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Biomedical Informatics

01. **Abthul Manaf, T.L.**

Electronic patient management information system (EPMIS) for asthma&COPD MSc. Biomedical Informatics – 2014   D 3614

Abstract

Objectives : Asthma and COPD (Chronic Obstructive Pulmonary Disease) are more prevalent in Sri Lanka but lacking actual statistical report and indicators, which are more important in health management. Adopting of available and FOSS (Free and Open Source Software) to develop web based health information system for Asthma and COPD management information system for NPTCCD (National Programme for Tuberculosis Control & Chest Disease) in order to increase the quality of healthcare, and effectiveness and efficiency of the organization.

Design/Methodology : Initially, studied the existing paper based information flow and identified the requirements of chronic disease control programme in Asthma and COPD, and then, designed an information flow for the proposed electronic patient management information system. The District Health Information System version 2 (DHIS 2) is an integrated FOSS. The tracker model of DHIS 2 is used to customize for Electronic Patient Management Information System (EPMIS) to use at specialized chest clinic in Asthma and COPD control programme of NPTCCD and facilitate to collect aggregated data for use in health management at the administrative level.

Results/Discussion: The EPMIS, captures individual and health related information of patients, generates real time aggregated data from the patient records for health management at various administrative levels, and facilitate clinician to access accurate patient information whenever need even in remote

locations. The financial benefits are no any cost to adopt the software and use, less maintenance cost and well supported from community software development team.

Conclusions : The tracker module has smooth integration between personal health data and aggregated data management, which is an advantage of DHIS 2 among FOSS in health information system. But, there are limitations observed during testing, including DHIS2 tracker module which could be corrected with new version in the future. Otherwise, find out FOSS to customize and develop a system for patient health record and integrate with DHIS 2 based health information system of NPTCCD which is suitable to collect aggregated information.

0002. Jayathilaka, L.D.

Health care service personnel e-Registry (Institutions registered under privat health services regulatory council)
MSc. Biomedical Informatics – 2014   D 3618

Abstract

Human resource for health is recognized as one of the core building blocks of the health system. Right number of health care workers with the right knowledge performing the right tasks in the right place is crucial to deliver high-quality patient care.

It is documented that 40% of the population fulfil their health needs via private sector [4] The most up-to-date information indicates that there are 3457 private medical institutions registered under Private Health Services Regulatory Council [3]. The existing registration system is paper based. Even though PHSRC has some data with regard to human resources, they are not up to date and complete. Health sector work personnel who discharge duties in health facilities are the products of years of specialised training. Uninterrupted quality delivery of the health care is inbuilt in their roles of responsibilities which they have undertaken to perform. The Ministry of Health has the main responsibility to supervise the quality of care that the health institutions provide. For this, management of human resources for health is essential.

Health Care Service Personnel e-Registry for the Private Health Institutions is an umbrella framework which was built for the comprehensive information management of the health Care Service Personnel across computerized systems and it has secured exchange between the Ministry of Health and the Private sector Health Institutions . At the first phase the Medical officers' and the Nurses' data will be captured.

Health Care Service Personnel e-Registry is a Custom-built Open Source software product. We used Scrum development framework. Web application to support multitenant administration was developed. The application server and the database server would be published on the local server. The institutions will be given a user name and a password to access the web application. Mandatory data of the Medical Officers' and the Nurses' will be collected at the end of the first phase of the project.

With the introduction of the Health Care Service Personnel e-Registry, accuracy, completeness, legibility, accessibility and timeliness of the data collection phase will be improved. Accuracy and speed of the data aggregation process will be increased. Delay in data transmission will be eliminated. Data analysis will be speeded up and the analysis will be accurate.

0003. Jayatilleke, W.M.A.U.

Development and piloting of national injury surveillance system of Sri Lanka (NISSSL)

MSc. Biomedical Informatics – 2013   D3267

Abstract

Traumatic injuries are the leading cause of hospitalization in Sri Lanka for last coupleof decades. Although Sri Lanka has achieved good health indices compared to other Asian countries injuries have become an epidemic. The major drawback of the injury prevention activities is lack of complete, accurate and timely data. Sri Lankan Public Health professionals were severely handicapped in the field of injury prevention due to lack of injury data.

There was a long felt national need for an injury surveillance system and in 2008 Ministry of Health launched a pilot injury surveillance system in few selected

hospitals. It has been piloted for several months and discontinued. Two independent teams and an expert form the World Health Organization had evaluated the system and recommended to develop a national injury surveillance system. Therefore this project was carried out with the objective of designing, developing and piloting a web-based National Injury Surveillance System for Sri Lanka (NISSSL) including revision of the existing data collection tool.

In this project, existing data collection tool was critically evaluated and developed a new data collection tool. A prototype of National Injury Surveillance System (NISSSL) has been developed and piloted successfully at Base Hospital, Horana. Previously piloted system was built using proprietary software development technologies which are costly and highly dependent on software vendor. Therefore NISSSL was developed using FOSS such as PHP, MySQL. Unable to comply with the changing data needs without a system change was the major drawback with the previous system. Therefore NISSSL was developed to accommodate the changes in the questionnaire without a system change.

Findings of the piloting of this project revealed that NISSSL has the potential of scaling up to the next level which is to include five selected hospitals. The ultimate objective of this project is to implement a National Injury Surveillance System (NISSSL) at selected s e n t i n e l h o s p i t a l s representing all the districts which provides with data for effective injury prevention activities in Sri Lanka.

0004. Niranjan, R.

Implementation , evaluation and modification of Open MRS electronic health record system in Human Genetics Unit.

MSc. Biomedical Informatics – 2014   D3615

Abstract

Background: Doctors want to improve quality of care given to patients. However they are unable to do it because they do not get good quality information about patients and protocols conveniently at a place where they are. Therefore a computerized health information system becomes very important in the modern health care system. An Electronic health record (EHR) is a core component of this health information system.Successful implementation of an electronic health record in a health institutiondepends on multiple social and technical factors. If these factors are not managed well, it is not possible to get benefits from an electronic

health record. User satisfaction is the most important factor that decides whether the new system will be accepted by users or not.

Objectives: The objective of the study was to implement, evaluate and modify an electronic health record system at a specialized unit in Sri Lanka.

Methodology: An open source electronic health record called open Medical Record System(openMRS) was implemented at the Human Genetics Unit of the Faculty of Medicine, University of Colombo. Evaluation of usage and user satisfaction was carried out using a case study method. Data related to user satisfaction was collected during pre, intra, and post implementation phases. Modifications of the EHR were made according to the findings to increase user satisfaction.

Results: Results of data analysis revealed that most of users have long term exposure to computers and that they used computers daily. Further, it was found that provisions to include pedigree information was an essential requirement of users. Modification of electronic health record was done to integrate pedigree drawing facility to make it usable by users for their purpose. Users prefer laptop computers more than other type of computers as this facilited entering data during a consultation.

Discussion: Users decision about whether to continuously use the system depends on their characteristics and their perception regarding usefulness and usability of the EHR. Findings from data collected regarding above mentioned three components can be made use to improve EHR usage.

Conclusion: Modification of an EHR to cater to specific user requirements will improve usage and acceptance.

0005. Piyasena, M.G.Y.

Development of ICT based health management information system for anti-leprosycampaign in Sri Lanka.

MSc. Biomedical Informatics – 2014 D 3609

Abstract

Background: Health Informatics is a new subject emerged in the world with the development of computer and information technology. In this back ground throughout the world integration of Information and Communication Technologies (ICT) into health care delivery systems can be found to overcome paper based system's short comes. Planning, monitoring and evaluation of healthcare programmes provides a strong foundation for the realisation of quality health

service delivery systems. Therefore, establishment of a robust management information system in any disease control program is crucial for the elimination of the disease.

Objectives: The objective of the study was to provide the web based online Health Management Information System (HMIS) to Anti- leprosy campaign.

Methodology: This article describes the efforts to reform the Health Management InformationSystem (HMIS) of Anti-leprosy campaign in Sri Lanka. It explores the strengths and weaknesses of the current health information system and related causative factors. To reach the objectives customisation of the tracker model of the District Health Information System-2 (DHIS-2) software were used. The sources of data for the customisation were literature review and document analysis.

Results: Results delivered from this research project is customised Dhis 2.16 version of tracker model. This tracker model allows to aggregate patient data into central data repository. Further, it was found that DHIS-2.13 version aggregated quarries are not working as documentations in the user manual. This bug fixed and included into Dhis- 2.16 version.

Discussion: It is believed that public health activities have been improved because of the introduction of ICT based tools in data collection and timely information generation. Within Sri Lanka it is difficult to find an expert in the DHIS software. Hence minimum expert opinion on this aspect was obtained.

Conclusion: The study findings reveal that accurate, timely and reliable health information is unavailable with current health information system and therefore evidence based health planning is lacking. At the same time result shows that DHIS-2 tracker suits the Anti-Leprosy Campaign context as a data repository for elimination of the disease. However, this is a remarkable challenge, within context of the manual data capturing tools and no local developer or development team to address the problem arise within the software.

0006.Prabhath, L.A.N.

Development of the minimum clinical dataset and the clinic management information system for the National Cancer Early Detection Centre.

MSc. Biomedical Informatics – 2014   D 3611

Abstract

Introduction: Strengthening existing services for early detection of cancer by evidence-based, feasible, scalable and cost-effective screening services is a national priority. The cancer early detection centre is one such initiative. Unavailability of a well structured essential data set and the difficulty in proper storage and analysis tofacilitate decision making are the main information management issues at the cancer early detection centre.

Objectives: The general objective of the research project was to develop a clinic management information system for the cancer early detection centre with a well-structured minimum clinical data set.

Methodology & Results: The structured minimum clinical dataset was developed by using a modified framework. The first iteration of the five step framework was carried out. A free and open source solution (District Health Information System version 2.0) was

customized and deployed as the clinic management information system. Participatory action research model was followed.

Discussion: The data quality assurance and quality analysis should be integral to any information system. Effective use of the modified framework for minimum clinical dataset development could be done in local setting. User participation has had a positive impact for the outcome of this research project. During the pilot implementation, the paper forms and the computer based system needed parallel operation. Training must be carried out continuously, catering individual and institutional needs, not limited to the software used.

Conclusion: The modified framework could be adopted and carried out in the local settings to develop standard minimum dataset. Furthermore the District Health Information System version 2.0 can be customized to capture name-based client information and store securely for data analysis. Based on the lessons learnt, a data quality and analysis improvement model was suggested by the author for further discussion and future studies.

Keywords: cancer early detection, minimum clinical dataset, data quality, DHIS2, information systems

0007. Randeniya, G.R.G.K.S.

Development of data collection and analysis software for risk factor analysis in non communicable disease prevention programme.

MSc. Biomedical Informatics – 2014   **D 3610**

Abstract

Introduction : Sri Lanka is well placed among low and middle-income countries with better health indicators more towards developed countries. But according to various recent statistical analyses, country prevalence for Non Communicable Disease related mortalities and morbidities are high. In such background a quality Non Communicable Disease surveillance system is vital for monitoring, evaluating and improving the "National Non Communicable Disease Prevention Programme" to achieve quality indices.

Objective : The objective of this study is to design and implement a single integrated data repository on Non Communicable Disease risk factors for national and provincial level surveillance activities with the intention of improving data quality.

Methodology : To achieve these objectives, recommended steps in "Information system development for developing countries by World Health Organisation" were followed. According to the requirements, customisations of "District Health Information System" software were done and online electronic information systems were developed. The system was piloted in selected MOH areas at RDHS Kurunegala.

Conclusion : New system helps to generate quality monthly, quarterly and annual reports in terms of accuracy, completeness and timeliness. Data analysis became much easier with the new system as of its built-in functionalities.

Future works : Because of the new systems' improved functionalities, central NCD unit is seeking the possibilities of extending the system to the rest of the districts in near future.

0008. Senevirathne, R.M.J.S.K.

Implementing public health data repository in the Southern Province.

MSc. Biomedical Informatics – 2014   **D3617**

Abstract

Background: The fundamental to effective efficient public health information be available to health care providers at multiple levels and multiple organizations. Public health delivery in Sri Lanka is a devolved subject and is being coordinated with central (Family Health Bureau (FHB) and ministry of health) and provincial health administration. Direction of Data flow of public health was established from field office to Medical Officer of Health (MOH) office then to RDHS office i.e. District office (Regional Director of health Service) and to National Level (FHB and ministry of health). With the introduction of provincial administration in 1989 new health administration level called "Provincial level" added between national and district level. However Data flow was unchanged creating a gap hence, proper data reporting system not available at provincial level. There for objective of this study is to design and implement public health data repository in Southern province.

Methodology: District Health Information System 2 (DHIS2) is a Free and open source software (FOSS) which is a freely available multiplatform supported web based public health information system. The DHIS2 is also customizable and can used to collect individual or aggregated data. This Software is customized to meet the requirements of public health data repository proposed for the southern province. DHIS2 system implemented in a server at southern province and Data element and data entry forms designed to suit the public health data report system. Data entry operators were trained and Data was entered.

Results: Twenty users from 14 MOH offices had entered data. The Data was entered using electronic version of existing paper form named RH-MIS 524, which is created by DHIS2. Form called RH-MIS-524, which reports data, related to a Public Health Midwife (PHM) area and concise aggregated form named RH-MIS 509 is generated by the system as a report to represent whole MOH area. The MOH officers are confidence with the system appearance, security and user friendliness of the system.

Conclusion: Implementation of good Web based public health information system will enhance service delivery, planning and supervision of the public health system with timely available accurate consistent data.

0009.Sriyantha, N.S.

Development of an electronic pharmacy information system to manage anteretroviral drugs at thePharmacy of National STD/AIDS Control Programme.

MSc. Biomedical Informatics – 2014   **D3616**

Abstract

Background: Antiretroviral drugs are vital not only to patients who are already suffering from immunodeficiency virus but also to the rest of the population that are liable to be infected. As the annual report 2013 of the National STD/AIDS Control Programme pointed out, 9% of people taking Anteretroviral drugs have been defaulted. This is a major concern of National STD/AIDS Control Programme in Sri Lanka. Identifying those people as early as possible is one of the prime objectives in terms of saving their lives and preventing transmission of the infection to others. Information Management System is an important factor for any Health Services. There is no Electronic medical record system to manage people living with Human Immunodeficiency Virus at National STD/AIDS Control Programme in Sri Lanka. Pharmacy management system is a subsection of Electronic Medical Record System. It is an enormous necessity to manage Anteretroviral drugs.

Objective of the study is to develop electronic system to manage Anteretroviral drugs at the Pharmacy of National STD/AIDS control programme.

Method: Following requirement analysis, stakeholders decided to customize OpenMRS to develop pharmacy management system. Pharmacy system developed to support to maintaining of registers, dispensing details and inventory management. System was tested with previously available data. Project is piloted at Pharmacy of National STD/AIDS control programme. Users were trained before piloting the project. Evaluation: Several methods used to test product itself and to evaluate the acceptance of the users. To sustain the developed system, it should satisfy the user. In the demonstration, pharmacists are satisfied with the system as it eases their work and save the time, providing accurate and timely data. All users are satisfied with the system developed and comment that on easiness of using it.

Discussion: Pharmacy system has been developed to suit HIV clinic record system, which could be developed in future with the Global Fund grant. All Users are satisfied with the system. They expressed that it saves their time, and reduce errors. Recently released version of OpenMRS is fulfilling most of the requirement user need. Conclusion: Implementation of this system will definitely reduce the workload as well as data errors. It will provide accurate and timely data for critical decision and it could be a historical database to support to make strategic decisions.

0010. Weerakoon, W.M.T.W.P.

Development of a disaster management information system for the disaster preparedness and response division at the Ministry of Health.

MSc. Biomedical Informatics – 2014   D 3613

Abstract

Introduction: An electronic disaster management information system has been identified as one of the requirements in the Health Master Plan and the Strategic Plan for the Disaster Preparedness and Response Division of the Ministry of Health. The aim of this study was to develop a disaster management information system to assist all activities of the disaster management cycle. The applicability of free and open source software development methods in a low resource setting was also assessed during this process.

Methodology: The project followed the action design research method. Multiple iterative "building, intervention and evaluation" cycles were conducted involving participants from all domains. Software requirements specification was compiled through a current state analysis and requirements analysis. The data elements and indicators were identified based on the Sphere project, existing data elements and a minimum dataset framework. The system was designed to emulate the disaster management cycle aligning it with the relative functions of the Disaster Preparedness and Response Division. The demo version was developed for selected modules. The free and open source platform of Sahana disaster management systems was utilized and development was done by the Sahana community.

Results: The software requirements specification, data elements and indicators, and a demo version of the software were the main results. The compilation of the software requirements specification resulted in the identification of all the functional and non-functional requirements of the system. A total of 112 data

elements and 19 indicators were identified. Out of the three modules and seven sub modules, the Disaster Assessment and Response module and the three sub modules, namely, Capacity assessment, Hazard assessment and Demographic-Geographic Information System were incorporated in to the demo version.

Discussion and Conclusion: The knowledge gap between multiple domains was bridged by using the action design research method. This facilitated the alignment of software with activities of the disaster management cycle and the project design enabled the achievement of this relatively novel concept. Furthermore, utilising free and open source software resources was a cost effective method in the development process. Thus, the outcome of this project can be used as a foundation for the implementation of disaster management policies of the Ministry of Health.

0011. **Weerasinghe, W.M.S.P.A.**

Development of a management information system for Mental Health Unit Ministry of Health – Sri Lanka.

MSc. Biomedical Informatics – 2014   **D 3612**

Abstract

Introduction: Mental illness is increasingly recognized as an important worldwide   health concern. It is the number one cause of morbidity in the world. The burden of mental health was identified as a priority in Sri Lanka. However, far too little attention has been paid to a mental health information system. Incompleteness, poor timeliness and poor information dissemination are identified as the drawbacks in the existing paper based information system. Given the facilities in an electronic information system to overcome above drawbacks, it will be important to develop a web based mental health information system.

Objective: The objective of this study is to design and develop a web- based management information system for Mental Health Programme of Sri Lanka to improve the mental health information system.

Methods: Steps in " Mental Health Policy and Service Guidance Package for Mental Health Information Systems by World Health Organization" was followed. System requirement analysis was achieved by semi structured interviews of users and participant observation. According to the gathered requirements, customisation of "District Health Information System version 2"(DHIS2) was performed to develop the web-base Mental Health Information System (MHIS)

Testing of the system was carried out by a pilot run at Teaching Hospital-Ragama, District Hospital-Kiribathgoda, District Hospital-Meerigama and Mental Health Unit at Ministry of Health. Also, users of the system were evaluated at the end of the pilot run to assess the user acceptance of the new system.

Result and discussion: :Results of the pilot run showed that completeness of the data set has been drastically increased up to 96%, while the accuracy has also been improved. Functionality for report generation was successful and 66% of users showed the willingness to use web base information system for data collection and analysis

Conclusion: The developed MHIS using the DHIS2 software was able to fulfil the drawbacks in manual paper base system. New system facilitates to maintain complete, quality and timely information. Also, it enhances the report generation function, thus allowing relevant stakeholders to formulate prevention strategies and interventions. Despite the many advantages in developed MHIS, establishment of some of the fundamental requirements such as defining Minimal Mental Health Data Set, defining national level patient identification number , awareness to the users, etc.. is required in implementing the system at the Mental Health clinics.

0012. Wickramarathne, G.M.J.C.

ICT based record system to National programme for TB control & chest diseasesSri Lanka.

MSc. Biomedical Informatics – 2014   **D 3619**

Abstract

Purpose: ICT use is one of the key criterion of success in public health. ICT explores the resource areas and allow people to get correct decision, at correct time in local and national levels by using accurate figures. The aim of this project is to describe the development, implementation and use of ICT Based record System in National Programme for TB Control & Chest Diseases (NPTCCD) - Sri Lanka.

Materials and Methods: The system designing was started after analyzing System Environment and Functional Requirements of Specification under the aspect of public health.

The organizational structure and hierarchy levels were clearly identified and authentication powers were given accordingly. The affordability and sustainability

of the system is most important aspect in countries like Sri Lanka as a general rule. Many approaches for using special purpose software to enhance the performance of an information retrieval have been proposed during last couple of years, but after analysis, the numerous systems and software, I found the best technical option for the organization is to use FAOS according to the organizational need, Rather than using high cost software with limited resources and financial support. Mainly NPTCCD is handling the aggregate data for planning and implementation. District Health Information Software 2 (DHIS2) is an open-source software which was initially developed by the Health Information Systems Programme(HISP) at the University of Oslo. DHIS2 is having most of the key features to cater to thedemands of handling aggregate data.

Infrastructure facilities provided by the NPTCCD which consist of Computers, Network, Broadband Internet connection, Web Server and data entry operators. The financial support was by Global Fund and PGIM - Sri Lanka.

Conclusion: National Programme for TB Control & Chest Diseases ICT Based record System Tested at NPTCCD head office for confirmation of free of bugs. It has piloted in 3 chest clinics from the point of view of Public health. It is planned to implement in all 26 chest clinics in all island, including all 25 districts in Sri Lanka. the end users, data entry operators and resource persons are assigned to WEB based system with prior permission.

Clinical Oncology

0013. Cooray, B.J.R.

Retrospective study to examine the average delay of the overall treatment time and thlocal control of the disease of the cervical cancer patients received radical radiation therapy in the year 2010 at National Cancer Institute, Maharagama.

MD Clinical Oncology – 2014   **D 3534**

Abstract

Introduction The purpose of this study is to examine the average delay of the overall treatment time and the local control of the disease of the cervical cancer patientsreceived radical radiation therapy in the year 2010 at National Cancer Institute,Maharagama.

Patients and Methods the subjects of this study were the patients registered for brachytherapy in the year 2010. Out of 326 patients, only 119 patients were included in thestudy. The delay of the treatment time was calculated by subtracting 55 days from theduration of the radiation treatment. The date of relapse of the disease was taken as theday when the patient underwent the biopsy to confirm the recurrence.

Results The mean age at diagnosis was 53 years. 50.4% of the study population presented with stage 11 IB disease and only 9.2% presented with stage 11A disease. The most common histology type was squamous cell carcinoma which accounts for 48.7%. The average delay of overall treatment time was 14 weeks. The 4 year disease free survival was 47.2%. Majority of the relapses (90%) occurred within 1st 3 years from the treatment. There was a significant correlation between the delay of the treatment and the time to relapse. 78.2% of the study population received 2 fractions of brachytherapy while 21.8% was treated with 3 fractions.

Conclusion To improve the local control of the cervical cancer and the survival, unscheduled gaps of the overall treatment should be avoided.

Key words: Cervical cancer, Overall treatment time, Relapse

0014.Indranath, K.

"Retrospective study of stage 11 & 111 carcinoma of rectum on anatomicales (Low/ High)"

MD Clinical Oncology – 2014   **D3535**

Abstract

Introduction: Colorectal cancer (CRC) is a major health problem affecting both developed and undeveloped countries. Loco-regional recurrence after resection of rectal cancer is difficult to treat. The prognosis after a local recurrence is poor. High rectal cancer (HRC) (> 6 cm up to 12 cm) and low rectal cancer (LRC) (0 to 6 cm from the anal verge) were categorized according to the flexible sigmoid scope findings.

Objectives: The objectives of this study were to find out event free survival at 2 years, local recurrence rate, treatment modalities being used, toxicity of treatment, rate and sites of distant metastasis, mortality and overall survival in patients with HRC and LRC.

Methods & Materials : This study was done using retrospective data extracted from clinical records of rectal cancer patients registered for treatment at National Cancer Institute of Maharagama (NCIM), Sri Lanka in 2007. Number of patients with clinical records containing adequate data on factors intended to analyze were 81 and all of them had been selected as the study population. A database was created using Microsoft Excel 2007. Data have been compared *with SPSS version 16(SPSS, Chicago*, USA). Survival was analysed using Kaplan-Meier curves. Statistical significance for differences between groups was tested using Chi square test.

Results : Eighty one patients (46 male, 35 female, median age 57 years, range 21-83 years) comprised 33 with HRC and 48 with LRC. The proportion of stage II & ill cancers was similar in both groups.

Thirty nine patients (48.1%) had neoadjuvant Chemoradiation (CRT) followed by surgery. All the patients had radiotherapy either pre/ post operatively. All the patients with HRC underwent anterior resection (AR) and 33 patients (68.8%) with LRC had abdomino-perineal resection (APR). Among the patients who had neoadjuvant CRT, 20 (51%) patients tolerated it without many side effects. Adjuvant chemotherapy was given to 60 (74.1%). Any grade chemotherapy toxicities were identified in 40 (66.7%) patients but 90% of them had grade I or II toxicity.

Loco regional recurrence was 13.6 %: 1.2% for HRC vs. 12.3% for LRC. We could not compare the results by chi squire test as only one patient in HRC group had local recurrence. Our study showed 72.7% of the loco regional recurrence occurred within 2 years. The overall mortality is 28.4%. Mortality among the LRC was 29.2% compared to

27.3% in HRC patients (p-value-0.85) and the finding was not statistically significant. The stage related mortality was 11.6% in stage II and 47.4% in stage III (X^2- 12.67, P-value- 0.001). This is a highly significant association. The rate of distant metastasis was 29.6%. The predominant site of metastasis was liver (in 50%) followed by lung. It did not show any association with the site of tumour.

The EFS at 2 years for HRC is 66.6% and for LRC is 74.6%; X^2- 0.001, p value- 0.999. Overall EFS is 35.6 months with a p-value of 95% confidence interval of 32.7 to 38.5. Overall survival at 2 years was 83% for HRC and 84.1% for LRC (p

value-0.9) and statistically not significant. Mean overall survival period was 38.7 Months for HRC vs. 37.0 Months for LRC respectively.

Conclusion : HRC and LRC differ in the rate of local recurrence. Overall survival is strongly related to the nodal stage of the disease. EFS, overall survival, the treatment toxicities & frequency of distant metastasis in both groups were similar. Loco regional recurrence was 13.6 %. The rate of distant metastasis was 29.6%. The overall mortality is 28.4%. This subject has been analysed as a subgroup in all the trials which we mentioned in Literature Review. Thus, this has to be studied further deeply to find the association strongly by prospective trials. An electronic patient data base should be created at NCIM so that accurate data for research and audits could be obtained faster and easily.

0015.Iqbal, A.

Non randomized retrospective analysis of survival outcome of childhood primarylivertumours (Hepatoblastome/ Hepatocellular Carcinoma) managed in a single(paediatric) unit, National Cancer Institute of Sri Lanka.
MD Clinical Oncology – 2010   **D 3014**
Abstract

Objective

The main purpose of this study is to investigate the long-term outcome of children withprimary hepatic malignancies who were treated in the paediatric oncology unit of theNational Cancer Institute Maharagama, Sri Lanka (NCIM).**Method :** Between the periods of January 2005 - December 2010, 35 children withhepatoblastoma/ hepatocellular carcinoma were referred for treatment, out of which 5patients left against medical advice for alternative medicine and they were excluded fromanalysis.

A retrospective analysis of data from 30 patients diagnosed with Hepatoblastoma (HB)/Hepatocellular carcinoma (HCC), treated at NCIM were recruited as subjects for this study.

All information was extracted from patients' clinical records and interview of the parents/guardian.

Data on socioeconomic status, demography, pre-treatment investigations, pretext staging,neo-adjuvant chemotherapy, chemotherapy related complications, time to

surgery aftercompletion of chemotherapy, surgical procedure, post surgical adjuvant therapy and posttreatment follow-up including survival were collected using a questionnaire. Analysis wasdone using statistical software.

After thorough assessment, majority of patients were given neo-adjuvant chemotherapy patients were referred to the paediatric surgical units at the Lady Ridgeway Hospital for resection. Following surgery adjuvant chemotherapy was started according to protocol.

Results : Among 30 patients, 26 received neo-adjuvant chemotherapy according to our unitprotocol (Similar to SIOPEL protocol). Four patients underwent primary surgery followed by adjuvant chemotherapy. Among the neo-adjuvant group, 16/26 patients (62%) underwent surgery. 10/26 patients (38%) did not undergo surgery due to disease progression or refusal of surgery and they were considered as treatment failures. The median time to surgery after completion of chemotherapy was 36 days and more than 50% of patients had a significant delay in excess of four weeks. Among patients who underwent surgery 13/20 subjects (65%) had a complete resection. Overall 17/20 of patients (85%) in the surgical group are living by the end of study period. However, among the non- surgical group, only 2/10 (20%) patients were alive at the end of study period. Both of them had residual metastatic disease. Out of the surgical group 15/20 (75%) were free of disease at end of study follow up. The two-year overall survival is 63% for the study population with median of 28 months. The two year disease free survival is 50% for the whole population. The median age at diagnosis was 10 months (2 to 132 months). The mean follow up period was 28 months (1 to 80 months). 53% of patients developed febrile neutropaenia and there were no treatment related deaths recorded.

On univariate analysis only the presence of inoperable or residual disease following neoadjuvant chaemotherapy was found to have significant impact on survival (p<0.05).

Conclusion : Neo-adjuvant chemotherapy followed by surgical resection results in an overall survival of 63%. The significantly better survival in the surgical group is due to limited

residual disease following neo-adjuvant chemotherapy, emphasizing the prognostic importance of response to chemotherapy. In general our results are comparable to those of the SIOPEL study. Measures should be focused to minimize failures from

surgery and such a program might increase the number of patients undergoing surgical resection and improves the quality of life.

0016. Jayasekera, C.J.

Audit on demographics, presentation, management and survival of bladder cancer patients referred to National Cancer Institute Sri Lanka in 2009 & 2010.

MD Clinical Oncology – 2010   D 3532

Introduction : Bladder cancer is the ninth most common cancer in the world. The highestincidence of bladder cancer is in Northern America and Europe; and the lowest incidence in Asia and Latin America and Caribbean. It is three times more common in men compared with women. As an Asian country the incidence of bladder cancer is far low in Sri Lanka. According to the cancer incidence data published in 2007, it's the 10th most common cancer among males over 65 years of age.

General objective : To study about presentations, demographics, stage and outcome of bladder cancer patients who presented to National Cancer Institute, Maharagama from 1st January 2009 to 31st December 2010.

Specific Objectives :

- To study presentations of bladder cancer among Sri Lankan patients.
- To study the demographics of bladder cancer patients.
- To analyze the impact of stage and histopathology and adjuvant treatment modalities on the outcome of above studied patients.

Methods and Materials : This study was done using retrospective data extracted from clinical records of bladder cancer patients registered for treatment at National Cancer Institute, Maharagama Sri Lanka, from 1st January 2009 to 31st December 2010. Number of patients with clinic records containing adequate data on factors intended to analyze was 121 and all of them were selected as the study population.

Results : Among the demographics observed, Bladder cancer predominantly affected the males (81.81%). Bladder cancer was diagnosed more frequently in 60-69 year age group. Trannsional cell histology was the commonest type (77.68%). Commonest presenting symptom was hematuria (88.43%). Frequent site of metastasis was lung. All patients had stage appropriate adjuvant treatment at NCIM considering their performance status.

The number of patients attended the follow up clinics were significantly low after referring back for check cystoscopies. There is a substantial delay in seeking opinion from the oncologists from the first symptomatic presentation.

Conclusion : The demographic and histological parameters and presenting symptoms among Sri Lankan patients were largely compatible with the observed trends in other parts of treatment and follow up of Sri Lankan patients should be formulated with the collaboration of GU surgeons. This will help to utilize treatment facilities for bladder cancer in an efficient and cost effective manner.

0017.Jayawardena, P.L.S.

The pattern of recurrence of triple negative breast cancer.

MD Clinical Oncology- 2009   **D 3533**

Abstract

Purpose : To analyze the pattern of recurrence of Triple-Negative Breast Cancer in comparison to the receptor- positive breast cancer.

To establish that the pattern of recurrence of Triple-Negative Breast Cancer among the Sri Lankan women is similar to that already established and is due to the inherent Aggressivenessof the tumour.

Experimental Design : We conducted a retrospective study on a cohort of 1,104 patients withinvasive breast cancer who were referred for treatment at National Cancer Institute of SriLanka from 01st January 2007 to 31st December 2007 and had their immuno-histochemicalprofiling done at the NCISL Pathology Laboratory. Triple-negative breast cancers weredefined as those that were eostrogen receptor negative, progesterone receptor negative, andHER2neu negative, and receptor-positive breast cancers were defined as those that wereeostrogen receptor positive, progesterone receptor positive, and HER2neu negative. Thedemographic features of triple-negative breast cancer were identified; the prognosticsignificance of triple-negative breast cancer was explored; and the variables that affect thedisease free survival in triple-negative breast cancers were analyzed.

Results : The median follow-up time was 5 years. 168 patients had triple negative tumours, which translate into 15.2% of the total female breast cancer patients registered for treatment in the year 2007. 214 patients had receptor positive disease.

Compared with receptor-positive breast cancer patients', those with triple-negative breast cancer had an increased rate of recurrence (22% versus 11%; p< 0.019); a shorter mean time to recurrence (18.7 versus 34.5months; $p < 0.001$) and a lower 3 year disease free survival (53% versus 80%; p<0.001). The triple-negative patients had a greater predilection for visceral metastasis than for bone metastasis. The pattern of recurrence was also qualitatively different; among the triple-negative group, the risk of recurrence peaked at approximately 3 years and declined rapidly thereafter. Among the receptor-positive group, the recurrence risk gradually increased at a lower level over the period of follow-up.

The demographic features of triple negative tumours, were consistent with the established data. Kaplan- Meier survival curves were derived to identify the prognostic variables that affected the disease free survival of triple-negative cancers and only the nodal status had a statistical significant difference , (log rank p<0.009) .

Conclusions : Triple-negative breast cancers, of the Sri Lankan women, have a more aggressive clinical course than receptor-positive breast cancer, but the adverse effect is transient, and it is consistent with the established data.

0018.Kandegedara, S.L.

A retrospective analysis of patients with ovarian cancer treated at National CancerInstitute Maharagama during 2005-2007.

MD Clinical Oncology – 2014   **D 3527**

Abstract

Introduction: Ovarian neoplasms consist of several histopathological entities; treatment depends on the specific tumour type. Epithelial ovarian cancer comprises the majority of malignant ovarian neoplasms.

Epithelial ovarian cancer is one of the leading causes of death from gynaecologic cancers in the western world as well as in Sri Lanka and it is the fifth most common cause of cancer mortality in women. The incidence of ovarian cancer increases with age. Detection of ovarian cancer while it is in its early stages significantly improves the prognosis. Since symptoms of ovarian cancer are vague and nonspecific, especially at earlier stages and the screening test is not as sensitive or specific as necessary, especially in those with early- stage disease majority of women are diagnosed at later, less treatable stages. The standard treatment approach for ovarian

cancer is initially a surgical approach with an attempt at optimal debulking of the tumour followed by chemotherapy.

Objectives: To study demographic features including age, ethnicity, geographical distribution, symptom presentation together with the impact of histological diagnosis and the stage at presentation on the prognosis of the disease , while assessing different treatment modalities instituted on the outcome of the natural disease in particular to the development of loco-regional or distant relapse.

Methods and Materials: This study was done using retrospective data extracted from clinical records of patients registered for treatment at National Cancer Institute (NCI), Maharagama, Sri Lanka during the period 2005 to 2007. Number of patients with clinical records containing adequate data on factors intended to analyze were 229 and all of them had been selected as the study population. A database was created using Microsoft Excel data analysis. Survival analysis was calculated by using the Kaplan Meier and log rank test. Statistical significance for differences between groups was tested using Chi square test. Mean follow up period was 5.2 years with SD of 1.6. Maximum follow up period was 7 years.

Results: Among the demographics observed, mean age at diagnosis of all histological subtypes of ovarian cancer in the study participants was 50.8 years with a SD of 14.26. Majority of study participants were within the age group of 40-70 years. Epithelial histology (n=186, 81%) was the most common histo- pathological diagnosis among the majority of study participants in contrast to non-epithelial histology. Of them 15% (n=33) had Germ -cell histology and ten cases (4%) of sex cord tumours. Mean age at diagnosis of epithelial histology was 54.41 years with SD ±10.62 with a median of 55years for sex cord tumours. Germ cell tumours showed a secular age distribution peaking at 10-20 yrs then around 50-60 years. Majority of the study participants irrespective of the histological subtype were presented predominantly with stage III disease. Majority of patients with epithelial ovarian cancers were diagnosed at advanced stages (97.2%, n=107) in contrast to non- epithelial histology. Majority of subjects n=21 (70.6%) with stage IV disease at presentation had liver metastasis. A statistically significant difference was observed in the disease free survival in early stage disease (1, II) as compared to intermediate and advanced disease (III, IV). Pre-operative CA 125 levels were raised in the majority.

Conclusion: The demographic and histological parameters of ovarian cancer among Sri Lankan patients and the factors found to associate with disease relapse were

largely compatible with the observed trends in other parts of the world. As the histopathological diagnosis of ovarian cancer has a strong impact on the treatment modalities, improvement in the histo-pathological reporting found to be a wanting and calls for attention. New evidence based guidelines which help decision making on adjuvant therapy and treatment follow up of Sri Lankan patients should be implemented to utilize treatment facilities for ovarian cancer in an efficient and cost effective manner.

Keywords: Ovarian cancer; Demographic characteristics; risk factors; adjuvant chemotherapy; survival

0019.Mugunthan, T.

A study of pattern of non Hodgkin lymphoma at National Cancer Institute ofSri Lanka 2010.

MD Clinical Oncology – 2014 **D 3531**

Abstract

Introduction : Non Hodgkin Lymphoma is not a single disease, but rather a groups of several closely related cancers and potentially curable. Since the early 1970's incidence rates for NHL have nearly doubled. Many effective treatment options exist for NHL patients and management of NHL has evolved considerably over the last five decades. In 2010, 275 new cases of Non Hodgkin Lymphoma were reported to NCI.

Objectives : General objective is to study the treatment pattern of NHL at National Cancer Institute Maharagama in 2010. Specific objectives are analysis the demographic features of the patients, to evaluate the sites, type of NHL, staging, outcome following treatment including side effects, complete response and relapse and comparisons of treatment response with previous study.

Methodology : This study was done using retrospective data extracted from clinical records of NHL patients registered for treatment at National Cancer Institute, Maharagama Sri Lanka, from 1st January 2010 to 31st December 2010. Number of patients with clinic records containing adequate data on factors intended to analyze was 275 and all of them were selected as the study population.

Results : Among the demographics observed, NHL predominantly affected males(67%). NHL was diagnosed more frequently in60-69year age group and median age of presentation was 62 years. Most common presentation was nodal disease(84%) . Comorbidities had associated with52% of the NHL patients . There

were no statistically significant links between etiological comorbidities or farming with NHL. All patients under went biopsy and only64% of the patients under went immuno histo chemistry assessment.DLBCL was the commonest type(38%). DLBCL59%and 47% of the FL were categorized intoachieved in 77% in DLBCL and 93 % in FL. *During the study period* 31 patients (11%) died due to different reasons.

Conclusion : The demographic and histological parameters and presenting symptoms among Sri Lankan patients were closely compatible with the observed trends in other parts of the world. Improvement in advance investigation facilities, freely available monoclonal antibodies supply and establishment of evidenced based common local treatment guidelines are necessary in our country to improve the treatment outcome.

0020.Nettikumara, N.A.K.M.

A retrospective study on the demographics, clinical profile and the outcome of multiple myeloma patients treated at National Cancer Institute, Maharagama, Sri Lanka, from 2009 to 2012.

MD Clinical Oncology – 2014   **D3528**

Abstract

Introduction: Multiple Myeloma is a less frequent malignancy in both developed and under developed countries. Despite recent advances in the treatment of MM it is a major health problem worldwide because the disease remains incurable and the treatment aimed at improving symptoms and preventing complications of the disease.

Objectives : To identify patient demographics, clinical profile, response and toxicity to different types of chemotherapy schedules, and use of radiotherapy, for patients with Multiple Myeloma treated at NCI Maharagama during 2009 to 2012.

Material and Methods : A retrospective study of newly diagnosed patients with multiple m2yeloma treated at two units at the National Cancer Institute, Maharagama, Sri Lanka, between 2009 to 2012.

Result : Sixty five newly diagnosed multiple myeloma patients were analyzed and male to female sex ratio was 1.4:1. Median age group was 61-65 years and percentage of age under 60, 50, and 40 years were, 49.2%, 20%, & 4.6%, respectively.

The most common presenting symptoms were back pain (75.8%), fatigue (23%), and loss of appetite (12.31%). Osteolytic bone lesions (86.15%) and anemia (81.4%) were the most common myeloma related organ and tissue impairment followed by impaired renal function (58.46%) and hypercalcemia (53.8%). Radiotherapy was used in 59.6% of patients for symptomatic bone lesions.

Median bone marrow plasma cell concentration was 40-50%, median ESR was 100-125 mm/1st h, and median serum paraprotein level was 31-40 g/1. Serum (32 microglobulin

level was high in majority of patients (63.08%), and normal in 15.38% of patients atpresentation.Patients treated with Bort/Dexa, showed highest response rates (CR=66.66%, PR=33.33%) and less adverse events (grade 1-2 events=33.33%).

Thal Dexa and MPT groups showed > PR rates of 75% vs 73.33%, and grade1adverseevents of 37.5% vs 43.3% and grade 3-4 adverse events of 25% vs 33% respectively. Both MPand VAD groups showed > PR rates of approximately 50% with grade 1-2 adverse events of22% vs 37.5% and grade 3-4 events of 22% vs 25%, respectively. Patients treated with Cyclo/Pred achieved only PR (66.67%) with less adverse events. (Grade 1-2 events of33.33%).

Conclusion : In our study, the predominant sex group was male, accounting for 58.46%, andsex ratio, male : female was 1.4: 1 which is comparable with standard data. Meadian agegroup at presentation was 61-65 years which is below the standard age group. (65-70 years)and the percentage of patients, below 60, 50, and 40 years, were significantly higher than thestandard data. This indicates that MM affects young people more commonly in Sri Lanka,than western countries.

Myeloma related organ and tissue impairment was more commoner than standarddata,especially in terms of renal impairment and anemia.Patients who were treated with Bortezomib/Dexamethasone showed the highest response rate (CR=66.66%, PR=33.33%) with less adverse events (grade 1-2 =33.33%) than standard data. Patients who were treatedwith Dexa/Thal, MPT, MP, VAD and Cyclo/Pred, showed comparable response rates and adverse events with standard data.An electronic patient data base should be created at NCIM so that accurate data for researchand audits could be obtained faster and easily.

0021. Peiris, H.S.N.

 Significance of pre-treatment haemoglobin in carcinoma of cervix patients\ treated with concurrent chemoradiation.

 MD Clinical Oncology – 2014   D 3526

Abstract

Objective/ purpose : Various factors have been demonstrated to improve tumour response &survival of carcinoma of cervix patients treated with concurrent chemoradiation. Aim of thisstudy is to evaluate the value of pre-chemoradiotherapy level of haemoglobin in the outcomeof carcinoma of Cervix.

Methods & material :90 patients who received CCRT were retrospectively analyzed to findout the association between the Pretreatment Hb levels with clinical outcomes. Thres

holdlevel was taken as 10 mg/dl and the two groups were compared with an independent T- test.P value of less than 0.05 was taken as significant. Kaplan Meier method was used in survivalestimates and their significance was assessed with Log rank test.

Results : In this cohort of patients with a median follow-up of 26 months, patients with a pre-treatment value of Hb more than l0 mg/dl demonstrated better overall survival and disease free survival than their counterparts. (p— 0.025 for OS & p=0.012 for DFS respectively).

Conclusion : Pretreatment Haemoglobin can be used as an important predictor of clinical outcome and efficacy of treatment in patients treated with radical chemoradiation for carcinoma of cervix possibly in conjunction with other prognostic factors. However, further validation with a larger patient cohort is recommended.

0022. Perera, K.M.K.

 A retrospective analysis of patients with differentiated thyroid cancer treated at National Cancer Institute, Maharagama during 2005-2007.

 MD Clinical Oncology – 2013   D3530

Abstract

 Introduction: Thyroid cancer is the third most common cancer affecting the Sri Lankan female population and the incidence of Differentiated Thyroid Cancer

(DTC) has been steadily increasing over the past few decades. DTC typically affects younger population. Though a large majority of DTC patients carry an excellent prognosis with a low mortality rate, it's primary and adjuvant treatment strategies, based largely on retrospective data, are still debate

Objectives: To study the demographics of DTC among Sri Lankan patients including age, sex, geographical distribution and to analyze the impact of stage, histological factors and adjuvant treatment modalities on the outcome of patients, in particular the development of loco-regional or distant relapse .

Methods and Materials: This study was done using retrospective data extracted fromclinical records of DTC patients registered for treatment at National Cancer Institute (NCI),Maharagama, Sri Lanka during the period 2005 to 2007. Number of patients with clinical records containing adequate data on factors intended to analyze were 223 and all of them had been selected as the study population. A database was created using Microsoft Excel. Statistical significance for differences between groups was tested using Chi square test. Mean follow up period was 5.2 years with SD of 1.6. Maximum follow up period was 8 years.

Results: Among the demographics observed, DTC predominantly affected the females (84.3%) while DTC as a group was diagnosed more frequently in 21-30 year age group. Papillary histology was the commonest type of DTC (78.5%). Over one third of papillary carcinoma patients were found to have autoimmune thyroiditis. Follicular histology, widespread capsular invasion and extra thyroid extension were all found to be risk factors associated with metastasis (p< 0.05). 30.5% of DTC patients have received radiotherapy, most frequently due to local lymph node metastases or extra thyroid extension of the tumour. 82.5% of study population has received adjuvant 1-131 therapy, including a large number of low risk patients, as well.

Conclusion: The demographic and histological parameters of DTC among Sri Lankan patients and the factors found to associate with disease relapse were largely compatible with the observed trends in other parts of the world. New evidence based guidelines which help decision making on adjuvant therapy and follow up of

Sri Lankan patients should be implemented to utilize treatment facilities for thyroid cancer in an efficient and cost effective manner.

Keywords:Differentiated thyroid cancer; risk factors; adjuvant treatment strategies; 1-131 therapy

0023.Siriwardhana , L.

A study to quantify the changes in target volume and its position during acourseof fractionated radical radiotherapy for invasive bladder carcinoma.

MD Clinical Oncology – 2012   D 3012

Abstract

Aim: To quantify the interfractional variation in the bladder volume and its position during a course of fractionated radical radiotherapy treatment. To evaluate any associated factors and to assess the feasibility of reducing the planning target volume (PTV) by reducing the internal margin.

Materials and methods:23 patients with T2-4 NO MO carcinoma of the urinary bladder were treated with conformal radiotherapy in NCI. Each patient had two post micturition computed tomography simulation scans during the whole course of treatment. An initial scan prior radiotherapy was done to define the target volume for radiotherapy treatment planning. All patients also underwent a second CT scan at mid treatment to assess any change in target volume and its position. Variations in Bladder volume and its position were compared using co-registration of the two scans.

Results: The mean post micturion volume on the initial planning scan and mid treatment scanwas 218.9 cm^3 (Standard Deviation = 84 cm^3) and 212.8cm^3(S.D=78cm^3)respectively. The difference was however not statistically significant (p=0.115). .Average bladder wall displacement was <0.6cm with wide confidence interval (95% CI =1.6-4.12cm) and was not statistically significant. (p= >0.05). Wall displacement was dependant on tumour location but not with age, sex and extent of the tumour. 6 patients (26%) however required to have replanning of treatment as the mid treatment volume was outside original planned field.

Conclusion: In our study, the bladder volume for majority of patients (74%), were adequately encompassed with the planned treatment fields during the whole radiotherapy course. Bladder wall replacements were variable in different

directions and anisotropic margin expansion may be more appropriate for target volume delineations .Advances in image guidance during radiotherapy will be beneficial in evaluating interfraction variability.

Keywords:Bladder carcinoma, radiotherapy, target volume, wall displacement.

0024.Siyambalapitiya,H.S.D.

Out patient thyroid remnant ablation using repeted low 1 131 activites (30mci) in patients with differentiated thyroid cancer experiences in Cancer unit Kandy.

MD Clinical Oncology – 2013   D 3013

Abstract

Introduction : Radioactive I^{131} is used to ablate the remaining thyroid tissue after the surgery for the patients who have differentiated thyroid cancer. This could be accomplished by either administrating empiric fixed dose or dosemeteric calculated dose. Fixed dose can be as high as l00 mCi to 150 mCi or as low as 30mCi. However, Cancer Unit in the Teaching Hospital Kandy used to ablate with 30 mCi of I^{131} as OPD procedure. But they give couple of such doses repeatedly to same patient in 3-6 month intervals.

Consultant oncologist decides the number of doses given to a particular patient at the the first consultation in caner unit.

Purpose : The purpose of our study is to assess the success rate of ablation in each number of doses given and see that there is a difference in ablation by giving three, four and five doses.

Method : This is a retrospective study of patients registered in the Cancer Unit in the Teaching Hospital Kandy between 1st of January 2008 and 31st December 2008 and patients werefollowed up to 31st December 2012. Each patient was given the number of doses prescribed by the oncologist and the success of ablation was assessed by the whole body scan and serum thyroglobulin levels at the and of scheduled number of doses.

Results : Total Number of patients studied was 85 and out of them 39 patients receive three doses, 14 patients had four doses while 33 patients received five doses. Among the patients who received three doses, 32 cases were successful in ablation and 7 cases were considered as unsuccessful. Study also revealed that 10 cases were successful and 3 cases were unsuccessful in patients who received four does. Among 33 patients who were treated with five doses, 27 cases were

successful and 9 cases were failed in ablation. The success rates are 82.1 per cent, 76.9 per cent and 81.2 per cent for the doses 3,4 and 5 respectively.

Conclusion : Using the Minitab statistical package, it is evident that, the Different number of doses varying form 3,4, and 5 have the similar success rate in remnant thyroid ablation in differentiated thyroid cancer.

Community Medicine

0025. Abeywickrama, T.D.

Knowledge on selected risk factors for non-communicable diseases and attitudes and practices related to physical activity among office workers in the Sethsiripaya office complex.

MSc. Community Medicine – 2012   **D3217**

Abstract

Noncommunicable diseases (NCDs) are rising rapidly in a majority of South East AsianRegion countries, including Sri Lanka. The overwhelming need for cost-effective prevention and control strategies in this region are being restrained by unavailability and the poor quality of data. Risk factors for noncommunicable diseases are prevailing among the most economically productive group; the labour force, in our country.

Therefore I wanted to describe the knowledge on selected risk factors for noncommunicable diseases and attitudes and practices related to physical activity among office workers in the government sector. A descriptive cross sectional study based on stratified sampling was carried out among 430 office workers in the Sethsiripaya office complex, during months of August and September, 2012.A developed self-administered questionnaire was pretested and administered by the investigator to gather information regarding knowledge on risk factors and attitudes regarding physical activity. Translated and validated form of the International Physical Activity Questionnaire was used to collect data on level of physical activity. Details on constraints for engaging in exercises were also collected.

Out of 402 respondents, females accounted for 71%. There were 232 officeworkers in '20 to 39 years' age category. There were 42 (10.4%) executive workers and non executives accounted for 89.6%.The overall knowledge on risk factors for NCDs was reasonable among the respondents.Knowledge on smoking was higher in participants with above A/L education (26%) than individuals educated up to or below A/L (13%) (p< 0.05). Knowledge on alcohol as a risk factor for NCDs was

'good' among 36% of responders with higher education level, while it was only 23% among the lower educational category. Knowledge on diet as a risk factor waslow in people <40 years (22%). Only 16% of older participants were in that category. Married people scored better than singles in the population.

Individuals with higher education had better scores (80.1%) for knowledge on physical activity as a risk factor for NCDs, than up to and below A/L group (67.5%). Subjects who had not been diagnosed with the main NCDs had more participants in 'good' and 'average' knowledge categories , than the subjects with diagnosed NCDs (p< 0.05).

Attitudes towards physical activity were in 'average' score among 71% of the sample, and 14% of them had a 'good' category score. A great majority has perceived that 'exercises would improve their health' and 'exercise would help to improve their fitness level'. A large number has disagreed on 'lack of skills' and 'lack of good health' as reasons for not engaging in physical activity current smokers were 9% among the study population, while 18.4% reported to be current alcohol drinkers. Low physical activity was prevailing among 46% of the office workers and highly active group was 29%.

The main constraints for engaging in exercises were family responsibilities, being too tired at the end of the day, being too busy with housework and limitation in time.

There was no significant association between knowledge on physical activity and attitudes regarding physical activity. Nor were there demonstrable associations between attitudes on physical activity and level of physical activity, or knowledge on physical activity and physical activity level did not demonstrate any association either.Office workers with a diagnosed disease did not show a better level of knowledge, attitudes and practices on NCDs, than their healthy counterparts. This should draw the attention of health care providers towards better provision of knowledge, encouraging positive attitudes and enhancing physical activity levels among patients.

Despite a fair amount of knowledge and reasonably good attitudes, these workers demonstrated high level of physical inactivity. Work site health promotion programmes aiming at government office workers are very useful in the current setting.

0026. **Agampodi, S.B.**

Epidemiology of leptospirosis among patients admitted to selected Tertiary Care Hospitals in three endemic districts in Sri Lanka, during the 2008 epidemic.

MD Community Medicine – 2010   **D 2986**

Abstract

Sri Lanka experienced the worst ever outbreak of leptospirosis in the year 2008. Despite its accurate prediction by the Epidemiological unit of Sri Lanka, the public health system was unable to prevent and control this outbreak mainly due to lack of understanding on local disease dynamics and paucity of data to explain these dynamics. The main objective of the present study was to describe the sero-epidemiology and determinants of leptospirosis among patients admitted to selected government hospitals in three endemic districts in Sri Lanka during the 2008 outbreak of leptospirosis.

The present study was carried out in Matale, Kegalle and Kandy general hospitals from September 2008 to January 2009. All consecutive patients admitted to medical wards of selected hospitals were screened for probable cases and those who fulfilled the inclusion criteria were invited to participate in the study. Confirmation of leptospirosis was carried out using the gold standard microscopic agglutination test with a broad panel of serovars. An age and sex matched control group was selected for the case-control study from the same wards. Variables for the study were selected using a conceptual hierarch of proximal, intermediate and distal level variables. An interviewer administered questionnaire and a clinical check list was used as data collection tools. A conditional logistic regression was used to analyze determinants of leptospirosis. Altogether 746 acute fever patients were screened to select 404 probable cases of leptospirosis; paired sera were obtained from 167 patients and 153 of them were treated as leptospirosis by treating physicians. Of the clinically suspected cases of leptospirosis, 77 (50.3%) were confirmed as having leptospirosis using gold standard test. The prevalent serogroups causing human leptospirosis in the study area were Pyrogenes (28.7%), Sejroe (18.8%), Javanica (11.5%) and Hebdomadis (11.5%). The commonest exposure event during the three weeks

prior to onset of symptoms was exposure in paddy fields, with 70.3% of cases and 38.1% of controls reporting this event. Cases were significantly more likely to be part time paddy field workers (55%) rather than traditional farmers, compared to controls where only 35.8% were part time workers but the majority were full time farmers. Exposure to paddy field (OR 3.29, 95% CI 1.93-5.62) and running water (OR 2.57, 95% CI 1.40-4.73) were the main environmental exposure risk factors identified in a multivariate model. Cattle handling (OR 7.15, 95% CI 3.02-16.92), dog handling (OR 2.4, 95% CI 1.15-5.01) and frequent sighting of rats in the home yard (OR 2.56, 95% CI 1.49- 4.41) were risk factors for contracting leptospirosis and frequent sighting of cats in the home yard showed a trend towards a protective effect (OR .603, 95% CI .338-1.074, p=0.08).

Dumping solid waste in their own garden (OR 2.09, 95% CI 1.34-3.27) was a risk factor, whereas using mainline water for drinking and other purposes (OR .551, 95% CI .307-.987) showed independent protective effects on leptospirosis. Farming or agriculture as an occupation was not significantly associated with leptospirosis in this study population.

This study confirmed that only half of the clinically suspected leptospirosis patients had the disease, a finding that strengthens the urgent need for laboratory diagnosis to detect concurrent outbreaks of leptospirosis and other common infectious diseases. Non- traditional paddy field workers with infrequent exposure pose a major challenge in defining a target group for primary prevention. The role of rodents and cattle as the main reservoirs of infecting *Leptospira spp.* for human disease within the study area was established and inclusion of rodent control in paddy fields and control of bovine leptospirosis are recommended as integrated approaches in leptospirosis control. Regularizing rural waste disposal procedures and improving access to safe water is essential for the future prevention of leptospirosis.

0027. Balasingham, S.J.

Prevalence of injury risk behavior among children aged 4 to 5 years in theGampaha district, its correlates and association with unintentional injuries.

MD Community Medicine – 2013 **D 3225**

Abstract

Background : Childhood unintentional injuries are a major cause of mortality, morbidity and disability among children in developed and developing countries. The natural curiosityof the growing child and the desire to experiment lead to the child engaging in behaviours that expose him/her to the risk of unintentional injuries. The prevention of unintentionainjuries among children requires a balance between education and supervision by the principal caregivers of the child, behaviour of the child and environmental hazards. Identification of children who engage in risky behaviour and factors that promote such behaviour is vital if unintentional injuries are to be prevented.

Objectives : To develop and validate a screening instrument to identify injury risk behaviour of children aged 4 to 5 years and to use the developed instrument to estimate the prevalence of injury risk behaviour among children aged 4 to 5 years in the Gampaha district.

To describe the correlates of injury risk behavior and to describe the association of injury risk behavior with unintentional injuries.

Methods :Phase I - A screening instrument was developed to describe injury risk behaviour of children aged 4 to 5 years associated with unintentional injuries based on literature review and consensus of experts. The screening instrument developed was named the Childhood Injury Risk Behaviour Assessment Tool (CIRBAT). Judgmental validity was examined and agreed upon by a panel of experts. Criterion validity was assessed by means of a hospital based descriptive cross sectional study. Information was obtained from principal caregivers of children aged 4 to 5 years who were brought to hospital following unintentional injuries and of children who were brought for treatment of minor illnesses or routine vaccination. Having experienced an unintentional injury (current and/or a past history within the previous six months) which required care from a health care service provider was considered the proxy gold

standard. The cut-off score on the CIRBAT that distinguished between high and low injury risk behaviour groups was determined using a Receiver Operator Characteristics (ROC) curve.

Phase II - A community based descriptive cross sectional study was carried out to determine the prevalence of injury risk behaviour and its correlates. A stratified two stage cluster sampling technique was used to identify a sample of 1240 children aged 4 to 5 years and caregiver pairs from the Gampaha district. Information on selected socioeconomic factors, caregiver related factors, child related factors, environmental factors and unintentional injuries suffered by the index child needing care at a health care facility during the previous six months was obtained. A checklist was used to observe home hazards for unintentional injuries among a subsample of households. Bivariate analysis followed by multiple logistic regression analysis was performed to determine independent effects of correlates of high injury risk behaviour.

Results :

Phase I

A cut off score of 64.5 was decided upon based on the ROC curve. to differentiate High Injury Risk Behaviour (HIRB) from Low Injury Risk Behaviour (LIRB). The sensitivity and specificity of the CIRBAT were 84.2% (95% CI 78.7 - 88.5) and 84.5% (95% CI 78.1 - 89.3) respectively. Two weeks test retest reliability and internal consistency were 0.86 and 0.88 respectively. The median CIRBAT score of children who suffered unintentional injuries was significantly higher than that of children who did not suffer any unintentional injury (p<0.001).

Phase II

The prevalence of HIRB determined using the CIRBAT was 861 per 1000 children (95% CI 841 - &79) aged 4 to 5 years over a period of six months.

Principal caregiver being educated only up to Grade ten (OR" 3.4, 95% CI 1.6-6.2), presence of a household member on long term drugs and medication (OR= 2.1, 95% CI 1.2-3.8), low proximity of the of the caregiver to the child during playtime (OR= 1.9, 95% CI 1.3-2.6) and the child suffering an unintentional injury needing care at a health care facility at least once during the previous six months (OR= 1.6, 95% CI 0.8-2.7) were found to be significant predictors of HIRB.

Four/more children in the family of the index child (OR= 0.4, 95% CI 0.2-0.8), father currently unemployed (OR= 0.2, 95% CI 0.06-0.4) and poor and moderate

levels of safety advice given by principal caregivers to the child in their care on prevention of poisoning/overdose (OR= 0.1, 95% CI 0.04-0.3) were found to be protective correlates significantly associated with HIRB.

Conclusions : The CIRBAT is a valid and reliable tool to identify HIRB. Eighty six percent of the children between 4 to 5 years were seen to have high injury risk behaviour.

Recommendations : Adequate supervision of children aged 4 to 5 years during their daily activities in a safe environment is important to prevent unintentional injuries among children.

Keywords: injury risk behaviour, correlates of injury risk behaviour, children aged 4 to 5 years, caregiver supervision, environmental hazards.

0028.   Basnayake, A.C.M.

Impact of rheumatoid arthritis on patients seeking care at specialist based rheumatologyclinics in the district of Colombo.
MD Community Medicine – 2013   D 3224

 Abstract

Rheumatoid arthritis (RA) being a chronic disabling disease causes physical, psychological, social and economic impacts for patients and their families. Physical impacts may be due to distressing symptoms of RA such as pain in joints and morning stiffness which last even more than an hour. It also leads to many radiographic changes in such as osteopenia, periarticular erosions, soft tissue swelling, loss of joint space and subluxation. In addition to them it also affects other systems causing extra articular manifestations of the disease and also many patients have independent comorbidies as well as conditions caused by treatment or disease itself. Rheumatoid arthritis is frequently associated with functional disability due to destructive nature of the disease and status of disease activity. Health related quality of life (HRQL) is often affected and leads to poor physical, psychological, social as well as economic impact.

The objectives of this study were to determine the health related impact among RA patients seeking care at the teaching hospitals in the district of Colombo and to describe economic impact for their households. In order to determine the

health related impact Arthritis Impact Measurement Scale 2 - SF (AIMS2-SF) was validated to the Sri Lankan context for the study setting.

The Sinhala version of the AIMS2-SF was validated in a consecutive sample of 146 RA patients seeking care at the Rheumatology and Rehabilitation Hospital, Ragama by establishing judgmental validity, construct validity as well as reliability. The Sinhala version of the AIMS2-SF was identified to be a valid and reliable instrument for the study setting with a reasonable convergent and discriminant validity, adequate internal consistency (Chronbach's alpha exceeding 0.7 except for symptom component which was 0.615) with an excellent test - retest reliability (exceeding 0.8 in all components). Convergent and discriminant validity was assessed using relevant subscales of Short Form - 36 questionnaire and showed good convergent validity (r= 0.442, 0.553and 0.825 for physical, symptom, affect components respectively) except for social interaction component (r= 0.264). These values were the highest in respective columns and rows of heteromethod block in MultiTrait-MultiMethod matrix except for social interaction component showing reasonable discriminant validity.

The study to determine impact was conducted in a stratified sample of 850 RA patients in four clinics at three teaching hospitals in Colombo. This study used self-administeredAIMS2-SF, two interviewer administered questionnaires and Disease Activity Score 28 (DAS 28) as study instruments. The overall response rate was 92.5%. The physical, symptom, affect, social and role components mean scores of the AIMS2-SF were 2.2±1.5, 3.8±2.4, 3.6±2.5, 3.6±2.1, 2.4±2.6 respectively indicating on an average reasonable health impacts in all dimensions. Prevalence of physical disability, quality of life in relation to symptoms, psychological disability, poor social interaction and working disability were 39.1%, 52.1%, 46.4%, 50.7%, 52.5% respectively. Mean disease activity score (DAS 28) was 3.6±1.2 in the present study and approximately 46% were with moderate disease activity at the time of the study.

Moderate to severe pain, age and presence of deformities significantly influenced the physical disability (p0.00l). Moderate to severe pain (p0.00l), education level; Ordinary Level (O/L) or higher (p=0.01) and presence of comorbidities (p<0.05) influence symptom score significantly. Psychological disability is significantly predicted by moderate to severe pain (p0.00l), presence of

deformities (p<0.01), education level; O/L or higher (p<0.01), extra articular manifestations of rheumatoid arthritis (p=0. 01) and among currently married (p=0.05). Social interaction among participants were significantly influenced by moderate to severe pain (p< 0.001), presence of deformities (p< 0.001), O/L or higher education (p< 0.001), duration of diagnosis more than 2 years(p< 0. 001) and for presence of comorbidities (p<0.01). Moderate to severe pain (p< 0.001), age (p< 0.001) and presence of extra articular manifestations (p<0.01) significantly predicted working disability.

This study shows that 2.4% of participants changed their jobs and 12% abandoned their jobs due to RA during the course of it. Proportion of direct cost in this study sample was approximately 96%. In this sample of patients treatment cost (costs for health professional visits, hospitalization and illness related costs like medicines, laboratory investigations, obtaining technical aids and other daily needs) due to disease such as domestic help) was approximately 79 % out of the total cost incurred by households. Travelling cost per clinic visit incurred by household was 14.2% out of the direct cost incurred. Seventy percent of households of study participants were with cost burden of more than ten which is considered as catastrophic and leads to increase poverty.

It is concluded that RA causes functional disability, poor health related quality of life and great economic impact among the Sri Lankan patients seeking care in government teaching hospitals in the district of Colombo. Many socio demographic and disease related factors predicted HRQL among them.

0029.Cader, M.

Learning difficulty among primary school children in the District of Kalutara : Prevalence, behavioural comorbidities, risk factors and maternal concerns.

MD Community Medicine - 2014   **D 3478**

Abstract

Learning Difficulty (LD) among primary school children has been identified as a global school health problem by health and educational authorities. Although, the problem has enormous social consequences at individual, family and society level, lack of research evidences has imposed a restriction in initiating strategic decisions for early identification and interventions in Sri Lanka. The present study was planned to gather basic research evidences which can be utilized to fill the existing gap in the field of LD in Sri Lanka.

The study was conducted among primary school children in grade three and grades four in the District of Kalutara to estimate the prevalence of LD, to identify behavioural comorbidities and risk factors of LD; and to describe maternal concerns towards parenting children with LD.

The study comprised four components. First component was development and validation of a screening instrument, Learning Difficulty Screening Questionnaire for Primary School Children [LDSQ (PSC)] in order to identify primary school children with LD. The second component included a descriptive cross sectional study to assess the prevalence of LD and to describe the behavioural comorbidities of LD among primary school children in grade three and grade four. The third was a case control study to identify selected risk factors of LD in a sample of children identified as cases and controls in the prevalence study, and the last was a qualitative study to describe maternal concerns towards parenting children A 36 item teacher administered screening instrument, LDSQ (PSC) with three subscales, reading, writing and math was developed involving multiple steps during item generation and item selection. Judgmental validity of the toolwas ensured during the process of development. Criterion validity was assessed against a gold standard which was the clinical judgment and separate cut off levels for each of the three subscales; reading (>45.5), writing (>41.5) and math (>50.0) were identified. Internal consistency reliability and the test retest reliability for subscales were found to be satisfactory.

Model identified male sex (OR=6.1;95% CI=2.6-14.2), poor wealth quintile (OR=2.6; 95% CI=1.1-6.1), maternal age at delivery <20 &>35years (OR=11.9; 95% CI=3.6-39.7), Premature Baby Unit (PBU) stay >3days (OR=6.3; 95% CI=1.6-25.5), child needs special attention during infancy (OR=3.1; 95% CI=1.2-8.0), motor development delay (OR=2.8; 95% CI=1.01-7.8), Child with Special Health Care Needs (OR=5.2; 95% CI=2.1-13.3), family with >5 members (OR=4.3; 95% CI=1.7-10.8), family history of LD (OR=3.3; 95% CI=1.1-9.6) and home with violent disagreement pattern (OR=4.2; 95% CI=1.4-12.5) as risk factors of LD.

The qualitative component which included focus group discussions with mothers of children with LD revealed that most of these mothers were dissatisfied with the present life. Discussions identified four major thematic areas imposing psychological distress among mothers of these children. Uncertainty about future expectations, difficulties experienced in parenting children with LD and with superadded behavioural problems, stressful events experienced in family

functioning and negative experiences gained during school involvement were the identified principal areas that were concerned by the mothers.

It was found that 18% of primary school children in Sinhala medium government schools in the District of Kalutara are having one or more type of LD. Often LD present as overlapping problems and significantly associated with behavioural problems. Risk factors of LD are multifactorial with biological as well as socioeconomic origin. Mothers of children with LD are concerned due to different reasons related to parenting of children with LD.

It was recommended that the Ministry of Health and Ministry of Education should work together to launch a comprehensive screening program at primary grade level and to identify high risk children at preschool level. Incorporation of teacher training programmes, mental health services, parent education programmes and multisensorial teaching methods would also help to minimize the social and psychological consequences at individual level as well as family level.

Keywords : Learning Difficulty, Primary School Children , LDSQ (PSC).

0030.   **Chulasiri, M.P.P.U.**

Prevalence and associated factors of smoking among adult males in Colombo District and cost of treatment of lung cancer attributed to smoking.

MD Community Medicine – 2014   D 3481

Abstract

Introduction and objectives : Tobacco smoking is a risk factor for six of the eight leading causes of death in the world including lung cancer. Both developed and developing countries spend a large proportion of resources to manage the lung cancer, which could have been prevented if smoking was prevented. No recent studies have been conducted in Sri Lanka to measure the extent of smoking problem and assess the burden of lung cancer attributed to smoking.

The present study was designed with the objectives of determining the prevalence and factors associated with smoking among adult males aged 20-59 years in Colombo district. It also aimed to estimate the cost of treatment of lung cancer attributed to smoking, among male lung cancer patients in Colombo district.

Methodology : The study consisted of three components: A community based cross-sectional study, a hospital based case control study and a hospital based cost estimation study.

The descriptive cross sectional study design was used to determine the prevalence of smoking and to identify the factors associated with smoking among adult males aged 20-59 years. A representative sample of 1200 adult males selected using multistage cluster sampling technique served as the study population. Categorization of smoking was based on the definition of smoking offered by the Centers for Disease Control (CDC) and Prevention identification of factors associated with smoking was based on the PRECEDE model. This model recognizes that health behaviors have multiple factors, which must be evaluated in order to assure appropriate intervention. PRECEDE is an acronym for Predisposing, Reinforcing, Enabling. Constructs in Educational Diagnosis and Evaluation. Information on status of smoking and factors associated with smoking were assessed using an interviewer-administered questionnaire. Data entry was done by Epidata software (v 3.1) and analysis done by SPSS Version 20. Analysis was performed to estimate prevalence of different categories of smokers a disaggregated by socio demographic profile and presence of a chronic diseases with 95% Confidence intervals. In assessing factors associated with smoking, data was analysed based on PRECEDE model.

A case control study was carried out among 62 newly diagnosed male lung cancer patients originated from the district of Colombo and presented to National Cancer Institute- Maharagama. Four controls per case were randomly selected from the same Grama Niladhari area as the participants matched for the age of the cases within 10 years. Cases were recruited at their initial clinic visit to CIM. Controls were recruited in a household survey. The selected controls were medically examined to confirm, that they do not have lung cancer. Information on smoking, other potential risk factors and confounders were obtained using an interviewer-administered questionnaire administered by trained data collectors with a medical background. Univariate analysis and conditional Logistic regression were performed to assess the risk factors of lung cancer.

Disease-specific cost estimation approach to the treatment cost of lung cancer that can be attributable to smoking was done using the 91 records of persons who were registered in the year of 2008 in CIM. Using the scenario building technique all items that contributed to the cost of management of lung cancer were listed and cost was estimated. The 62 lung cancer patients who served as the cases in the case control study participated in the household cost estimation. The relevant information was obtained using two interviewer-administered questionnaires.

Results : The prevalence of ever smoking among adult males in Colombo district was 54.1% (95% CI 51.0-57.2). Prevalence of current smokers was 36.5% (95% CI 33.8%-39.3%) while prevalence of former smokers was 17.6% (95% CI 15.3%-19.9%). Disaggregating the current smokers into current daily smokers and current non-daily smokers showed that the prevalence of current daily smokers was 29.8% (95% CI 27.2%-32.6%) while the prevalence of current non-daily smokers was 6.7% (95% CI 5.3%-8.3%). Prevalence of former daily smokers and former non-daily smokers were 14% (95% CI 12.1%-16.2%) and 3.6% (95% CI 2.6%-4.8%), respectively.

Among the ever smokers, prevalence of smoking was higher among age of who were in the age group of 50-59 years of age (20.3%), Sinhala (46.2%) Buddhists (43.9%). educated level G.C.E. O/L or less (17.9%), married (43.5%). doing a job (44.4%) and earns less than Rs. 40,000.00 per month (38.6%). The prevalence of smoking was higher among the ever smokers, who were hypertensive (0.06%) and having Diabetes Mellitus (0.07%).

Manufactured Cigarette was found to be by far the most popular form of smoking among the study population. Prevalence of current bidi smoking was 15.7% and 12.7% reported former bidi smoking.

The mean number of cigarettes smoked by the current daily smokers per day (7.7. SD=6.6) was significantly lower than the mean number that had been smoked per day by the former daily smokers (12.92. SD=15.5). Mean age at initiation of smoking for current smokers was 20 years and for former smokers was 19 years. Sixty point three percent of current smokers had attempted to quit smoking at least once in their life with an average of 3.2 quit attempts.

The prevalence of secondhand smoking among adult males was 26.8% ((5% CI 24.2%- 29.4%). Among them 10.3% (8.7%- 12.0%) have exposed inside the home, 13.5% (11.6%- 15.5%) exposed in a vehicle and 8.2% (6.7%-9.8%) exposed to secondhand smoking inside a closed public place.

In the present study, possessing unfavorable attitudes on smoking was found to be a significant predisposing factor associated with initiation and maintenance of smoking (p= <0.001).

History of smoking by the father (p<0.001), having a family member smoking in the presence of the respondent when the respondent was young (p= 0.004). having close friend who smoked regularly when the respondent was young (p< 0.001), having a close friend offering cigarette/ bidi/other tobacco products to the respondent when

the respondent was young (p<0.001) and getting frequently invitations to parties where friends regularly smoke when the respondent was young (p< 0.001) were factors that were found to reinforce smoking habit of adult males.

Availability and accessibility to tobacco products were considered as the factors enabling smoking. Ninety-two percent of the ever smokers who started smoking at the age between 20 to 30 years of age have bought the tobacco products by themselves. Some have received tobacco products by their friends and a little percentage have received by one of the family members. Thirteen point four percent have bought the tobacco products as packets and 91.4% (540) have bought as single or multiple sticks at a time. A further 12% had received the cigarettes free of charge. Most of the ever smokers (93.7%) who started smoking at the age between 20 to 30 years of age have said that there was a place to buy tobacco products near their house/ school/ work station. Most of the shops had cigarettes (98.7%) and bidi (72.6%) available. Majority have said that they could reach a shop to buy a tobacco product within 10 minutes when they were young.

In multivariate logistic regression, four variables were identified as significant risk factors for lung cancer among the males, after being adjusted for the confounding. When the effects of confounding variables were controlled, ever smokers were found to be at a 10.74 times (3.54-32.59) higher risk of lung cancer compared to never smokers. An educational level of passing GCE O/L or less (OR= 5.61 (2.37-13.28). having been ever exposed to X rays (OR= 2.81 (1.14-6.94) and having a family history of any cancer (OR= 2.83 (1.09-7.30). were the other risk factors for lung cancer among males adjusted for confounding. Being a current alcohol drinker (OR= 0.20 (0.08-0.48) was found to be a protective factor of lung cancers among males.

The present study data estimated that PAR% of smoking on lung cancer on adult males as 84.04%. This confirms that if smoking among males were prevented. 84% of lung cancers cases could be prevented.

Total treatment cost of lung cancer patient in Colombo district was Rs. 407808.70. including systemic cost of Rs. 169181.50 and household cost of Rs. 238627.30. Therefore, treatment cost of lung cancer attributed to smoking, among male lung cancer patients in Colombo district was Rs. 43.183.026.40. If smoking can be prevented among adult males in Colombo district, this amount of money could have been averted annually for other Health Programs.

Conclusion : The study concluded that the prevalence of ever smoking among adult males in Colombo district was high. Presence of unfavourable attitudes and several enabling and reinforcing factors have been identified as important for initiation and maintenance of smoking. Approximately one fourth of the adult males have been exposed to second hand smoking. Ever smoker has a 10.74 times higher risk of lung cancer compared to never smoker when adjusted for confounding factorsand exposure to second hand smoking, having lesser education, exposure to X ray and having family history of anycancer have been found as risk factors for developing lung cancer. Population attributable risk percent (PAR %) of smoking for lung cancer was 84.04% and if smoking had prevented. Rs. 43,183.026.40 a year would have been averted to any other Health Programs.

Recommendation : It is recommended that the high prevalence and strength of smoking in the country should be brought to the notice of the relevant authorities as evidence of poor success of tobacco preventive initiatives and take into account the identified predisposing, reinforcing and enabling factors of smoking. Strengthening the already available measures and formulating new policies to minimize second hand smoking are needed to be focused more. Averting the high treatment cost of lung cancer by preventing smoking should be made use in public awareness programmes and in efforts against tobacco promotional activities.

Keywords: Tobacco smoking, Lung cancer, Treatment cost, Odds ratio

0031.Dabhrera, T.M.E.

The use of a community-based organization to change lifestyle characteristics related to non communicable diseases : A community –based intervention study among 25 – 60 year old residents of Ragama MOH area.

MD Community Medicine – 2014   D 3585

Abstract

Sri Lanka is currently experiencing demographic and epidemiological transition and this is reflected in the increase in the incidence of non-communicable diseases (NCDs). The common risk factors linked to NCDs, mainly CVD, stroke, diabetes and hypertension are related to lifestyle. These include physical inactive.

ity, poor nutrition, harmful use of alcohol and tobacco use and all these are modifiable when addressed in an integrated fashion.

Objectives: The objective of the present study was to evaluate the effectiveness of a multifaceted intervention delivered through a community based organization to change lifestyle and anthropometric characteristics related to NCDs among the 25-60 year old population in Ragama MOH division.

Study design: A cluster randomized controlled intervention study was designed for the purpose. The study consisted of 3 phases and was carried out in Ragama MOH area in the Western Province, which was randomized into intervention and control areas and an additional control population selected from Wennappuwa MOH area in the North Western Province.

Data collection: A total of 660 individuals were included in the study. Baseline data was collected from 213 individuals (in 10 clusters) from the intervention and 230 (in 11 clusters) from control areas from Ragama and 217(in 10 clusters) from Wennappuwa.

Results: Just over 55% of the participants were females. Nearly 23% of the study population was categorized in the low physical activity level. There were more males in the low physical activity category.

According to the WHO cut off values for BMI approximately 50% of females were overweight or obese in Ragama and Wennappuwa.

Of the males 38.2% were current smokers. Nearly 20% smoke more than ten cigarettes daily. There was a statistically significant association between green leaves, vegetables and fruit increase in the number of respondents consuming those food items more than one day per week.

A lifestyle modification programme targeting behaviour change in relation to diet, physical activity, smoking and alcohol use was designed using Social Marketing concepts. The programme was implemented through funeral societies in the intervention area for a period o six months.

Effectiveness was evaluated in relation to the process and outcome of the intervention. *A* change in diet, level of physical activity, smoking, alcohol use and change in the anthropometric measurements was assessed in the outcome evaluation.

Community members were amenable to the implementation of a community based intervention programme to reduce NCDs in the community through Funeral Societies. Culturally appropriate exercises were well received by the community members.

There was a statistically significant increase in the frequency of consumption of green leaves in the intervention area compared to control areas following the intervention for six months.

The number of respondents who consumed green leaves, fruits and vegetables more than one day per week increased significantly from the baseline number in the intervention area following the intervention.

Although there was no statistically significant difference in change in the means of total MET values in walking, cycling and leisure activities between the intervention and control groups, the reduction in mean sitting time following the intervention was statistically significant.

There was no statistically significant change in BMI, smoking and alcohol use following the intervention.

Process evaluation was carried out by assessing the dose, fidelity and coverage. The dose and fidelity of the intervention was high in majority of the activities conducted in the intervention. Coverage was high (109% for the first session) for total attendance while low coverage (37% for the first session) was seen in the attendance of respondents from the baseline survey.

Conclusion and recommendation: Use of Funeral Societies to deliver a lifestyle modification programme in the community should be conducted with long term planning and designed to reach the community in uniform manner considering the results from the outcome and process evaluation in the present study.

Keywords: **Non Communicable Diseases, community-based organization, Funeral Society lifestyle modification, outcome evaluation, process evaluation,**

0032. De. Silva, J.P.

The prevalence of unhealthy behavior patterns among men in an economicallyactive age group and determination of risk factors (correlates) for such behavior patterns in the district of Kalutara.

MD Community Medicine - 2014   D 3483

Abstract

Unhealthy behaviors lead to the causation of many diseases including Non Communicable Diseases (NCDs). Common behavioral risk factors that lead to NCDs include unhealthy dietary practices, inadequate exercises, smoking and excessive consumption of alcohol. NCDs and their behavioral risk factors are commoner among males (Kasturiratne, et al., 2005). Unhealthy behaviors among men affect the

individual, family and the society in a negative way. In the absence of a national program to determine the prevalence of unhealthy behaviors and associated factors among economically active men the depth of the issue remains unknown.

The objective of the survey is to identify and describe common unhealthy behaviors, related anger of selected unhealthy behaviors and certain associated/ risk factors for such unhealthy behaviors among economically active men in the district of Kalutara.

The study consists of three components. In component I, In Depth Interviews (IDI) were carried out among Conflict Resolution Committee officers, Administrative Officers at village level appointed by the divisional secretariat and Public Health Midwives in the district of Kalutara with a view to identify unhealthy behaviors, related anger of selected unhealthy behaviors and associated socio -demographic factors among economically active men in the district. Following IDIs an interviewer administered questionnaire was formulated. In component II, LAQ was administered to 5402 men in the age group of 35 -50 years who are permanently living in a medical Officer of Health (MOH) area (Ingiriya) in the district of Kalutara. Socio - behavioral mapping of 5402 men was carried out simultaneously using GIS equipment. In component III, a community survey was conducted in the district of Kalutara using a sample of 646 men in 15 clusters (12 rural areas, 2 urban areas and one estate area) with 43 -44 men in each cluster. Above sample was collected using multistage cluster sampling technique. IAQ was administered to 646 men in an economically active age group.

Following IDIs, transcripts were analyzed carefully to identify common unhealthy behaviors, related anger of selected unhealthy behaviors and associated / risk factors for such unhealthy behaviors. Thereafter socio - behavioral mapping survey of unhealthy behaviors, was carried out and data collected using IAQ were analyzed using SPSS software and GIS data were analyzed using ARC GIS software. Geographical locations and clustering of unhealthy behaviors and certain possible associated factors were visualized using geographical maps. Further analysis in geographical areas where the density of unhealthy behaviors are higher were carried out using data collected through the IAQ. Kernel mapping technique in ARC GIS software was used to visualize areas where clustering of unhealthy behaviors were seen in Ingiriya Medical Officer of Health area. Following the community survey, unhealthy behaviors, related angry mental states of a few unhealthy behaviors and certain associated factors were analyzed and described using statistical tests such as Chi Square test and binary logistic regression.

Following IDIs it was revealed that alcoholconsumption, smoking, illegal drug abuse, unhealthy dietary habits, violent behavior in an angry mental state (towards family members, those at work place and neighbors) and deliberate self-harm are the common unhealthy behaviors among economically active men in the district of Kalutara.lt was revealed following socio behavioral mapping survey that current alcohol consumers have clustered in Handapangoda, Eduragala, Nimalagama, Rathmalgoda, Imagira and few other GramaNiladari (GN) areas. Current smokers have clustered in Rathmalgoda, Wagawatta, Nimalagama, Eduragala, Ingiriya North and Kurana GN areas. Illegal drug addicts were highest in Maputugala and Rathmalgoda West GN areas. All food types studied were found to be clustering in Ingiriya GN area. Clustering of Roti food consumption at unhealthy levels was seen in Raigamwatta GN area in which estate Tamils live. Deliberate self-harm is clustering in GN divisions Maputugala, Arakawila and Rathmalgoda areas. Angry behavior towards family members was found to be clustering in Handapangoda, Ingiriya, Rathmalgoda and Batugampola GN areas. Handangoda area has clusters of both 'angry behavior towards people at work place' and 'angry behavior due to land disputes'. Angry behavior at work place is also clustering in Poruwadanda east GN division where 28 factories could be seen.

Results of the community survey in Kalutara showed that the overall current alcohol consumption among men between 35 -50 years who live in the district of Kalutara to be 46.9 %. Significant associations could be observed at $p < 0.05$ for sector (highest in estate sector), ethnicity (highest among Tamils), religion (highest among Hindus), level of education (highest among those educated up to grade 5), monthly income, (highest among those with a monthly income of less than 10,000 rupees) and employment (highest among unskilled laborers) with current alcohol consumption. The prevalence of current smokers among men between 35 -50 years who live in the district of Kalutara was observed to be 33.9 %. Current smoking behavior is significantly associated at $p < 0.05$ with sector (highest in estate sector), ethnicity (highest among Tamils), religion (highest among Christians), profession (highest among unskilled laborers) and nature of employment (higher among those employed permanently) with current smoking. Highest prevalence of illegal drug abuse was found among those living in rural areas. Both the community survey and the social mapping survey showed the prevalence of illegal drug abuse to be 2.3%. The community survey revealed that 84.4 % of the men are currently consuming either one or more foods at unhealthy levels. Among those live in urban areas about 3/5 of the men consume processed meat at unhealthy levels.

Community survey showed that forty four percent of the men have admitted that they had angry behavior towards family members during last one week. Among those from urban areas 3/4 have developed anger towards people at work place. There is a significant association between sector and self-reported anger towards people at work place with men in urban sector having the highest prevalence of anger towards people at work place. Also it was revealed that one out of eight male who are in the age group of 35 -50 years have reported anger due to land disputes. The percentage of men who have attempted deliberate self-harm during last one year has been 4.2% with the relatively highest percentage of men who have attempted deliberate self-harm being reported from rural areas (4.9%). The highest percentage of men who attempted deliberate self-harm during last one year belonged to those with a diploma or a degree. Commonest method used by those attempted deliberate self-harm has been ingestion of pesticides.

Following the socio -behavioral mapping survey, it could be concluded that unhealthy behaviors are clustering in certain geographical areas which cannot be attributed to higher population densities in such areas. Men who live in Ingiriya GN area could be deemed as most vulnerable to unhealthy dietary habits among men. Roti consumption at unhealthy levels was found to be highest in estate areas where the majority population is Tamil. Poruwadanda GN division was found to be an area where there are many factories and that the men who live there have been most vulnerable to angry behavior towards co -workers. It was also seen that about 75% of men who live in urban areas had angry behavior towards coworkers.

It could be concluded following the community survey, that the prevalence of unhealthy behaviors such as alcohol consumption and smoking is highest among estate Tamils without proper education. Alcohol consumption was common among poor whereas the highest prevalence of smoking could be seen among those men receiving a monthly income of more than 50,000 rupees. The prevalence of illegal drug abuse was highest among those living in rural areas which indicate that this unhealthy behavior has spread to rural areas in Kalutara district. Unhealthy food habits such as processed meat consumption at unhealthy levels has been highest among those in urban areas. It was also found that more than 80% of men consume either one or more food types that were analyzed at unhealthy levels. Deliberate self-harm has been commoner among men who live in rural areas and the commonest mode used by those who attempted deliberate self-harm has been ingestion of pesticides. It can also be concluded that education has not affected positively towards reducing this unhealthy behavior.

Following the survey, it could be concluded that those men who have a relatively lower income, who have not had proper education and who consume alcohol are more vulnerable to angry behavior at home. It was also revealed that those who are angry at home are more prone to angry behavior at work place. It was seen that estate Tamils are more vulnerable to angry behaviors due to land disputes.

It is recommended that further studies be carried out to analyze why certain unhealthy behaviors have clustered in certain geographical locations and take remedial action with a view to promote healthy behaviors among economically active men. It is also recommended that factors that are significantly associated with unhealthy behaviors be given priority in implementing preventive measures and conduct a similar study in future to see that the prevalence of unhealthy behaviors have reduced.

0033.De Silva , L.S.D.

Knowledge attitudes and practices on responsible dog ownership, knowledge on rabies &treatment for dog bites and factors associated among persons aged 20 to 59 years in Medical Officer of Health area, Maharagama.

MSc. Community Medicine- 2015   D 3608

Abstract

Rabies is a zoonotic disease which is endemic in Sri Lanka. The main vector of human rabies is the dog. The county invests huge portion of its annual health budge to prevent this deadly disease. Rabies is fatal when acquired, yet it can be prevented by adapting appropriate preventive methods. Some of these are promotion of responsible dog ownership (RDO) in the community and post exposure therapy (PET). The concept of RDO addresses the protection of rights of the dog itself, that of the owners as well as the entire community. The treatment following dog bite has an important place in prevention of human rabies. The treatment consists of provision of first aid and the PET.

Objective : To describe knowledge, attitude and practice on RDO, knowledge on human rabies and treatment following dog bites (TFDB) and their associated factors among persons aged 20-59 years in MOH area Maharagama

Method:A community based cross sectional study was carried out among a random sample of 340 participants, aged 20-59 years in the MOH area Maharagama by using probability proportionate to the size cluster sampling technique. Data were collected by

using a pre tested interviewer administered questionnaire by two trained pre intern doctors and analyzed using SPSS software.

Results: Response rate was 94.7% (322/340). The mean age was 38.1 years (SD=11.2 years).Of the participants, 94% were Sinhalese (n=303): 87% Buddhists (n=280); 74.2% married (n=239); 64.6% employed (n=208); 82% lived in own house (n=264) with a median income of Rs. 38,000.00 (IQR=Rs. 38,000/=). Only 11.5% (n=37) were dog owners. Overall knowledge on RDO was good among 69.3% (n=223) with: > 50% knew about rabies vaccine and breeding control but < 40% knew about parvo & distemper vaccines. Overall attitudes onRDO were favourable in 73.3% (n=236) with: >95% on dog vaccination against rabies but <32% on not allowing of free roaming. >60% had practiced: immunization; de worming but < 40% had practiced breeding control. Overall knowledge on rabies was good in 64.9%, (n=209): 70.8% (n=228) knew route of entry of virus but < 45% knew cat & bat are also reservoirs. Overall knowledge on TFDB was good in 61.2 %,(n=197):89.6%,(n=288) on first aid but < 30% knew importance of noticing offending dog's health , observability and what to do if dog is suspected to have rabies.

Buddhists (p=0.03), education >0/L (p<0.001); having income>Rs.38, 000. (p<0.001), being employed (p<0.001) and owning dog (p<0.001) .The factors associated with favourable attitudes on RDO: age 20-39 years (p<0.001); Sinhalese (p=0.04); Buddhists (p=0.01); being unmarried (p=0.01); education > O/L (p=0.02). The factors associated with practices of RDO were: education >0/L with correct disposal of dog's dung (p<0.01) and putting up a collar (p<0.01); being unmarried with dog's breeding control (p=0.02); being employed with avoidance of dog being a nuisance to public (p=0.04).

The factors associated with good knowledge on rabies were: Sinhala (p=0.01); educated > O/L (p<0.001), being employed (p<0.001), income >Rs. 38,000.00 (p<0.001);owning dog (p<0.001).The factors associated with knowledge on TFDB were: ever-married(p=0.02); educated > O/L (p<0.001);income >Rs.38, 000.00 (p<0.001); being employed (p<0.001); owning a dog (p<0.001).

Conclusions and Recommendations : There are gaps in knowledge, attitudes and practices with regard to vaccine preventable diseases of dogs, control of breeding, prevention of free roaming of dogs, knowledge on reservoirs of rabies and all the components of PET. Therefore health education should be done to cover these aspects targeting identified groups.

Keywords :Rabies, responsible dog ownership, PET

0034.De.Silva,G.P.V.G

The pattern and factors influencing the attendance to tuition classes and its association with psychological distress and selected social health issues among grade 13 school children in educational division, Moratuwa.

MSc. Community Medicine - 2013   D 3392

Abstract

Introduction : Despite the free education provided by Sri Lankan government, obtaining private tuition has become an obsession among students these days. It goes parallel to formal education and nourished by the exam-oriented educational system. Students spend a significant amount of time, energy and money obtaining tuition. Gaining a good knowledge about the extent and the influencing factors of tuition attendance is important for planners and policy makers in `order to improve the existing education system. Since school children are widely involved identifying the health consequences of tuition attendance has become a timely necessity.

Objective : To describe the pattern and factors influencing tuition attendance and describe its association with psychological distress and selected social health issues among grade 13 school children in Educational Division, Moratuwa.

Methods: A cross sectional descriptive study was carried out among grade 13 school children of Educational Division, Moratuwa. The whole population of 763 students were studied. A self-administered questionnaire was used for data collection.

Results : Six hundred and sixty eight students participated with a response rate of 87.5 %. A proportion of 96.7% students obtain tuition for at least one subject and 66 % obtain tuition for all three main subjects. Mean number of hours spent on tuition during a week was 13.23(SD = 6.85).

A proportion of 53.9% attended tuition in three or more days per week. Mean number of hours spent at tuition during a week is highest among Physical sciences students(16.78, SD=6.78) and lowest among Arts students (10.25, SD= 6.93). A proportion of 31.1% had attended tuition during the school hours at least once. Student factors like subject stream, educational target, obtaining tuition with the purpose of passing A/L exam; good parental support on education; tuition factors like completion

of syllabus, discussion of past papers and good teaching methods was found to be significantly associated with the level of tuition attendance. Level of tuition attendance had no significant association with the psychological distress and the selected social health issues.

Conclusions and Recommendations : Current tuition attendance was very high in the study group. Certain inter-relating factors centered on passing the A/L examination ware associated with the level of tuition attendance. A proportion of 43.1 % of study group were psychologically distressed. However psychological distress was not associated with the level of tuition attendance. Tuition attendance was not associated with the selected social health issues assessed in this study. A proper mechanism should be established to standardize and regulate the services of private tuition system as the tuition attendance has become extensive. Macro-level correlates of tuition attendance such as socio, cultural and policy level factors need be studied. Interventions should be taken at school level to optimize the mental well-being of students.

Available health services in the region should be strengthened to cater the mental health needs of students. A good public-private partnership between school and tuition education systems should be built to minimize the wasting of resources and to provide more benefits to the students. All the factors that are related to tuition need to be explored by means of in-depth qualitative studies.

Keywords : Tuition, Advanced Level examination, Psychological distress

0035.De Silva, Y.I.P.

Study on social, demographic and behavioral characteristics of motor cycle accident victims, presented to the accident service of National Hospital of Sri Lanka, and their mechanism of injury, injury pattern and outcome.
MSc. Community Medicine – 2012   D2965
Abstract

Road traffic accidents are major but neglected public health problem, requiring concerted efforts for effective and sustainable prevention. In developing countries like Sri Lanka, motor cycle is not only the major contributor to the vehicle fleet but is the major reason for road traffic accidents.

An institutional based descriptive cross sectional study was carried out in the accident service of National Hospital of Sri Lanka, to describe socio-demographic and behavioral

characteristics of motor cycle accident victims, and their mechanism of injury, injury pattern and out come and selected rider factors associated with them.

A convenient sample of motor-cycle accident victims admitted to the accident service of NHSL, fulfilling the eligibility criteria, was recruited until the required sample size of 384 subjects is achieved, during the period of three months.

A pre-tested interviewer administered questionnaire was used to collect data from motor cycle accident victims. Well trained interviewers conducted data collection under the supervision of the principal investigator. All participants were followed to obtain outcome of the injury till discharge, transfer, death or for maximum of one month period. Data on injury pattern and outcomes of accident were collected by the interviewers by data extraction from bed head tickets.

Data analysis was done by the principal investigator by using the SPSS version 18.0. Socio demographic and behavioral factors associated with motor cycle accident victims were analyzed for statistical significance using chi-square test and a probability of less than 0.05 is considered as the statistically significant level.

From the total study population of motor cycle accident victims, majority (67.7%) were motor cycle riders, where the rest of them were pedestrians (18.8%) and pillion riders (13.5%) respectively.

Approximately half of the victims had passed GCE (O/L) and 36.7% of victims had average monthly income of Rs 11,000 - 20,000 . As regards to the behavior of victim at the time of accident, 12.3% were alcohol users, 90% of riders were wearing helmet while 6.5% of them were using mobile phones. Majority (51.2%) of them had average riding speed of 40 to 50 km/hour and most of them (87.3%) possessed a valid driving license.Motor cycle accidents had taken place under normal environmental conditions including straight roads (65%), in dry conditions (86.1%), without any abnormality at the scene of the accident (71.1%), during the day time with good day light (68.5%).Half of the victims had fractures, while 38.5% had only minor injuries. Main site of the injury was lower limbs (38.4%).

Main out come of the motor cycle accident victims was full recovery (50.8%) where 32% were stayed 2 to 5 days duration in the hospital. The fatality rate was 0.5 per 100 motor cycle accident victims during study period.

High education level was associated with rider habits of alcohol consumption, mobile phone usage, helmet wearing and low speed riding (p<0.05). Advancing age was significantly associated with low speed riding (p< 0.05). Compared to non helmet wearers low percentage of head injury was sustained with helmet wearers (p<0.05). The percentage of poor recovery sustained in alcohol consumers was statistically significant at p<0.05 level.

According to the findings, it is recommended to strengthen the police surveillance activities on helmet wearing and mobile phone usage while riding and to conduct well targeted health promotion programs on educated people for prevention of alcohol usage and mobile phone usage while riding.

0036.Dheerasinghe, D.S.A.F.

Prevalence of depression anxiety and stress among women aged 40 to 55 years according to menopausal status & risk factors of depression in menopausal women in the District of Colombo Sri Lanka.

MD Community Medicine - 2014   **D 3477**

Abstract

The middle age, which is defined as 40 to 60 years, is a time of many changes for women with physical, psychological and social importance. For most women, menopause occurs during this midlife, which might also cause physical health problems (e.g. menopausal symptoms, atrophy of urogenital tracts, osteoporosis etc.); psychological problems (e.g. presence of depressive, anxiety, or stress symptoms); sexual functioning difficulties (due to changes such as dryness of vagina and change in sexual desire and satisfaction); and changes in relationships. Hence, assessment of common emotional states such as depression, anxiety and stress during this midlife is a priority area for researchers.

Therefore, the current study was embarked upon to translate and validate the DASS-21 for women aged 40-55 years to assess the prevalence of depression, anxiety and stress according to menopausal status; to assess associated factors of anxiety and stress among menopausal women; and to identify risk factors of depression among menopausal women of the same age group in the District of Colombo.

The study consisted of two components. Component one translated and validated DASS-21 to assess depression, anxiety and stress among women aged 40-55 years. The DASS-

21 Sinhala was validated to be used as a screening tool to distinguish women with depression/anxiety/stress from women without depression/anxiety/stress. An independent sample comprising 35 cases from each category was selected from the psychiatric clinic of the Colombo South Teaching Hospital and 49 controls selected from the community and cut off values were obtained for each category using ROC curves. Cut off values, sensitivity and specificity, and positive predictive values (PPV) and negative predictive values (NPV) are as follows:

Depression scale - cut off 17, sensitivity of 97.1%, specificity of 97.96%, PPV 97.9%, NPV 97.2%;Anxiety scale - cut off 16, sensitivity of 97.1%, specificity of 97.96%, PPV 97.9%, NPV 97.2%;Stress scale - cut off 20, sensitivity of 97.1%, specificity of 97.96%, PPV 97.9%, NPV 97.2%.The second component of the study, the prevalence of depression, anxiety or stress among women aged 40-55 years was determined in the District of Colombo using the validated DASS-21 Sinhala. A sample of 1553 women aged 40-55 years was selected using multistage, stratified cluster sampling. The adjusted prevalence of depression, anxiety and stress among these women were 19.7%, 15.7% and 19.8% respectively. A stepwise increase in prevalence of depression was observed according to premenopausal, perimenopausal and postmenopausal status (11.5%, 19.9%, and 25.5% respectively). The prevalence of anxiety was high among perimenopausal women (17.4%) compared to premenopausal (14.5%) and postmenopausal women (14.9%). Further, prevalence of stress was observed to increase from 15.4% in premenopausal to 18.9% in perimenopausal and 23.7% in postmenopausal women.

The presence of menopausal symptoms; having a high score for dysfunctional coping strategies; a negative attitude towards menopause; and poor quality of life in relation to social relationships, were revealed as common associated factors of both anxiety and stress.

Further, an extended family structure; the presence of one or more stressful life events in the past 5 years; low perceived social support in relation to the number of people; presence of premenstrual symptoms in the past; having a past history of a psychiatry disorder; and perceived lower quality of life in relation to physical health, were identified as other associated factors of anxiety.

In addition, significant associations were observed between stress and religion, stress and higher educational level (O/L passed and above), and stress and low social support, in relation to their satisfaction of the social support they received.

The third subcomponent of the component two was a case control study, with confirmed cases of depression (137) and unmatched controls with no depression (137) selected

from the prevalence study in the District of Colombo. Bivariate analysis followed by logistic regression analysis was performed to identify the independent risk factors for depression adjusted for confounding effect in the logistic regression mode logistic regression analysis identified nuclear family structure (OR=2.90, 95% CI: 1.51-5.56), presence of high score for menopausal symptoms (OR=2.23, 95% CI: 1.34- 4.01), presence of premenstrual symptoms in the past (OR= 2.01; 95% CI: 1.14-3.53), less number of people available for social support (OR=2.03; 95% CI: 1.16-3.54), and presence of stressful life events (OR=2.13; 95% CI: 1.15-3.92) as risk factors of depression among menopausal women aged 40 - 55 years.

The research concluded that DASS-21 Sinhala is a valid and reliable tool to assess depression/ anxiety/stress among middle aged women. Depression, anxiety and stress could be considered as an emerging psychological heath problem, as nearly one fifth of women in the study population had the above psychological problems. The risk factors specific for depression among menopausal women are mainly related to the reproductive system (presence of premenstrual symptoms and presence of menopausal symptoms), stressful life events and social support available. Measures should be taken to improve the psychological wellbeing of middle aged women by making available programmes at community level. Hence, findings of this study will be useful for the health planners to implement intervention programmes for these women to enjoy life in their midlife.

Keywords: Depression, anxiety, stress, prevalence, middle aged women, menopause, risk factors, DASS-21

0037.Dilhani, W.N.S.

"Knowledge , attitudes and practices on chronic kidney disease and factors associated among adult population in Medical officer of Health area Padavi Sripura".

MSc. Community Medicine - 2013   **D 3578**

Abstract

Introduction : Chronic kidney disease (CKD) has become a growing public health problem in Sri Lanka with an emerging new form of CKD in certain parts of the country, for which definitive cause has not been identified (CKDu) yet. Although many researchers have been conducted to describe prevalence and aetiology of CKD in Sri Lanka, less attention has been paid towards the knowledge, attitudes and practices related to CKD among general public in high risk areas, which is imperative in

preventive interventions for CKD. This study was conducted with the aim of assessing knowledge, attitudes, and practices related to CKD and factors associated with these among adult population in a high risk area.

Methods :A cross sectional descriptive study was conducted among adult population in Padavi Sripura MOH area. Participants were selected using the random cluster sampling method and those who have already diagnosed to have CKD were excluded. A sample of 610 adults was included to the study while data collection was carried out using an interviewer administered questionnaire. Assessment of knowledge was based on 12 subcomponents of knowledge on CKD related to anatomy and physiology of kidneys, conventional risk factors, symptoms, screening, course / progression / treatment of CKD, types of kidney diseases, complication, prevention, retardation of disease progression of CKD and possible risk factor control related to agrochemicals and drinking water. Attitudes were assessed on possible risk factor prevention and practices were assessed based on self reported practices related to selected possible risk factors.

Results : Total of 600 adults had completed the questionnaire with a response rate of 98.8%. Among those 63.8% (n=383) had good overall knowledge on CKD while knowledge on anatomy and physiology of kidneys, types of kidney failure, symptoms and screening of CKD were found to be "poor" among 96.3%, 60.8%, 48.7% and 52.3% of respondents respectively.

Majority (80.2%, n= 481) had favorable attitudes towards selected aspects of possible risk factors and prevention of them. Among the selected practices related to risk factor prevention , practices of monitoring BP and blood sugar were at safe levels among majority of diagnosed adults with hypertension and DM (81.8% and 85.7% respectively), while the same were at unsafe levels among high proportions of healthy aluminum pots for cooking and storing drinking water (61%, n=366), using PPE while spraying agrochemicals (87.3%, n=427) ,engaging in risk behaviors while spaying agrochemicals (62.4%,n=305) and usage of untreated water from dug wells, for drinking (74.3%,n =446). The practice of sparingly using analgesics for aches and pains belonged to safe category (72%, n= 409).Among the socio demographic factors, above O/L educational level (p=0.007) and not engaging in paddy cultivation (respondent or a family member) (p<0.001) were associated with good knowledge on CKD, while a number of sub components of knowledge on CKD, favorable attitudes and some safe practices were associated with one or more of age <40 years, above O/L education level and monthly family income > 10,000.Good knowledge on CKD was found to be associated with favorable attitudes (p<0.001) as well as safepractice of using PPE while

spraying agrochemicals (p=0.014) and practice of using aluminum pots for cooking and storing water (p<0.001).

Conclusions : Majority (63.8%) of study sample had a good overall knowledge on CKD while only one third of them had poor overall knowledge. Majority (80.2%) had favorable attitudes towards selected aspects of possible risk factors and prevention of them while practices of many (61% - 97%) were unsafe, exposing them to the possible risk factors. One or more of factors from among younger age (less than 40 years), > O/L educational level >10,000 monthly family income were associated with good overall knowledge on CKD, good knowledge on several sub components of knowledge on CKD as well as with favorable attitudes and some safe practices. Presence of co-morbidities in self and a CKD patient in family were not associated with good knowledge on CKD or safe practices. Good knowledge on CKD was associated with favorable attitudes as well as some safe practices.This study findings showcase importance of health education programs targeted at high risk communities (people more than 40 years, with lower education and lower income) ,high risk groups such as people with co-morbidities and with family members diagnosed to have CKD and high risk occupations (paddy farming). Promoting carbonic fertilizers and new rice strains requiring less agrochemicals as well as safe drinking water supply are recommended for this high risk area.

0038.Edirisinghe, E.A.R.D.

Knowledge , attitudes and practices of public health midwives in the district of Kalutara on the revised maternal care package and issues faced by them in implementing the package.

MSc. Community Medicine – 2013   D3387

Abstract

Maternal care programme in Sri Lanka is considered as a successful low cost highly effective programme. External review of the MNH programmes in 2007, emphasized the need of revising the existing maternal care package to minimize the underutilization of available resources, by pass phenomena, duplication of service and to improve the quality of care. The panel of expertise in relevant specialties revised the existing maternal care package with goal of providing targeted intervention, equitable service and quality of care in the maternal and new born health in the country. In 2011 it was piloted tested and scaled up throughout the country by 2013. One year after implementation, it

was important to study the knowledge, attitudes, compliance and the perception of the health care worker with the service delivery guidelines in the maternal care package.

Therefore, this cross sectional descriptive study was carried out in the Kalutara district, western province with the objectives of assessing knowledge, attitude, and practices of the public health midwives on the revised maternal care package and issues faced by them in implementing the package.

Pre tested self-administered questionnaire was used to assess knowledge and attitudes. The practices were assessed with a check list and focus group discussions were used to identify issues faced by them in implementing the package. All the Public Health Midwives (375) working in the thirteen Medical Officer of Health areas during the period of 1st August 2013 to 1st September 2013 were included in the study.

The mean score for the overall knowledge was 86.3% and 72.5% of the participant scored more than the average for the assessment. For the different components of the maternal care, 75% of them had scored more than the average except for the antenatal clinic care, antenatal domiciliary care and assessment of Edinburgh post-partum depression scale. Mean score for the attitude questionnaire 85.2%. The majority of participants had good attitude toward the revised maternal care package. They reported highest positive attitudes (almost 100%) the antenatal sessions, introduction of the weight gain chart and for most of others areas had scored more than 90%. Nearly 1/4 of the study population was having negative attitudes towards the birth and emergency plan, relationship between field and institutional staff, achievability & feasibility of the package. There was a statistically significant association between knowledge vs the attitudes and the service experience vs the attitudes in the study population.

Majority of the practices of PHM on service delivery guidelines in revised maternal care package is acceptable, except the practices in components of investigation package, identification of family planning method in post-partum period, plotting of SFH and providing post-natal clinic care.

In the qualitative assessment the majority of study population accepted and agreed that the revised maternal care package was a good quality, evidence based and timely intervention. The majority had appreciated the intervention including weight gain chart, investigation package, the introduction of Edinburgh post-partum depression scale and the newly introduced pregnancy record (512A).

The major issues highlighted in the discussion were practicably and achievability of the antenatal clinic schedule, schedule for antenatal home visit for the low risk and high mothers and birth and emergency preparedness plan. Majority of them accepted that the Edinburgh post natal depression scale was a good intervention with practical difficulties.

In conclusion majority of the study population had good knowledge and good attitude towards the revised maternal care package. Considering the qualitative assessment, majority of them are in good faith of revised maternal care package, except the schedules of antenatal clinic, antenatal home visits, the birth and emergency preparedness plan.

The results of the study pointed out the service need of continuous professional development and the periodical assessment of the knowledge of the service providers. Also it is important to strengthen the supervision with correct guidance of the staff and increase the availability of necessary facilities for the maternal care. There should be a service appraisal mechanism to motivate the service providers specially the field health staff. Also the study finding can be used to improve the maternal care in the district by the relevant administrators.

Keywords: Revised maternal care package, Public Health Midwife, antenatal care, postnatal care, maternal care

0039.Edirisuriya, C.S.

Adverse events following immunization in infants in the public sector in Kalutara district: Epidemiology and potential spatial accessibility to clinical management services.

MD Community Medicine – 2015   **D 3586**

Abstract

With a very high vaccine coverage rate in infancy in Sri Lanka, Adverse Events Following Immunization (AEFI) emerges as a threat to perceived safety in the near absence of vaccine preventable diseases. Provision of facilities for successful management of AEFI based on scientific research is essential.

This study was conducted to describe the epidemiology of selected AEFI following vaccination in the public sector and to assess the potential accessibility for public AEFI clinical management services.

Infants (n=1845) were enrolled to a prospective cohort at the post natal wards of public sector hospitals in and around the Kalutara district after exposure to BCG vaccine. They

were actively followed up for the development of AEFI for 42 days at each encounter of first, second and third dose?, DTwP-HepB-Hib vaccine and Japanese Encephalitis (live attenuated) vaccine while for BCG, the follow up period was 6 months.

A nested case-control study among 221 cases and 442 controls was carried out to determine the association of preselected predictive factors and the occurrence of AEFI.

A descriptive cross sectional study was carried out to observe the pattern of healthcare accessibility in emergency and non-emergency situations by parents or principal care givers of the study infants. Perceived time to travel to each of these healthcare centres with the mode of travel also was recorded. Using this preliminary data and the geospatial tools, potential accessibility within 15 minutes for each mode of transport was calculated separately in non-emergency and emergency situations assuming all the health centres were available for access. Same analysis was carried out assuming that the 24 hour open government healthcare centres were the only centres able to be accessed in an emergency.

A location-allocation analysis was carried out in GIS environment to identify the new places where future healthcare centres could be established to increase the emergency healthcare accessibility in the Kalutara district.

There were 591 observed AEFI. The commonest AEFI (95%) was fever. DTwP- HepB-Hib vaccine caused the highest amount (86%) of observed AEFI. Cumulative incidence rate for fever after the first dose of DTwP-HepB-Hib was 14% (95% CI 12.1, 16.0). Most vulnerable period for AEFI following exposure to vaccine is the first three days, out of which 50% of AEFI occurred within first 12 hours except for BCG. There was no clustering of AEFI according to the residencies of the infants. Low birth weight infant has a 2.3 higher risk (OR=2.3, 95% CI 1.5, 3.6) of developing an AEFI than the normal weight infant (p=0.000).

In an emergency, assuming only 24 hour open government sector healthcare centres were accessible, the potential accessibility within 15 minutes for infants living in the Kalutara district was 44.3% when transportation mode used was walking and the accessibility rose to 56.2% if the transportation was a personal vehicle. It was shown that establishing 49 new primary health care type centres could increase the potential accessibility for AEFI to 96% if the mode of transport was personal vehicle.

Above findings highlight that AEFI detection is optimised by concentrating during first three days following vaccination in infancy. By concentrating on the first 12 hours following vaccination alone, 50% of AEFI can be detected. The incidence rates estimated in this study can be used to monitor and evaluate vaccine safety programmes of the

Kalutara district and possibly any setting within Sri Lanka. Possible strategies to increase emergency healthcare access within the Kalutara district include establishing new healthcare centres and improving road conditions.

Keywords: Vaccine safety, Adverse Events Following Immunization, AEFI, Potential accessibility, Location-Allocation modelling, GIS, Sri Lanka

0040.Edirisinghe, E.A.R.C.

Pregnancy planning, birth preparedness, complication readiness and their related factors among antenatal mothers admitted to General Hospital, Matara.

MSc. Community Medicine – 2013   D 3426

Abstract

Introduction: Pregnancy related deaths and disabilities are a major public health problem throughout the world. In addition to medical causes, poor planning of pregnancies and inadequacy of birth and emergency preparedness and poor knowledge regarding danger signs in pregnancy leading to delay in care seeking has been identified as underlying reasons for maternal deaths and complications.Pregnancy planning and Birth Preparedness and Complication Readiness (BPACR) can be considered as an integral part of safe motherhood, leading to better care seeking behaviour of pregnant mothers. However, few studies have been conducted in Sri Lanka to evaluate the knowledge and practices related to these aspects among pregnant mothers.

Objectives: This study was conducted with the objective of describing pregnancy planning,birth preparedness, complication readiness and the related factors among antenatal mothers admitted to General Hospital, Matara.

Material :and Methods: This study included a convenient sample of 395 mothers (with a completed 36 weeks of period of amenorrhoea) admitted to General Hospital, Matara. Data collection on study variables was done using a pre-tested, interviewer administered questionnaire and collected data was analyzed using SPSS statistical software package. Chi- square test was used to assess the association between variables. Ethical clearance for the study was obtained from the Ethical Review Committee of the Faculty of Medicine, University of Ruhuna.

Results: The majority of the pregnant mothers in the sample were Sinhalese and Buddhists (over 94%), married (n=384, 97.2%), from rural areas (n=327, 82.8%), educated up to G.C.E. Ordinary Level (n=191, 48.4%) and aged between 18-34 years (n=330, 83.5%). Only 80 mothers (20.3%) were employed. Approximately 43% (n=169) mothers were pregnant for the first time.

Of all mothers, 92 (23.3%) had unplanned pregnancies and 42.9% of the unplanned pregnancies were due to contraceptive failure. Poor planning of pregnancy was significantly associated with older age of the mother (p<0.05), unmarried and unemployed status of the mother (both p<0.01), multi parity, low educational level of mother/husband and low family income (all p<0.00l).

Although 280 mothers(70.9%)were aware of birth preparedness, only 38 mothers (9.9%) have undergone pre-pregnancy screening and peri-conceptual folic acid was not taken by the majority (53.4%) of the mothers. However, over 2/3rd of the mothers reported satisfactory participation in antenatal care services and use of antenatal medication, immunization and basic investigations were nearly 100%. Considering the level of BPACR, 353 mothers (80.4%) were well prepared. Mothers from minor ethnic groups (p<0.01) and rural areas (p<0.05).those with low educational levels and income (p<0.001) and unemployed mothers (p<0.05)were significantly more likely to be poorly prepared for birth & complications. Unplannedpregnancy and lack of awareness of birth preparedness were also significantly associated with poor BPACR status (p<0.001 and p<0.05 respectively). Regarding knowledge on danger signs during pregnancy and post-partum period, the [majority mothers were aware of 3 danger signs (n=227, 57.5%), while 60 mothers (15.2%) did not know of any danger sign. The level of knowledge on danger signs was good in 291 (73.7%) of the mothers. A good level of knowledge was significantly associated with primiparity, higher educational level of mother/husband and mother being employed (all p<0.05).

Conclusionsand recommendations: A considerable proportion of mothers have unplanned pregnancies due to lack of contraceptive use or contraceptive failure. Although use of antenatal services, level of BPACR and knowledge on danger signs were satisfactory among the majority, several areas needing attention has been identified such as poor awareness of pre-pregnancy screening and lack of knowledge on some important danger signs. Educational programs should be designed to raise awareness on these issues, especially among newly married women, targeting specifically for women in the high risk groups identified during this study.

Keywords:Pregnancy planning, Birth preparedness and complication readiness, Danger sings.

0041. Ellawela, Y.G.

Parenting stress, risk factors and coping strategies among mothers of adolescents aged 15 to 19 years in the District of Colombo.

MD Community Medicine – 2013   **D 3220**

Abstract

Introduction

Parenting stress is the tension parents feel in fulfilling their parenting functions (Abidin, 1995). Parenting children of any age is difficult, but it is especially difficult for older children, of pre-teen and teenage years.

Late adolescence is traditionally a difficult period of life from a social and sometimes physical standpoint. Thus coping strategies play a major role in the issue of parenting stress as parenting is not equally stressful to all mothers. Given that mothers have traditionally been more involved than fathers in the day-to-day responsibilities of child rearing it might be expected that mothers would experience more stress than fathers.

The present study was undertaken to translate and validate the Stress Index for Parents of Adolescents (SIPA), to determine the prevalence of parenting stress, compare coping strategies adopted by high stressed and low stressed mothers and identify risk factors of parenting stress among mothers of adolescents aged 15-19 years in the district of Colombo.

Methods: Component 1 of the study included translation and validation of SIPA. Criterion validity of SIPA-Sinhala version (SIPA-S) was assessed based on the diagnosis by a clinical psychologist. The validated cut off point for SIPA-S total score was 230, with a sensitivity of 86.7% and specificity of 84.8%. Reliability measured by Cronbach's alpha was 0.749. Construct validity of SIPA-S established by Spearman correlation coefficient to assess the correlation between SIPA-S and GHQ-12 scores was 0.719.

Component 2 determined the prevalence of parenting stress, compared coping strategies adopted by high stressed and low stressed mothers and identified risk factors of parenting stress. The Brief COPE-S was used for comparison of coping strategies and an interviewer administered questionnaire identified risk factors of parenting stress.

A cross sectional descriptive study was conducted in a sample of 1292 mothers of adolescents aged 15-19 years in the District of Colombo, Sri Lanka. A multi stage stratified cluster sampling technique with probability proportionate to size was used to select the study sample. A total of 44 clusters were included in the study with a cluster size of 30.

Results : Response rate was 97.9%. The mean age of study sample was 43.2 years ±5.9. Adjusted prevalence of high parenting stress among mothers of adolescents aged 15-19 years was 29.8% (95% CI: 27.32 - 32.29).

Significant differences were observed between mean scores of emotional focused (p<0.001), problem focused (p<0.001) and dysfunctional coping strategies (p<0.001) between the mothers of adolescents with high and low parenting stress.

Bivariate analysis and logistic regression analysis were carried out to identify risk factors of parenting stress. Logistic regression analysis identified not attending school (OR=2.89, 95% CI: 1.34-6.24), Internalizing behaviours (OR=4.01, 95% CI: 2.17-7.42), Externalizing behaviours of the adolescent (OR=3.92, 95%CI: 1.03- 14.93), frequent internet browsing

(OR=4.03, 95% CI: 1.35- 12.08), need for stylish clothing (OR=5.24, 95% CI: 2.50-11.01) as adolescent related risk factors of high parenting stress.

Among maternal factors, logistic regression analysis identified poor relationship with the adolescent (OR=4.23, 95% CI: 1.77- 10.09), stressful life events during adolescence of the mother (OR=3.45, 95%CI: 1.62- 7.35), stressful life events in the past year (OR=3.62, 95% CI: 1.28-10.22), dysfunctional coping (OR=1.29, 95% CI: 1.20 - 1.39), poor perceived health status (OR=2.85, 95%CI: 1.00- 8.12) and dissatisfaction about the amount of sleep (OR=4.26, 95% CI: 1.55- 11.67) poor as personal risk factors of high parenting stress among mothers of adolescents.

Out of the family factors, only marital satisfaction (OR=6.13, 95% CI: 1.91- 19.69) and low overall support available at home (OR=4.34, 95% CI: 2.38- 7.91) were significant in the multivariate analysis.

Among the other factors related to the family, multivariate analysis identified, lack of moral support from society (OR=2.56, 95% CI: 1.38- 4.73) and unavailability of support from friends (OR=l .82, 95% CI: 1.01- 3.25) as risk factors of high parenting stress.

Conclusions and recommendations: SIPA-S is a valid and reliable tool to assess parenting stress among mothers with adolescents. Parenting stress could be considered as an emerging health problem as nearly one third of the mothers of adolescents in the study sample had high parenting stress. Measures should be taken to improve the psychological wellbeing of the mothers, organized programmes should be available in the society.

The findings of this study will be useful for the heath planners to implement effective intervention programmes among parents of adolescents and among adolescents with the

goal of reducing high parenting stress thus helping mothers to fulfill their parenting role effectively and to enable them to enjoy their life as parents.

Keywords: Parenting stress, mothers of adolescents, risk factors, coping strategies, SIPA-S

0042.Fernando, E.H.K.

Incidence, types and associated factors of occupational injuries among sewing machine operators in selected garment factories at the Export Processing Zone, Awissawella

MSc. Community Medicine – 2012   D2976

Abstract

Introduction: Occupational injuries are a major entity which is on the rise in the whole world. For timely interventions it is necessary to identify the reasons for the injuries to reduce the burden.

Objective: To determine the incidence, types and associated factors of occupational injuries among sewing machine operators in selected garment factories at the Export Processing Zone, Awissawella.

Methods: A retrospective descriptive study was conducted between August to September 2012 to determine the incidence during the three month period immediately prior to the survey. The sample size computed was 423. Sample was selected randomly from each of the four selected factories. Total number included from individual factory was based on probability proportionate to size of total number of sewing machine operators in each factory. A pre tested self administered Sinhala questionnaire was administered. Chi square test was used to test for associations and a probability of less than 0.05 was selected as the significant level. Bivariate analysis was done and the results were expressed as Odds Ratios (OR) and 95%

Results : Response rate was 99.8% (n=422). The incidence of occupational injuries was 52.1 (95% CI: 33.0 - 77.9) per 1000 workers for the three Confidence Intervals (CI). month period with an estimate of 208.4 (95% CI: 170.7 - 250.5) per 1000 workers per year. The commonest mode of injuries were due to needle pricks (40.9%; n=9). Fingers (72.7%; n=16) were commonly affected resulting in cut injuries or puncture wounds (36.4%; n=8). Being a male (OR 2.7; 95% CI: 1.2 - 6.1, P = 0.04), being ever

married (OR 2.8; 95% CI: 1.05 - 8.3, P = 0.04) and having experience in the garment field (OR 3.5; 95% CI: 1.2 - 12.5, P = 0.02) were significantly associated with the occurrence of injuries.

Conclusions and Recommendations: Incidence observed is considered high despite probable under reporting. The associated factors were non modifiable. Therefore recommend appropriate preventive measures with emphasis on regular in service training sessions. Future research should focus on conduct of prospective studies.

Keywords: Garment factory sewing machine operators, Occupational injuries, Incidence, Associated factors

0043.Fernando, K.E.S.

Health seeking behavior of parents of patients with dengue haemorrhagic fever and the healthcare costs incurred for patients treated in-ward at Lady Ridgeway Hospital for children, Colombo.
  MSc. Community Medicine – 2014   D 3581

   Abstract

Timely seeking of appropriate health care in dengue will reduce the risk for the patient, economic burden to the family and to the health system of the country. Hence, a descriptive cross-sectional study was conducted to find the health seeking behaviour of parents of children with dengue fever/dengue haemorrhagic fever and the healthcare costs incurred for patients treated in-ward at Lady Ridgeway Hospital for Children, Colombo.

 The study commenced from 22nd August to 15th October 2013. Health seeking behaviour and household costs were assessed, conducting interviews with 222 caregivers using a pre-tested IAQ and SAQ. System cost was derived using checklists and interviews with key experts in the relevant fields.

A major proportion of the study participants were from the Colombo district (83.8%). Among the caregivers, 97.2% were females, of which 192 (86.4%) mothers, were the primary caregivers of the children. The mean age of the caregivers was 36.6 years (SD 10.2 years). A majority of the sample was Sinhalese 57.2%, and 28.8% were Sri Lankan Moors and Malays.

There was a predominance of male patients (54.1%) among children in the study sample. The median family size was 4 (inter quartile range 3-8). A majority of the mothers had education up to grade 10 or above (n=158) and were non working females (n=179, 80.6%). The income level in most cases were Rs.20, 000 or above (54.1%). Upper middle socio-economic level as assessed by the composite scale was observed in 55.4% of the participants.

A majority of 64.4% sought prompt and appropriate care for the dengue infection. The most popular type of ambulatory care was western private (54.9%). There were 67 who did not seek any ambulatory care prior to hospital admission and 3.1% of them were admitted to hospital only after the 3 rd day of illness onset. On average children were admitted to hospital on day 2 (IQR 1-3) of onset of the illness.

Mother's level of education and the socio-economic level of the family was significantly associated with prompt and appropriate health seeking behaviour (p=0.001).

Mother's age and monthly family income were not associated with prompt and appropriate health seeking behaviour. The distance to western private healthcare provider (p=0.019) and the time taken to visit the same had a significant association with prompt and appropriate health seeking behaviour (p=0.001).

The mean total direct household cost of DF was Rs. 1110 (mean 1583.13) and DHF was Rs. 2000 (mean 2711.08). A majority of 85.7% of children missed school on average 4.63 days due to dengue. Among the employed caregivers of the children 93.1% lost 4 days of work on average and 42.3% of the household members lost 3.86 days of work/school on average due to the same reason.

The mean hospital cost (system cost) of DF was Rs. 13,166.11 and DHF was Rs. 32,217.23.

The results of the study pointed out the need of strengthening awareness programmes in the community through existing public health system to improve prompt and appropriate health seeking behaviour during childhood dengue. A referral system for hospital admission is suggested to reduce the economical burden on health expenditure.

Keywords-Dengue fever, Dengue haemorrhagic fever, Health seeking behaviour, Cost

0044. Fernando, P.H.S.

Incidence and correlates of occupational injuries, and effectiveness of an intervention to reduce occupational pesticide exposure among farmers at the Naula Divisional Secretariat area in Sri Lanka.

MD Community Medicine - 2013   D 3229

Abstract

Agricultural workers are confronted with many unfavorable health conditions due to environment, equipment, machinery and chemical exposure. Therefore it is essential to cater the health issues faced by agricultural workers. Although care of the individual worker is a major task of an occupational health service, it has responsibilities for improving the health of the workforce as a whole by identifying poor health and its causes. Implementation and evaluation of preventive measures should be compatible with socioeconomic and cultural context of a country. Assessments of currently existing health situation among agricultural farmers are important in different dimensions and it will provide information on current health problems and their determinants.

The study was done in two phases among the male farmers in the Naula Divisional Secretariat area of the Matale district in Sri Lanka. A descriptive follow up study was done over a period of six months following one month baseline investigation as the first phase. The study aimed at, describing the socio demographic characteristics and cultivation practices, to determine the incidence of occupational injuries, to determine the incidence of symptoms of occupational pesticide poisoning and to describe their existing correlates, among the male farmers. A two arm parallel group quasi experimental intervention study was done over a period of six months following one month baseline investigation, aiming to assess the effectiveness of an education and practiced based intervention to reduce occupational pesticide exposure among spraying farmers in the second phase. The intervention was introduced to a group of farmers over a period of six months and the comparison group was allowed to continue their routine spraying and handling practices during the same period. The outcome was assessed by measuring erythrocyte cholinesterase activity and proportion of symptoms of occupational pesticide poisoning.

Out of 2303 study participants, a majority (68%) were above 40 years of age. Education level only up to junior secondary level (Year 6 - G.C.E. O/L) was

obtained by 70% of farmers. More than 92% of farmers used equipment like hoe, knife and 'kettha' for farming activities. In addition, most of the study farmers used the knapsack spray machines (92%) and two wheel tractors (78%) for farming activities. The most commonly wore protective clothing , while handling pesticide was long sleeved shirt (82%). Boots (4%) and polythene or chemical resistant apron (2%), were the least commonly used protective gears while applying pesticide. Harvesting the crop before the pre-harvest interval of spraying was done by 73% of the study participants.

The adjusted incidence rate of work related injuries for the particular cultivation season was 16.2% for the period of six months. Out of all injuries, the open wound was the commonest (64%) type of injury. Injury to ankle and foot was the commonest (29%) affected body site. The binary logistic regression analysis shows that presence of injuries among farmers were independently associated with age more than 30 years, part time farmers, ethnicity other than Sinhalese, farming alone, extent of cultivated land area more than 2.0 acres and working hours per day for more than 8 hours.

The adjusted incidence rate for symptoms of occupational pesticide poisoning was 64.6% for six months. In the present study severe headache (19%) was the commonest symptom. Presence of symptoms of occupational pesticide poisoning of farmers were significantly associated with age of more than 30 years, primary educational level, ethnicity other than Sinhalese, using of trellis for farming, working duration more than 200 hours per month, extent of land area of spraying at a time more than 0.5 acres and duration of a spraying session more than 2 hours.

A highly significant difference between pre and post intervention mean ChE activity can be seen in the intervention group. There was no such difference among the non intervention group. This implies that, the intervention that has been implemented was able to reduce the occupational pesticide exposure among farming sprayers in Naula Divisional Secretariat area of the Matale district in Sri Lanka.

More attention should be given to minimize occupational injuries and occupational pesticide exposure among farmers. Health promotion programmes, to build awareness towards work site safety and use of personal protective gears while spraying pesticides, should be implemented.

0045.Fernando, P.N.M.A.

Compare knowledge, attitudes about torture and experience in handling of torture victims between medical practitioners and undergraduates of selected institutes in the Gampaha District.

MSc. Community Medicine – 2013   **D 3425**

Abstract

Torture is one of the most extreme forms of violence, resulting in increased morbidity, mortality and disability (WHO, 2002) and is endemic throughout the world. Violence is a public health problem (Dahlberg & Mercy, 2009) and can be prevented through a public health approach. Effective diagnosis is crucial to successfully identify the hidden burden and implement preventive activities. The ability of the current and future practitioners to contribute to above cause largely depend on their knowledge and attitudes of torture and their experience in handling torture victim.

The objective of the present study was to compare the knowledge and attitudes about torture and experiences in handling of torture victims between medical practitioners and undergraduates of selected institutes in the Gampaha District. A cross sectional analytical study was conducted in the selected hospitals CNTH. DGH Negombo and DGH Gampaha and the Faculty of Medicine, University of Kelaniya. The study populations were medical practitioners and undergraduates of the fourth year. The calculated sample size was 160 from each group. Data was collected from 16.08.13 to 16.09.13. A pretested self-administered questionnaire was used to collect the data. It had questions / items dealing with socio demographics, knowledge, attitudes of torture and experiences in handing torture victims.

Data was collected from 131 practitioners and 143 undergraduates. It was found that large knowledge gap existed in both groups. Only 62% practitioners and 50% undergraduates had good overall knowledge. Total mean scores were (65 vs 61) worse in undergraduates with significant difference (P=0.049). Further revealed mean score (SD) of basic knowledge 69.5 (29.8) vs 58.5 (32.4); (P=0.004), knowledge on main types 71.8 (24.1) vs 62.2 (28.4) (P=0.007). Usage of mass

media (47% vs 77%) and scientific journals/seminars/lecture (28% vs 42%) to gain further knowledge on torture. Only male practitioners had significant association with good overall knowledge (X^2=4.36;df=l;P=0.037).

A majority (98% vs 92%) understood effective diagnosis, treatment and rehabilitation of torture victims is important. But most disturbing finding was that many (32%-54%) considered that torture can be permissible under certain circumstances. Lack of experience in both groups noted, more than half of practitioners didn't feel competent in examination of torture victims. Only 48% undergraduates had seen a torture victim.

Based on these findings it is recommended that the knowledge gaps identified, needed to be addressed. Positive attitude shown towards improving training, skills, and work environment related to torture medicine further needed to be strengthened. Lack of exposure in torture medicine should be corrected at university and hospital. The use of mass media for improve further knowledge should be considered.

0046.Fernando, W.B.S.P.

Knowledge, attitudes, practices and correlates of knowledge of mothers with children less than 5 years regarding the safety of drinking water in Kalutara Medical Officer of Health.

MSc. Community Medicine – 2014   **D 3579**

Abstract

Introduction : Consumption of safe water is essential in preventing water related disease conditions, especially in childhood with rapid growth and development. Mothers play key roles in child caring in Sri Lanka. This study was carried out with the objectives of assessing the knowledge, attitudes, practices and correlates of knowledge regarding safety of drinking water in mothers with children less than five years of age and their socio-demographic characteristics.

Methodology : A community based cross sectional descriptive study was conducted in 2013, utilizing a pre-tested interviewer administered questionnaire on 271 mothers with children less than five years of age in Kalutara MOH area who were selected by multi-stage sampling technique. Results were analysed with SPSS-17.

Results and Discussion : Response rate was 97.7% (253/271). Mean age of mothers was 30.3 years. Majority were housewives (68.8%, 174/253) from rural areas (53%, 134/253) who were educated beyond GCE O/Ls* (58.5%, 148/253). Overall knowledge on drinking water safety was poor (44.3%, 112/253). Only 57.3% (145/253) knew that tap water wasn't safe for direct consumption. Majority knew that bottled water is not entirely safe (89.7%, 227/253), boiling makes drinking water safe (72.3%, 183/253) and filtering isn't reliable (51%, 129/253). Feaces as a contaminant of water was known by only 22.9% (59/253). Taste (36.8%, 93/253), odour (35.2%, 89/253), and colour (22.5%, 57/253) were erroneously used to assess water quality. Majority (92.2%, 238/253) was aware that diarrhea was a water borne disease though the awareness on other prevalent diseases was low (16.8%, 43/253). Higher proportion had favorable attitudes (56.1%, 142/253). Majority (78.7%, 199/253) consumed what they believed to be safe water. However 31.6% (80/253) believed their water was safe even if they didn't practice boiling. Ninety five percent (239/253) believed that boiling is the most reliable method of water purification. Tap water and respectively. Access to improved water sources was 62.8% (159/253), mostly from tap (52.2%) or well (7.1%). Purification preceding consumption was undertaken by 71.7% (180/253) where 55.3% (140/253) employed boiling. More than 85% (210/298) of children less than five years of age, of the 253 mothers selected, received boiled water for drinking. Earthenware (31.2%, 69/221), metal (28.5%, 63/221) and PET (5.9%, 13/221) were popular water storage utensils. Poor knowledge was significantly associated with education below O/Ls* (x^2=15.82, df=T, p<0.001), average household monthly income less than Rs.30,000 (x^2=12.53, df=l, p<0.001) and the practice of boiling drinking water (x^2=7.88, df=l, p=0.005).

Conclusions and Recommendations :Knowledge on drinking water safety was poor though attitudes and practices were above average indicating room for improvement. Providence of aid to acquire improved water sources by all is essential. Health education combined with health promotion should be employed for developing positive attitudes and practices.

Keywords: drinking water, safety, knowledge attitudes practices

0047. Fernando, W.M.P.A.

Effectiveness of an educational and technical skill development intervention on improvingmenstrual hygiene management among grade ten school girls in the district of Kalutara.

MD Community Medicine – 2014   **D 3427**

Abstract

Introduction : Menstruation is a natural phenomenon that occurs with sexual maturity of females. Topic of menstruation is a taboo and surrounded with misconceptions. Thus menstrual hygiene management (MHM) is not discussed openly and most female adolescents lack proper knowledge and attitudes on correct MHM practices.

Objective : To assess the level of knowledge, attitudes and practices and determine the effectiveness of an educational and technical skill development intervention applied through female teachers, to improve knowledge on menstruation and attitudes and practices towards menstrual hygiene among adolescent school girls in Kalutara district.

Methods : Phase I - Descriptive cross sectional study.

Component 1 assessed of knowledge, attitudes and practices of the adolescent girls in grade 10 classes and Component II, knowledge and attitudes among grade 10 teachers. Computed sample sizes were 720 students and 282 teachers. Using multi stage stratified cluster sampling technique, 48 classes were selected from 47 schools with 15 students/cluster and 6 teachers/cluster. Self Administered Questionnaires I (SAQ I) and II (SAQ II) were administered to students and teachers. Component III comprisedassessment of 47 schools for availability of supportive environment for MHM. Phase II - Quasi experimental study.

Intervention (IG) and control (CG) groups with six schools in each were selected purposively based on presence of a supportive environment. Computed sample size was 300 with 15 purposively selected students and one teacher/cluster, altogether total of 20 clusters.

Component I - Educational and skill development materials were developed. Pre and post training assessment were conducted by using SAQ II for teachers in both groups. After pre training assessment, educational and skill development training on preparing detachable sanitary towel holder was conducted in the IG.

Component II -. After the pre intervention assessment with SAQ I for students in both groups, same intervention was conducted on the IG. Post intervention assessment was conducted after six months by using same SAQ I in both arms.

Component III - Evaluation of the effectiveness of intervention package to improvement of knowledge, attitudes, reported practices and activities affected due to menstruation in the intervention group comparative to the control group.

Descriptive statistics for Phase I and inferential statistics for Phase II were applied.

Results : Phase I/Component I - Satisfactory overall, knowledge, and practices among studentswere25% (95%CI: 21.9%-28.3%) and 17.3% (95%CI: 14.7%-20.3%)] respectively. Proportion with satisfactory attitudes was 67.5% (95%CI: 63.7%-70.6%).Phase I/Component II - Satisfactory overall, knowledge and attitudes among teachers were 89.3% (95%CI: 85.4%-92.6%) and 89.0% (95%CI: 85.4%-92.6%). Phase I/Component III - Supportive environment was present only in 48.9% (95%CI:34.9%-63.1%) of the schools.

Phase II/ Component I/IB - Statistically significant (P<0.001) increase in overall knowledge and attitude scores were observed among teachers in the IG against CG.

Phase II/ Component III - Statically significant (P0<00l) improvement in terms of overall knowledge and attitudes and (P<0.05) eleven out of sixteen variables related to practices and all eight variables under activities affected due to menstruation were observed in IG against CG. Ninety three percent of students had prepared the sanitary ware.

Conclusion and Recommendations : The educational and technical skill development intervention on promotion of MH proved effective with a significant positive impact on the knowledge, attitudes, practices and activities affected due to menstruation. Recommendations include improving teaching skills of teachers by incorporating training modules on reproductive health in training courses, improving basic sanitary facilities in schools, in-cooperation of MHM into basic sanitary guidelines in schools and in the school health programme and distribution of "Hand Book" among students. Future research should consider conducting randomized controlled trials to further strengthen the evidence of effectiveness of the intervention.

0048.Gamage, A.U.

Prevalence and correlates of hypertension and its economic impact among selectedcategories of government public administration officers in the district of Colombo.

MD Community Medicine – 2014   D 3420

Abstract

Introduction : Increasing prevalence of non-communicable diseases such as hypertension among employees is a burdento the individual, the family and the country. This study aimed to determine the prevalence, correlates of hypertension and the economic impact due to hypertension among senior officers (SOs) and managerial assistants (MAs) of government Public Administration offices in Colombo district. A total of 275 SOs and 760 MAs were selected. Both samples were selected randomly.

Methodology :A cross sectional survey to detect prevalence of hypertension and a cross sectional comparative study was carried out among randomly selected 272 senior officials (SOs) and 739 managerial assistants (MAs) attached to government administrative offices in the Colombo District. Blood pressure (BP) was measured using the standardized protocol of American Heart Association (AHA). Classification of hypertension was done according to Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7). Data collection was done using a self- administered questionnaire which gathered information on socio demographic, economic characteristics, life style related practices and occupational characteristics and a data sheet which gathered information pertaining to the clinical examination and investigation findings such as blood pressure measurement, weight, height, waist and hip circumferences and biochemical parameters. A quantitative dietary assessment was carried out among the study participants using an interviewer administered food frequency questionnaire. Twenty four hour urinary sodium to assess the salt intake as a correlate of hypertension was conducted among 84 senior officers and 84 managerial assistants. All measurement and investigations were done adhering to standard protocols. Occupational stress was assessed using a standardized instrument, namely the Efforts Rewards Imbalance (ERI) model which was adopted and validated to the Sri Lankan context among administrative officers. The instrument showed good validity and reliability.

The economic impact caused by hypertension among study participants, as perceive from the perspective household and productivity loss to the government was assessed

by conducting a cross sectional survey in 134 hypertensives working in ten randomly selected government Public Administration offices in Colombo district.

Results : Two hundred and seventy two (98.9 %) SOs and 739 (97.2%) MAs responded to the invitation to participate. The mean ages were 44.1 (SD ± 9.0) and 42.1 (SD ±8.7) years for SOs and MAs respectively. Fifty eight percent (n= 156) of the SOs and more than 75 % (n=571) of the MAs were females.

The crude prevalence of hypertension based on classification of JNC 7 criteria among 30- 60 years SOs and MAs attached to government Public Administration offices in the Colombo district was 32.4 per hundred population (95% CI ;26.8-37.9) (N=88) and 29.4 per hundred population (95% CI; 26.2-32.7) (N=217) respectively. The age and sex adjusted prevalence of hypertension among 30- 60 years SOs and MAs attached to above offices was 32.9 per hundred population with a 95% CI of 27.4 to 38.6 and 33.01 per hundred population with a 95% CI of 29.6 to 36.4 respectively. The observed differences between the two percentages among SOs and MAs were not statistically significant (p>0.05).

Of the SOs 63.6% (n=173) were normotensives and 4.0% (n=ll) were pre-hypertensives while 21.3% (n= 58), 1.5% (n= 4), and 0.7% (n= 2) were in the hypertension stage I, stage II and in the isolated systolic categories respectively. Considering MAs 63.5% (n=469) were normotensives and 7.2% (n= 53) were pre-hypertensives, while 19.9% (n= 147), 1% (n= 7), and 1.9% (n= 14) were in the hypertension stage I, stage II and in the isolated systolic categories respectively. Of the hypertensive SOs and MAs 52.3% (n=46) and 35% (n=76) were unaware they were having hypertension respectively. Of the patients diagnosed and on treatment for hypertension 68.6% (n=24) of SOs and 43% (n=49) of MAs had controlled hypertension.

The logistic regression analysis revealed significant correlates of hypertension among SOs after adjusting for confounding factors, to be age more than 40 years (OR=5.23; 95% CI 2.08- 13.17), occupational stress as measured by high efforts rewards ratio (OR=2.8; 95% CI 1.1- 7.4), over-commitment (OR=2.5; 95% CI 1.1- 5.6) and high efforts (OR=2.5; 95% CI 1.2- 5.3), positive family history (OR=6.()l; 95% CI 2.5- 14.3), dyslipidemia (OR=5.09; 95% CI 2.02- 12.8), being a current smoker (OR=4.8; 95% CI 1.1-21.05) and current alcohol consumption (or= 3.5; 95% CI 1.2 – 10.3), high body mass index (C)R=5.09; 95% CI 2.9-26.01) and high waist hip ratio (OR=3.4; 95% CI 1.2- 9.8). The significant protective factors were moderate energy intake

(C)R=0.34; 95% CI 0.15- 0.75) and a health promotive work setting (OR= 0.365; CI; 0.17-0.79). Being a male was a positive non-significant correlate of hypertension after adjusting for confounders.

Among the MAs significant positive correlates of hypertension were, being more than 40 years of age (OR=3.16; 95% CI 1.37- 7.46), male (C>R=3.02; 95% CI 1.01- 9.12), occupational stress measured by high efforts (OR=3.02; 95% CI 1.9- 4.8), average working hours more than 50 hours per week (OR=1.48; 95% CI 1.01- 2.14), positive family history (OR=5.35; 95% CI 3- 9.56), dysglycemia (OR=2.23; 95% CI 1.16- 4.28), dyslipidemia (OR=2.76; 95% CI 1.40- 5.47), being a current smoker (OR=26.48; 95%c CI 6.49- 208.15), current alcohol consumption (OR=1.3; 95% CI 1.06- 1.67), high body) mass index (OR=2.02; 95% CI 1.35- 3.02) and high fat intake (OR=l.56; 95% CI 1.02 2.38) and consumption of less than five servings of fruits and vegetables (OR=2.76 95% CI 1.40- 5.47). The significant protective correlates were commuting distance c less than 20 Km (OR=0.85; 95% CI 0.73- 0.99), health promotive work setting (OR=0.48; 95% CI 0.28- 0.81).

The computed mean salt intake among SOs and MAs was 10.84 (SD±4.9) g and 11.: (SD±5.5) g per day respectively (p>0.05). The mean salt excretion among hypertensives and non-hypertensive SOs was 12.2 (± 3.4) g and 9.5 (± 2.1) g and among MAs was 12.6(± 1.8) g and 10.6 (± 2.9) g respectively. Twenty four hour urinary sodium excretion was significantly higher (p<0.05) among hypertensives compared to non hypertensives among SOs (OR=2.6; 95% CI 1.1- 6.5) and MAs (OR=1.96; 95% CI 1 5.8).

Having a history of pregnancy induced hypertension was a statistically significant correlate among MAs (OR=1.96; 95% CI 1.1- 3.5) but not among the SOs (OR= 95% CI 0.5- 4.3).

Considering the direct household cost for outpatient care (OPD), the total mean (O cost was for obtaining treatment from a consulting a physician was the highest am both SOs (Rs.5554.98) and MAs (Rs.5357.21) while the lowest was for a general practitioner among both SOs (Rs.2229.07) and MAs (Rs.2992.08). Of the total (cost the highest mean cost was for investigations at all three different type consultations. The mean admission cost to a government hospital for disease (Rs. 12560.00) and investigation (Rs. 7741.40) was lower than the cost incurred in the private sector admission for disease (Rs. 138785.00) and investigation (Rs.68589.36).

The economic impact of loss of production due to sickness absenteeism to the government was estimated to be Rs. 210513.81 for the 34 SOs due to their taking 78.5 days off and Rs. 194787.27 for the 95 MAs due to taking 268 days off. The estimated economic impact due to lost earnings of a male and female SO leaving the workforce early at age 50 years when the retirement age is 60 years were Rs. 6643906.73 and Rs.6989780.60 respectively and economic impact due to lost earnings for a male and female MA was Rs.3013023.00 and Rs.3178862.85 respectively.

Conclusion: The prevalence of hypertension among SOs and MAs was high. Even though the two study populations belonged to the same occupational group it is obvious the determinants varied across the study populations. Timely, cost effective interventions and periodic screening are important to prevent this upsurge.

Keywords: Administrative officers, hypertension, prevalence, correlates, economic impact

0049.Galappaththi, H.K.A.

Prevalence of work-relatedmusculoskeletal disorders and its associated factors among male paddy/Chena cultivators in the Medical Officer of Health area, Kanthale.

MSc. Community Medicine – 2013   **D 3389**

Abstract

Agriculture is one of the oldest occupations of human civilization. In Sri Lanka, 31% of the labour force is engaged in the agriculture sector predominantly in paddy and Chena cultivation. Paddy/Chena cultivation is a hazardous occupation involving strenuous work in challenging environments. Due to the types of activities engaged, famers are more prone to develop Work-related Musculoskeletal Disorders (WMSDs), which are caused by cumulative damage to muscles, tendons, ligaments, nerves or joints in relation to their occupations. Prevalence of WMSDs and its association with worker characteristics, working environments and work related behaviour is a common research topic in industrialized countries. However, research interest on this topic is limited in developing countries among farmers, including in Sri Lanka. Therefore, the aim of this study was to describe the prevalence of WMSDs and its associated factors among male paddy/Chena cultivators in the Medical Officer of Health area, Kanthale.

A community-based, cross-sectional, analytical study was conducted in the Medical officer of Health area, Kanthale. The study population consisted of adult male farmers

engaged in paddy/Chena cultivation for >1 year and working > 20 hours per week and residing in the area for >1 year. Farming as secondary occupation and having other conditions well known to cause chronic pain were excluded. The final sample size calculated for the study was 432 and was recruited using a three stage probability sampling technique, with Grama Niladhari divisions as clusters and had a satisfactory response rate (96.8%). Data collection instrument was a pretested interviewer administered questionnaire consisting broadly of areas on prevalence of WMSDs, demographic and socio-economic status, knowledge on WMDS, risk factors and preventive measures, exposure to hazards, and work-related practices and health seeking behaviour. WMSDs were assessed according to validated criteria. The prevalence of WMSDs was assessed based on musculoskeletal disorders prevalent during last year and in last seven days in the study sample. Data was analyzed using SPSS version 20. Significant tests used for quantitative data was t test and for qualitative data was chi- squared test. Factors associated with the prevalence of WMSDs during last year were also assessed using Odds Ratio (OR) with 95% Confidence Interval (CI) for qualitative data. The sample predominately consisted of farmers aged over 40 years (73.2%, n= 316); who were married (95.1%, n=411); Sinhalese (88.9%, n=384); Buddhist (88.7%, n=383); educated up to O/Level (85%, n=367) and income < Rs. 20,000 (72.3%, n=312). The prevalence of WMSDs during last year was 44.2% (n=191, 95% CI: 39.6 – 48.6) and 39.8% (n=172; 95% CI; 35.4-43.8) during last 7 days . Among the diseased, lower back was the most prevalent site affected during last year (68.1%, n=130) and last 7 days (59.7%, n=114).

Age >40 years (prevalence OR=3.1, 95% CI: 1.9-5.0), lower level of education (OR=2.6 95% CI: 1.7-3.9), lower monthly income level (OR=1.9, 95% CI: 1.2-3.1) and absence of other income source (OR=2.4, 95% CI: 1.4-4.1) were significantly associated with an increased prevalence of WMSDs. In contrast, 'good' knowledge on WMSDs, risk factors and their preventive measures was significantly higher among farmers with WMSDS (OR=4.8, 95% CI: 3.2-7.2). Of the physical and ergonomic hazards, prolong flexion (OR=1.9, 95% CI: 1.1-3.2), repetitive movements (OR=2.9, 95% CI: 1.3-6.5), repetitive twisting (OR=3.8, 95% CI: 1.8-8.0) and awkward posture (OR=3.0, 95% CI: 2.0^1.6), exposure to high temperature (OR=7.7, 95% CI:2.7-22.0) and cold rainy weather (OR=3.2, 95% CI: 1.9-5.4) were significantly associated with WMSDs. Of the work related practices, engaging in both paddy and Chena cultivation (OR=2.5, 95% CI: 1.6-3.7), planting/weeding (OR=3.4, 95% CI: 2.1-5.5), longer life time working duration, more resting hours during work per day, less working hours and less sleeping hours per

day were significantly associated with WMSDs (p< 0.05). The majority of farmers practiced at least two preventive methods against WMSDs (80.1%, n=346) while all preventive methods practiced were significantly associated with an increased prevalence of WMSDs (p< 0.05) .The majority taking treatment for WMSDs, particularly from a western practitioner (OR=9.4, 95% CI: 5.8-15.3) was significantly associated with WMSDs.

In conclusion, the prevalence of WMSDs was over 40% among paddy/Chena cultivators in a rural district in Sri Lanka. This high prevalence was associated with many factors in relation to their worker characteristics, physical and ergonomic hazards, work related practices and health seeking behaviour. It is recommended to conduct health promotion programs on proper ergonomics at work place with active participation of the public health staff, especially for farmers with vulnerable characteristics for developing WMSDs.

Furthermore, it is recommended to establish a proper referral system and guidance for farmers for early identification and adequate treatment of their WMSDs.

Keywords: work-related musculoskeletal disorders, musculoskeletal disorders, - male farmers, paddy/Chena cultivators, ergonomic hazards

0050. **Ghouse, M.B.A.**
Pre-pregnancy contraceptive usage among currently pregnant women and its relation to birth spacing practices in Kalpitiya M.O.H. area.
MSc. Community Medicine - 2012   D 2980
Abstract

It is no doubt that birth control, birth spacing or reduction in the number of births play a significant part in the stability of a family and it also serves as a proxy measure of access to Reproductive Health Services. The widespread shift in the developing world from large families to smaller families is one of the most important social transformations of the 20th century. In Sri Lanka the usage of contraceptives since the mid-1970s has been identified as the most important reason for this shift.
This study with the objective of describing the contraceptive usage and its association with birth spacing practices among pregnant mothers in Kalpitiya MOH area aims to

look into the issue of the difference in the contraceptive usage compared to the Puttalam district and the national values and to clear out many misconceptions, irregularities or shortcomings in the reproductive health care service provision.

This is a community based cross sectional descriptive study and all pregnant mothers under care in the Kalpitiya MOH area during the period of the study was considered as the study population. The sample size was 423 and the response rate was 94%.Sample characteristics showed a younger (>% under 30 years) and a predominantly Muslim population (>50%) who were better educated (~90 above secondary level). Household crowding index (HCI) is

a concept not studied adequately in previous studies and not in DHS 2006/7, and it showed a moderate value as 2.32 persons per room in a house. Age at marriage (for female) was 21.36 for the population which was less than the DHS value of 23.3 (21.3 for Puttalam district). This was significantly associated with the ethnicity and husband's occupation.

About 80% were married before they reached 24 years and -30% before completing 18 years. More than % of those who got married before completing 18 years were in their 17th and 18th years at marriage. Age at marriage was significantly related (p<0.05) with the education level, husband's occupation and parity. However it was not related with ethnicity or monthly income.

Teenage marriages, especially those below 17 years are prevalent in increased rates especially in some PHMM areas where agriculture and fishing was the main occupation and mostly populated by Sinhala Catholics.

Average number of pregnancies (parity) for a mother was 2.36 while abortions were 0.18 per mother and parity had a significant (p<0.05) association with age and education level of the mother and her husband as well as with HCI.

Contraceptive usage during the last pregnancy showed a "non-user" rate of nearly 47% and DMPA 37% which are much higher than the expected norms. The trend in using DMPA decreases and non-user rates increases with each parity level.

Two thirds of the sample population wished for another pregnancy which was mostly (36.2%) after 3 years. The most preferred FP method prior to the next pregnancy was DMPA injections (43.2%) and Pills/Implants by 25% while 15% (for a delay of 37.4 months) will not be using any method.

Though >80% had been aware of contraceptives earlier, more than % of them agreed that it was inadequate and nearly 45% of information about contraceptives was from

"non-health" sources. About V* had visited FP clinics and the services afforded there were considered by them as satisfactory.

The analysis of the birth intervals showed that the gaps from the 1st child up to 5th births averaged 3Yi to 3³A years. During these intervals DMPA is the main choice while non-usage is also prominent. Proportions of "non-users" increase with each pregnancy while the proportion for DMPA decrease.

This study has revealed that the female population is much better educated than had expected from a rural area. Therefore health sector approaches and efforts to educate them on reproductive health matters should be tactfully handled taking religious and cultural factors into consideration. Knowledge and awareness on contraceptive methods needs to be improved among the target population especially during the period of their first pregnancy and among the males especially to the husbands and elders who may influence their womenfolk regarding contraceptive decision making.

An effort should be made to include household crowding index (HCI) into DHS which could be an important indicator for policy planning and implementation process.

0051. Godakanda, I.P.

The pattern of sedentary behavior during leisure time and physical activity, and it's risk for overweight among school children aged 14-15 years in Kalutara district.

MD Community Medicine – 2014 **D 3428**

Abstract

Sedentary behaviors are one of the more serious yet insufficiently addressed public health problems. The knowledge needed to inform future evidence-based interventions and national guidelines that specifically target sedentary behavior with physical activity pattern among adolescents are extremely limited in Sri Lanka and this alarming situation needs to be addressed. The non availability of a validated study instrument exclusively designed to make available a comprehensive range of sedentary behavior information is another hidden aspect in this regard. Due to this dearth of information, a call for a more extensive body of epidemiological research on sedentary behavior and physical activity and its' risk for overweight have been made recently.

The objectives of this research were to translate and validate a questionnaire to assess sedentary behavior among adolescents. Also to describe both the pattern of sedentary

behaviours during leisure time and physical activity and to determine its risk for overweight among school children aged 14-15 years in the Kalutara District. The study included three components - a validation study, a cross sectional study and a case control study.

The study revealed that the Adolescent Sedentary Activity Questionnaire (ASAQ-S) is a valid tool to assess sedentary behavior with the results showing Intra class Correlation Coefficient(ICC) of 0.53 (95 % CI of 0.08, 0.78) after performing a criterion validity assessment using an accelerometer as the gold standard among 42, randomly selected school children aged 14-15 years. Its reliability assessment showed as 0.89 (95% CI: 0.7.0.8) of Intra class Correlation Coefficient with significant results for a total week of sedentary time.

The cross sectional survey was carried out among a sample of 1795, recruited using multistage cluster sampling with probability proportionate to the size of the 14-15 years aged school children in government schools in the District of Kalutara. A total of 90clusters were included and cluster size was twenty participants in the class room. The pattern of sedentary behavior was assessed by inquiring on the time spent on 14 different types of sedentary activities across the week days and weekends by using the validated

ASAQ-S. The results revealed that 95.2% of adolescents were engaged in sedentary activities for > 4 hours per day during an average week. During week days 92.1%, and on weekends 96.4% of adolescents were sedentary for > 4 hours per day. Females were more sedentary than males for > 4 hours per day (97% and 93% respectively) with the significant P value of <0.001. A higher proportion of overweight participants were sedentary for > 4 hours per day than normal weight and underweight participants shown as 97%, 94%, and 96% respectively with significant difference of P value as 0.03.

The mean duration of sedentary hours during a normal day among the adolescents showed as 9.89 + 3.02 hours per day. For week days it was 8.26 + 2.84, and for weekends 11.52 + 3.92 with statistically significant difference (P < 0.001). In addition, adolescents were engaged 70.6 % of the day in sedentary activities. TV viewing was the single most popular sedentary behaviour during weekends and doing home work was during week days. TV viewing time revealed 1.6 hours per day during week days and 2 hours per day during weekends among both sex. Adolescents 17.6% were spent > 4 hours per day on watching TV during the weekend and only 6.1% did the same during

week days. During week days while 58.5% spent less than 2 hours per day doing home work, 36.6% of participants spent time for > 2 hours per day and 4.9% were not.

The pattern of physical activity was assessed using the validated Physical Activity *Questionnaire - S in this component of the study too.* Ony 3o.1% of the adolescentswere participating in moderate - to vigorous - physical activity (MVPA) for at least 60 minutes per day for 5 or more days per week and were categorized as sufficiently active. Accordingly only 30.6 % female participants and 35.1% among the male participants were sufficiently active with significant difference (P = 0.05). At the same time more urban schools participants (35.1 %) were sufficiently physically active than rural participants (30.6 %) with a significant result (P: 0.01). Only 26.7% of overweight participants were sufficiently active showing significant difference with normal (35.1%) and underweight group (30%) with P value of 0.02.

The risk factors of overweight were assessed in relation to the level of sedentary behavior during leisure time and the level of physical activity in the case control component of thestudy. In this component of the study 176 overweight participants defined as cases and 704 normal weight participants were selected as 4 controls per case. Univariate analysis followed by logistic regression analysis was carried out to identify the independent risk factors for overweight adjusted for confounding effect. The strongest risk for overweight was indicated for those who watched Video/DVDs for > 2 hours duration with 3.1 time of risk for becoming overweight than those who watched for less than 2 hours (95% CI:1.8-5.3; P value : <0.001). Watching TV for > 2 hours showed the risk for overweight as 2.6 with 95% CI of 1.7- 3.8 and P value of <0.001. Doing home work for > 2 hours showed 1.8 times risk for over weight than those who spent less than 2 hours on home work (95% CI: 1.2, 2.7; P: <0.001). When considering the pattern of physical activity it was found that there was 1.6 times risk of overweight with insufficient physical activity adolescents than those who were sufficiently active by participating in moderate- to vigorous- physical activity (MVPA) for at least 60 minutes per day for 5 or more days per week (95% CI: 1.1, 2.4 and P value of 0.03).

The Three-Day Dietary Record which was validated for the local setting was used to assess the participants' food consumption. Study results revealed that consumption of pulses and seeds (OR; 0.5.; 95% CI: 0.3.0.7), and both vegetable and fruits (OR: 0.06, 95% CI 0.4, 0.9) had a protective effect for the overweight than non consumption, after controlling the confounding effects. Also results showed consumption of meat (OR:

1.9; 95% CI: 1.2, 3.1), fish or other sea foods (OR: 1.6; 95% CI: 1.1, 2.8), fast food, fried rice and oily foods (OR: 1.9; 95% CI: 1.2, 2.9), Carbonated drinks sweetened drinks, ice packets (OR: 1.9; 95% CI: 1.2,2.8), and Sweets, biscuits, ice packet (OR: 1.8; 95% CI 1.2, 2.7) have a higher risk for over weight than those who did not consume.

It is concluded that the pattern of sedentary behavior during leisure time among school children aged 14-15 years showed undesirable high levels with types of activity duration of activity and week day/weekend variation, sex, and sector of the school Physical activity pattern showed low levels of sufficiently active as recommended. Their unhealthy levels of engagements in these activities showed positive risk for overweight and this has to be considered as an alarming but hidden public health problem. Awareness should be created among the community and the general public regarding the adverse health outcomes in relation to all the age categories as important strategy for the prevention of NCDs.

Keywords: adolescents, sedentary behaviours, physical activity, risk factor overweight.

0052. **Gunarathna, N.K.C.**

An intervention for personal hygiene related to influenza among school children through school health clubs in Kalutara district.
MD Community Medicine - 2012   **D2985**
Abstract

1nfluenza is a highly contagious disease caused by influenza virus that affects the respiratory tract. The influenza virus has great potential to undergo mutation or re-assortment leading to the emergence of new strains causing seasonal epidemic or more destructive pandemic influenza. Vaccination is the main preventive method adopted for influenza. Non-pharmaceutical measures, especially, hand washing has equal place in the prevention of influenza. These methods also play a major role in preventing other common communicable diseases like other respiratory tract infections, diarrhoeal diseases and impetigo. Effectiveness of non-pharmaceutical measures in prevention of influenza and other communicable diseases depends on people's adoption of these behaviours correctly. Behaviour Change Communication (BCC) is identified as an effective method in inculcating new behaviour or changing or strengthening existing behaviours.

Schools have been identified as a key setting that can play an important role in influencing healthy behaviours and lifestyles in children and young people. The school health promotion programme in Sri Lanka was initiated in the year 2007 and already established School Health Clubs (SHCs) in school setting used to carry out the health promotion activities. SHCs were chosen to plan and implement the BCC programme for this study.

This study was designed with the objectives of evaluating the functioning of SHCs in the Kalutara District and to assess the effectiveness of a BCC package in improving the personal hygiene related to influenza diseases among Grade 8 and 9 school children. The study consisted of three components.

The component I assessed the functioning of SHCs and health promotion activities conducted by them using a cross sectional design. All the schools (406) in the Kalutara District were selected to the study out of which the basic information data on schools were collected from only 376 schools using a SAQ. Subsequently, trained data collectors visited the schools that were identified as having SHCs, and collected data on the functioning of SHCs and health promotion activities carried out by SHCs.

Study component II was designed to describe factors associated with functioning of SHCs. The PI collected the necessary information through seventeen in-depth interviews with school principals (of schools with SHCs and without SHCs) and coordinating teachers of SHC.

The study component III, a quasi-experimental community trial with pre test and post test assessments and a comparison between intervention and control group, was planned to determine the effectiveness of the BCC package in improving the personal hygiene related to influenza disease. The BCC package was developed to provide the necessary information using participatory techniques, to enhance skill development and to monitor the personal hygiene. Supplying soap, providing frequent reminders of messages using different communication methods and problem solving sessions were also included in the BCC. Pre and post tests using a SAQ and an observation check list on hand washing technique were conducted among school children from 26 clusters (cluster size 30), selected using stratified multi stage cluster sampling technique, in the intervention and control groups.

The proportion of functioning SHCs in Kalutara District was 29.5% and none of the Type 3 schools had a functioning SHC. Functioning of SHC was significantly

associated with the education zone (p<0.001) and functional grade of the school (p<0.001). With regard to performance of functioning SHCs, 37.8% was good, 23.4% was satisfactory and 38.7% was poor. The common health promotion activities carried out by functioning SHCs were exercise programmes (93.7%), regular cleaning of school environment (91.9%), providing first aid facilities (88.3%), participating in SMI (74.8%), giving health talks at school assembly and community health projects. Maintaining a health resource centre (13.5%) was the least common activity done by SHC.

Having committed and responsible principal, having a skilful coordinator, efficient management of available resources and the positive attitude towards health promotion were identified as the positive factors associated with the functioning of a SHC. The mainnegative factors identified were lack of resources and lack of awareness on school health promotion and poor inter-sectoral collaboration.

The mean of the knowledge score obtained for different aspects of influenza diseases (26% to 37% with comparatively higher knowledge on influenza prevention) in pre intervention period nearly increased by 30%) after the intervention. The pre intervention knowledge on hand washing (mean score - 45%>) and cough etiquettes (mean score – 57%) reported nearly 25% improvement at the post intervention survey. However, only 2% improvement was reported on behaviours during illness, which had a mean score of 87% during the pre intervention stage.

The overall attitude score shifted towards the positive direction with more than 10 point improvement in the attitude score at the post intervention survey. Six months after the intervention, significant improvements were noticed on self reported frequency of hand washing with soap (Pre int. Mean 3.4 to post int. mean 5.2 per day), always hand washing with soap *(20.7%* to 37.9%) and on always using running water for hand washing (20.7 to 37.9). Mean score for observed hand washing technique improved 16 % from that of the pre intervention value (61.3%>). Practice on cough etiquettes (45%> to 67%) and behaviours during illness (50%> to 63%>) also reported significant improvement at post intervention stage.

Lack of resources, lack of awareness on health promotion concept among stake holders and poor inter-sectoral corporation were identified as main constraints for the establishment and functioning of SHCs. The implementation of BCC package to improve personal hygiene through SHC was effective in improving the knowledge,

attitude and practices on personal hygiene related to influenza diseases and the knowledge on influenza disease.

Providing regular in service training programmes on school health promotion to relevant staff at school, conducting awareness programmes for community members and for parents and the revitalization of SHC programme are recommended. The BCC package to improve personal hygiene with relevant modification to the target community needs to be implemented in other schools in the District of Kalutara.

0053.Gunasekara, N.M.D.M.S.

Safety performance , correlates and cost of construction injuries of male building construction trades workers in Colombo Municiple Council area.

MD Community Medicine – 2015   D 3600

Abstract

Introduction

Construction industry is considered as a hazardous industry and its employees are incurring work related fatal and non- fatal injuries globally, even in developed countries. This study was carried with the aim of describing Safely Performance of male Construction Trades Workers including attitudes and perceptions towards safety, behaviours of workers when faced with high risk situations; injuries, costs and correlates of injuries. The study was conducted in Colombo Municipal Council Area.

Methods

The study had three (3)

components

Component I

Development and validation of tools to assess attitudes, perceptions and behaviours of construction workers related to safety.

First component of the study comprised of two (2) partsSubcomponent I- Development of a tool to asses Worker's Attitudes & perceptions towards safety (WAS).

Thirty two (32) items were used in the questionnaire used in the validation study and the responses were rated on a scale ranging from zero to five. Four hundred and forty one (441) construction workers were enrolled in the validation study and factors were extracted using Principal Axis Factoring (Principal Factoring). Direct

Oblimin Rotation was used to rotate factors. Data was analyzed using SPSS (version 20).

Eighteen items (18) were retained in the final tool and five underlying factors were identified taking both Keiser criterion and scree plot into account. The tool explained 64.5% of the variance and both Kaiser-Meyer-Olkin test and Bartlett's Test of Sphericity were satisfactory.

Subcomponent II-Development of a tool to asses Workers' Behaviours when faced with high risk situations.

Twelve (12) items were use in this component of the study and only face, content and consensual validity were assessed subjecting it to the several expert panels and modified Delphi technique was used to arrive at a consensus.

Component II

A Cross sectional study to assess attitudes, perceptions, behaviours of c<workers related to occupational safety, injury frequencies and correlates of construction injuries was conducted.

A total of 2380 construction workers working in 161 construction sites were enrolled in the study (minimum number of workers needed was 2361). Tools developed and validated in the Component I were used in this study.

Information on injuries was collected using a questionnaire and details of minor acute injuries (cuts, bruises etc.) that required treatment other than self medication was given a recall period of two (2) weeks (even if they did not cause any work loss), but major acute injuries (fractures, amputations etc) that required hospitalisation or long term treatment were given a recall period of one (1) year. Any acute injury that lost work time was given a recall period of three (3) months. Injuries were categorised according to the type of injury and cause of injury. Musculoskeletal disorders such as repetitive stress injury were considered only if it required treatment from a doctor/medical practitioner and was given a recall period of six (6) months.

Component III

Costing study-This component of the study was conducted prospectively for six (6) months. Human Capital method was used to calculate the cost of construction injuries and only direct medical costs (both hospital and out of pocket expenditure) of injuries and indirect cost due to loss of earnings in the subject and care-givers were assessed.

Scenario Building approach was used to calculate direct hospital medical costs and prevalence type of costing was done.

Results : Majority (64%) of workers were helpers (36%), Masons (20%) and Carpenters (8%).Only a slight majority of workers agreed that "there are efforts to improve safety" and that"safety inspections are carried out on regular basis" (52% and 54% respectively). Only 31%agreed to the statement that "working safely is the top priority for site managers, foremans and supervisors" and only 38% agreed to the statement that "management provides safety training". An overwhelming majority of workers agreed to "Safety rules and procedures are required" and "Safety rules and procedures are easy to implement" (92% and 90% respectively).

Working on scaffolds which is not totally boarded, working on scaffolds with missing guard-rails and climbing up or down a scaffold without a ladder were not considered as risky by 3%, 4% and 26% of workers respectively.

Using a ladder which is not tied or secured, using a ladder which is broken or somehow defective and using a ladder which extends less than 1 meter above the landing place were not considered as risky by 7%, 0.4% and 34% respectively.

Working on fragile roofs without support, working on roofs without edge protection without a harness and working on roofs in bad weather were not considered as risky by 10%, 2% and 1% respectively.

There were 974 injuries (both minor and major injuries collectively) in this study for a period of one year; 232 (24% of injuries) were hospital injuries while 742 (76%) were minor injuries and the overall injury prevalence was 41%.

There were 364 (37%) superficial wounds and 88 (9%) sprains in this study. There were 201(21%)open wounds, 55(6%) fractures and 55 (6%) contusions. Majority (62%) of the injuries which resulted in hospitalization were due to trips and falls (elevated) (36%) and tools and material (26%).Indirect cost of acute injuries is quite high and mainly it is due to the unregulated sector.

Conclusions : Acute injury rates are quite high among construction workers in this study compared to injury rates in other countries and prevalence of all types of injuries was relatively high in this study. Most of the minor injuries which can be prevented by appropriate protective methods and vocational training were high in this study. Both major and minor injury rates were higher in the large category.

More attention should be to improve safety performance and safety inspection should be carried out regularly in all categories of the industry. Provision of safety training to

workers and improved attention to safety by the management will reduce the acute injuries among construction workers.

Keywords :Construction Worker, safety performance, acute injuries, chronic injuries, cost of construction injuries.

0054.Gunasekara, P.M.G.

Knowledge, attitudes and practices on family planning counseling among public health midwives in Gampaha district.

Abstract

Introduction:

Besides the relatively low percentage of unmet need in Sri Lanka, one third of maternal deaths are directly related to unwanted pregnancies. It would not only affect the individual women, but also the unborn fetus, the rest of the members of the family, community and the country which could be classified under health, social and economic aspects.

Counseling is very important in the field of family planning, as satisfactory counseling isthe cornerstone in improving family planning practices, which would reduce the' unmet need.

Public Health Midwives (PHMM) play a leading role in the provision of family planning services at the grass root level. Thus the quality of the work of PHMM really matters in deciding the quality of the family planning services of the country, and assessing the knowledge, attitudes and practices on family planning counseling of PHMM is of utmost importance.

Objective: To describe the knowledge, attitudes and practices on family planning counseling among Public Health Midwives in Gampaha district.

Methodology:A descriptive cross sectional study was carried out in Gampaha district. Public Health Midwives who belonged to all the Medical Officer of Health areas were taken as the study sample. A self-administered pre- tested questionnaire was used to collect data. All thepossible steps were taken to ensure the accuracy and completeness of information, and confidentiality of the participants. Data were analyzed using SPSS software package.Periodic in service training programs should be arranged to PHMM in order to maintain their knowledge on the above aspects.

Results: Out of 502 PHMM. 467 took part with a response rate of 93.02%. Majority (32.5%) of the participants belonged to the age category of 41-50 years and 77.9% had passed their GCE A/L.

About two thirds (62%) of the PHMM had a satisfactory knowledge on family planning byanswering 3 or more of the 5 questions included to assess the knowledge. Lowest knowledge was noted on the questions regarding emergency contraception (22.5% correct).

There was a statistically significant association with age (P=0.001) and the number of years in service (P=0.026). It was found that 54.2% of the participants had a satisfactory knowledge on family planning counseling. Only 9% of participants knew all 6 steps of GATHER approach. A statistically significant difference regarding the knowledge on family planning counseling was noted age less than 40 years(p=0.006). levels of education above 0/L(P=0.037), duration of service less than 10 years (p=0/014) and the family planning knowledge (p=0.001). Interestingly, no statistically significant difference was noted between those who had and had not family planning counseling training.

Only satisfactory knowledge of family planning counseling had a statistically significant association (P=0.004) with attitude on family planning counseling.

Only 42 (9%) of the PHMM knew about all the steps of GATHER hence could expected to practice it properly during family planning counseling. It was shown that 34 (81%) of

them (ie.7.3% of the total study sample of 467) were following the steps of GATHER. A statistically significant difference regarding usage of the steps of GATHER was not noted between the levels of knowledge on family planning counseling.

Conclusions: Content of basic and in service training regarding family planning and family planning counseling need to be re-evaluated by the experts in the field for necessary modifications.

Keywords:Family planning counseling. PHMM. GATHER approach

0055.Gunathilaka, M.N.J.

Patterns of occupational eye injuries and knowledge and practices on their prevention among the patients attending the outpatient department of National Eye Hospital.

MSc. Community Medicine – 2014　　　　　　　　　**D 3604**

Abstract

Introduction: Occupational Eye Injuries (OEIs) cause substantial morbidity, disability and economic loss globally. Local studies on Work Related Eye Injuries (WREI) and its prevention are scarce.

Objectives: To describe socio-demographic, occupational and clinical characteristics knowledge and practices on prevention and first-aid among patients presenting with OEIs t(National Eye Hospital, Colombo.

Methods: A descriptive cross-sectional study was conducted in 218 consecutive patients presenting with OEIs to National Eye Hospital, Colombo. Data was collected using a interviewer-administered questionnaire and clinical records. Knowledge on identifying hazards, preventive measures and first-aid were assessed separately and a total score was calculated for each.

Results: Response rate was 100%. Mean age was 34 years (SD=±11.5). Majority were married (65.6%,n=143), male (97.7%,n=213) breadwinners (58.3%,n=127). Most affected were welders (29.8%,n=65) and construction workers (19.7%,n=43). Flying-particles (41.7%,n=91), grinding particles (36.7%,n=80) and chemicals (11%, n=24) were main causes, resulting in 57.3%(n=12 foreign bodies, 10.1%(n=22) abrasions and 5.9%(n=13) chemical-burns. Thirteen (6%) h; bilateral injuries, 18(8.7%) had partial and complete vision loss and 121(55.5%) had previous OEIs.

Majority 91.7%(n=200) scored =>8 out of 14 for knowledge on identifying hazards (Median9.7,IQR=9-ll) and 45.9%(n=100) scored full marks for knowledge on prevention (Median4.2,IQR=4-5). Majority had goggles (90.7%,n=202), spectacles (60.8%,n=152), hand shields (64.1%,n=185) but not face-masks (9.4%,n=9) or welding-helmets (32.4%,n=24).Personnel Protective Equipment (PPE) usage was compulsory in 63.3%(n=l; workplaces but only 16.5%(n=36) were using PPE during injury. Main reasons for non-use wt unavailability (22.5%,n=49) and low priority (20.6%,n=45). PPE use during injury v significantly (p=0.004) higher where it was compulsory.

Lack of interest (22.5%,n=49) and lack of facilities (7.8%,n=17) were main reasons for not receiving first-aid. A significantly higher proportion with good knowledge, had received first aid (p=0.049) and presented to hospital within 12 hours (p=0.024). **Conclusions:**Socio-demographic, occupational and clinical characteristics of OEI patients Knowledge on identifying hazards and prevention was satisfactory however, utilization of PPE was poor. Overall knowledge on first-aid was satisfactory but practices were unsatisfactory. Better knowledge was associated with better practices c treatment-seeking. Legislation, provision of PPE and worker education targeting change on prevention and first-aid are recommended.

Keywords: Occupational eye injuries, Personnel Protective Equipment (PPE Practices, Prevention, First aid

0056.Gunawardana, B.M.I.

Incidence, immediate consequences, associated factors and health seeking behavior related to falls among elderly in Medical Officer of Health area Elapatha.
MSc. Community Medicine – 2015   D3603

Abstract

Introduction : Birth and emergency preparedness is a cost effective and evidence based intervention that is recommended by the current WHO maternal care model and used in maternal care package in Sri Lanka. Assessing the progression of this component is a timely concern which would provide light for further improvement of maternal and child health in the country.

Objective : To describe the birth and emergency preparedness, associated factors and its association with maternal and neonatal outcome among postnatal mothers at Base Hospital, Balangoda.

Methods : A descriptive cross sectional study was conducted from August to October 2014 among the postnatal mothers who had delivered after completion of 37 weeks of period of amenorrhoea. The computed sample size was 427 and all the postnatal mothers who had delivered within that period were selected for the study. Data collection was done using a pre tested interviewer administered questionnaire. Bivariate analysis was done using SPSS software and chi square test was used to assess the significant associations and a probability of less than 0.05 was selected as the level of significance.

Results: Response rate was 93.9% (n= 401). The majority of the mothers were in the 25-34 age category (n= 245, 61.1%) and 3.7% (n= 15) were teenage mothers. Approximately 80% and 11% were Sinhalese and Tamils respectively. Regarding utilization of antenatal care services, 84.3% (n= 338) of mothers had registered at antenatal care before 12 weeks and 89.3% (n= 358) had received domiciliary care during antenatal period. In relation to maternal outcome, 6.2% (n= 25) had experienced post-partum complications before discharge from hospital. Considering neonatal outcome, 99.5% (n= 399) were live births and 4.8% (n= 19) were resuscitated after birth.

The majority of the mothers (59.4%, n= 238) were well prepared for birth and emergencies. Factors which showed a significant association with well preparedness for birth and emergencies were; ethnicity (p < 0.001), religion (p < 0.001), married mothers in union (p <0.05), having attained higher educational qualifications by both partners (p<0.01), receiving adequate maternity social support (p<0.001), received domiciliary care by PHM (p<0.05) and participation at antenatal classes by mother (p < 0.05). Lesswell prepared mothers were more likely to experience post partum complications compared to well prepared mothers (p < 0.05). Babies of well prepared mothers were more likely to have a favourable apgar score at ten minutes and not needed resuscitation at birth (p < 0.05).

Conclusions and Recommendations : The overall preparedness for birth and emergencies was satisfactory among the study participants. Considering the associated factors, there were several modifiable factors, which needs due attention. The association between well preparedness and the better maternal and neonatal outcome suggests the need for further improvement in this intervention. Future research should be conducted separately in the estate sector.

Keywords : Birth and emergency preparedness, Maternal outcome, Neonatal outcome

0057.Gunawardhana, Y.A.G.K.

Pre hospital care received by injured children less than five years admitted to Lady Ridgeway Hospital.

MSc. Community Medicine – 2012   **D 2981**

Abstract

Introduction: Childhood Injuries are a growing problem all over the world. It is important not only to prevent injuries but also to mitigate the consequences following an injury. The opportunity to prevent death and disability during the post injury period differs depending on the severity of the injury but it would appear that the earlier the definitive care can be provided, the better the patient outcomes that can be achieved. Therefore pre-hospital care plays a major role in preventing death and disabilities due to injuries.

Objectives: To describe the pre-hospital care received by injured children less than five years admitted to the Lady Ridgeway Hospital and associated factors.

Methods: A hospital based descriptive cross sectional study was carried out at the Lady Ridgeway Hospital accident ward, surgical wards and ENT and burns unit. A sample of 431 pairs consisting of a pre-hospital care giver and a child were recruited using the consecutive sampling method and giving a response rate of 92.8%. Data were collected by the principle investigator and one trained data collector, using a pre tested, interviewer administered questionnaire. Data was statistically analyzed by using the SPSS soft ware package.

Results: The mean age of injured children was 38.16 months (SD±13.2). Majority of the children were male and Sinhalese. Majority of care givers were unemployed mothers and belonged to the age group of 30-39 years. Only 15.7% of the care givers had first aid training and 69.6% of care givers had education level above or equal O/L. The most common injury type according to the mechanism was fall and according to the nature it was bleeding wound. A first aid box with basic equipment was available for 56.8% injured children. Majority (59.3%) of children was transported within the golden hour and used three wheelers (57%) as transport vehicle. Although a majority (87.5%) of care givers had access to communication methods only 21.5% knew the emergency telephone number. Majority (60.5%) of care givers had good knowledge on first aid. However, the score for nose bleeding management was low. A care giver education level associated with the good knowledge on first aid. Having first aid training for the care giver was

significantly associated with the correct practice for bleeding wound, contusion and fractures.

Availability of first aid box with basic equipments and use of suitable vehicle to transport the child were significantly associated with care giver education level >O/L and child belonging to upper social class (land 2).

Conclusion and recommendations: Correct first aid practice was significantly associated with first aid training of the care giver. First aid training among care givers was low (15.7%). Therefore it is recommended to start first aid training sessions for mothers in the immunization clinics.

The majority used a three-wheeler as the transport method. Therefore, it is recommended to train three-wheeler drivers about basic first aid and on how to transport injured children safely. Though a majority of care givers had accessible communication methods only 21.5% knew the emergency number. It is recommended to educate the citizens regarding the established pre-hospital care system and emergency numbers.

Keywords: **Pre hospital care, First aid practices, children below five years.**

0058.Herath, D.C.K.

Prevalence and factors associated with unmet need for family planning among 15-49 year old women in the Medical Officer of health area Mallavi

MSc. Community Medicine – 2014   **D 3583**

Abstract

Background: The concept of unmet need for family planning is defined as discrepancy between women's contraceptive use and their fertility intentions. In developing countries, many women in the reproductive age group do not use any contraceptive methods but prefer to postpone or limit their births. The causes and the magnitude of unmet need can vary according to the socio- demographic characteristics of women in different countries and different regions. Mallavi Medical Officer of Health area is situated in the Mullaitivu district in the Northern Province of Sri Lanka. Data on unmet need in the Northern Province are scarce, Due to the effects of more than three decades civil war. Therefore, the findings of this study could help program managers to strengthen the family planning program and further reduce the unmet need in the area.

Objective : To determine the prevalence and factors associated with unmet need for family planning among 15-49 year old women in the Medical Officer of Health area Mallavi.

Methods : A community based cross sectional study was conducted in the MOH area Mallavi. A total of 500 women between 15-49 year of age were enrolled using cluster sampling, according to probability proportional to size. Data were collected using an interviewer administered questionnaire by trained data collectors from August to September 2014. Univariate analysis was performed to describe the characteristics of the study population and women with unmet need. Factors associated for unmet need was tested using chi-squared test where applicable.

Current contraceptive prevalence rate for any method was 66.6%, while the prevalence of modern contraceptive methods was 54.6%. The extent of unmet need was 11.8%, with 3.6% for spacing and 4.2% for limiting. Among the women with unmet need, only one amenorrheic woman reported her most recent pregnancy as mistimed. Ever use of contraception was 54.2%. Being employed (OR=1.976; CI: 1.02-3.82; p=0.040) and husband's agreement in fertility goals (OR=0.439; CI: 0.24-0.79; p=0.005) were the factors significantly affecting the total unmet need for contraception, Education level below GCE Ordinary Level was a protective factor (OR=0.452; CI: 0.25-0.81; p=0.006), Age of the respondent, monthly income level, parity and number of living children were not associated with the unmet need. Family planning service related problems were; the distance to the family planning clinic, long waiting in the clinic (n=4, 50%) and lack of privacy (n=2, 25%) were the main reasons cited by women with unmet need.

Conclusions and Recommendations : Program planners should focus on increasing the competence of service providers by updating their knowledge in family planning and skills in counseling. Should create awareness on various methods, their probable side effects and increase access to modern contraceptive methods, in order to reduce the unmet need and empower them to make an appropriate choice of contraception.

Keywords : Unmet need. Family planning, Reproductive age, Mallavi

0059. Hettiarachchi, J.

Overweight and obesity among adolescent school children : prevalence, correlates and effectiveness of an intervention in the Colombo Educational Zone.

MD Community Medicine - 2013   D 3228

Abstract

Sri Lanka showed broad socioeconomic changes including rapid urbanization and industrialization resulting in considerable nutrition transition leading to overweight and obesity as an emerging problem.

The present study was designed with the objective of describing the prevalence of overweight/obesity and to assess factors associated with it among 14 to 15 years old school children in the Colombo education zone. It also aimed to develop and validate an instrument to assess an adolescent's dietary habits and to assess the effectiveness of a nutrition education package to promote healthy eating habits among adolescents. In order to achieve these objectives, a school based study was carried out in the Colombo education zone.

The preset study was conducted in six stages. Stage I was conducted to develop and validate the Adolescent Dietary Habits Assessment Questionnaire (ADHAQ). Stage II was a cross sectional descriptive study to estimate the prevalence of overweight/obesity and to identify some factors associated with overweight/obesity. One thousand seven hundred and fifty subjects were selected for the descriptive study using the cluster sampling method. Stage III and IV were qualitative data collection from parents to assess their knowledge and views regarding diets to adolescents; data collection from stake holders of school canteens regarding their attitude towards food sold at the canteen; and the canteen policy. Stage five was designing an education package based on stages II - IV to change the unhealthy dietary habits. Stage six was the randomized controlled trial to assess the effectiveness of the newly designed education package.

The ADHAQ was validated by using judgmental and criterion validity. Criterion validity of the food habit questionnaire was assessed by using a 7-day food inventory method as a standard. The study revealed a good correlation coefficient (y>0.7) for most of the food habits between the gold standard and ADHAQ concluding that it is a good instrument to measure adolescents' dietary habits.

Data were collected from 1728 students in relation to socioeconomic characteristics, physical activity and dietary habits. Data were collected from all participants using a self

administered questionnaire. Height and weight were measured and age specific BMI was calculated to determine the over weight and obesity prevalence.

Prevalence of over weight and obesity among adolescents were revealed as 10.8% with *no* gender difference. Studying in a semi government or international school (OR 2.62), living in the Colombo District (OR 2.09), higher family income (OR 1.78), activities that lead to sedentary behaviour such as sitting activities for more than four hours (OR 3.06) and not doing sports at school (OR 2.41) were found to be significantly associated with adolescent over weight and obesity. Parental non communicable diseases such as diabetes (mother OR 4.46 and father OR 2.40) and adolescents who had a perception of their mother (OR 5.70) or father (OR 2.75) being obese were also found to be significantly associated with adolescents' over weight and obesity.

Focus group discussion with parents revealed that there is a vast range of attitudes and knowledge gaps with regard to adolescents' diet. Key informant interviews with canteen stake holders and observation of canteens revealed that most school canteens are not following and encouraging healthy eating habits or adhering to canteen policy and there was lack of supervision and monitoring by Health authorities and the Ministry of Education.

The short period of nutrition education intervention to adolescents and their parents resulted in a significant reduction of bad dietary habits among overweight and obese adolescents. The intervention study showed an impact even after six months of intervention concluding that even a short term nutrition intervention targeting both adolescents and their parents results in reduction of bad dietary habits.

As over weight and obesity is an emerging trend in Sri Lanka especially in urban areas, it is very important to take necessary action to control over weight and obesity as well as its predictors. This study clearly demonstrated that the newly developed nutrition education package was very useful in the reduction of bad dietary habits which is one of the main predictors of adolescents' overweight and obesity.

0060.Hewage, S.A.

Knowledge , attitudes on newborn care and the level of satisfaction on care received during hospital stay among postnatal mothers at Castle Street Hospital for women.

MSc. Community Medicine – 2014   **D 3605**

Abstract

Background: Though Sri Lanka has successfully reduced neonatal mortality, further reduction is slow and stagnant. Most of these deaths could be prevented by adhering to simple, yet evidence based interventions practiced at hospital and home.

Methods: This hospital based descriptive cross sectional study describes maternal knowledge, attitudes and factors associated with evidence based interventions on newborn care at home among postnatal mothers at Castle Street Hospital for Women. Total of 422 eligible mothers selected by consecutive sampling method were assessed using a questionnaire at an exit interview. Associated factors were tested for statistical significance using Chi Square test. A p value less than 0.05 was considered as statistically significant.

Results: Overall knowledge mean score is 72.7%. Knowledge is low in basic emergency care, demand feeding and some basic hygienic practices. Favorable attitudes are seen in 90.7% (n=383) of the sample. Knowledge is associated with having more than one child, (p<0.00l), being educated above Ordinary Level (p<0.001), and attending to antenatal parent-craft classes (p=0.002). Parity more than one (p<0.031) and attending to antenatal parent-craft classes (p=0.004) are predictors of favorable attitudes as well. More than 75% were entirely satisfied with the care they received during hospital stay. Primiparous mothers and those suffering from antenatal complications were found to be less satisfied when compared to their counterparts.

Conclusions: Most mothers possess good overall knowledge and healthy attitudes towards newborn care. Knowledge should be improved on less scored areas. Primi-para, less educated should be cared more. Antenatal mothers should be made aware of the significance of participation in parent- craft classes. Further studies are needed to evaluate effects of poor knowledge and attitudes on health outcomes of the newborn.

Keywords: Maternal knowledge, Attitudes, Newborn care, Satisfaction, Intrapartum care

0061.Hirimuthugoda, L.K.

Profile and pattern of physical activity of current users on walking pathways in Kotte area.

MSc . Community Medicine – 2014   **D 3601**

Abstract not available

0062.Jayakody, H.G.

Knowledge, attitudes and selected practices on child feeding among child care providers in preschool settings in Nuwaraeliya district

MSc. Community Medicine – 2013   **D 3385**

Abstract

Preschool attendees are children from 2 to 5 years who are also the main target population in routine MCH care. To provide an optimum early child care, development and nutrition, there should be a good collaboration between the parents, preschool teacher and public health midwife. Nutrition among preschool children is an area with increasing importance.

Child care providers in preschools play a key role in child nutrition practices. Their knowledge, attitudes and practices on child feeding shape the preschool children's nutritional behaviours at present and future.

This study aims to describe knowledge, attitudes and selected practices on child feeding by child care providers in preschool settings and their associated factors in selected divisional secretariat areas in Nuwaraeliya district.

A descriptive cross sectional study was conducted in three divisional secretariat areas in Nuwaraeliya district, namely Ambagamuwa, Rikillagaskada and Kothmale. Child care providers employed in child care centers in the permanent cadre at least for I year were . selected as the study population. Multi stage sampling technique was adopted to select the main study sample of 427. From the main sample, a subsample of 106 centers was selected for observations.

A pretested self administered questionnaire was used to gather information on socio demographic variables of child care providers and centers, knowledge and attitudes on child feeding and selected child feeding practices namely, behaviour of the child care provider during the meal time of the center, communication with parents, in cooperating

healthy nutritional concepts to routine teaching and quality of the meal served at the child care center. As the second component of data collection, a pretested observation checklist was employed to make observations on general physical environment of the center and selected feeding practices. Data analysis was done using Statistical Package for Social Sciences (SPSS) software, version 17.

Response rate for the self administered questionnaire was 82.1%. Mean age of child care providers was 37.6 years and they had mean work experience of 12.03 years. 81.4% had basic training on preschool education and 66.2% had in service training on child nutrition as well. Among the participants 43.9% were employed in the estate sector.knowledge score of 5.49 and 52.6% scoring more than 50% of the total score. Positive attitudes towards child feeding were held by 63.7% of the study population (n=219, 95%CI =58.4 - 67.6) while 36.3% responded negatively.

Participation of child care providers during the meal time with children was 83.3% and 61.1% in cooperated nutrition in to routine teaching. Many child care providers (62.1%) reported that they discuss and provide a feedback to parents on daily food intake of children.

Among surveyed child care centers 33 centers exclusively provided meals to children while 230 centers accepted meals from home. Also 79 centers had both these methods for meal provision. . But only 14.4% of child care center staff was trained on hygienic food handling by the public health staff. In the observation subsample 18 child care centers did not have sanitary facilities for children, while availability of water for hand washing was 50%. Safe drinking water was provided only at 29 centers.

Statistically significant associations for knowledge score was observed with ethnicity, level of education, number of children to the child care provider, minimal duration of basic training, the type of in service nutrition training received and the sector they were employed at. Associations for attitude level was present with ethnicity, level of education, minimal duration of basic training, type of in service nutrition training programme attended and the employed sector of the child care provider.

Knowledge and attitudes on child feeding were satisfactory. However differences are seen in practice. Standard basic training and well organized in-service training are some of the modifiable factors in improving the knowledge and attitudes on nutrition of preschool teachers.

Further, strengthening of infrastructure related to water and sanitation, food handing during meal preparations in preschools is necessary to graduate a future generation with good hygienic practices.

Keywords - preschool nutrition, child care providers

0063.Jayakodi, K.K.M.N.

Selected factors affecting the compliance with treatment regimens of diabetic patientsattending Medical Clinics in the district of Kalutara

MSc. Community Medicine - 2012   D 2971

Abstract

Diabetes mellitus is one of the major health problems in the World. It has been predicted that diabetes mellitus will become an epidemic in low income countries in South Asian region (International Diabetes Foundation 2009). Diabetes mellitus has a long latent period and patients have to be on lifelong treatment. Due to the nature of the disease and its complications which affect almost all the organs of the human body, the impact to the individual, family and the country is immense. Therefore patients compliance to life long treatment may lead to reduce the mortality and morbidity due to the disease and ultimately reduce the socio-economic burden to the country. By identifying factors which determine compliance to the treatment regime will benefit in long term to the development of the country.

A descriptive cross sectional study was carried out in medical clinics at General Hospital Kalutara. The main objective of the study was to describe some factors affecting the compliance with treatment regimens of diabetic patients attending medical clinics in the General Hospital Kalutara. An interviewer administered questionnaire was used as the study instrument and total of 418 diabetic patients who attended all medical clinics participated the study. The study was conducted in the month of September, 2009.

Two third of participants (68.4%) were females. The number of patients in the age group of 51-55 years (22.5%), were higher than in other age groups. Only three percent of patients were older than 75 years. The majority of diabetic patients (92.6%) who sought treatment were Sinhalese and eighty five percent were Buddhists. There was a considerable number of Roman Catholics (7.2%) were among clinic attendees. Most of attendees were married (91.1%) and eighty seven percent of them had more than two

children. Approximately, 24% of patients of the study group had a monthly income between Rs 5,001-15,000 range, which is higher than the current poverty line of the country. The majority of male population (65%) were employed and 29 percent of them belonged to the category of traders/businessman. Twenty eight percent (28%) of were in the category of unskilled laborers. The majority (82%) of females were not employed. The care giver at home of 42 percent of diabetic patients were children. And those who accompanied by children and spouses to the medical clinic were 82 percent and 60 percent respectively. The majority of diabetic patients lived within the 10 km distance to the hospital. Approximately twenty one percent of patients had travelled 20 to 25 km to reach the medical clinic, bypassing government health institutions closer to their residence. The majority of patients used the public transport system to attend the clinic, most of them (74%) used private buses.

The mean duration of diabetes was 6.6 years and thirty two percent had the less than three years. There was a significant association between the level of education and the duration of the diabetes at p<0.001 level. The number of diabetics in age groups of <55 years and >55 years significantly associated with duration of the illness at p<0.001 level. The majority of diabetics (66%) were taking treatment for other chronic non communicable diseases (NCDs) also. Among them, hypertensions was the commonest (86.6%).Those with coexisting NCDs had significant association with educational level (p=0.01) and duration of the illness(p<0.001).

Seventy five percent of attendees used only the government service to obtain treatment for diabetes and the majority (95%) had visited the clinic monthly. Of the few who missed clinic dates, was mainly due to personal reasons. The compliance to the intake of food items like bread; biscuits and sugar/jiggery were moderate among diabetic patients. But 54.3% of people totally avoided foods with high glyceamic index.
The majority of patients were compliant with the monthly glucose estimation (94.3%) and blood pressure measurements (83%)The frequency of monthly blood pressure measurements was significantly associated with age (p<0.001) and sex (p=0.02). Poor rate of compliance to ophthalmoscopic examination of eye, examination of feet and HgAlC estimation were found among attendees. Compliance to daily medications were high (96.7%).The overall knowledge level on the disease, prevention and complications was also high (75%).The patients' attitude on the care provided, quality of drugs given and towards health staff were favourable except on the laboratory services.

Travelling of long distance to seek treatment can be minimized by improving health facilities at peripheral units and by strengthening of referral systems. Measures should be taken into address the factors responsible poor compliance of ophthalmoscopic examinations, laboratory examinations and feet examinations practiced at clinics. A check list of activities can be developed similar to what is practiced at the diabetic clinic, NHSL, used or diabetic patients at medical clinics. Further studies will be needed to look in to factors affecting the compliance of patients attending other governments health and private institutions as well as to compare factors affecting the compliance of diabetics attending health institutions not having a service of a consultant physician.

0064.Jayathilake, W.M.B.G.

Selected childhood experiences, current psychological wellbeing and its associates among imprisoned Sinhala speaking women in Welikada Prison, Colombo Sri Lanka

MSc. Community Medicine – 2013   D3503

Abstract

Introduction

Women imprisonment is rising in the world. Female prisoners have more psychological problems and more adverse childhood experiences than the general population. Imprisoned women who had psychological problems had more adverse childhood experiences than the prisoners who didn't have psychological problems. Most of the imprisoned women are mothers. Mothers are the principal carer for the children. The psychological status of imprisoned female is worth seeking along with its associates since this is a group of women who need others assistance to make their life adjusted. Any intervention that could uplift their psychological wellbeing would make their life better if they are to be released out of the prison. Since there are no studies done in Sri Lanka to study the imprisoned women psychological wellbeing and their childhood experiences, it is important to study on this to find the magnitude of the problem in Sri Lanka.

The study among imprisoned women was done with the following objective." To describe selected childhood experiences, current psychological wellbeing and its associates among imprisoned Sinhala speaking women in Welikada prison, Colombo Sri Lanka."

Methodology :A descriptive cross sectional study was done at the Welikada Prison, Colombo, among the imprisoned Sinhala speaking women. 273 imprisoned Sinhala speaking women were selected using simple random sampling technique. Using

interviewer administered questionnaire 270 women were interviewed. Three women didn't consent for the study.

Frequencies of the selected socio demographic characteristics and selected childhood experiences calculated. GHQ 30 questionnaire was used to assess the psychological distress.

Odds ratio was used to calculate the associations between the psychological distress and the selected socio demographic characteristics, selected childhood experiences and factors related to imprisonment.

Results : Response rate was 98.9%. Mean age of the imprisoned women were 41.28years (SD ±11.86yrs) and Most of women were within the age group of 35-49 years (38.1%). Of them 68.5% were currently married and majority had at least one child. (86.3%). House hold member's smoking (58.5%) and alcohol (40.4%) use was the commonest adverse childhood experience experienced by the imprisoned women. Nearly one fourth (22.6%) of the imprisoned women had attempted suicide during their life and more than half (55.7%) of them had attempted before the age of 18 years. Similarly of the 258 women who had been sexually active during their life, half (50.0%) of the women had exposed to sexual activities during first eighteen years of life and mean age at first sexual exposure was 19.2 (SD±4.86) years. Nearly three forth (73.7%) of imprisoned women were psychologically distressed in the study sample. Being a women of aged less than 25 years((OR=4.51, 95% CI=1.035- 19.64)),previous history of suicidal attempts(OR=2.10,95%CI =1.00-4.4Inexperience of severe physical injuries by the care giver during childhood(OR = 2.73, 95% CI =1.10 - 6.74), not having enough foods to eat (OR=2.97, 1.009-8.75) and absence of someone to tell worries (C)R=0.355, 95% CI =0.113-0.945) during childhood were significantly associate with psychological distress.

Conclusion : Nearly three forth of the imprisoned women were psychologically distressed and younger age, history of suicidal attempts, history of being severely injures by the care giver during childhood, absence of someone to tell their worries and not having enough food to eat during childhood were risk factors for psychological distress.

Recommendation: Need to strengthen the rehabilitation and mental health services to the imprisoned women.

Keywords:**Imprisoned women, Adverse childhood experiences, Psychological distress,**

0065.Jayasekera, S.A.H.D.

Knowledge and practices of public health midwives on expanded programme on immunization in Kalutara district and related cost in the provision of services

MSc. Community Medicine – 2013   **D3401**

Abstract

Introduction: Immunization is regarded as a high priority intervention as it averted number of communicable diseases. At present all countries have national immunization programmes as it is the single most cost effective way to prevent deaths especially in children. High immunization coverage has caused a sharp drop in the incidence of vaccine preventable diseases during the past decade in Sri Lanka. Immunization has been an integrated component of maternal and child health programme even before the start of Expanded Programme on Immunization (EPI). With the rising cost of newly introduced vaccines EPI has faced new challenges to maintain the sustainability. One of the reasons to achieve the success is dedicated public health staff with excellent public health infrastructure. Public Health Midwife (PHM) is the first level of contact between the individual and the health system that is providing essential health care at door step.

Objective: To describe knowledge and practices of Public Health Midwives on Expanded Programme on Immunization, service provision and estimate the related cost involved in infant immunization in Kalutara district.

Methodology:A descriptive cross sectional study was carried out in Kalutara district. In first component of the study to assess the knowledge and practices of Public Health Midwives on EPI and provision of services, a sample of 396 PHMM was selected and all PHMM were included to fulfill the sample size. In second component 4 MOH offices under Regional Director of Health Service (RDHS) division were included to estimate the cost incurred for EPI programme. Fifteen immunization clinics from urban and rural setting were selected by simple random method from the four MOI as a representative sample to estimate direct and indirect cost in EPI programme service provision in Kalutara RDHS. The response rate for the study population 95.2%. A pre tested self-administered questionnaire and an observation check list were used in the study population and pre tested data extracted sheets were use to estimate direct and indirect cost incurred for EPI programme in the district.

Results: All the participants were Sinhalese (100%). Most of the PHMM were qualified with G.C.E. Advanced Level examination (76.13%). A majority of them stated that they

have received basic training on immunization (93.4%) and EPI programme (92.3%).Only a few of them had training on vaccine financing (33.2%). Majority of PHMM performed immunization at the time of data collection (97.1%). Out of all PHMM 77.2% had good knowledge on overall awareness of vaccine and cold chain management. PHMM with good knowledge on vaccine wastage as cost saving method was 90.7%. Eighteen participants (4.77%) were aware on cost of Pentavalentvaccine. Their knowledge on vaccine financing was poor. Only 30% were aware on vaccine financing. Vaccine financing knowledge was significantly associated with service duration of the PHM (p=0.048). PHMM with high knowledge on EPI programme was more(49%) with above 10 years of service duration. Their knowledge on vaccines was significantly associated with duration of service (p =0.001). The participants with training on EPI were more aware on vaccine wastage (94.8%) and participants knowledge on vaccine wastage was significantly associated with training on EPI (p=0.039). Majority of participants followed correct practice on service provision on infant immunization (96.8%). The practices on provision of services wasnot significantly associated with selected socio demographic factors like age, educational level and marital status (p>0.05). PHMM who had adequate knowledge on cost saving, correctly followed wastage minimizing of vaccines. Their knowledge on cost saving was statistically significant with practices on wastage (p =0.002).The correct handling of vaccines, steps taken for excess vaccines remained after a clinic session, correct and timely filling of Child Health

Development Records and correct record keeping were correctly done in all 15 clinic settings (100%).The cost for a fully vaccinated child at the age of one year was Rs. 1447.20. Out oftotal cost for a child, the cost for vaccines (90.6%) was higher than other costs. Total annual cost for EPI for infant immunization in 15 clinic settings is Rs: 17749743.36.

Conclusions: The knowledge on vaccine financing of Public Health Midwife has to be improved. It will lead to provide their services more responsible and accountable way by minimizing all possible wastages on EPI programme. It will lower the total cost spend on EPI programme. Vaccine cost is the highest proportion among all other components in

EPI programme in the country. Total EPI programme cost was Rs: 17749743.36 for infant immunization for one year duration in 15 clinic settings. The cost for fully vaccinated infant was Rs: 1447.20.

Keywords: Vaccines, EPI programme, Wastage, Vaccine financing, cost saving

0066.Jayasinghe, J.A.D.A.E.

Quality of life and its associated factors among patients with chronic kidney disease attending the Provincial General Hospital Badulla.
MSc. Community Medicine – 2013   D2962
Abstract

Introduction: Chronic Kidney Disease (CKD) is a devastating chronic medical condition that is characterized by kidney damage of either functional or structural abnormalities and with or without decreased Glomerular Filtration Rate (GFR) persisting over three or more months. CKD is associated with high morbidity and mortality attributed to disease itself such as multiple disabling symptoms, co-morbidities, complications, multiple drug treatment regimens and intrusive treatment options such as routine dialysis, all of which invariably affect their Quality of Life (QOL).

Objectives: The aim of this study was to describe the quality of life and its associated factors such as socio demographic, economic and disease related characteristics among clinic patients with CKD attending the Provincial General Hospital Badulla (PGH).

Methods: A descriptive cross-sectional study was carried out in the general medical clinics at PGH Badulla. All clinic attendees who were residents of Uva Province and with a confirmed diagnosis of CKD were consecutively recruited to obtain a sample size of 405. Patients of subsequent clinic visits or in the event of only a relative being present in the clinic were excluded. An interviewer administered questionnaire was used to collect socio demographic, economic and disease related characteristics. The QOL was assessed by administering the Short Form 36 (SF 36), which has been validated for Sri Lankan adults.

QOL was assessed in eight dimensions and summary measures (physical component summary/PCS and mental component summary/MCS) to assess the overall physical and mental functioning of an individual. Poorer QOL (as indicated by lower scores) related

to individual domains was identified by comparing the domain and summary scores with each other. Factors associated with QOL was assessed by applying the' t' test.

Results: The majority were males (66.4%), currently married (88.4%), Sinhalese in ethnicity (75.6%) and Buddhists (74.8%). Most (32.8%) belonged to 50-59 year age group with a mean age of 59.1 (SD = 11.7) years. Nearly 50% resided in Badulla MOH division and worked as farmers of paddy/chena cultivation (38.6%), educated up to Grade 5 or below (31%) and earning less than Rs. 10000 per month (80.5%). The average duration of CKD was 2.2 years (SD = 1.9). Hypertension was the commonest (55.3%) risk factor present at the time of diagnosis while 36% were currently suffering from > 3 symptoms. With regards to overall physical functioning, lower QOL was seen (with scores less than 37) with domains of role limitation due to physical problem, role limitation due to emotional problem and general health. Higher QOL was seen with domains of social function. The only demographic factors significantly associated with poor QOL related to physical functioning was older age, while it was both older age and being unmarried for poor QOL related to mental functioning. Ethnicity and religion showed no difference as a factor for both physical and mental functioning. Of the socio-economic factors, unemployment, lower level of education and lower income were significantly associated with poor QOL in both physical and mental aspects. Disease burden related factors significantly associated with poor QOL related to physical functioning were being on dialysis, on blood transfusion, presence of ^ 3 symptoms and being aware of chronicity in both physical and mental functioning related to QOL. In addition, duration of CKD more than 2 years was a significant factor with physical function. Service utilization factors that were significantly associated with both aspects of QOL were distance to clinic > 10 km, no regular clinic visits and needing >2 days hospital admission monthly. In addition, poor compliance was significant for mental QOL.

Conclusions and recommendations: QOL was relatively lower in some aspects of physical and mental functioning among clinic patients with CKD. Factors associated with QOL of
them were related to older age, unmarried status, their lower socio-economic status and some aspects of high disease burden and poor service utilization It is recommended that

patient perception views especially of these vulnerable groups should be incorporated in the long term management of CKD in Uva province

Keywords: **Chronic Kidney Disease, Quality of Life, Uva province**

0067.Jayasinghe, D.U.C.J.

Risk factors for neonatal sepsis, its effect on maternal post partum depression, maternalsatisfaction about the care received and adherence to infection control standards by health care workers in government secondary and Tertiary Care Hospitals in the district of Gampaha.

MD Community Medicine - 2014   **D 3482**

Abstract

Neonatal sepsis is one of the major contributory factors that cause neonatal morbidity andmortality. As very little is known about the risk factors for neonatal sepsis the present studywas carried out to determine the risk factors for neonatal sepsis and its association onmaternal post partum depression. It also describes the maternal satisfaction regarding theneonatal and maternal care received through government health services and the adherenceof infection control standards by health care workers in the hospital setup. The study wascarried out in the District of Gampaha in Sri Lanka during the period of August 2010 to January 2011.

A case control study to determine the risk factors for neonatal sepsis was conducted among the mothers of diagnosed neonatal sepsis babies and mothers of non sepsis babies. A sample of 240 cases and 240 controls were enrolled. The cases were recruited according to the clinical features of WHO strategy in Integrated Management of Childhood Illness. The information was gathered from the interviewer administered questionnaire and by the data extraction sheets. To find out risk factors for neonatal sepsis and to control confounders multiple logistic regression analysis was applied. The results were expressed as Odds ratios and their 95% confidence intervals.

A descriptive cross sectional study design was used to assess the maternal post partum depression due to neonatal sepsis of their newborn. The study instruments were self administered validated Sinhala version of Edinburg Postpartum Depression Scale and the interviewer administered questionnaire.

Maternal satisfaction regarding neonatal care and maternal care received through government health services were assessed by using a 20 item satisfaction scale among the mothers of sepsis neonates.

The adherence to infection control standards by health care workers in selected procedures carried out in labour rooms, neonatal intensive care units, postnatal wan and operation theatres has been observed directly according to the check lists. Designs of buildings and physical facilities were observed in the same units according to the check list relevant to infection control guide lines.

The maternal risk factors for neonatal sepsis were registration of pregnancy in the antenatal clinic after eight weeks of gestation (OR=1.91;95% CI: 1.07-3.44); total antenatal clinic visits <4 (OR=7.18; 95% CI: 2.10-24.49); having a bad obstetric history of mothers namely abortions, still births and early neonatal deaths (OR=6.78; 95% CI: 3.21-14.32); history of maternal fever during the last one week of delivery (OR=2.74; 95% CI: 1.25-6.02); dribbling more than 18 hours before delivery of neonate (OR=10.00; 95% CI: 2.12-47.44); total number of vaginal examination >3 times before delivery of neonates (OR=3.28; 95% CI: 2.10-24.49); meconium stained amniotic fluid when delivering the neonate (OR=10.57; 95% CI:3.75-29.74); and mode of delivery by caesarean section, forceps or vacuum (OR=2.33; 95% CI=1.40-3.86). The neonatal risk factors were time of birth of the neonate between 4 pm to 8 am of following day. (OR=2.12; 95% CI: 1.29-3.47), being a male neonate (OR=1.74; 95% CI: 1.09-2.78.44) and birth weight < 2500g (OR=5.17; 95% CI: 2.79-9.57).

The post partum depression among mothers of sepsis neonates was 78% whereas among controls were 28%. Neonatal sepsis was a risk factor (OR=14; 95% CI: 8.6-22.8) for maternal post partum depression.

The overall maternal satisfaction regarding the received neonatal care was 90% and maternal care was 84.6%. The diet and drinking water provided from the hospital were taken only by 6.7% and 8.3 % of mothers respectively.

Out of observed procedures for infection control standards the compliance of hand washing among the labour room staff, neonatal intensive care units and post natal wards were 57.1%, 80% and 82% respectively.

Conclusions and Recommendations : Eight maternal factors and three neonatal factors were identified as risk factors for neonatal sepsis. Among those, six of the maternal factors and two of the neonatal factors were modifiable. Therefore preventive

strategies should be contemplated with relevant authorities. Post partum depression was very high (78%) among the mothers of sepsis neonates. It is extremely crucial to arrange screening for postpartum depression and counselling sessions while in the hospital for all mothers of neonates with neonatal sepsis. Although the overall satisfaction of care was satisfactory it is needed to pay attention on deficient areas like sanitary facilities and communication skills. It is of importance to pay regular attention to the adherence of infection control standards among all categories of health care workers and carry out regular in-service training programmes regarding this need.

It is advisable to establish routine clinical audits to improve the services and share experiences to minimize the neonatal infections and other adverse outcomes.

0068.Jayawardena, K.A.R.N.

Subjective well-being and perceived parenting styles among late adolescents in Gampaha Educational Zone.

MSc. Community Medicine – 2012   **D 2973**

Abstract

Adolescence is believed to be a period with lot of challenges to mental health resulting in diverse mental health problems. The mental health problems among adolescents have shown a rapid incline during the recent past which warrants promoting mental well-being. Among various methods of evaluating mental health, Subjective Weil-Being has been considered a valuable measure which captures the positive aspect in the mental health continuum. Subjective Well-Being is considered to be influenced by various determinants among which parenting styles have been prominently placed. There is ample evidence to show that the relationship between the Subjective Well-Being and the parenting style is mediated by the cultural influence. Although the researchers have identified authoritative parenting style as the best parenting style with regard to mental health outcomes in the adolescents in Western countries, controversy exist regarding the importance of authoritativeness in collectivistic culture. At the same time, though the parenting practice of mother and father is believed to be complementary to each other, no research has looked into the mental health outcome with respect to the combination of the parenting styles.

This study was conducted among school going late-adolescents studying in Gampaha Educational Zone to describe the association between Subjective Well-Being among adolescents and their personal, parental and family factors and the perceived parenting

styles of their parents. A cross-sectional study design was used and multi stage stratified random cluster sampling method was applied to select 729 participants from the school going late-adolescents in the selected Educational Zone. An anonymous self-administered questionnaire was used for data collection, which included (1) components regarding personal, family and parental factors, (2) parental authority questionnaire and (3) a component on Subjective Well-Being, which was assessed using Multidimensional Students' Life Satisfaction Scale, Global Life Satisfaction Scale and the Affect Balance Scale. Correlates of the parenting styles of each parents were analysed separately using Chi-Square Test combined with post-hoc analysis. Correlates of the Subjective Well-Being were identified using odds ratio and the 95% confidence intervals. ANOVA test combined with post-hoc was carried out to identify the differences between this group with highest mean score and the mean scores of other groups with various combined parenting styles.

Most adolescents perceived both their parents as authoritative (Father-72.3%; Mother-69.7%). Both mothers and fathers exerted gender-differential treatment in parenting, where the permissive style is commoner for adolescent among males than females ($\%^2 = 20.14$; df = 2; P<0.001). Mothers were more authoritarian towards younger adolescents ($\%^2=8.72$; df=2; P<0.05) while fathers of students in middle social class were less authoritarian 11.15; df = 4; P<0.05). Family structure or the presence of siblings has not influenced the parenting style significantly. Further, maternal or the paternal characteristics has not shown any association with the maternal parenting style. However, fathers were perceived as authoritarian by the students whose mothers spend less than 5 hours away from home for employment ($\%^2=16.54$; df=4; P<0.01). Paternal parenting style was not significantly associated with other paternal or maternal characteristics.

Even though the mean score of Subjective well-Being remained within the normal range, there were students who have scored as low as 19%. Poor Subjective Well-Being was significantly lesser among females (OR=0.7; 95% CI=0.5-0.9) and among the only children in the family (OR=().5; 95% CI= 0.3-0.9). Suggesting the effect of parenting style on Subjective Well-Being, students with authoritarian (OR=1.8;95% CI=1.2-2.7) or permissive (OR=2.3;95% CI=1.2-4.4) father showed a significantly low Subjective well-Being compared to those with authoritative paternal parenting styles, while the maternal authoritarianism led to poorer Subjective Well-Being compared to maternal authoritativeness (OR=1.5;95% CI=l.l-2.3). Highest mean score for Subjective Well-

Being was reported among the students who perceived both their parents as authoritative. However, only three combinations of parenting styles showed significant decline in the Subjective Well-Being compared to this best style. Those were the combinations of both parents being authoritarian and father being permissive while the mother being either authoritative or authoritarian.

The relationship between the normal subjective Well-Being and the authoritative parenting style as suggested by this study can be utilized to develop tailor-made programs to address mental health ill-being among adolescents, although further research is warranted to identify best possible interventions. Parents should be made aware of the complementary nature of the parenting styles of the parents and the specific interventions targeting negative combinations could be incorporated to the existing school health program.

Keywords: Late-adolescents, Parenting style, Subjective Well-Being

0069.Jayawardene, D.M.S.

Knowledge, attitude and practices regarding human rabies and factors associated with knowledge among grade ten students in the Nugegoda education division.
MSc. Community Medicine - 2012   D 2961

Abstract

Despite a very conducive environment within the isle of Sri Lanka for the elimination of rabies,human rabies deaths continue to be reported yearly resulting in very high disability adjusted life years lost due to a totally preventable, yet deadly disease. Further, a one fifth of the total drug budget is still being spent only for rabies post exposure prophylactic treatment causing a massive economic burden to the country. Rabies has thus proved itself as a public health problem in Sri Lanka. It is also evident that children are the most likely victims of this disease. A lack of knowledge, incorrect practices and unfavourable attitudes have been attributed as the main cause of this dilemma and educational and awareness activities specially targeting children aged 15 years and younger have been advocated as a solution to bridge the gap between the present state of burden caused by rabies and the desired state of a rabies free country. Hence, this study was conducted to describe the knowledge, attitudes and practices regarding human rabies and to determine the factors associated with knowledge, among grade ten students in the Nugegoda education division.

A descriptive cross sectional study was carried out in the Type 1AB and Type 1C schools in the Nugegoda education division. The study population consisted of the grade 10 students studying in these schools. The key variable as well as the primary outcome in this study was the level of knowledge on rabies. Multistage cluster sampling method with probability proportionate to the size of the student population was used to select the 694 study units. A Structured, pretested self-administered questionnaire with coded identities was used to collect data from the study units. The questionnaire consisted of sections on socio demographic characteristics, knowledge, practices and attitudes pertaining to the prevention of rabies.

Data entry was carried out using Epi data 3.1 and analysis was carried out using the Statistical Package for Social Sciences (SPSS) version 18.0. Socio-demographic characteristics of the study population were described using frequency distributions. The knowledge score was calculated using a predetermined scientific method. Individual practices and attitudes were described and presented as frequency distributions. Factors were cross tabulated to different levels of knowledge and the association was assessed using chi square. A p value of 0.05 was be used to determine the significance.

A response rate of 100% was obtained from the study units. The majority of study units (68.2%) were found to have a poor knowledge regarding rabies, while only 31.8% were found to have a good knowledge. The knowledge score of the participants ranged from 0-504.

The mean score of the marks scored by the study units was 317.2 (CI=312.3-322.1, SD= +65.5) while the median mark was 318 and the mode was 316. The majority of the students were not in the practice of fondling stray dogs (83.4%) and stray cats (82.1%). Of those who owned a dog as a pet the majority of study units did not allow their dogs to roam freely during the day time (77.2%) or the night time (81.1%). However, 44.9% of the dogs were allowed to roam freely within the garden during the night time. Although the majority of the dogs (74.9%) had been vaccinated at some point or the other only 9% indicated that their dogs had been sterilised. Although the majority of study units (65.9%) had washed the wound well with soap and flowing water, 70.6% of study units had failed to apply antiseptics on the wound site. Most of the victims (42.4%) had sought treatment immediately following the bite from a government hospital (54.3%). In the assessment of attitudes most of the study units (37.5%) agreed that elimination of rabies from Sri Lanka was dependent upon the elimination of dog rabies, while a further 33.6% of study units also agreed that Sri Lanka could achieve rabies free status if universal dog

vaccination was achieved. Most of the study units (39%) strongly agreed with the statement indicating dog sterilization was a sin while 38.6% strongly disagreed that unwanted puppies should be dumped at site away from their homes.

Those who had parents who had completed the G.C.E. O/L examination or studied further (father. p<0.005; mother, p=0.001), those who attended Type 1AB schools (p<0.001), Schools with a school health club (p<0.001) and non health promoting schools (p=0.009), those who did not fondle stray dogs (p=0.001) and stray cats (p<0.001) the presence of stray cats at school (p<0.001), those who had vaccinated their pet dogs (p<0.001) and those who had not been exposed to any harm by an animal during the past year (p=0.006), were found to possess a good knowledge on rabies.

A majority of students had poor knowledge regarding rabies although most had correct practices pertaining to the prevention of rabies and favorable attitudes. The study identified factors that could be modified through interventions to improve knowledge on rabies among these students.

Key words: **Knowledge, attitudes, practices, rabies, school children**

0070. Jayawickrama, W.I.U.

Emotional and behavioural problems of school going adolescents aged 13 – 15 years in MOH area Maha-Oya : prevalence , correlates and association with school performance.

MSc. Community Medicine – 2012   **D 2968**

Abstract

The mental health problems in children and adolescents have become a major public health challenge universally (National Institute of Mental Health, 2011). Therefore, the importance of a deeper understanding on the mental health in young people is a highly perceived need at alllevels.

The emotional and behavioural problems of adolescents can be influenced by a variety of factors such as social and economic factors, demographic factors, and serious threats and stressors such as conflicts and disasters, chronic physical illness and negative family environment. The adolescents in the former conflict-affected areas are more vulnerable to develop emotional and behavioural problems as many of the above mentioned

characteristics are collectively found among them. The negative effects of the emotional and behavioural problems in adolescents often results in poor educational performance.

The present study was conducted to describe the prevalence and correlates of emotional and behavioural problems and its association with school performance of school going adolescents aged 13-15 years in Maha-Oya MOH area.

A descriptive cross sectional study was carried out in the selected study area. Five hundred and thirty nine students from grade 8, 9, and 10 of schools from Maha-Oya zonal educational area participated in the study. The selection of the sample was done using random cluster sampling technique. The study instruments consisted of validated Sinhala version of Strengths and difficulties Questionnaire (SDQ) for the assessment of the emotional and behavioural problems, a self administered questionnaire for the associated factors and a data extraction sheet to collect the students' second term test marks (held in year 2012) for the major subjects studied in grade 8, 9. and 10 (Science, English, Mathematics, Sinhala, Religion and History). Students were categorized as normal, borderline and abnormal according to the total SDQ scores (borderline and abnormal groups are collectively considered as clinically relevant group), and used to describe the prevalence of emotional and behavioural problems. The association of socio- demographic and conflict-related factors with the emotional and behavioural problems was checked using chi-squared test. Marks obtained by each student for all subjects were averaged, and Z-scored were generated for this mean score so that all students in all grades were made comparable. Students' performances were then checked against emotional and behavioural problems using student's test.

In the presentstudy the prevalence of clinically relevant emotional and behavioural problems long the selected group of school children aged 13-15 years old was 15.9%. The factors which were significantly associated with the emotional and behavioural problems are the age ($p<0.01$), low parent's education ($p<0.05$), family members quarrel at home ($p<0.01$), unnecessary scolding at the adolescents ($P<0.001$)), lack of parental support for academic activities ($p<0.01$) and extracurricular activities ($p<0.05$), attending tuition classes or not ($p<0.05$), being scolded for poor school performance ($p<0.001$), financial difficulties in purchasing academic needs ($P<0.01$) and loss of a family member due to armed conflict ($p<0.001$).

However, some factors such as the sex of the adolescent, the number of siblings, parent's occupation, alcohol consumption by a family member, frequency of involvement in

religious activities had no significant association with the emotional and behavioural problems.

The means of the average marks of students were 33.4, 34.6, and 33.1, respectively, for grade 8, grade 9. and grade 10. The average marks of those with emotional and behavioural problems were significant less than that of students with normal mental health ($p<0.01$). Further, the z scores of students were also significantly associated with some individual symptom-scales of SDQ. namely, emotional problems ($p<0.001$), conduct problems ($p<0.0l$), peer problems ($p<0.0l$) and pro-social behaviours ($p<0.05$).

This study shows that the emotional and behavioural problems among adolescents in Maha-Oya MOH area are not comparatively high. However, a number of factors were significantly associated with poor mental health, which in turn significantly affected the school performance .as a number of other inter-related factors which could influence mental health were not studied further research is required before devising mental health interventions for this area.

Keywords : Emotional and behavioural health, Adolescents, School performance, Armedconflict.

0071.Kalubowila, K.C.

Lightning injuries among residents in Medical Officer of health area, Kiriella : lifetime prevalence, knowledge, attitudes and practices on prevention and associated factors.

MSc. Community Medicine - 2014   D 3599

Abstract

Background : Lightning is one of the most attractive and beautiful phenomena in nature. Despite this attractiveness and beauty, lightning is a great mystery that mankind has witnessed. Humans or animals struck by lightning may suffer severe injury. The reported number of deaths and injuries from lightning are less than the actual figures in all countries. Therefore, all over the world the real burden due to lightning is underestimated.

Objective : This study was conducted to describe the lifetime prevalence of lightning injuries, knowledge, attitudes and practices on lightning and prevention of lightning related adverse effects and to determine the associated factors among residents in Medical Officer of Health area, Kiriella.

Methods :A descriptive cross-sectional study was conducted. One resident of each household aged from 15 to 64 years were selected with priority been given to the head of the household. Sample size was 510. The selection of the sample was done using cluster sampling with probability proportionate to size. A pre-tested interviewer-administered questionnaire and checklist were used to collect data. Questionnaire consisted of three parts including, socio- demographic data, incidence of lightning injuries and factors related to knowledge, attitude, and practices. Lightning injuries were reported as a percentage with 95% confidence interval. Knowledge, attitude, and practices were described in frequencies and percentages. Overall knowledge score and overall attitude score were calculated. Associations between calculated overall knowledge and overall attitude scores were compared with selected socio-demographicfactors separately using chi square test and a probability value of less than 0.05 was consideredas statistically significant.

Results : The response rate was 98.4%. The majority of the study population was in the agegroup 35-44 (27.5%, n=138) with an average age of 42 years. Majority were males (60%,n=301). UT the population under study, 5fa /lUUU (9b% CI 2.2-55) reported their lifetimeprevalence of lightning injuries. Among those who had experience with lightning, most (55.5% n=10) were in the age group 35-44 years and males (72.2%, n=13). Farmers were the mostaffected by lightning (44.4%, n=8). During the period from 2005 to 2014 most injuries (38.8%,n=7) were reported. High incidence (66.7%, n=12) of injuries has been due to lightning strikesoutdoors, while 56% (n=10) of victims were working in the field during lightning. Of thepopulation 12.4% (n=62) had a 'Good Knowledge' to protect themselves from lightning strikeswhile most (76.3%, n=383) had an 'Average knowledge'. A majority (87.5%, n=439) hadpositive attitudes towards issues related to prevention of lightning injuries. Most houses (64.9%, n= 326) had functioning earth wires and earth rods. The association with reported and the observed practices on the availability of functioning earth wires and earth rods was found to be statistically significant (p<0.05).

Conclusions and recommendations : A fewer of the study participants had a good knowledge on prevention of lightning injuries but part of them lacked the knowledge on safe body posture to be adopted when they were outdoors during lightning strikes.

Therefore, educating communities on safe body posture is essential. Since the use of electrical, electronic and telecommunication equipment is on the rise nowadays, it is beneficial to establish an effective lightning protection system at each household.

Keywords: lightning injuries, residents, associated factors

0072.Karunarathna, A.N.W.

Knowledge, attitudes and screening practices on thalassemia among grade 12 school children in Kurunegala educational division.

MSc. Community Medicine - 2012   **D 2975**

Abstract

Thalassemia is a genetic disease, which has an autosomal recessive pattern of inheritance. It is the commonest monogenic disease in the world and has become major public health problem in Sri Lanka.

Highest frequency of the disease was reported from Kurunegala District and 5% of total health budget is needed to manage the thalassemic patients in Sri Lanka. The main preventive strategy of this deadly disease is prevention of new births of affected babies by improving the knowledge of youth. It's important to identify the level of knowledge, attitudes and screening practices among grade 12 school children which represent the major proportion of youth .It will help to fill the gap in the knowledge in the future.

This study was conducted to describe the knowledge attitudes and screening practices among the grade 12 school children in the Kurunegala educational division and to determine the factors associated with knowledge.

Descriptive cross sectional study was conducted among 642 participants and the response rate was 100%. A structured, pre tested self administered questionnaire was used to collect the data. The questionnaire consisted of 4 sections including socio demographic factors, knowledge attitudes and the screening practices. Cluster sampling method was used. Clusters, which consisted of 25 students, were selected randomly. The informed written consent was obtained from participants and parents. The questionnaire was checked for completeness at the time of collection.

Data analysis was done by the principal investigator on personal computer by using the statistical package for social science (SPSS) version 15.

Socio demographic data were analyzed and presented by frequency distributions. Knowledge level was assessed by scoring the each question. The mean score was calculated and presented. The mean score was 14.85(SD+04) out of maximum 22 marks. There was significant association between the knowledge and the sex of the participants (p<0.001). The identification of thalassemia as a genetic disease (78.8%, n=506) and the mode of transmission as genetically from parents (90.5%,n=581) were good. Identification of thalassemia as an autosomal recessive disease (19.3%,by blood test.Majority (78.7%, n=505) had favorable attitudes for premarital screening and 67.3% disagree with social stigmatization. Out of 642 participants 247(38.5%) had an opportunity to check blood for thalassemia and 162(65.6%) had checked their carrier state and 85(34.4%) had not checked the carrier state. The most common reason stated for not undergoing carrier screening were, due to afraid of blood withdrawing. The association between the knowledge and carrier screening was not significant (p=0.512) Even though the level of knowledge was satisfactory among the participants, there were few gaps in the level of knowledge on specific components. It's highly recommended to start a comprehensive programme to increase the knowledge and achieve a good coverage of screening for thalassemic carrier state.

Keywords: Thalassemia, knowledge, attitudes, screening

0073.Karunarathne, M.D.D.S.

Road traffic accidents among three wheeler drivers in police area Gampaha and selected aspects of their health status.

MSc. Community Medicine – 2012   D 3215

Abstract

Introduction - Three wheeler accidents accounted for over10% of total road traffic accidents in Sri Lanka during the last 5 years. Road traffic accidents involving three wheelers have become an important public health issue, especially with the expansion of the three wheeler industry in Sri Lanka and the wide popularity it has achieved among general public.

This study was focused on identifying some factors related to health and practices of three wheeler drivers which could have a bearing on three wheeler accidents with a view of prevention.

Objective - To describe the prevalence of three wheeler drivers meeting with three wheeler accidents and to describe its association with selected health conditions and

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consumption of alcohol, smoking and drug usage of three wheeler drivers in police area Gampaha.

Method - This study was done as a community based descriptive cross sectional study. All the three wheeler drivers registered in police area Gampaha, who were engaged in three wheeler driving as their main source of income, and for more than 5 days per week for at least one year by August 2012, were taken as the study population. An interviewer administered questionnaire was used to collect information from the participants and a data extraction sheet was used to extract data from health records available with the participant.

Clinical examination was done according to a checklist. Data were analyzed using SPSS version 17.

Results - The mean age of three wheeler drivers was 36.9 years with a standard deviation of 8.3 years. Majority of the three wheeler drivers 74.7% (n=330) were married and 76.5% (**n**=338) had studied up to grade 11. Regarding the driving experience, the majority of three wheeler drivers had a driving experience of 2-3 years (37.1 %). Drivers who had less than 3 years of driving experience had a lesser risk of meeting with a three wheeler accident which wasstatistically significant. (02=4.463, df-1, p=0.035, C>R=0.6, CI=0.4-0.97).

Among the 442 of three wheeler drivers 18.4% (n=81) had met with at least one three wheeler accident within a period of one year and out of those 81 drivers, 17.3% (n=214) had faced a second accident within the same period.

Only 38.3% (n=231) of three wheeler accidents which occurred for the first time were reported to the police and it was 7.1% for those occurred for the second time.

Collision with another vehicle was the commonest type of accident and property damage was the commonest type of damage suffered in both first and second time accidents. The commonest cause as cited by three wheeler drivers for the accidents they met with was high speed (25.3%).

Among the participants, 54.1% (n = 239) were alcohol users, 37.8% were smokers and 3.1% (n=214) were illicit drug users. Driving after consumption of alcohol was shown to have a 2.4 times greater risk of meeting with three wheeler accidents. (D2=4.327 dfi=l p=0.038 OR=2.4 CM. 0-0.5).

Prevalence of hypertension among three wheeler drivers who participated in the study was 4.5% while for diabetes mellitus it was 4.3% and for visual defects 6.1%.

The three wheeler drivers having illnesses like diabetes mellitus, hypertension,

epilepsy, mental disorders and visual problems were not associated with three wheeler accidents. Having visual difficulties while driving and taking regular treatment for illnesses were significantly associated with three wheeler accidents.

Conclusions - Having less driving experience showed a lesser risk of meeting with a three wheeler accident. The current practice of driving after consumption of alcohol, three wheeler drivers being on regular treatment for an illness and three wheeler drivers having visual difficulties while driving were associated with meeting with three wheeler accidents during the one year period under study.

Recommendations - The findings of this study highlights the importance of reporting of all accidents irrespective of their gravity in order to have valid statistics which could be utilized for preventive purposes, strictly implementing the speed limits for drivers, implementing effective programmes to prevent the three wheeler drivers from driving under influence of alcohol and assessment of visual function of drivers at regular intervals.

Keywords:Road traffic accidents, diabetes mellitus, hypertension, visual defects, three wheeler drivers, three wheeler accidents, alcohol

0074.Karunaratne, S.A.S.C.

Cervical cancer screening among 35-39 year old married women in the Medical Officer of Health area, Kuruwita : proportion screened and associated factors and follow up pattern of papanicolaou smear recipients

MSc. Community Medicine – 2012 **D 2963**

Abstract

Cervical Cytology screening (Pap smear test) programme to identify pre-cancerous lesions of Cervical Cancer is being implemented in Sri Lanka through the Well Woman Clinics island wide. Cervical Cancer is the second most commonest cancer among women in reproductive age in the world as well as in Sri Lanka. Based on the existing epidemiological evidence and natural history of the disease, policy decision was taken in 2008 to actively screen for women completing 35 years of age for Cervical Cancer with Pap smear testing. This study was designed with the objective of determining the proportion screened for Cervical Cancer with Pap testing and selected socio-demographic and service related characteristics associated with undergoing screening among married women aged 35 - 39 years in the Medical Officer of Health area,

Kuruwita and to describe the follow-up pattern of those screened. Women in this age group include 5 cohorts of women since the inception of new policy.

Methods:A community based descriptive cross-sectional study was conducted using a pre-tested, interviewer administered questionnaire among a sample of women aged 35 - 39 years. A total of 524 women, selected by two-stage cluster sampling technique with Probability proportional- to- size of the population.

Results: The response rate was 99.8%. Cervical Cancer screening rate was 17.8% among women between 35 - 39 years of age. The screening coverage among women in the 35 year age cohort was 13.7%. The coverage was highest in 36 year age cohort (36%). Out of those who have undergone Pap testing, approximately half of recipients have got it done at the age of 35 years. Age at marriage less than 20 years (P= 0.05), being unemployed (P=0.02), monthly income less than Rs. 20,000.00 (P=0.04) were associated statistically significantly with women undergoing screening. Women who regularly utilize the field health services showed approximately three times higher (OR= 2.94, 95% CI = 1.51 - 5.74) possibility of undergoing testing. Women who were aware on Well Woman Clinics (OR = 2.5, 95% CI = 1.0 - 6.34) and motivated by another person to get aPap test done (OR = 8.80, 95% CI =4.01 - 19.30) showed higher possibility of getting Pap test done.

Public Health Nursing Sister was the main service provider (58%), where majority had got the test done from the clinics conducted by the Medical Officer of Health (91.4%). Among those , never screened (n=170), 48.2% mentioned that lack of time to attend the clinic as a main barrier to screening followed by , screening was not being perceived as very important (n=40, 23.5%), 17.1% of them are being symptomless (n= 29) and fear of the procedure (n=28, 16.5%). Fifteen percent were waiting to get the test done in the future.

Out of those who had undergone the test, 48% had received the reports and only 43.6% had received them within three months. Majority (72%) had received them via Public Health Midwife. Except one all other reports were normal. Ninety seven percent knew the content of the report. The advices given by the healthcare workers was appropriated for the results given in the report. A higher percentage (97%) of the Well Woman Clinic Client Records was containing only the date of which the Pap smear was taken, while only in 25% results were recorded.Seventy four percent were given clear advises on the future follow-up and they were tallying with advises given by the health care worker.

Conclusions and Recommendations: The screening rate was far too low compared to the National target of 80%. Therefore, in addition to the routine clinic activities,

multifaceted interventions such as strengthening of media publicity and conducting of out-reach clinics in remote areas will enhance the screening by increasing the awareness among public about the disease, the risk, service availability and by improving the accessibility. Using peer group to motivate others also can be used to attract target groups.

To gear-up the coverage in screening and to strengthen the follow-up mechanism while ensuring the quality of data, introducing a Pap Test Registry would be of much beneficial.

Keywords: Cervical Cancer screening, Pap smear test, proportion screened, knowledge, follow- up of smear recipients, Kuruwita

0075.Kumari, P.B.V.R.

Risk factors and risk assessment of breast cancer among women in the district of Colombo.

MD Community Medicine – 2013   D 3221

Abstract

Breast cancer is escalating in Sri Lanka in such a pace that the country may soon face a serious burden in terms of mortality and morbidity. This increasing incidence of breast cancer is not explained well only by its conventional risk factors.

Mammography screening aims to reduce the disease burden from breast cancer by early detection and treatment of occult malignancies in women over 40 years of age. However, absence of a routine screening programme hinders Sri Lankan women from early detection. Identifying the at-risk women for breast cancer by a low-cost simple risk prediction tool would be of paramount importance.

The objectives of the study were to identify the risk factors of breast cancer specific for Sri Lanka, to develop and validate a risk prediction model for identifying the at-risk women for breast cancer and to assess the prevalence of 'increased risk for breast cancer" among women in the district of Colombo.

The study consisted of three components. Component one was a case-control study, with newly diagnosed cases of breast cancer (n=210) selected from surgical, chemotherapy and radiotherapy units at the National Cancer Institute, Maharagama, and unmatched controls with no breast cancer (n=206) selected from the breast clinic in the same hospital. Cases and controls were recruited using a non-probability sampling method. Interviews were carried out by a trained interviewer at the patient's residence using an

interviewer-administered-questionnaire. Quality of diet related to cancer was assessed using a food frequency questionnaire, validated before the study proper. Lifetime total physical activity levels was assessed in relation to occupational, household and sports/recreational activities using Lifetime Total Physical Activity Questionnaire (LTPAQ), assessed for its reliability before the study proper. Anthropometric measurements such as body weight, standing height and waist circumference were measured by standardized instruments. In a selected sample (61 cases and 51 controls) of women who had been residing at the same residence for > 10 years and had never been employed, indoor nitrogen dioxide levels were measured using passive samplers twice over two weeks period.

Bivariate analysis followed by logistic regression analysis were carried out to identify the independent risk factors for breast cancer adjusted for confounding effect in the logistic regression model. Of the socio-demographic factors, low income of < Rs. 20,000 (OR: 7.3; 95% CI: 1.76, 30.31) was significantly associated with breast cancer. Of hormonal and reproductive factors, total duration of breast feeding less than 24 months (OR: 2.62; 95% CI: 1.49, 4.61) and menarche before the age of 12 years (OR: 4.31; 95% CI: 1.59, 11.69) were the significant risk factors. Of lifestyle related factors, sub-optimal consumption of anti-oxidants (OR: 2.56; 95% CI: 1.45, 4.53) and fibre (OR: 7.4; 95% CI: 3.19, 17.27) and 'low' lifetime total physical activity (OR: 2.45; 95% CI: 1.09, 5.51) were found to be significant risk factors. Of genetic factors, having a first degree relative with breast cancer (OR: 6.25; 95% CI: 2.61, 14.97) and of the co- morbid factors, having diabetes mellitus (OR: 2.44; 95% CI: 1.08, 5.51) were found to be significant factors. In addition to that presenting with a breast lump was a significant factor for breast cancer (OR: 19.7; 95% CI: 9.1, 42.5).

In the second component of the study, a risk prediction model was developed based on the results of component one. Age, age at menarche, age at first live birth, total duration of breast feeding and having a first degree relative with breast cancer were identified as the risk predictors in the model. Each predictor was weighted by its OR to develop individual scores, and a summary risk score was calculated by adding the individual scores. The risk prediction model was applied in an independent sample comprising 44 cases and 62 unmatched controls recruited from the National Cancer Institute, Maharagama, to assess its validity as a screening tool, as well as to derive a cut-off value using ROC curves to distinguish at-risk women for breast cancer from no- risk women. At a cut-off value of 8.5, the risk prediction model had a sensitivity of 88.6% and a

specificity of 79.0%. The positive and negative predictive values were 75.0% and 90.7% respectively.

In the third component of the study, the prevalence of 'increased risk for breast cancer' among women was determined in the district of Colombo using the validated risk prediction model. A sample of 1372 women who were 40 years or above was selected using a multistage, stratified cluster sampling. The adjusted prevalence of 'increased risk for breast cancer' among women was 33.3% (95% CI: 32.1%, 35.8%).

It is concluded that the risk factors specific for breast cancer among Sri Lankan women are mainly related to reproductive life. However, significant proportion of breast cancer was explained by lifestyle related factors and this adds evidence to the already existing knowledge. In view of delayed presentations and relatively high at-risk population in district of Colombo, the validated risk prediction model should be promoted as a simple, low cost tool for identifying and prioritising these women for routine mammography screening.

Keywords: Breast cancer, risk factors, screening, risk assessment, prevalence

0076.Kumarendran, B.

Pinworm infection and control among children living in low income settlements in Colombo Municipal Council area.

MD Community Medicine – 2014   **D 3484**

 Abstract

Background : Pinworm (*Enterobius vermicularis)* infection is considered to be one of the most common helminthic infections of humans. Low income urban populations are at higher risk of getting intestinal helminthic infections due to favourable conditions for transmission. Control of pinworm infection needs a combination of drug treatment of the case and all members of the family and improvement in hygienic conditions. Lack of knowledge about enterobiasis among parents might be an important risk factor for enterobiasis in children and health education has been shown to be of value in the control of enterobiasis.

Objectives: This study had two general objectives. The first objective was to estimate the pinworm egg positivity rate and associated factors among children aged three to seven years in low income settlements in the Colombo Municipal Council (CMC) Area.

The second objective was to evaluate the effectiveness of mebendazole mass treatment and health education on reduction of reinfection rate among the same study population.

Methodology:

Component 1

A population based cross-sectional analytical study was carried out to estimate the prevalence of egg positivity of pinworm and to determine the factors associated with egg positivity of pinworm during January to February 2014. Any child who had completed three years to seven years of age and who was living in the selected low income settlements in the Colombo Municipal Council area for at least the last one year was recruited. Any child who was not suitable for the collection of the cellophane adhesive anal sample was excluded. The total sample size was 1257. Participants were selected using a population proportionate cluster sampling method from 48 settlements in the CMC using a list of low income settlements prepared by a previous survey and the electoral list.

Data was collected using questionnaire, data entry sheets, cellophane anal swabs, anthropometric and GPS sensing equipment. The questionnaire included sections on socioeconomic factors such as education, income, housing and household amenities, parents' knowledge, attitude and practices in relation to transmission, prevention and control of pinworm infection and features observed in children which may either increase the risk of transmission of pinworm infection or be the features of infection. Cellophane anal swabs (CAS) produced by a Japanese company were used to collect the perianal samples. Body weight of the children was measured using electronic digital scales and the height was measured using portable stadiometers. GPS coordinates were documented using 'Garmin' handheld sensors. Allied health science graduates collected the data. After obtaining their written informed consent, parents were given a demonstration on taking CAS using a mannikin and were advised to take the swab early morning as soon as the child woke up. CAS was collected for two consecutive days. Technicians in the Department of Parasitology, Faculty of Medicine, Ragama, carried out the microscopic examination of CAS.

Component 2

A factorial cluster randomized control trial was carried out to assess the effectiveness of deworming against pinworm during January to May 2014. Two interventions were

used. One intervention compared the re-infection rate with two doses of SPMC mebendazole l00mg administered two weeks apart to only positive cases and their households against two doses of SPMC mebendazole l00mg administered two weeks apart to all study participants and their households, irrespective of pinworm egg positivity. The other intervention was to compare the reinfection rate following routine health education as against special health education. The education intervention was developed through discussions with residents of settlements which were not selected for the trial. Data collectors distributed health education leaflets and gave verbal advice during each follow-up visit to the settlements. Parents were given a participant recruitment card and were advised to make the routine healthcare provider aware about the recruitment status.

About two to three weeks after collection of the first CAS, depending on the type of intervention arm, eligible participants were given mebendazole. Whenever a child was treated, all household members were also treated with mebendazole. The second CAS was collected a week after administration of the first dose of mebendazole. A second dose of mebendazole was given two weeks after the first dose. The third CAS was collected a week after the second dose of mebendazole, and the fourth CAS was collected 12 weeks after the second dose of mebendazole.

Data was entered twice in EpiData and validated for discordant entries between the duplicate documents. Data was exported to SPSS software and cleaned. Univariate and logistic regression analyses were carried out. Significance was assessed at 5% significant level.

Results : In Component One, the sample collection rate was 94.3% (1185/1257). Of the 1185 children who provided baseline samples, 504 (42.5%, 95% CI: 39.7 to 45.4%) were positive on at least one of the samples taken on two days. Of these 504 samples, 258 (51.1%) were positive only on one day. Prevalence of egg positivity was similar among males (40.4%) and females (44.6%). In univariate analysis, pinworm egg positivity was associated with age of child (p=0.001), number of children in a house (p=0.001), number of household members (p <0.001), levels of education in the mother (p=0.001) or father (p=0.001), household amenities score (p=0.001), socio economic status (p<0.001), weight for age Z score (p=0.02) and BMI for age Z score (p=0.02). In logistic regression analysis, pinworm egg positivity was associated with socioeconomic status (OR = 0.98, 95% CI: 0.97 to 0.99), age of the child [from 3 years to 7 years] (OR = 1.02, 95% CI: 1.004 to 1.05), BMI for age Z score (OR= 0.97, 95%CI: 0.95 to 0.99)

and increasing number of children aged 3 to 7 years in a household (OR= 1.05, 95%CI: 1.001 to 1.1).

In Component Two, the sample collection rate was 79.8 % for CAS_2, 75.2% for CAS_3 and 73.3% for CAS_4. Overall egg positivity reduced from 42.5% to 10% following the first dose of mebendazole, further reduced to 6.8% following the second dose of mebendazole and then increased to 29.3% at 12 weeks following the second dose of mebendazole. Reinfection rate at 12 weeks after the second dose of mebendazole (i.e. those who were CAS3 negative but CAS_4 positive) was similar in all four intervention arms: special education and treatment of only positive cases (31.6%), special education and mass treatment (29.7%), routine education and treatment of positive cases (25%) and routine education and mass treatment (32%). Overall negative conversion rate after the first dose of mebendazole (NCR,) was 87.2% (366/420) and after the second dose of mebendazole (NCR_2) was 94.2% (373/393). There was no evidence for an association between type of intervention and either NCR] or NCR1. In univariate analyses, reinfection rates were associated with baseline egg positivity (p=0.001), number of household members (p=0.03), socioeconomic status (p=0.02) and BMI for age Z score (p=0.004). In logistic regression, there was no evidence for association between type of intervention and reinfection (OR= 1.003, 95% CI: 0.97 to 1.03) when baseline pinworm egg positivity rate and BMI for age Z score are adjusted, Re-infection was associated with baseline pinworm egg positivity (OR= 1.22, 95%CI: 1.15 to 1.3) and BMI for age Z score (OR= 0.96, 95% CI: 0.94 to 0.99).

Conclusions : The prevalence of pinworm egg positivity among the children in low income settlements in the Colombo Municipal Council area was 42.5% (95% CI: 39.7 to 45.4%). When the possible risk factors were considered together, there was evidence that increasing age of child, higher number of children in a household, lower socioeconomic status and lower BMI for age Z score were independently associated with increased risk of pinworm egg positivity. There was no evidence for a difference in the reinfection rate of pinworm between the four intervention arms namely special education and treatment of only positive cases, special education and mass treatment, routine education and treatment of positive cases and routine education and mass treatment. There was also no evidence for a difference in the negative conversion rate following the first and second doses of mebendazole among the four intervention arms. Pinworm reinfection rate was found to be associated with baseline egg positivity and BMI for age Z score.

Recommendations : Prevention and control activities of pinworm should be strengthened in the low income settlements in the Colombo Municipal Council area. The association between the pinworm egg positivity and the BMI for age should be explored further. Parents should be educated on the modes of transmission of pinworm infection. Parents and healthcare workers should be sensitized on the need for a second dose of mebendazole two weeks following the initial dose.

Keywords : *Enterobius,* **Pinworm, low income settlements, deworming, mebendazole**

0077.Mahesh, P.K.B.

Knowledge and practices of the parents in determination of fever, responding to fever and their influence on the outcome of the children treated as dengue fever

MSc. Community Medicine – 2012   **D 2977**

Abstract

Introduction-Presence of four subtypes and favorable breeding conditions of the vectors has made dengue a continuing public health burden in Sri Lanka. Timely interventions reduce the morbidity and mortality of dengue in which fever is the main symptom. Parents' response to fever, is influenced by their knowledge on fever. The literature is scarce in the area of home -based secondary prevention and its influence on the outcome of dengue .

Objective-To evaluate knowledge and practices of the parents of the children treated as dengue fever/dengue hemorrhagic fever, on determination and response to fever and their associations with the disease outcome.

Methodology-A descriptive cross sectional study was done in six general medical wards Lady Ridgeway Hospital for Children from July 2012 to December 2012. Systematic sampling was done with a sample size was 425. Knowledge and practices were explored in the parents, who were care giving the admitted children using an interviewer administered questionnaire. Once the child was discharged, data on four outcome parameters: duration of stay, need of intense monitoring, elevation of liver enzymes, the grade of DHF, were obtained using a data extraction form. Association between socio-demographic factors and knowledge, practices and knowledge, practices and outcome were evaluated.

Results- The response rate of the study was 99.5%(n=423). A majority of respondents (97%) were mothers with a mean age of 35.6 years. The rest were fathers(3%) were with a mean age of 42.9 years. Majority of mothers(59.3%) and fathers(62.4%) had an education level between grade 6 and ordinary level. In 50.4% of the respondents, the mean knowledge score was below 50% knowledge had a positive correlation with respondent's age, spouse's age and income of the family. The association with income was statistically significant (p<0.001). A negative correlation was seen with the number of children in the family and the child's age of which the latter was significant (p=0.03). Parent's education level and having a thermometer at home had a significant association with the knowledge (p<0.001), whereas gender and being employed were not significant.

Only one third of the parents used a thermometer to detect fever. .Self-medication was practiced in more than 85% of the families prior to seeking professional medical care. Less than 50% administered the correct dose of paracetomol. Knowledge on fever significantly influenced the usage of a thermometer (p<0.001) and decision on correct dose of paracetomol (p=0.01). Approximately one tenth used home based traditional treatment. Seeking care in private sector was done earlier than from the government sector and nearly 42% shifted back to the latter. Usage of a thermometer was significantly associated with the timing of treatment seeking (p=0.05). Relative delay in admission and delayed first blood counts were seen more in the group with unfavorable outcomes. Giving an overdose of paracetomol was significantly associated with getting liver enzymes elevated (p<0.001). Usage of a thermometer was significantly associated with the duration of hospital stay (p=0.005).

Restriction of the diet was practiced by about one fifth and more than 80% used temperature reducing measures.

Conclusions and Recommendations- Parents knowledge on fever was not satisfactory. Socio-demographic factors like, parent's age, education level and income affects the parents' knowledge on fever. Knowledge on fever influences the practices of responding to fever. Majority do not use thermometers in determining fever. When the illness persists, seeking treatment from government sector increases. Harmful practices like delayed treatment seeking, paracetomol overdose, not using thermometers leads to unfavorable outcomes.

More health education programs targeting general public on correct fever management should be planned and implemented. More research have to be encouraged in local

setting relevant to fever management in dengue as it would facilitate to get more insight on current management practices and research outcomes could be used for further reduction mortality from dengue.

Key words- **Dengue fever, Fever, Knowledge, Practices**

0078.Mambulage, R.U.

The prevalence and pattern of occupational injuries, its associated factors and health and safety practices among labourers of Ceylon Electricity Board, Western Province North.

MSc. Community Medicine – 2012   D 2972

Abstract

Nearly 317 million occupational accidents occur annually in the world and the estimated yearly economic burden is 4% of global domestic produce (ILO 2012). The Hazards and risks faced by workers vary with the occupation and some occupations are considered high risk. Electricity is inherently dangerous due to its properties and those engaged in electrical work are subjected to increased risks at work. The labourers in the Ceylon Electricity Board (CEB) is one such category of workers who face this increased risk on a daily basis. Studies on the topic of occupational injuries are scarce locally as well as internationally and electrical workers are an under studied group. This study was carried out to determine the prevalence and pattern of occupational injuries, its associated factors and use of health and safety practices among labourers of the CEB, of Western Province North (WPN). An interviewer administered questionnaire developed using the information generated by key informant interviews, was used to collect data from 321 CEB labourers in study area who were selected by simple random sampling method. Three hundred and one subjects responded with a response rate of 95.8%. A check list was used to observe a sub sample of workers on the use and adherence to health and safety practices. Workers were asked to recall the injuries they faced during last 6 months as at 31^{s1} July 2012 and prevalence was calculated for 6 months and an annual rate was estimated. Knowledge and the use of health and safety practices were also self reported by the workers.

The study sample consisted of males with a mean age of 40.1 years ranging from 20 -59 years. The majority (83%) were married workers and predominately Sinhalese. Educational level was comparatively higher than the general Sri Lankan labour force.

Reported chronic non communicable disease prevalence was lower than in the community with diabetes mellitus prevalence of 9.6% and hypertension 3%. Among the workers a majority (43.2%) were unskilled workers.

The prevalence of occupational injuries was 7.6 per 100 workers per 6 months(95% CI = 4.6- 10.6) and the annual estimated prevalence was 15.2 per 100 workers (95%CI = 11.1-19.2). Therefore every 1 out of 6 workers in CEB, WPN were at risk of occupational injuries. Youngest age group (20-29.9 years) showed higher injury rates compared to older age groups. Out of the injuries, 18 were minor injuries (78.3%) while 21.7% were reportable. Mechanical accidents was the highest (52.2%) type reported while been struck by objects or tools (30.4%) caused highest injuries. Lacerations were the major injury type (34.8%) and upper limbs were most affected body part.

Among categories of labourers, proportion of unskilled workers injured (9.9%) was higher than the proportion of skilled workers injured (4.6%) although not statistically significant.

Frequent use of personal protective equipments (PPE) by workers was 81.4% and the most frequently used PPE was safety belt (98.3%). Observations were comparable for some PPE use. Unsafe lifting was practiced by 24.9%, frequently. Considering the injury pattern and the use of personal protective equipments, Proper use of PPE will prevent most of the injuries.

Injured were more likely to be young aged (39.9 years or less), unmarried and work experience less than 10 years. Injuries seemed to be higher in workers without training, without history of past injury and frequent use of unsafe equipments.

As large numbers of workers are at risk especially young healthy workers of productive age group employed in unskilled labourer categories, the current injury reporting system, use of personnel protective equipment and the training programmes need to be reviewed. Prevention of these injuries should be a priority. Reviewing the current training, health and safety practices as well as improved surveillance of occupational injuries are recommended as possible interventions.

Keywords: - Occupational injury, prevalence, labourers of Ceylon Electricity Board, associated factors.

0079.Manori, D.M.S.

Emotional and behavioural status and associated factors of Sinhala language conversant children aged 11-16 years who are resident in children's homes in the Gampaha probationary division.

MSc. Community Medicine - 2014   **D 3388**

Abstract

Introduction: Emotional and Behavioral disorders are common among children in any socio economical condition. Inmates living in Children's Homes lack the love, affection and care comparing to counterparts making them more vulnerable for above disorders.

Objective: To describe the emotional and behavioral status and the associated factors of Sinhala language conversant children aged 11-16 years who are resident m Children's homes in the Gampaha Probationary Division.

Methods:A descriptive cross sectional study was conducted. Minimal sample size calculated was 294. All eligible inmates of 14 Children's Homes in the Gampaha Probationary Division was included to meet the sample size. A pre tested self rated Strengths and Difficulties Questionnaire (SDQ) and an interviewer administered questionnaire were administered. A checklist was used to extract data from the records. Chi square test was used to test for associations and probability of less than 0.05 was selected as the significant level. The results were expressed as Odds Ratio (OR) and 95% Confidence Interval (95% CI).

Results: Response rate was 100% (n=279). The prevalence of abnormal emotional and behavioral status was 26.2% (95% CI: 21.1-31.7). Conduct problems were the highest (28.7%; 95% CI 23.4-34.4) and prosocial problems were the lowest (3.6%; 95% CI 1.7- 6.5). Female sex (OR= 3.L; 95% CI: 1.7-5.9, p<0.001), being living in Children's Home for more than six years (OR= 2.1; 95% CI: 1.1^1.0, p= 0.01), having less than 10 friends (OR= 1.8; 95% CI: 1.03-3.1, p = 0.04) and not discussing problems with someone (OR= 8.2; 95% CI: 3.5-19.7, p<0.001) were significantly associated with having abnormal emotional and behavioral status.

Conclusions and Recommendations: Observed prevalence is higher than the figures from general population. Except "sex" all other associated factors were modifiable.

Hence recommend early screening and establishing counseling services. Future research should focus on assessing all three versions of the SDQ and qualitative research to identify root causes of the related problems.

Keywords:Emotional and behavioral status, Children's Homes, Strengths and Difficulties Questionnaire, Total difficulties score

0080. Nadeeka, N.H.S.

Antenatal morbidities,their associated factors and practices related to their management among mothers in Kalutara District.

MSc. Community Medicine – 2012   D 2960

Abstract

Background

Maternal mortality has traditionally been the key measurement in the monitoring of maternalhealth and adequacy of obstetric services around the world including Sri Lanka. Even though a developing country, Sri Lanka is experiencing a low level of maternal mortality rates with lot of inter-district disparities. However achieving the Millennium Development Goals will not be a reality unless maternal morbidities are properly addressed. In order to achieve that, Sri Lanka needs a clear understanding of the accurate burden of obstetric morbidities as well. The objective of the present study was to assess the proportion of selected antenatal morbidities, associated socio- demographic, economic and health related factors and to describe practices related to their management among mothers in Kalutara District.

Methods :A hospital based descriptive cross sectional study was conducted among mothers who delivered their babies after completion of 36 weeks of pregnancy in government hospitals with specialized obstetric care. Data was collected using a pre tested interviewer administered questionnaire. Information was also collected from Pregnancy Records, Clinic records, Bed Head Tickets and relevant documents. The morbid conditions were defined using standard definitions used by the Ministry of Health, Sri Lanka college of Obstetrics and Gynecologists and World Health Organization. The sample of 420 postpartum mothers were recruited from three main hospitals in the district General Hospital Kalutara, Base Hospital Horana and Kethumathi maternal Hospital for the study giving 99.5% response rate. Sample was selected proportionate to the monthly average of deliveries in each hospitals and unit. Systematic sampling was used to select mothers from each

unit using the postnatal ward register. Basic socio demographic characteristics of the sample were approximate with the population characteristics of the district. Data collection was done by the principal investigator.

Results: The sample predominantly consisted of mothers who were Sinhalese(83.8%);Buddhist(81.9%); educated up to O/L and above. The majority of them were in the age group of 20-29 yeaThe results revealed that the proportion of mothers had at least one selected antenatal morbidity was 42.9% and more than one morbidity was present among 9.1% mothers .The most common morbidity among mothers was anaemia (21.2%). The rest of the morbidities reported were as ; chronic hypertension 2.6%, Pregnancy Induced Hypertension8.1%, chronic Diabetes Mellitus 3.1%, gestational Diabetes Mellitus 4%, heart diseases 1.7%, Antepartum hemorrhage2.4%, Asthma6.9%, Urinary tract infections2.6%, epilepsy 0.7% and liver diseases 0.5%. There were no reported cases of Malaria, Tuberculosis and Sexually Transmitted Diseases.

Mothers whose age was 35 years or more were more likely to have any morbid conditions during pregnancy (OR=1.7, 95% CI= 1.04-2.8). Statistically significant associations were seen between the age group with PIH and Anaemia.

No significant association was seen between GDM and selected characteristics. The association between the higher parity of three or more, unplanned pregnancy with the presence of anaemiawasstatistically significant.

Overall awareness and perception about morbidity was good. Practice related to management of PIH was good. But the dietary habits regarding management of anaemia and GDM were not satisfactory. Physical exercises were not given adequate attention by mothers with GDM.

Conclusion : Proportions of antenatal morbidities are notably high among mothers in Kalutara District. The services should be more oriented to address preventive and management strategies on such morbidities. More researches should be carried out to identify the underlying causes for these morbidities.

Keywords: **Antenatal morbidity, Sri Lanka**

0081.Nagodawithana, N.S.

**Pattern of day time noise pollution and prevalence and correlates of noise `
induced hearing loss among traffic policemen in the city of Colombo.**

MD Community Medicine – 2013   **D 3222**

 Abstract

Environmental pollution by noise is a major public health problem in both developing and developed countries. Environmental noise (also termed - community noise, residential noise or domestic noise) is defined as noise emitted from all sources other than noise within the industrial work places. The main sources of environmental noise are traffic noise (includes road, rail and air traffic), industrial noise (outside of the industry), construction noise, public services noise and noise from neighborhoods. Noise is an inevitable companion of development process and is becoming an increasingly dangerous and disturbing environmental pollutant. Excess noise produces number of health effects and noise induced hearing loss (NIHL) is probably the most serious health effect of it.

The present study was carried out to determine the pattern of day time noise pollution and prevalence and correlates of NIHL among traffic policemen in the city of Colombo, Sri Lanka. The study comprised of three components. The first component was a cross sectional descriptive study to determine the day time noise levels in identified locations in the city of Colombo, to describe the noise levels of selected sources of noise in the city of Colombo and to predict the level of noise based on traffic data using computer software. The second component was also a cross sectional descriptive study to determine the prevalence and socio-demographic correlates of NIHL among traffic policemen employed in the city of Colombo. The third component was a validation study to develop and validate a self administered questionnaire as a screening instrument to detect NIHL. The study was carried out in the city of Colombo from November 2011 to June 2012 and the traffic policemen who were working in the city of Colombo were included in the study. The noise measurements were carried out in purposively selected 60 places. Measurement of noise was taken for a total of six hours duration on a week day to determine the noise level of a place. Equivalent continuous A weighted sound pressure level (LAE_Q) was measured while getting Lio, L50, L90, and LA_{MAX} at the same time. LA_{EQ} for peak and off- peak traffic

hours (three hours each) was measured separately to obtain final LA_{EQ} (8hrs) value. Measuring of noise levels was done by using a Rion NL 52 Class I sound level meter.

LA_{eq} (8hrs) ranged from 76.6 dB to 84.0 dB with the median of 80.9 dB within the city area while recommended LA_{eq} level for the city area was 63.0 dB. Noise levels of the city of Colombo were 13.3 dB to 21.0 dB higher than the recommended value and this 13.3 dB implies the increase of sound pressure level (SPL) by 21.4 times while 21.0 dB implies the increase of SPL by 125.9 times above the recommended noise level.

LAeq for the peak hours of the traffic ranged from 76.6 dB to 83.6 dB while 80.9 dB was the median. LA_{eq} for the off-peak hours of the traffic ranged from 76.2 dB to 84.4 dB with the median value of 80.4 dB. There was not much difference in noise levels in peak and off-peak hours of traffic.

The commonest cause for noise in the city of Colombo was traffic noise while noise from lottery sellers and noise from musical shops also contributed to noise pollution to some extent. Noise levels of all type of vehicles which run within the city were measured and it was in the range of 80.2 dB (cars) to 105.2 dB (diesel three wheelers). The three noisiest vehicles in the city were diesel three wheelers, large buses with normal engines and petrol two stroke three wheelers while least noisy three vehicles were cars, jeeps and pickups.

Noise levels of some places were predicted using the IMMI noise mapping software. Traffic data from the Transport Laboratory of University of Moratuwa was used to provide necessary inputs to IMMI software. The predicted noise levels were compared with observed noise levels of same place and it was found that the software was able to predict the noise level with an overestimation of around 3.0 dB.

Hearing assessment of the traffic policemen was carried out by doing pure tone audiometry on a sample of 287 policemen. It was found that the prevalence of NIHL among traffic policemen working in the city of Colombo was 41.1% (95% CI = 35.5% - 46.9%). A third of those having NIHL had major high frequency hearing loss.

The socio-demographic correlates for the NIHL were assessed by using an interviewer administered questionnaire and there were 23 socio demographic characteristics which showed statistically significant associations with NIHL according to bi-variate analysis. However only "age" of the participant showed statistically significant association with major NIHL (OR = 1.088, 95% CI; 1.055 - 1.123) and only "duration of work as a policeman in career" showed statistically significant association with any type (minor or major) of NIHL (OR = 1.007, 95% CI; 1.005 - 1.009) according to multi-variable analysis.

A self administered questionnaire (SAQ) consisting of 22 items was developed by the PI to be used as a screening tool to detect NIHL. However, the results indicated that the SAQ cannot be used for the intended purpose.

These results highlight the need to take effective actions to lower the noise level in the city. As a first step the relevant authorities such as Central Environmental Authority should take action to implement existing rules and regulations regarding noise pollution. Consultation of the scientific community for the upward revision of recommendation regarding noise level for a Municipal Council area is suggested as lowering of noise levels to 63 dB in a city may be an unrealistic target. Curtailing of importation of diesel three wheelers and large buses with normal engines is suggested as those are producing more noise and better alternatives are available.

Introduction of new regulations to reduce the LA^ of the horns of the vehicles is suggested. It is recommended to explore the feasibility of using surveillance cameras already installed in the city of Colombo to obtain traffic data and to use that data as input for the IMMI software to estimate noise levels.

It is also recommended to conduct pre recruitment hearing assessments for the policemen and periodic hearing assessments to the traffic policemen. To explore the feasibility of reducing the number of hours per day spent on the road by traffic policemen by increasing the pool of traffic policemen is suggested to the Department of Police.

It is suggested that traffic policemen, who are suffering from NIHL, should be immediately transferred to a different branch of the Police.

0082.   Nanayakkara, I.O.K.K.

Knowledge and the attitudes on infant and young child feeding and associated factors among public health midwives in Colombo district.

MSc. Community Medicine - 2012   D 2978

Abstract

Appropriate and adequate feeding during infancy and young childhood is crucial for growth and development of children. The gamut of feeding practices important during this period includes breast feeding and complementary feeding. Numerous evidence based interventions are recommended to address the issue of malnutrition in infancy and young childhood. World Health Organization (WHO) and UNICEF recommends that infants be exclusively breastfed for the first six months of life. Thereafter children should receive adequate, safe and nutritious complementary foods in addition to continued breastfeeding until two years of age or beyond. These recommendations have been adopted by the National Nutrition Policy of Sri Lanka (2010) and Maternal and Child Health Policy (2011) and are currently in practice as national recommendations. Ignorance and incorrect food and health beliefs, linked to poor feeding and health practices will lead to malnutrition. Nutrition education is an important responsibility of community workers from all sectors. These workers need to be trained to deliver appropriate messages effectively through individual counseling, group discussion etc.

At grassroots level the Public Health Midwife (PHM) is responsible for strengthening proper infant and young child feeding (IYCF) practices through a range of methods including counseling of mothers, demonstrations and growth monitoring. However Research findings are scarce on knowledge and attitudes of PHMM in Sri Lanka on IYCF counseling.

The present study was a cross sectional descriptive study aimed to assess the knowledge and attitudes of Public Health Midwives (PHMM) in Colombo district on infant and young child feeding and factors associated with their knowledge. Three hundred forty eight PHMM in Colombo district were included as study

participants. A structured, pre-tested, self administered questionnaire was used to collect data from PHMM on the days of in- service training or monthly conference, pre arranged with the permission the MOH. The content and consensus validity of the questionnaire was assured by soliciting assistance of an expert panel with experience in infant and young child feeding at national and international levels. Knowledge on infant and young child feeding was assessed on breastfeeding and complementary feeding separately. Marks gained by PHMM for the knowledge components were used to categorize them as having either 'satisfactory' or 'not satisfactory' levels in knowledge on breast feeding and complementary feeding.

Background characteristics of the study participants, training and public health work experience and personal breast feeding and complementary feeding experience of PHMM in whom the youngest child is below five years of age were assessed for their association with the level of knowledge on breastfeeding and complementary feeding.

A majority (208, 59.8%) of PHMM in the Colombo district had a satisfactory level of knowledge on breastfeeding, but the level of knowledge on complementary feeding was satisfactory only in 166 (47.7%) of the PHMM. Gaps of knowledge on breast feeding were identified in the areas of advantages of breast milk to the mother, breast milk expression and managing infected mastitis, while importance of weight measurement and current recommendations on main meal frequency were among the knowledge gap on complementary feeding.

The factors that were significantly associated with a 'satisfactory' level of knowledge on breast feeding are age of the PHM below 40 years (p<0.001) and having a public health work experience of less than 8 years (p=0.03). Satisfactory level of knowledge on complementary feeding was significantly associated with possessing a basic educational level of GCEA/L or higher (p=0.01), age of the PHM below 40 years (p=<0.001) and having a public health work experience of less than 8 years (p<0.001). Satisfactory level of knowledge on complementary feeding was inversely associated with training on lactation management (p=0.02) and BFHI (p=0.01).

The present study concluded that a majority (208, 59.8%) of PHMM in the Colombo district has a satisfactory level of knowledge on breast feeding but the level of knowledge on complementary feeding was satisfactory only in 166 (47.7%) of the PHMM. The study recommends that the specific areas of

knowledge gaps identified by the study be strengthened by increasing quality of existing training programmes on infant and young child feeding and building capacities of resource personnel at MOH level to provide continuous guidance to the field staff. Since the knowledge of PHMM who were above 40 years and with more than 8 years of experience, were comparatively poor, refresher training targeting them is recommended.

Keywords; Infant and young child feeding, Public Health Midwife, Attitudes, Sri Lanka

0083.   **Nishad, A.A.N**

Prevalence and associated factors of cataract and barriers to cataract surgery among elders in Mahara Divisional secretariat area.

MSc. Community Medicine – 2012   D 2966

Abstract

Cataract is the leading cause of blindness in the world and a common cause of visual impairment in the elderly. Prevalence of cataract is shown to be increased with age, especially in elderly age groups. Therefore cataract is not only a health issue for the elderly, but also a significant determinant of all aspects of life, including quality of life. Exact figures of prevalence and associated factors should be known for planning of eye care services for the ageing population. People will not come for treatment if the barriers are not addressed even after establishment of treatment services.

This study was conducted to determine the prevalence of cataract, its associated factors and to describe the barriers for cataract surgery among the elderly population in the Mahara Divisional Secretariat Division (DSD) of the Gampaha District, Sri Lanka.

This was a population based cross-sectional study conducted between 1st of August and 31st October 2012 in selected localities in the Mahara DSD. A multistage sampling method was used to select 540 elderly people after excluding terminally ill and bed bound people. An interviewer administered questionnaire originally prepared in Sinhalese was administered by the investigator to collect data on demographic and social characteristics, associated factors and existing barriers for treatment. A clinical eye examination with Snellen's visual acuity chart, and Slit lamp examination was carried out to detect and grade cataract by a medical officer

with more than five years experience in Ophthalmology under direct supervision of a Consultant Ophthalmologist.

The sample consisted of 470 persons, of whom, 335 (71%) were females. Mean (SD) age of the sample was 68.6 (7.3) years and 87 (19.5%) were 75 years or older. The prevalence of cataract was 80.6% including the operated eye and 73.6% when the operated eye was excluded. Nuclear only cataract (44.9%) was the commonest subtype followed by mixed (27%) and sub-capsular (1.3%) types. Seven percent had undergone cataract surgery previously. Advanced age, lower income and having chronic medical conditions like hyperlipidemia, chronic renal disease or thyroid disorders were associated with presence of cataract; female sex, diabetes or hypertension were not associated with cataract.

Lack of awareness or knowledge on cataract or cataract treatment services, financial constraintsand socio-cultural misconceptions were the main barriers for cataract surgery.

The main strength of this study is the use of the gold standard technique for detection of cataract. The high cataract prevalence reported among the elderly emphasized that Sri Lanka has to strengthen and expand its vision care services. There should include population level cataract detection programs in partnership with mass media to increase the public awareness on cataract especially for elderly. Continuous efforts should be put forward to dispel the misconceptions about cataract and cataract treatment services. Need for good case control studies for further evaluation of associated/ risk factors for cataract and qualitative studies for further evaluation of the barriers for treatment of cataract are warranted.

Keywords : cataract, associated factors, barriers for surgery

0084. Pathirana, A.

An assessment of the nutrition environment of schools in the Moneragala district; based on World Health Organization - Nutrition friendly School initiative (NFSI) criteria.

MSc. Community Medicine - 2014　　　　　　　　　**D 3606**

Abstract

Introduction / Background

While a large portion of global population is still affected with under nutrition, an epidemic of over nutrition is affecting the world population at the other end of the spectrum, causing a paradoxical double burden of malnutrition. Nutrition Friendly Schools Initiative (NFSI) was developed by the WHO, specifically to remedy this problem at the strategic intervention point of school nutrition environments. Sri Lanka, has already implemented Health Promoting Schools concept at a national level based on the same principles as NFSI. An evaluation of the school nutrition environments is essential to evaluate the current nutrition programmes and design future interventions.

Objectives : To assess the nutrition environments of schools, identify deficiencies and successful areas in the current school nutrition environment and to compare differences in the school nutrition environment in different types of schools in the Moneragala district.

Methods : The research was conducted as a cross sectional descriptive study of the school nutrition environments in the Moneragala District, Sri Lanka. From a total of 269 schools in the district a sample of 175 schools were selected based on a random, probability proportionate to size sampling technique to recruit a representative number of 1AB, 1C, Type 2 and Type 3 schools. A self-administered questionnaire developed by the Oxford University, WHO collaborating Centre to evaluate the school health environment based on global NFSI criteria was adapted following translation and pre-testing in an adjoining district. Percentages and mean values were computed and key questions stipulated by the original questionnaire were tested for statistical significance between categories of schools using Fisher's exact test and ANOVA.

Results : Of all schools 88.1% were providing the free school meal for student's. Only 64.3% of schools were aware of the canteen circular and 43.0% (n=68) had other written nutrition related policies developed within schools. Only 3.3% (n=5) of schools had special training to school staff members on nutrition. Physical education curriculum was reported as well adapted for different age groups(satisfaction score 4.73/5; SD=0.64). 54.5% (n=85) stated that the food available in schools donot complement the teachings on healthy eating. Access to health services was poor in most schools (31.4%; n=50).

Conclusions and recommendations : Most criteria stipulated by the NFSI are currently implemented at different levels in the study population. However there is considerable opportunity for improvement through better coordinated multi-sectorial approaches that address all aspects of the school nutrition environment effectively.

Keywords-Nutrition Friendly Schools Initiative; Sri Lanka; Health Promoting Schools; Evaluation;

0085.   **Pathirana, V.P.S.D.**

Prevalence of menstrual disorders , their association with daily activities and health care seeking behavior among grade twelve adolescent school girls in Seethawaka Education Division.

MSc. Community Medicine – 2013   D 3396

Abstract

Background: Adolescence, the transitional phase between childhood and adulthood is characterized by immense biochemical, physical and psychological changes. Menstrual disorders are common among young girls. They may be benign or may be associated with pathological condition. Therefore careful evaluation is necessary for early diagnosis and treatment of underlying problems and their sequel. In spite of uncorrected menstrual problems that adversely affect the daily routine and quality of life, the health seeking behviour of adolescents is remarkably low worldwide. This study was conducted to determine the prevalence of menstrual abnormalities, their association with daily activities and health care seeking behaviour among grade twelve school girls in Seethawaka Education Division.

Methods: A descriptive cross-sectional study was carried out among 348 adolescent girls aged 16 to 19 years schooling in seven government schools in Seethawaka Education Division from September to October 2013 using a self-administered, structured questionnaire addressing the socio-demographic details, menstrual characteristics, association of menstrual disturbances on the activities of daily living and health care seeking behaviour of the adolescents.

Results: Overall prevalence of menstrual disorders was 97.7%. Age at menarche was 12.37 (SD 1.37) years. Four (1.2%) cases of precocious puberty and 1 (0.3%) case of delayed puberty were observed. Following menstrual disorders were reported among study population, (prevalence was shown in brackets): Dysmenorrhea in overall (67.2%) and moderate to severe (28.7%), premenstrual syndrome with at least one symptom (56%) and according to ACOG, 2000 (14.7%.), irregular cycles (14.9%), polymenorrhea (5.3%), oligomenorrhea (2.7%), menorrhagia by cycle duration (4.6%) and quantity of bleeding (26.1%), hypomenorrhoea by cycle duration (0.6%) and quantity of bleeding (8.6%).

Most common somatic symptoms of PMS were abdominal pain and cramps, muscle, joint or back pain and headache while most common affective symptoms were getting angry for minor things, feeling extremely tired or fatigue and inability to sleep.

Ethnicity, presence of chronic diseases, oligomenorrhoea and family history of dysmenorrhea were significantly associated with dysmenorrhea (p <0.05). The factors significantly associated with PMS were presence of dysmenorrhea and chronic diseases, ethnicity and religion (p <0.05).

Menstrual disorders were associated with negative impact on relationships, activities of daily living and school performance. A majority reported need for prolonged resting hours and to stay alone in the bedroom while 12.9% of girls reported school absenteeism owing menstrual disturbances.

A Larger proportion of girls perceived menstrual problems as normal phenomenon and more than three quarter stated no requirement of treatment in spite of menstrual problems were being common.

Home remedies and simple analgesics were used by about 10% and only 11.5% sought western type treatment for menstrual cycle problems.

More than three quarter of girls attempted to seek information either by discussing with somebody or referring to source of information.

Mother was the major source of information for girls while girlfriends and sisters were second and third respectively. Information was sought very rarely from males except in the case of health care workers where almost equal preference was observed for both males and females.

Conclusion: Menstrual problems were common and a significant source of morbidity, yet poorly addressed among adolescent school girls. It adversely affects relationships, daily activities and school performance. A majority perceived it as a normal phenomenon and was reluctant to seek medical treatment from currently available health care services.

Providing adequate knowledge on menstrual problems to adolescent girls and their parents may help to seek medical attention without being silently tolerating disturbances.

0086.Perera, K.C.M.

Prevalence of obesity and overweight and the association of the overweight with selected factors and anthropometric measures among children attending preschools in MOH areas Colombo Municipal District 4 (D4) and 5 (D5).
MSc. Community Medicine - 2014   **D 3584**

Abstract
Childhood obesity increases the risk of obesity in adulthood and is associated with cardiovascular disease risk factors. The roots of the obesity epidemic need to be tracked back as early in life as possible in order to develop effective means for preventing this condition and its health consequences in the future. Studies addressing the risk factors associated with obesity or overweight in Sri Lanka is limited in preschool age group.

The present study was designed with the objective of determining the prevalence' of obesity and describing the association of overweight with selected factors and anthropometric measures among children attending preschools in MOH areas Colombo Municipal District 4 and 5.

Preschool children (n=431) in MOH areas Colombo Municipal District 4 and 5 were selected using a stratified multistage sampling technique. Information was collected from the parent/guardian of the study population by using an interviewer

administered questionnaire. Anthropometric measurements were taken from selected preschool children. Data was entered in IBM-SPSS version 20 and chi squared test was used to determine associations.Overall prevalence of obesity among children attending preschools in MOH areas Colombo Municipal District 4 and 5 was 1.7% and overall prevalence of overweight was 4.37% (including obesity).Monthly family income, long term illness, long term medication such as antiasthmatic drugs, soft drink frequency, number of main meals per day, frequency of rice based food intake and father working abroad were significantly associated at 0.05 level (p<0.05) to the preschool children overweight.Age, birth weight, weight at 6 months, number of main meals per day, butter fat spread intake frequency, increasing mother's age were significantly associated at 0.01 level (p<0.01) to the preschool children overweight.Ethnicity, wheezing, frequency of rice meal, potato and milk intake, dining out breakfast were significantly associated at 0.001 level (p<0.001) to the preschool children weight.Waist circumference, hip circumference, mid upper arm circumference, waist to hip ratio, mid upper arm circumference to height were significantly associated at 0.001 level (p<0.001) to the preschool children overweight.Birth order, number of children, sex and moderate physical activity were significantly not associated with the preschool children overweight. Body mass index waist circumference to height and mid upper arm circumference to age were significantly not associated with the preschool children overweight.As a result of health transition taking place in Sri Lanka, some risk factors risk behaviors have clustered among urban population where the prevalence of weight was relatively high. This study has showed increased prevalence of preschool children overweight and associated factors to the overweight in the Colombo Municipal District 4 and 5, for early intervention.

Keywords: Preschool, Children, Overweight

0087. **Perera, M.G.S.N.S.**

Factors associated with weight gain from first trimester of pregnancy to six months after child birth.

MSc. Community Medicine – 2012   **D 2974**

Introduction. -Weight gain from first trimester of pregnancy to six months after child birth, places a woman at risk of developing over weight and obesity in later life.

Objectives. - To determine the percentage of and factors associated with weight gain from first trimester of pregnancy to six months after childbirth, among mothers who attended child welfare clinics in Biyagama and Kelaniya Medical Officer of Health areas.

Methods. - This was a clinic based descriptive cross sectional study, conducted from August to October 2012. All eligible study participants were selected for the study until sample size of 387 was achieved. Validated culturally adopted, pretested interviewer administered and self- administered questionnaires were used in data collection. Weight and height was measured following standardized technique. Results were expressed as percentages. Odd's ratios (OR) and 95% confidence intervals (CI). Multivariate Logistic regression analysis was performed hence controlling for confounders.

Results. - Percentage of mothers who gained weight from first trimester of pregnancy to six month after child birth was 67.8% (95% CI 63% -72%, n=263). Weight gain was zero in 3.3 % (n=13, 95 % CI 1-5 %) while 28.8% (n= 112, 95% CI 24-34 %) had negative weight gain (weight loss). After performing multivariate logistic regression, low physical activity Odd's Ratio(OR) = 12 (95% CI 6.1-23.8, p=0.001), consuming > 1 Snack/day OR = 2.1(95% CI 1.3-3.4)p=0.004, BMI category-obese/overweight OR = 0.4(95% CI 0.3-0.7), p=0.001, Age>33 years OR= *0.5(95%* CI 0.3-0.9), p=0.02 were statistically significantly associated with weight gain from first trimester to six months after child birth. No significant association was observed with nationality, religion, parity, education status, income, social class, employment, contraceptive method used, duration of sleep, breast feeding status, quality of diet, psychosocial stress.

Conclusion. - Percentage of mothers who gained weight from first trimester of pregnancy to six months after child birth was 67.8%. After controlling for confounding factors, low physical activity, consuming > 1 Snack/day, being obese/overweight in booking visit, Age>33 years were statistically significantly associated with weight gain from first trimester of pregnancy to six month after child birth. Low physical activity and consuming > 1 snack/day per day increases the likelihood of gaining weight, while being obese/overweight in booking visit and age>33 years decreases the likelihood of gaining weight from first trimester of pregnancy to six month after child birth. .

Keywords - Female obesity, Physical activity, Snack, BMI, Postpartum weight retention, Six months

0088. Perera, W.N.D.

Birth and emergency preparedness , associated factors , maternal and neonatal outcomes among postnatal mothers at Base Hospital, Balangoda.

MSc. Community Medicine - 2015   D 3602

Introduction : Birth and emergency preparedness is a cost effective and evidence based intervention that is recommended by the current WHO maternal care model and used in maternal care package in Sri Lanka. Assessing thprogression of this component is a timely concern which would provide light for further improvement of maternal and child health in the country.

Objective : To describe the birth and emergency preparedness, associated factors and its association with maternal and neonatal outcome among postnatal mothers at Base Hospital, Balangoda.

Methods : A descriptive cross sectional study was conducted from August to October 2014 among the postnatal mothers who had delivered after completion of 37 weeks of period of amenorrhoea. The computed sample size was 427 and all the postnatal mothers who had delivered within that period were selected for the study. Data collection was done using a pre tested interviewer administered questionnaire. Bivariate analysis was done using SPSS software and chi square test was used to assess the significant associations and a probability of less than 0.05 was selected as the level of significance.

Results: Response rate was 93.9% (n= 401). The majority of the mothers were in the 25- 34 age category (n= 245, 61.1%) and 3.7% (n= 15) were teenage mothers. Approximately 80% and 11% were Sinhalese and Tamils respectively. Regarding utilization of antenatal care services, 84.3% (n= 338) of mothers had registered at antenatal care before 12 weeks and 89.3% (n= 358) had received domiciliary care during antenatal period. In relation to maternal outcome, 6.2% (n= 25) had experienced post-partum complications before discharge from hospital. Considering neonatal outcome, 99.5% (n= 399) were live births and 4.8% (n= 19) were resuscitated after birth.

The majority of the mothers (59.4%, n= 238) were well prepared for birth and emergencies. Factors which showed a significant association with well preparedness for birth and emergencies were; ethnicity (p < 0.001), religion (p <

0.001), married mothers in union (p <0.05), having attained higher educational qualifications by both partners (p<0.01), receiving adequate maternity social support (p<0.001), received domiciliary care by PHM (p<0.05) and participation at antenatal classes by mother (p < 0.05). Lesswell prepared mothers were more likely to experience post partum complications compared to well prepared mothers (p < 0.05). Babies of well prepared mothers were more likely to have a favourable apgar score at ten minutes and not needed resuscitation at birth (p < 0.05).

Conclusions and Recommendations : The overall preparedness for birth and emergencies was satisfactory among the study participants. Considering the associated factors, there were several modifiable factors, which needs due attention. The association between well preparedness and the better maternal and neonatal outcome suggests the need for further improvement in this intervention. Future

Keywords :Birth and emergency preparedness, Maternal outcome, Neonatal outcomeresearch should be conducted separately in the estate sector.

0089.   **Pethiyagoda, I.E.**

   Knowledge, attitudes, associated factors and challenges perceived by Public Health Midwives and Public Health Inspectors in Kurunegala district, with regard to selected aspects of adolescent sexual and reproductive health.
   MSc. Community Medicine - 2012   D 3214
   Abstract

Sexual and Reproductive Health problems among adolescence are one of the major issues encountered in developing countries. Problems related to availability, accessibility, acceptability and confidentiality of adolescent health services considered as contributors for it. The Public Health Midwives and Public Health Inspectors are the frontline health officers in field level who are responsible for providing sexual and reproductive health services for adolescents in the Sri Lankan context. Therefore study of knowledge and attitudes of PHII and PHMM on SRH related to adolescents and challengers perceived by them in providing SRH services for adolescents is a timely initiative.

The objective of the study was, to assess the knowledge, attitudes and associated factors on selected aspects of adolescent Sexual and Reproductive Health among PHII and PHMM in Kurunegala District and challenges perceived by them in

providing SRH services for adolescents. A descriptive cross sectional study was conducted .Three hundred and seventy three PHMM and seventy nine PHII attached to all MOH areas in Kurunegala district with at least six months of public health experience, were subjected to a self- administered pretested questionnaire.

The result showed a total knowledge score among majority73.4% (n=260) of PHMM and 77.6% (n=52) of PHII were satisfactory ($>75\%$) regarding five selected sections of ASRH. Gaps in knowledge are identified in individual sections on sexually transmitted diseases and contraception related to adolescents. When considering the attitudes of PHMM and PHII most were with favorable attitudes toward ASRH issues. When comparing total knowledge score with age, there was a significantly ($p<0.001$) higher proportion of PHMM and PHII 78.4 % (n=189) less than 50 years of age with satisfactory level of knowledge. When comparing the total knowledge score with service duration, there was a significantly ($p = 0.002$) higher proportion of PHII and PHMM 75.2% (n= 203) less than 20 years of service with satisfactory level of knowledge. There was no significant association between training experience and total knowledge score.

The commonest challenge perceived by PHMM and PHII in Kurunegala district regarding service provision of ASRH was, adolescents were reluctant to reveal their SRH problems to health workers.

It was concluded that overall knowledge and attitudes among PHMM and PHII regarding ASRH was satisfactory though the knowledge on contraception and sexually transmitted diseases were relatively unsatisfactory. Programme managers should pay more attention on this knowledge gaps in ASRH training. Though the knowledge and attitudes regarding ASRH were satisfactory among PHMM and PHII, adolescents were reluctant reveal SRH problems to them. Therefore further research on practices of health staff when providing services to adolescents should be emphasized.

0090.Poruthota, P.C.

Knowledge, attitudes and practices regarding infection control methods among selected "minor health care workers" in district General Hospital Kalutara and their correlates.

MSc. Community Medicine - 2012   **D 2979**

Abstract

Introduction : Basic infection control measures in any healthcare setup can reduce the rates of health care-associated infections. Health Care workers have greater responsibility ii prevention of health care associated infections.

Objectives : To study the knowledge, attitudes and practices regarding infection control methods among selected "Minor Health Care Workers" ("MHCW")s in District General Hospital Kalutara and their correlates. The term "MHCW's is used for the categories of Hospital Attendants and "Saukys Carya Sahayaka".

Methods : A hospital based descriptive cross sectional study in District General Hospital Kalutara, processes followed in relation to infection control and knowledge, attitudes and self reported practices of the "MHCW's (n=429) were studied using an interviewer administered questionnaire and practices of selected subsample were assessed using a non-participatory observation checklist. Data analysis were done using SPSS 16 soft ware package.

Results : Majority of the "MHCW's (n=258; 60.1 %) were females and (n=243; 56.7 %) had more than 10 years of working experience. Seventy four point six percent (n=320) of the MHCWs had participated at least one training on infection control during their service experience. Four point four percent (n=19) "MHCW's had experienced accidental cut or prick injuries within the last six months duration at the time of the study. Majority of "MHCW's (n=384; 89.5%) had adequate knowledge on infection control. Overall attitude towards the infection control was unfavorable (n=258; 60.1%). Overall self reported practices on infection control were poor (n=303; 70.8%). Although they had a good knowledge on infection control it was not significantly associated with the attitudes and practices.

Knowledge of MHCWs on infection control was significantly associated with their age, employment category, duration of employment, training experience with related to infection control, type of training on infection control training on selected areas of infection control such as training on hand washing, training on handling patients with communicable diseases, training on house- keeping and training on instrument cleaning (p<0.05).category, duration of employment, training on selected areas of

infection control such as training on handling wastes, training on house -keeping (p<0.05).

The self reported practices were significantly associated with age, civil status, educational status, employment category, training experience in relation to infection control, training on selected areas of infection control such as training on hand washing, training on handling patients with communicable diseases, training on handling waste (p<0.05).

Conclusion: Many gaps were identified in District General Hospital Kalutara on infection control among "MHCW's. Infection control in the District General Hospital Kalutara needs improvement. Facilities are needed for effective implementation of infection control programmes. Knowledge gap needs to be bridged by regular in-service programmes to improve favorable attitudes and the good practices in relation to infection control.

Keywords: Infection Control, in service programmes, "MHCW's

0091.Prasanna, S.A.S.

Knowledge and associated factors on selected non communicable diseases and attitudes of television programme producers in Sri Lanka towards the use of television media for the prevention of non communicable diseases in general public.

MSc. Community Medicine – 2013   D 3386

Abstract

Introduction: Non-communicable diseases (NCDs) have become the most sever threat to human health. The most cost effective prevention method for NCDs is primary prevention. The influence of media on the life styles of the people is enormous in the current world.

Objectives: To describe the level of knowledge and associated factors on selected non communicable diseases and attitudes of television programme producers in Sri Lanka towards the use of television media for the prevention of non communicable diseases in general public.

Methods:A television station based cross sectional descriptive study was conducted among 192 television programme producers serving in eight private and government terrestrial channels in Sri Lanka. Despite the calculated sample size (n=171), it was

decided to include all eligible study participants (n=192) for the study. Pre tested self administered questionnaire was used. Knowledge was assessed by summing the scores of individual components and producers who received 75 or more were categorized as producers with a good knowledge on NCDs. In the assessment of attitudes, 5 point Likent scale was used and obtaining a score of 60% or more were considered to have positive attitudes- Associations were tested using chi square test and a *probability of <0.05 was set as* significant level. Results were expressed as Odds Ratios (OR) and 95% Confidence Intervals (95% CI).

Result: The response rate was 91.2% (n=175). A majority (60%, n=10) of television producers had a "poor overall knowledge" and a majority (77.1%; n=135) had a "positive attitude" towards the use of television media for the prevention of NCD among general public. Those who had working experience of <10 years was significantly associated with overall good knowledge on NCDs (OR= 0.5; 95% CI: 0.3-0.9; P=0.02).

Conclusion and recommendation: The programme producers had a positive attitude towards producing programmes on prevention of NCDs although knowledge was poor. Recommend implementations of programmes to improve knowledge and further improvement of attitudes.

Keywords: Non-communicable diseases, Knowledge on non communicable diseases, Attitudes towards production of television programmes, Mass media

0092.Perera, A.U.S.

Some epidemiological aspects of hypertension in pregnancy of mothers in the district of Gampaha.

MD Community Medicine – 2008   **D 3219**

The present study was designed with the objective of studying the incidence and some epidemiological features of pregnancy induced hypertension (PIH) in the district of Gampaha and to study the pattern of blood pressure changes throughout the period of pregnancy.

The study design was a population based prospective study that recruited the women in to the study between seven to ten weeks of gestation and followed through up to six weeks post partum. One thousand fifty women were selected for the study using a multistage stratified cluster sampling technique. Thirty clusters comprising of thirty five individuals in each cluster were selected probability proportional to size of the population of selected Medical Officer of Health areas. Information was collected on socio demographic characteristics and risk factors for pregnancy induced hypertension

by using interviewer administered, pre coded structured questionnaires. Thereafter they were followed up at predetermined intervals and clinical findings during these visits including blood pressure were recorded using a specially designed form. Information on their post partum characteristics and post partum blood pressure recordings were entered into a separate form. Each mother in the sample was tested for micro albuminuria at twenty weeks gestation using a micral urinary dipstick which is a gold labeled optically read immunoassay (GLORIA) which has a sensitivity of 96.7% and specificity at detecting an albumin level of 20mg/l.

During the course of study fifty eight mothers were identified as having developed pre eclampsia according to the criteria used in the study and the estimated incidence rate was 56.8 per thousand pregnancies and 58.5 per 1000 live births. Risk factors that were identified as being associated with PIH using Cox regression analysis were primipara, RR 13.6, CI (8.4 - 22.2), pregnancy interval over five years, RR 3.19, CI (1.24 - 3.19), change of paternity since last birth, RR, 29.94, CI, (13.27 - 50.70), PIH during an earlier pregnancy, RR 29.94, CI (13.27 - 50.70), family history either on woman or spouse's side RR 101.38, (CI 52.71 - 194.87), family history of hypertension, RR 2.40 CI (1.46 - 5.77) and family history of both hypertension and diabetes RR 3.04, CI (1.75 - 3.28).

The study showed that the presence of microalbuminurea at 20 weeks was predictive of pre eclampsia. The sensitivity of 91.6%, specificity of 72.8%, positive predictive value pf 0.17, negative predictive value of 0.99, a likelihood ratio of 3.25 and a Youden's index of 0.64 indicating that it is good test that could be used as a predictor of pre eclampsia.

This study highlighted the importance of early enrollment of women for antenatal care so as to establish baseline blood pressure in order to recognize an increase in blood pressure. It also identified that nearly 22% of women who had PIH were diagnosed as hypertensive by 25th week of gestation. Early referral of these mothers to tertiary care centers resulted in preventing the mothers into developing the more severe form of this condition which is eclampsia.

Nine percent of still births and early neonatal deaths occurred in mothers with PIH and 81% of babies born to mothers with PIH. The study estimated thatl4% of LBW in the population could be attributed to PIH.

Based on the evidence obtained from the study it is recommended that all health care personnel providing antenatal care be made aware of the risk factors for PIH and that these be included in a revised mothers' record so that they are elicited for every mother. It is also worthwhile examining the cost effectiveness of screening for microalbuminurea at 18-20 weeks POA to routine antenatal care to be used as a predictor of PIH.

0093.Perera, T.A.P.

Occupational hazards, injuries among workers and availability and utilization of safety measures in small scale aluminum casting and manufacturing factories in Biyagama and Kelaniya Medical Officer of Health areas.

MSc. Community Medicine – 2012   D 2970

Abstract

Occupational hazard is any condition of a job that can result in an illness or injury. An occupational injury is a personal injury, disease or death resulting from an occupational accident. Every job has specific occupational hazards related to it. The objective of this study is to describe the occupational hazards and injuries among workers, availability and utilization of safety measures in small scale aluminum casting and manufacturing factories in Biyagama and Kelaniya Medical Officer of Health (MOH) areas.

This was a descriptive cross sectional study. This study was conducted by using an interviewer administered questionnaire and a factory inspection check list. Study setting was all the small scale aluminum casting and manufacturing factories located in Biyagama and Kelaniya MOH areas. Twenty seven factories and 259 eligible workers who were engaged in aluminum casting and manufacturing activities (melting, block making, welding, smoothing & cutting and polishing) were included in the study.

The interviewer administered questionnaire consisted of three parts to describe, some socio demographic data, personal occupational injuries and knowledge on first aid treatment among workers. The factory inspection checklist had been designed to describe physical and chemical occupational hazards, availability of safety precautions, use of personal protective equipment and availability of health related welfare facilities.

Only 23.6% (n=61) workers were permanent. Out of 259 workers, 71 had reported one or more than one, personal occupational injuries during the past 3 month period (total of 92 injuries). The incidence of spells of personal occupational injuries for the past 3 month period was 355.2 per 1000 workers. Most frequently occurred injuries were burns (31%, n=22), cuts (22.5%, n=16), abrasions & lacerations (18.3%, n=13) and acute muscle strains (11.3%, n=5). Fingers, hands and lower limbs were the most involved parts of the body. Seven percent (n=5) of workers had received first aid and 42.3% (n=30) were absent for work more than one day following their injuries.

All the owners and factory managements were not aware of occupational injury reporting system and none of the factories had general registers required by the factories ordinance.

Physical hazards identified were unsatisfactory thermal comfort (59.3%, n=16), inadequate ventilation (33.3%, n=9), lack of space (7.4%, n=2) and high noise level (55.6%, n=15). The only chemical hazard identified was collection of fume inside the factory (22.2%, n=6). Majority of the factories (77.8%, n=21) had no fire protection methods. Electrical safety was not satisfactory in 33.3% (n=9) of factories. Use of personal protective equipment among all categories of workers was grossly unsatisfactory.

Adequate amount of drinking water had been supplied to the workers in vast majority of the factories (96.3%, n=26). Fifteen factories (55.6%) had adequate sanitary facilities. Only 11.3% (n=3) factories had provided adequate dining room and 29.6% (n=8) factories had provided rest rooms. Higher number of factories 92.6% (n=25) had supplied adequate washing facilities.

Only 51.8% (n=14) factories had first aid boxes but none of them had standard amount of drugs and equipment mentioned in factories first aid regulations and none of the factories had trained workers for first aid.

Increase the usage of personal protective equipment among workers will reduce the occurrences of personal occupational injuries. Employers should be encouraged to provide adequate personal protective equipment for their workers. Public health inspectors and other relevant officers of the labour department should visit these factories more frequently as expected in view of improving occupational health, safety, welfare of the workers and proper implementation of the factories ordinance and regulations. Adequate sanitary facilities, dining rooms and rest rooms should be made available in all factories. Necessary steps should be taken to reduce physical hazards which were identified. All workers should be encouraged to wear appropriate personal protective equipment. There should be safety measures to prevent occurrence of fire and explosions in every factory.

Keywords: occupational hazards, personal occupational injuries

0094.Piyasena, D.A.K.N.

Prevalence, conditions for visual impairment, quality of life among visually impaired elderly population in Kalutara District and develop a tool to assess the risk factors for glaucoma.

MD Community Medicine - 2014   **D 3433**

Visual impairment (VI) is loss of vision in eye or eyes or the vision system and is a common condition among elderly population. VI has a profound impact on daily functioning and quality of Life. Glaucoma is the second leading cause of preventable blindness in the world and early detection of glaucoma may prevent progression of the disease, but because of its silent nature, is difficult to diagnose unless the patient undergoes an eye examination. Even though increased emphasis has been focused on VI around the world, limited information is available on the prevalence of VI among elders and little or no published data is available on risk factors for glaucoma in the Sri Lankan population.

The study was carried out in the Kalutara District of Western Sri Lanka in two stages. Stage one estimated the prevalence of VI in the district of Kalutara and determined main conditions for VI and compared Quality of life (QoL) of VI with those with normal vision. The stage 2 of the study identified risk factors for glaucoma and developed a risk factor model (GRAFT) to predict risk of developing glaucoma.

Stage one was a community based study among 1038 elders > 60 years. Primary sampling unit was the Grama Niladari (GN) division. A cluster of 20 study participants were selected from each GN division. A study unit was the elderly person aged > 60 years and data collection was done at home setting and at the field eye clinic. Validated pretested Interviewer administered questionnaires: visual acuity(VA) recording forms and referral forms were used as study instruments.

Assessment of VA using Snellen's chart enabled categorization of the elders as having normal vision (VA 6/6, 6/9), mild visual defect {(MVD) VA 6/12} and VI (VA < 6/18). VI group was further classified after pin-hole test as those with refractive error (RE) without correction and others as low vision (LV) and blind.

Considering the presenting VA among the elderly population > 60 years in the Kalutara district, the prevalence of VI was 43.5% (95% CI 41.8 - 44.6), prevalence of MVD 9.2% (95% CI 8.30 - 10.1) and prevalence of normal vision 47.3% (95% CI 45.76 - 48.84).

Among the elderly with VI the prevalence of uncorrected RE was 66.7% (95 CI: 64.2 - 68.6), LV 32.3% (95% CI: %30.3 - 34.7) and blindness 1.1% (95% CI: 0.61 - 1.59).

Among the VI, a higher proportion of elders (62.8%) were aged < 70 years. A majority were females (55.5%), married (84.3%, Sinhalese (77.4%) and Buddhists (77%). A higher proportion resided in the rural areas (55.3%) with 21.0% and and23.7%. from urban and estate sectors respectively.

Demographic and socioeconomic factors associated with VI were; age (p<0.0001), gender (p<0.005) and average monthly income (p<0.0005).

Among the elders with uncorrected RE 62.8 % (n= 123) were< 70 years. A majority with RE were females (56.1%). Sinhalese and Buddhist with uncorrected RE were 87.7% and 87.0% respectively. Proportion married was 85.5% and highest proportion resided in the rural areas (55.5%) with 21.6% from urban and 22.9% from estate sector.

Among the LV: elders; those aged <70 years was64.4%, 54.7% were females, 57.5%. Sinhalese, 57.5%.Buddhists and 85.5% were married. A higher proportion resided in the rural areas (54.8%) with 19.9% in urban and 25.3% in the estate sector

Co morbid conditions present among elderly with VI were: diabetes mellitus 20.1% (n=91), hypertension 29.2% (n=132), both diabetes and hypertension 11.5% (n=52), asthma 18% (n=82), ischemic heart disease 11.9% (n= 54) and hyper lipidaemia 11.3% (n=51). Significant associations were not found between VI and each of the co morbid condition (p>0.05).

Co morbid conditions present among uncorrected RE were; diabetes mellitus 32.2% (n=34), hypertension 26% (n=38), diabetes and hypertension 5.5% (n=8), asthma 26% (n=38), ischemic heart disease 16.4% (n= 24) and hyperlipidaemia 23.3% (n=34).

Elderly with LV (n=146) were examined by specialists in ophthalmology with slit lamp examination and funduscopy. Among the LV elders the main causes identified for VI were Cataract 66.4%(n= 97), diabetic retinopathy 11.6%(n= 17), glaucoma 9.7%(n= 14), Age Related Macular Degeneration (ARMD) 2.7%(n=4), corneal opacities 2.7%(n=4), retinal detachment 2.1%(n= 3).

Among the 5 blind elders, 2 had diabetic retinopathy and glaucoma; ARMD and RD were main cause for blindness in other three.

QoL was compared in an unmatched randomly selected sample of 101 visually impaired elders and 101 non visual impaired using IVI - S questionnaire. The comparison of mean domain scores of the two groups showed a significant difference between the mean scores of VI and non-VI in each of the five domains (p<0.001). The total mean QoL score of VI elders was 41.1 (SD+/-12.9) and in the comparative elders

without VI was 67.8 (SD+/- 11.2). This difference in the total mean QoL score was statistically significant (p<0.001).

Stage 2 component 1 was a Case Control study to identify risk factors of glaucoma. The cases (patients diagnosed with glaucoma, n=45) and control (patients who had no glaucoma but having other eye conditions need treatment n= 135) according to inclusion and exclusion criteria were selected from the Eye clinics of the hospitals of Kalutara District.

Bivariate analysis identified the following factors as having a significant association with glaucoma. Age (OR2.5; 95% CI: 1.2-5.0; p<0.007), family history of glaucoma (OR4.4; 95% CI: 1.9-9.9; p< 0.000), hypertension (OR3.3; 95% CI: 1.7-6.8; p<0.000), ischemic heart disease (OR 5.7; 95% CI: 2.7-12.5; p<0.000), hypertension > 10 years (OR 2.7; 95% CI: 1.3-5.8; p <0.04), asthma (OR3.1; 95% CI: 1.5-4.8; p<0.001), asthma > 10 years (OR 5.2; 95 CI 2.2-12.3; p< .00001), Myopia (OR3.0; 95% CI: 1.3-6.9; p<0.007) and reading glasses (OR 2.8; CI: 1.2-6.3; p< 0.03)were shown significant association with glaucoma.

Component 2 of stage 2 of the study developed a risk prediction model. GRFAT having five factors, age> 60 years, family history of glaucoma, history of IHD, duration of asthma > 10 years, presence of myopia.

Early detection and treatment of glaucoma is a lifelong cost effective strategy as prevention of permanent blindness and development of simple and low cost risk prediction model can be used in this regard.

Early identification of conditions causing LV among elders such as cataract and diabetic retinopathy through screening programs and referral of such patients for management will improve the QoL of elders.

Periodically subject elders for refraction would reduce the VI caused by RE and it will improve the QoL as well.

Keywords: Impaired vision, low vision, blindness, prevalence, cause, condition, glaucoma, risk factors, model to assess risk factors

0095.Punyadasa, D. H.

Incidence and associated family related factors of unintentional injuries among 1-4 year old children in the Medical Officer of Health area, Kolonnawa.

MSc. Community Medicine – 2012   **D 2959**

Abstract

Childhood unintentional injuries are unexpected occurrences affecting a child, which lead to immeasurable grief and suffering to entire family. Children aged 1-4 years are at greater risk of unintentional injuries due to their physiological limitations in terms of motor and sensory development. Community based studies on incidence and associated factors of childhood unintentional injuries are not readily available in Sri Lankan setting.

A community based descriptive cross sectional study was carried out among children aged 1-4 years residing in the MOH area of Kolonnawa, to assess the incidence and associated family related factors of unintentional injuries. A sample of 458 children aged 1-4 years was recruited using simple random sampling technique, giving a response rate of 91.6%.

Data were collected by a team of trained field investigators using a pre tested Interviewer Administered Questionnaire (IAQ) and a check list. The socio demographic factors, family related factors and details of the unintentional injuries of the study subjects were collected by the IAQ. After completing the IAQ, three sites of the household (garden, living area and kitchen) were observed for selected injury hazards to assess the safety of home environment. The data was analyzed using SPSS 18.2 statistical package.

The incidence of unintentional injuries among children aged 1-4 years during the study period of three months was 28.1 per 100 children (95%CI = 19.5-36.7).

Out of the 129 unintentional injuries occurred among 458 children, most of them were falls(79.8%,n=l 03).The majority (68.9%,n=89) of unintentional injuries had taken place at home while living area found to be the commonest place for unintentional injuries within the household. The majority of injury victims (55%, n=71) had home treatment while 25.5% (n=23) had taken treatment from a general practitioner. The proportion of injuries that required hospitalization was only 2% (n=3).

The factors that were significantly associated with the occurrence of childhood unintentional injuries are low monthly income of the family (p=0.045), low social support to the mother of index child (p=0.022), non authoritative type of parenting of the mother of index child (p=0.039), cared by person other than mother during day time (p=0.002), frequent arguments between parents (p=0.004) and frequent alcohol consumption of father (p=0.001).

The most frequently found child injury hazard in households was unprotected windows in living area within the reach of younger children (87.8%, n= 402). In 15.5% (n=71) of kitchens, cooking stove was within the reach of younger children.

The present study concluded that unintentional injuries are an important child health issue among children aged 1-4 years in MOH area Kolonnawa. The study recommends planning and implementing cost effective child safety interventions targeting the children in 1 -4 year age group.

It is recommended to conduct large scale community based studies on childhood unintentional injuries in order to assess the burden and associated factors of childhood unintentional injuries.

Furthermore it is time to introduce formal and informal education programmes to parents regarding healthy parenting practices. Community oriented health intervention programs on life skills and problem solving can be recommended in order to prevent frequent arguments between parents and frequent alcohol consumption of fathers.

Encouraging the parents to maintain a safe home environment is also recommended. It is suggested that primary health care workers can be trained to give due emphasis to appreciate and recognize household child injury hazards during field visits.

Keywords; Unintentional injuries, Children.

0096.Rajapakshe, E.

Factors associated with the occurrence and short term outcome of burn injuries among patients referred to the Burns Unit at the National Hospital of Sri Lanka.
MSc. Community Medicine - 2013   D 3397

Abstract

Burn injuries are physically and emotionally traumatic for the patient. Since factors associated with burn injuries vary considerably in different communities, it is

important to 'identity such factors within defined communities for the prevention of burn injuries. Hence, this study tries to identify the factors associated with burn injuries among patients referred to a specialist burns care unit in Sri Lanka. This is a hospital based cross sectional study done on patients who were referred following single or multiple burn injuries to the burns unit from accident service, surgical casualty wards and the eye hospital of NHSL during a period of 4 months. Participant data such as demography, socio-economic and burn injury data such as extent, depth, associated inhalational injuries, affected body site and accident data such as nature, type and source, place and time of occurrence, associated environmental and personal factors are collected by using their bed head tickets (BHT) and interviewing. It is found that burn injuries are common among males; aged 25-39; of Sinhalese ethnicity; currently married; educated up to O/L and currently employed. Majority of burns are accidental in nature; occurring in domestic settings; due to flame burns with kerosene; and at any time of the day. Age, sex marital status ethnicity, employment status and income level are significantly associated with most of the characteristics of burns such as extent of burn; depth of burn; and associated inhalational injuries. Further, this study shows that unemployment status of patients is significantly associated with almost all variables. Fatal outcome of burn injuries is significantly associated with inhalational injuries and flame burns in nature. Since this study finds the strong relationship of patients' demographic and socio-economic characteristics with factors leading to burn injuries, preventive programmes address the indentified factors in this study are recommended.

0097.Ranasinghe, L.I.

The attitudes and behavior of healthcare providers at a General Hospital, towards patients who get admitted following deliberate self-harm or attempted suicide.

MSc. Community Medicine - 2014   **D 3398**

Abstract

Background and Objective : Sri Lanka had one of the highest suicidal rates in the world. It is observed that the health care staff had unfavourable attitudes and behaviour towards suicidal or self-harm patients. International literature indicates the existence of positive, negative and mixed attitudes and behaviour of healthcare providers towards suicidal or self-harm patients. However, the majority of those studies have found that the attitudes of healthcare providers have been unfavourable. There are only two

studies that had been carried out in the Sri Lankan context, using qualitative methods in relatively small samples of healthcare providers. There are no studies that had used a standardized questionnaire to describe the attitudes and behaviour of healthcare providers towards suicidal or self-harm patients in the country.

The objective of this study was to describe the attitudes and behaviour of healthcare providers at a General Hospital towards suicidal or self-harm patients. The study further looked into some common socio-demographic and other factors which were associated with attitudes and behaviour of healthcare staff. District General Hospital Polonnaruwa was chosen as the study setting due to the relatively high number of suicidal or attempted suicidal cases per year in the district.

Methods : The study was a hospital based descriptive cross sectional survey, which was carried out over a period of one month, on eligible 3 categories of healthcare providers namely, the medical officers, the nursing officers and the attendants or labourers. A self-administered questionnaire which comprised of an attitudes section and a behaviour section was distributed among 126 medical officers, 328 nursing officers and 235 attendants or labourers. The 'Attitudes Towards Suicide Questionnaire' (ATAS-Q) was adopted with slight modifications to assess attitudes under 8 'Factors'. A locally developed questionnaire was used to assess the behaviour.

Results : The overall response rate was 81.4%. The 'Overall' attitudes of all three categories of healthcare providers was unfavourable towards suicidal or self-harm patients.

Homogeneity of attitudes was identified within each group of healthcare provider. The medical offices (mean score = 193.0; SD = 10.3) had significantly more favourable attitudes than the nursing officers (mean score = 189.1; SD = 12.4) at $p < 0.01$ level and attendants or labourers (mean score = 190.7; SD = 7.9) at $p < 0.05$ level. All three categories of healthcare providers showed a similar pattern of attitudes to the 'Factors' in the ATAS-Q. All categories of healthcare providers had relatively favourable attitudes for 'Acceptability', 'Religiosity' and 'Manipulation' whereas all had relatively unfavourable attitudes for 'Positiveness', 'Professional role and care', 'Personality traits', 'Mental illness' and 'Discrimination'. However, there were significant differences among the attitudes of the three groups for each 'Factor'. Attitudes of all categories were associated with their highest level of education. Although significant associations were identified between attitudes and sex, gender, longest serving unit, work experience for each category, there was no identifiable pattern in the association between attitudes and

socio-demographic or other characteristics among the three groups. The training that the medical officers and nursing officers had received on caring of suicidal or self-harm patients was not associated with their attitudes. The staff of the ETU and ICU had relatively favourable attitudes and the staff the Mental Health unit had relatively unfavourable attitudes.

All three categories of healthcare providers had favourable behaviour towards suicidal or self-harm patients. The attitude-behaviour relationship was poorly supported by the results of this study.

Conclusions and recommendations : The unfavourable attitudes and contrastingly favourable behaviour were the major finding in this study. Unfavourable attitudes towards patient characteristics and professional work environment revealed the psychological conflicts of healthcare staff with the 'norms' versus 'real' situations. Training programs failing to make significant changes in the attitudes of both Medical and Nursing Officers suggest the need for comprehensive training programs to improve the attitudes. The need for training is highlighted especially among the staff of the Mental Health unit whose attitudes were significantly unfavourable. Future studies are recommended in different geographical locations to generalize the results of the study.

Keywords: Attitudes, Healthcare providers, Suicidal patients, Self-harm patients, Behaviour

0098.   **Rajapaksha, R.M.P.T.D.**

Knowledge, attitude, practices and associated factors in relation to provision of care for pulmonary tuberculosis patients among nursing officers in Teaching Hospital Kurunegala.

MSc. Community Medicine – 2014   D 3607

Abstract

Tuberculosis (TB) is one of the major killers worldwide among infectious agents, second only to HIV/AIDS. In Sri Lanka, around 9000 new cases are notified annually and around 50% of them are sputum positive. Stigma related to TB is a worldwide phenomenon interfering with treatment and control.

Nursing officers are one of the main sources of health education and emotional support in medical settings. Their knowledge, attitudes and practices directly affect the quality of care for TB patients.

Methods : This descriptive cross sectional study was carried out among all nursing officers attached to Teaching Hospital, Kurunegala. Those who could not read and write in Sinhala/ English and those on long term leave were excluded. A sample of 389 nursing officers was selected through simple random sampling. Data was collected through a pre-tested, self administered questionnaire. Knowledge, attitudes and practices were described in frequencies and percentages. Total knowledge and attitudinal scores were calculated and categorized as good or poor.

These categories as well as specific knowledge, attitudes and practices were cross analyzed with selected associated factors. Statistical significance was tested at 95% confidence levels using Chi square test.

Results : Majority of the nursing officers were females (95.9%). Most had work experience of 5- 14 years (83.4%). Only 15.9% had "high exposure" to TB by working in chest units. Almost half (48.1%) had never participated in in-service programs on TB. Knowledge on the correct causative factor, mode of transmission, symptoms, best investigation to diagnose and effects of defaulting was good. But the correct period of infectivity of a patient on regular treatment was identified by only 60.9%. Heavy alcoholism as a risk factor was not identified by 63% and 89.2% misidentified Bronchial Asthma. Majority (79.7%) were unaware that hand washing does not protect against TB. Knowledge on safe disposal of sputum and effects of BCG vaccine were comparatively low.

Overall attitudes of most (53%) were good. Yet majority (77.7%) believed "most TB patients do not care about others getting infected through them".

Practices of proper referral of suspected TB patients and DOTS provision was favor majority (71.2% and 94.3% respectively). Only 57.3% maintained confidentiality of TB pa within wards.

There was a statistically significant (p=0.003) association between good levels of know and better attitudes.

Participants with "high exposure" displayed a highly significant association (p=0.000) with good attitudes but not with good knowledge (p> 0.05). They also had better attitudes than others in most attitudinal statements explored and for four statements, the difference was statistically significant.

The knowledge on period of infectivity of a patient on regular treatment had a significant association with good attitudes (p=0.000).

Maintaining the confidentiality of TB patients had a highly significant association with attitudes (p=0.000) but not with good knowledge (p>0.05).

Conclusions and recommendation : Both knowledge and attitudes of nursing officers in providing care for pulmonary TB patients was satisfactory. Good attitudes were significantly associated with good knowledge, but were specific deficiencies in knowledge and attitudes that may lead to poor practices.There should be regular in-service programs targeting the evidence based knowledge gaps and negative attitudes. More exposure to TB patients within their training may aid improving attitudes toward TB patient.

Keywords: Knowledge, Attitudes, Practices, Pulmonary TB, Nursing officers

0099.Ranaweera, A.D.

Incidence, risk factors and consequences of falls among the elderly in the district of Colombo.

MSc. Community Medicine - 2012   D 3213

Abstract

The elderly population in the world as well as in Sri Lanka is growing faster. Falls are an important cause of morbidity and mortality among the elderly. A fall is defined as an event which results in a person coming to rest unintentionally on the ground or other lower level, not due to any extrinsic event (e.g. forcefully pushed down, knocked down by a car). Approximately 28-35% of people aged 65 and over fall each year. Falls are predictable and preventable, but if no precautions are taken, the elderly may get into a cycle of repeated falls. However, due priority was not given to prevention of falls either by the elderly or by the health care sector. Considering the paucity of available information on the elderly falls in Sri Lanka, this study was conducted with the objectives of assessing incidence, circumstances, risk factors and consequences of falls among the elderly population in the District of Colombo. The study consisted of three components and was carried out during the months of August 2010 -March 2011. Component I was a community based descriptive study with prospective follow up. In a baseline visit, 1200 elderly aged 65 years or more, from 40 Grama Niladhari divisions in the district was enrolled in to the study and followed up for four months for assessing the

incidence of falls. The investigators revisited the elderly who had falls during the follow up period in order to assess the circumstances of fall and injuries sustained due to falls. Component II was a nested case control study which assessed the risk factors for elderly falls. The elderly persons who had falls during the follow up period were considered as cases. Two controls per case were selected from the elderly who did not have any falls during the follow up period. Bivariate and multivariate analysis using logistic regression technique was used in identifying risk factors. In component III, the elderly who had falls in the initial two months following baseline data collection were followed up for further eight weeks in order to assess their disabilities following falls.

Out of 1200 elderly in the baseline population, 25.8% (310) had falls in the previous year, 43.7% (n=524) had limited their day to day activities due to fear of fall and 48.6% (n=583)perceived falls as a significant health problem.

Out of the 1185 elderly who were completely followed up, 12.8% (n=152) had falls during the four months follow up period. However, the total number of falls reported from them during that period was 194, because some participants had more than one fall. The incidence rate of falls was 492 per 1000 person years (95% CI= 448-536). Out of the elderly who had falls 14.5% (n=22) had more than one fall during the follow up period (recurrent falls). Incidence rates in 65 to 69 years, 70 to 74 years and above 75 years age groups were 360 (95% CI= 328-392), 458 (95% CI= 417-499) and 691 (95% CI= 629- 753) person years respectively. Incidence rate of falls in females was 515 per 1000 person years (95% CI=469-561) where as it was 462 per 1000 person years (95% CI= 420-504) in males.

A majority of falls had occurred between 8 a.m. to 4 p.m. (52.2%, n=100), outside the house (52.6%, n=101) and at ground level (67.7%, n=130). A majority of inside falls had occurred in the living room (32.9%, n=30) and bed room (29.8%, n=27), while a majority of outside falls occurred in the garden (37.6%, n=38) and roads (25.7%, n= 26). Common extrinsic factors prevailing at the time of the fall included poor light (23.9%, n=46), slippery floor (20.8%, n=40) and uneven floor (16.7%, n=32). Fifteen percent (n=29) of falls were preceded by loss of consciousness (syncopal falls). The elderly could not get up without any help in the majority of falls (57.3%, n= 110). There were injuries or related acute medical problems in 65.6% (n=126) of falls and 71.4% (n=90) sought medical care. Outpatient care was received by 46.2% (n=42) and 34.4% (n=31) was hospitalized. The fall fatality rate was 252 per 10 000 elderly per year.

Injurious falls accounted for 48.5% (n=93) of falls and the majority of them were soft tissue injuries (73.5%, n=75) followed by fractures (23.5%, n=24). The common fractures reported after falls were fracture Tibia (33.3%, n=8), fracture hip (20.8%, n=5) and fracture forearm(20.8%, n=5). The commonest anatomical sites involved in injuries were lower limb (44.1%, n=45), followed by head (20.1%, n=21). About one fourth of injuries (26.5%, n=27) were considered as major injuries and in one third of them (33.3%, n=9), the elderly stayed in hospital for more than seven days.

Risk factors for elderly falls identified in the multivariate analysis included falls in the previous year (OR= 4.665, 95% CI= 2.946 -7.387; p=0.000), high disability level (OR=2.043, 95% CI=1.1189-3.510; p=0.01) and high house risk level (OR=1.675, 95% CI=1.038-2.703; p=0.035). Attributable risk percents for falls in the previous year, high disability level and high house risk level were 78.6%, 51.1% and 40.3%, respectively.

The proportion of disabled elderly was highest within four weeks of fall (55.0%, n=44). Even though the proportion of disabled (51.3%, n=41) was reduced after eight weeks of fall, it did not reach to the pre fall proportion (40%, n= 32). The disability level was higher among the elderly in higher age group, female sex and lower educational level.

The high incidence of elderly falls, high injury rate and high disability level following falls reported in this study indicate the necessity of organized falls prevention and control programmes in both preventive and curative health sector. Community participation and multispectral collaboration are important in environmental risk modification for preventing falls.

Keywords: elderly, falls, incidence, injuries, risk factors, disability

0100.Ranaweera, K.D.N.P.

Pharmaco-epidemiological and economic assessment of drug management in patients with cardiovascular diseases attending medical clinics of state sector hospitals in the Kalutara district.

MD Community Medicine - 2014 **D 3485**

Abstract

Cardiovascular diseases (CVD) are the commonest non communicable disease (NCD) in Sri Lanka. The disease burden of CVD is increasing partly due to epidemiological transition. Essential cardiovascular (CV) medicines play a key role in managing patients with CVD. Rational use of CV medicine is essential to achieve maximum benefit to healthcare providers as well as users. This study on the pharmaco-epidemiological and economic assessment of drug management in patients with CVD

attending government hospitals in Kalutara district was conducted to identify gaps in CV drug management.

This study consists of 4 components. In the Component I pre-tested interviewer administered questionnaire was used in 1745 patients attending the medical clinics of the government hospital in Kalutara district to describe morbidity pattern, prescribing pattern and out of pocket expenses on medicine. Hypertension was the commonest morbidity (81%) among the study participants. Diabetes and hyperlipidemia were associated with 35.4% and 36% of study participants respectively. About 48% of patients with hypertension were on single antihypertensive medication. The prescribing rate of diuretics was lower than that of ACEI. About 10% of patients with hyperlipidemia were not on statin therapy. Only 33% of patients with diabetes were on statin therapy. More than 95% of medicine requirement was covered by 13 essential medicines. The prescribing rate of Clopidogrel was unacceptably high with 24.2% and 19.9% in referral and primary level hospitals respectively. Mean daily cost of medicines for patients with hypertension, Ischemic heart diseases, strokes and myocardial infarction were Rs. 1.65(SD 0.9), 4.66 (SD 1.1), 4.78 and (SD 1.3) and 7.27 (SD 2.1) respectively.

In the Component II, the availability of CV medicines was assessed in 10 government hospitals for one year. This was the first study conducted in Sri Lanka to assess the availability of medicines longitudinally. Supply of medicines in study hospitals was irregular. Estimates of CV medicines were not in line with the requirement. Availability of Atorvastatin, Aspirin and Clopidogrel were less than 50% while Nifedipine, GTN, Isosorbide dinitrates are among medicines with excess stocks (Availability > 90%). Differences were reported between hospitals within the districts which could be avoided by redistribution of CV medicines.

Component III of the study was a retail pharmacy based cross sectional study describing the cost variation due to substitution of CV medicines. Research Assistants simulated as patients were recruited to purchase 10 selected CV medicines from 30 retail pharmacies in the Kalutara district. Nifedipine represented the highest price inflation (285%) followed by Aspirin (135%) and Atenolol 93.4% with brand substitution.

In the Component IV of the study, essential CV medicine list to manage patients with CVD attending the MC of government hospitals in Kalutara district was developed and validated with the assistance of an expert group. The scientific process of Component IV could be adopted for the other disease categories. The methodology adopted in this

component gives policy direction to the Ministry of Health to develop and validate drug inventories for other diseases, as none of the disease categories in Sri Lanka have developed and validated a medicine inventory in a scientific manner.

0101.Rangani, W.P.T.

Impact of the absence of father on the well being of 11-16 year old children and theirmothers in the Western Province.

MD Community Medicine - 2013   **D 3226**

Abstract

Background: The important role a father plays other than as a breadwinner has not been evaluated in ourcontext as in other countries. This induced us to carry out this study to find the impact of the absence of the biological father on 11- 16 years old children and their mothers in the Western Province.

Methodology : This comparative cross sectional study was conducted in two phases.

First phase or Component I had six focus group discussions to identify the views of mothers and children on the father. These children and mothers were from different MOH areas and with different ages and socioeconomic background. The analyzed focus group data was used to develop the Interviewer administered questionnaire, which was used along with the Strength and Difficulty Questionnaire (SDQ) and the General Health Questionnaire (GHQ) at the second phase or Component II of the study. There were four groups of children; 215 children in the migrant group whose fathers have migrated within the last six months to five years, 197 children in the bereaved group whose fathers have died within a similar time frame as above and two comparison groups. The migrant and the bereaved groups had age, sex and social class matched separate comparison groups as it was not feasible to have one comparison group which could be matched to different socioeconomic backgrounds of the migrant and bereaved groups.

Results : The mean age of the children in the migrant group and the comparison group I was 13.4 years (SD 1.79 years) and the mean age of the bereaved group and comparison group II was 13.5 years (SD1.61 years). The educational attainments were assessed using the position by merit, marks for the language subject and by the marks for the mathematics at the last school examination. From these the position by merit at the last school examination was affected by father absence but the marks for the mathematics subject was not affected by the father's absence. Though the marks for the mathematics subject was not affected the marks for the language as a subject was affected by the

father's absence and this was only seen in the bereaved group of children. The attitudes of the children towards studies in the bereaved group became more negative after the absence of their father however the attitudes of the children towards schooling did not change. The attitudes of children towards studies or schooling in the migrant group were not significantly affected by the father's migration.

Further the study looked at the impact of the father's absence to the mental health status (the children. The children were classified as children with mental health problems and children without mental health problems according to the validated cut off values o f f SDQ. The migrant group had 27.5% children and the comparison I had 16% children w had mental health problems and these proportions had a significant difference (p value <0.01). Among the children in the bereaved group 34.1% had mental health problems while only 19.3% children in the comparison group II had mental health problems and difference was also very significant (p value <0.01). Further we found that children wit! fathers had more emotional problems, more conduct problems, more hyperactivity problems and more peer relationship problems than children with lathers. The children in the father absent groups (both migrant and the bereaved groups) had poor pro-social behaviours than the father present groups.

It was not only the mental health status which was affected by the father absence but also the attachment with the mother and the friends. The children in the migrant group significantly deviated from their mothers end they were more attached to their friend father's migration but there was no such significant difference found among the chi 1 c the bereaved group. The mental health status of the children in the migrant group significant association with the children's attachment with their mother and wit friends but this was not evident from the bereaved group. Furthermore father absence entailed to the restriction of extracurricular activities and separation of siblings diverse reasons. Some of the children in the migrant group and the bereaved group were restricted from participating in their extracurricular activities after father's absence and these restrictions had a significant effect on their mental health status. The mothers had many justifications to separate her children the common reason they gave was the difficulty of looking after the children alone. This separation of siblings affected the mental health of both the children in the migrant group and the bereaved group significantly.

The unavailability of the father gave psychological distress to the mothers as well as the children. Mothers who lived with their spouses had significantly less psychological distress than the mothers who lived without their spouses. The magnification of her

duties and responsibilities, the unavailability of free time to spend with her children and the change in her occupation with the absence of her spouse may have caused psychological distress the mothers.

Conclusions and recommendations : This study was able to elicit the impact of father absence on the children and their mothers by comparing the father present and father absent groups. The father absence had a negative impact on the educational attainments and the psychological status of the children as well as the psychological status of the mothers. Though the current study has confined the father absence to migration and bereavement, future studies need to include the c categories of father absence such as by separation or divorce etc. Fathers should be encouraged to get involved with the academic work of their children and more emphasis should be given the children without fathers by the mothers and the teachers. The available maternal and child health programmes should always incorporate the fathers into agendas and mothers whom are living without their spouse should be given more support by the public health staff especially by the public health midwife on her field visits to psychological distress.

0102.Rupananda, O.D.S.

Parental knowledge, attitudes and practices on psychosocial development of children attending early childhood care and development centers in Medical Officer of Health area, Hatharaliyadda in Kandy district.

MSc. Community Medicine - 2013　　　　　　　　　**D 3423**

Health area, Hatharaliyadda from July 2013 to December 2013. Primary care each child was interviewed using interviewer administered questionnaire to knowledge, attitudes and practices on psychosocial development of children a ECCD center. There were 450 caregivers participated for the study. Knowledge attitudes were determined using a score. Association of socio-demographic fat knowledge score, association of socio-demographic factors and attitudes, assoc socio-demographic factors and selected practices were evaluated.

Results : Response rate of the study was 97.7% (n=450). 45.3% of participants had combined satisfactory and good level of knowledge score. 96% of participants had good attitudes on psychosocial development of children. Good level of knowledge on psychosocial development had a significant association with income of the family more than 10000 rupees (P=0.001). Favorable attitudes on psychosocial development had significant association with middle and high socio-economic class (p<0.001). Accepted

practices to improve psycho-social development were prevalent among parents except few practices such as punishment.

Having accepted behavior, when leaving the child at home had significant association with mother's occupation in an office setup, Sinhalese ethnicity and high monthly income. There was a significant association with carrying the child to vegetable stall, getting support for cooking, visiting relatives place and having play house, play area and locally made toys at home. Nuclear type of family was having significant association with carrying child into religious place and having similar opinion on rearing child.

Conclusions and Recommendations : Parental knowledge on psychosocial development of children was not satisfactory. But they had significant high level of favorable attitudes. Income more than 10000 rupees was associated with good level of knowledge on psychosocial development and high and middle socioeconomic status affects the favorable attitudes of parents. Monthly income of more than 10000 rupees, middle and high socioeconomic class and nuclear family were having significant association with practices on psychosocial development. Having good knowledge on psychosocial development had significant relationship with performing accepted practices improving psychosocial development. Majority of parents get their knowledge through health care workers. ECCD center based awareness programmes, special ECCD related activities in parent crafting classes, well baby clinics associated with conveying of ECCD related messages through generation are recommended. Community based exhibitions, competitions; demonstration in relation to ECCD related activities in PHM area level can be used to improve community participation on ECCD activities. Evaluation of ECCD related activities using national health information system can be used to upgrade the knowledge and practices on psychosocial development. Capacity of all grass root level officers including PHMM, ECCD officer, child protection officer, teachers in ECCD centers should be built to strengthen the ECCD activities.

0103.Samaraweera, P.C.

Elderly abuse in a selected medical officer of health area in the district of Colombo : prevalence and correlates of physical, emotional, financial abuse and neglect.

MD Community Medicine – 2012   D 2983

Abstract

Introduction: Elder abuse is defined as a "single or repeated act or lack of appropriate action, occurring within any relationship where there is an expectation of trust which causes harm or distress to an older person". However, due priority was not given to identify abuse of the elderly in Sri Lanka. The present study was undertaken with the objectives of developing a valid and reliable instrument to estimate the prevalence of elder abuse among elders of 60 years and/or above group in the MOH area of Kaduwela in the District of Colombo and to identify the correlates associated with elder abuse.

Methodology: Component I of the study developed and validated an interviewer administered questionnaire - the Elder Abuse Assessment questionnaire (EAAQ), to assess the prevalence of elder abuse in a community setting. Subtypes and methods of abuse common to the Sri Lankan situation were generated by reviewing existing instruments, literature review and focus group discussions. Item reduction of EAAQ was established through the process of the Modified Delphi Technique. Judgmental validity (face content and consensual) was assessed by a group of experts and the criterion validity was assessed by calculating the sensitivity and specificity of the EAAQ by using the clinical diagnosis of a Consultant Psychiatrist as the gold standard.

Component II of the study was a cross sectional survey conducted among a community based sample of 1500 elders aged 60 and/or above to assess the prevalence and correlates of elder abuse. The elders included in the survey were chosen by cluster sampling and the Grama Niladari Division was considered as a cluster. Fifty seven of such clusters were within the MOH area while 27 elders were selected from one cluster. Only one eligible elder was randomly selected from one household.

Component III was a comparative cross sectional study which assessed the correlates in elder abuse. The elderly persons who had experienced any physical, emotional, financial abuse and neglect during the prevalence study was considered as study units and considered to be having at least two types of abuse.

Results: The sensitivity for overall abuse in the EAAQ was 83.7% (95% CI 70.9-91.4) and specificity for overall abuse was 92.7% (95% CI 87.4-92.7). The reliability of the EAAQ, assessed using KR-20 was found to be satisfactory.

The overall response rate was 96.5%. The prevalence of any type of abuse was *19.2%* while the prevalence of physical abuse was 2.7% (95% CI 1.9-3.7) and the prevalence of financial abuse was 3.7% (95% CI 2.8-4.6). The prevalence of emotional abuse was 14.4% (95% CI 12.7-16.6) while prevalence of neglect was 15.1 (95% CI 13.3-17.0). Children were the main perpetrators of abuse followed by the daughters or sons-in-1aw.About 16% of the abused elders were unwilling to disclose about the perpetrators.

Correlates of elder abuse (victims) in the present study in bivariate analysis were increasing age; illiteracy; low educational level; no occupation or occupation with an irregular income; low standard of living; ownership of the living place by children or others; problems of children and grandchildren; poor practical support by caregivers; uncertainty of care giving; dissatisfaction about visits by children living away from the elders; low social relationships and low social activities; no income or less income; totally dependent on care givers financially; and having depression.

The correlates for elder abuse identified in the multivariate analysis included educational level of elder (AOR 2.2; 95%CI 1.2-3.4); problems of grand children (including disabling chronic disease, disability mental disability, alcohol and drug abuse, gambling and illegal work) (AOR 4.0: 95% CI 1.2-13.9); poor practical support from the family members (AOR 4.6: 95% CI 2.8-7.7); and having depression (AOR 11.1; 95% CI 6.5-18.5).

Conclusions and Recommendations: The EAAQ is proved to be a valid screening instrument to identify elderly people who suffer abuse or who are at high risk of being abused.

As elder abuse exists to a considerable extent in Sri Lanka, it is recommended that availability of valid instrument for its measurement (EAAQ) and correlates of elder abuse made known to the relevant authorities and also to the scientific community. Health care professionals are encouraged to screen elders who are at risk under their care using EAAQ. Awareness programmes should be initiated by Ministry of Social Services and further social support done through elder protective services.

Keywords: elder abuse, mistreatment, prevalence, correlates

0104.Sampath, H.M.R.C.

Pre hospital care, injury profile, disability, community reintegration and household cost of road traffic injury patients admitted to National Hospital, Sri Lanka.

MD Community Medicine – 2013   **D 3223**

Abstract

Introduction: Road traffic injuries are an emerging public health problem. Information related to pre hospital care, pattern of injuries, disabilities and economic burden are essential to prevent and control this emerging tragedy.

Objectives : This study was conducted to describe the pre hospital care received, the pattern and severity of injuries on admission among road traffic injury patients admitted to the National Hospital of Sri Lanka (NHSL) and to describe their disability, level of community reintegration and household cost profile up to three months after hospital discharge.

Methods : World Health Organization Disability Assessment Schedule 2.0 (WHODAS 2.0) and Community Integration Measure (CIM) were translated to Sinhala language and validated to assess the level of disability and community reintegration respectively. Pre hospital care was assessed in a descriptive cross sectional study enrolling 1546 road traffic injury patients directly admitted to NHSL.

A descriptive longitudinal study was conducted among 883 road traffic injury patients admitted to NHSL to describe the pattern and severity of injury on admission and to describe their disability and community reintegration at three months after hospital discharge. The severity of injuries was assessed using the injury severity score (ISS). A pre tested interviewer administered questionnaire was used to collect socio demographic information on admission and injury related household cost during the hospital stay and at three months after discharge. Functional disability was assessed using Barthel Index on admission and at three months after discharge. Overall disability and community reintegration were assessed at three months after discharge using WHODAS 2.0 and CIM respectively.

Results : WHODAS 2.0 Sinhala version and CIM Sinhala version were confirmed as having a good hypothesized scale structure. WHODAS 2.0 showed an adequate convergent validity with relevant domains of SF-36. Confirmatory factor analysis of WHODAS 2.0 confirmed seven-factor model with adequate model fit. One factor model was the best fit model for CIM. Both instruments indicated good reliability assessed by internal consistency and test retest methods.

Pre hospital care of 1546 road traffic injury patients shows that a majority (84.2%; n=1301) has not called for help at the site of accident. Only 5.1% (n=79) had received some form of first aid. Nearly two third (65.5%; n=T013) were transferred by three wheeler. The median time taken to reach a health care facility was 40 (IQR 30) minutes.

There were 43.9% (n=388) motorcycle riders 15.4% (n=136) pedestrians and 15.2% (n=134) passengers among 883 patients studied. The commonest body region injured was bony pelvis and lower extremities (58.7%; n=518) followed by upper extremities (40.9%; n=361). Of the participants 56.9% (n=502) sustained injuries to one body region and 36.5% (n=322) to two regions. The mean ISS was 7.3(±3.5) and based on the recommended cut off 5.2% (n=46) had minor injuries, 43.7% (n=386) moderate injuries and 50.4% (n=445) sustained serious injuries.

Functional disability was reported among 91.1 % (n=803) on admission and among 33.9% (n=299) at three months after discharge based on Barthel Index. At three months after discharge 49.7% (n=438) were not able to commence their routine activities of life. The results of WHODAS 2.0 indicated that of the 793 participants, 70.5% (n=559) had some disability. Significantly, higher proportion of disability was observed with advancing age, with increasing number of body regions injured and with increasing severity of the injuries. The disability was significantly higher among those who did not commence routine activities of life compared to those who had commenced.

The CIM showed a mean score of 34.7 (±4.8) at three months of discharge. A significant decline in community reintegration was observed with advancing age, when the severity of injuries and number of injured body regions increased. The community reintegration was significantly better among those who had commenced routine activities of life.

The injury related median household cost was Rs.27650.00 (IQR Rs. 48600.00) per person per episode of injury (n=883). Of this a median cost of Rs. 8800.00 (IQR 12700.00) had been spent as direct cost for the hospital stay and for the three month period after discharge (n=883). The median indirect cost among the 594 who reported loss income due to injury was Rs. 32000.00 (IQR Rs. 36925.00) per person per episode.

Conclusions and recommendations : The overall pre hospital care received after road traffic accident was not satisfactory. A majority of the participants had sustained injuries to lower extremities and bony pelvis and a majority had serious injuries assessed by ISS. At three months after discharge, nearly 50% could not commence the routine activities of life, one third of were having functional disability while 70% showed some overall disability. It is recommended to improve the pre hospital care for the patients of road traffic injuries and to conduct research to assess the reasons for having high percentages of disability after discharge.

0105.Semage, S.N.

Combat related posttraumatic stress disorder (PTSD) among combat military personnel in Sri Lanka Army : prevalence, risk factors and the feasibility & effectiveness of a non-trauma focused cognitive behavioural therapy intervention.

MD Community Medicine - 2010   **D 2984**

Abstract

Sri Lanka Army soldiers have been exposed to extensive combat stress during the 30year long civil war period. Posttraumatic stress disorder (PTSD) is known to be a major mental health consequence of combat stress.

The present study was undertaken for estimation of the prevalence of combat related PTSD in Sri Lanka Army, to identify the risk factors and to explore the effectiveness and feasibility of mindfulness meditation (Ana Pana Sathi) as a low cost treatment method for PTSD.

PTSD Check List military version (PCL-M) was translated into Sinhala and validated using a sample of 49 PTSD patients and 51 non PTSD persons. The desired cut off point for validated translation is 44. Sensitivity and specificity is 0.959 (95% CI 0.904 - 1.01) and 0.922 (95% CI 0.849 - 0.996) respectively. The area under the curve is 0.989 (95% CI 0.976 - 1.002). Reliability measured by Cronbach's alpha is 0.944 for the total scale and 0.812, 0.869 and 0.895 for three DSM-IV sub scales (Re-experiencing, Avoidance/Numbing and Hyperarousal) respectively.

A cross sectional descriptive study was conducted among a community based sample of 1784 combat military personnel chosen by multi stage random sampling. Data was collected using validated PCL-M and self administered questionnaire. Non response rate was 8.6% and incomplete data accounted for 2.5%. The sample was predominantly

younger (70% below 30 years), below the rank of corporal (87%) and educated up to GCE O/L or less (75%). Point prevalence of combat related PTSD among currently serving combat military personnel of Sri Lanka Army is 10.5% (95% CI 9.02 - 12.04%).

A case control study using a sample of 167 cases and 334 controls identified in the prevalence study was carried out. In a multivariate analysis, lower educational level (OR = 2.065, 95% CI 1.225-3.482), age less than 20 years at the first battle exposure (OR = 2.062, 95% CI 1.245- 3.415), having a history of psychiatric illness (OR = 4.834, 95% CI 1.120-20.872), reporting a family history of psychiatric illness (OR = 2.858, 95% CI 1.392-5.866) and history of childhood mental abuse (OR = 6.329, 95% CI 2.616-15.313) were identified as risk factors for combat related PTSD.

A quasi experimental study was conducted with 32 PTSD patients in the intervention group and 40 in the control group. Dropout rate was 38%. Significant reduction of overall symptoms (p< 0.000), re-experiencing symptoms (p< 0.020) and hyperarousal symptoms (p< 0.000) was found when compared to pharmacological treatment alone and there was no significant difference in the success rate of controlling combat related PTSD. Mindfulness meditation is not perceived as a feasible treatment method for combat related PTSD at domestic and camp environment. It can be effectively implemented as institutional group therapy.

Since the estimated burden of combat related PTSD is high outreach screening programmes for early detection of undetected cases and expansion of existing mental health services to cater the anticipated swelling of PTSD case load should be undertaken. Psychological rehabilitation programmes and a compensation scheme for victims of psychological war trauma should be implemented. The risk factors identified should be considered in future recruitment and deployment. Institution based group therapy of mindfulness meditation could be effectively utilized as a low cost, culturally accepted adjuvant therapy for pharmacological treatment for reduction of PTSD symptoms.

Keywords: Combat related PTSD, Sri Lanka Army, Mindfulness meditation, PCLM

0106.Senanayake, S.J.

Knowledge, attitudes and practices among nurses of Lady Ridgeway hospital regarding mercury containing medical devices and mercury free alternative medical devices.

MSc. Community Medicine – 2012   **D 2967**

Abstract

Mercury is a highly toxic heavy metal. Mercury is used in many medical devices used in the healthcare sector, making nurses one of the most vulnerable occupational groups as they handle mercury containing devices very often. Therefore, it is imperative that the existing gaps in knowledge, attitudes and practices with regards to mercury among nurses, are identified so that the occupational safety of health workers and the safety of the environment at large can be ensured.

The aim of this study was to describe knowledge, attitudes and practices among nurses of Lady Ridgeway hospital regarding mercury containing medical devices and mercury free alternative medical devices.

This was a descriptive cross sectional study. A self administered questionnaire assessed knowledge, attitudes and practices on mercury containing medical devices and mercury free alternative medical devices of nurses (n=538) working in any ward or unit in Lady Ridgeway Hospital, at the time of the study.

A response rate of 87.7% was achieved. All nurses (100%) were females and a majority (67.8%) was in the age group 24 - 34 years with 76.3% having a working experience of one to ten years in the government sector.

Nearly half (47.0%) of the study population had used only mercury thermometers while 22.5% had used only mercury free thermometers. Of the 347 who used mercury thermometers during the 3 months period prior to the study, 33.9% had seen more than 10 thermometer breakages in their units.

Of the study population 85.8% had used mercury sphygmomanometers. Among those who used mercury sphygmomanometers (n=405), 20.0% had seen mercury sphygmomanometer breakages in their units and of them 51.8% had personally experienced a mercury sphygmomanometer breakage during the period of three months prior to the study.

A total of 199 (42.2%) have received any training on managing a mercury spillage and majority (71.3%) had stated that they received the training at the basic nursing trainingof the study population, 271 (57.4%) had either cleaned a mercury spillage or had supervised a mercury spillage being cleaned. A total of 112 (41.3%) had incorrectly collected mercury and glass pieces together. Among who collected mercury globules and pieces of glass together, 67.0% had incorrectly disposed to the sharps bin.More than three fourths (84.5%) did not know that mercury vaporizes at room temperature.

Attitudes were assessed using six attitudinal statements with responses given on a Likert type scale. A majority (94.1%) had favorable attitudes towards issues related to mercury use in health sector.

A weighted score was developed for overall knowledge and "Good" level of overall knowledge was statistically associated with work experience of more than 10 years (p=0.032), having favorable attitude (p=0.007) and being aware of the hazardous nature of mercury before they participated in the study (p<0.001). Having a prior training was not associated with "Good" level of overall knowledge (p=0.85).

There were indications that a large amount of mercury is being released in to the environment by the Lady Ridgeway Hospital, increasing the risk of mercury exposure to healthcare workers, patients and general public. The study participants lacked knowledge on key areas regarding mercury used in the health sector but the overall attitudes were mostly favorable. Gaps in practices on managing a mercury spillage were evident. Effective training activities at the basic nurses' training and in-service training programmes are recommended.

0107. Senaratne,P.A.S.

Emotional, psychological problems and their correlates among school going adolescents (12-14 years) in Polonnaruwa District and the psycho-social environment of their schools.

MD Community Medicine – 2014   **D 3424**

Abstract

Adolescent emotional and psychological problems have attracted global attention < past few decades. It has been revealed that one in five adolescents in Sri Lanka is suffering from mental health problems. This multi-factorial problem, correlates with genetic, demographic, individual and environmental characteristics. Adolescence is mostly s school and it is considered an important factor that facilitates emotional and psychological well-being of adolescents.

Research into mental health problems among adolescent has been identified as < need and this study focused on the subject within a rural setting which has not beer earlier. The present study was carried out among schooling adolescents aged 12-1- Polonnaruwa District.

The study consisted of three components. As the first component, a descript sectional study was carried out to describe the emotional and psychological pre the adolescents using the self-reported Sinhala version of SDQ. To determine the of emotional and psychological problems, an analytical cross sectional s conducted. The study component three consisted of, a descriptive cross section; describe the physical and the psycho-social environment of 23 schools selected for the first component and a qualitative study to identify the strengths and difficulties encountered by school staff in promoting the psycho-social environment.

For the first two components of the study, 1901 adolescents aged 12-14 years studying in Grade 7, 8 and 9 classes with 1568 mothers/female caregivers participated. The response rate was 97% for adolescents and 82.5% for mothers/female caregivers. Multi-stage cluster sampling with probability proportionate to size of the population was used to identify study participants. The study sample was selected to represent all three educational zones of the District. Altogether 78 clusters were studied and the cluster size was 20. For the analytical cross sectional study, 126 'cases' and 252 'controls' were selected from the study component one.

Present study revealed that, 6.6% (95% CI 5.5-7.8) of adolescents were having emotional and psychological problems and 9.5% (95% CI 8.3-10.9) were having borderline symptoms. Among the adolescents peer problems were prevalent in 13.1% while emotional (4.6%), conduct (4.8%) and hyperactivity (4.4%) problems accounted for somewhat equal proportions. A statistically significant difference was found between mean total difficulty scores of males and females ($p<0.001$). Except for emotional sub scale ($p>0.05$) all the other subscale mean values were significantly higher among males compared to females ($p<0.05$). Only peer problem subscale, revealed a statistically significant difference with the age of the adolescents (p0<001)

In bivariate analysis, 16 categorical variables were found to be significant correlates of emotional and psychological problems of adolescents. Being bullied ($r=.40$, $p<0.001$), being a victim ($r=.48,P<0.001$) and average term test marks showed significant correlation with emotional and psychological problems.

In multivariate analysis, alcohol consumption of father/male caregiver (AOR=2.93, 95% CI 1.50-5.71), presence of academic pressure (AOR=3.35, 95% CI 1.20-9.37), none to help with difficulties at school (AOR=2.38, 95% CI 1.01-5.63), poor perception on body appearance (AOR=3.27, 95% CI 1.04-10.29), being bullied (AOR=1.33, 95% CI 1.18- 1.49) and being a victim (AOR=1.13, 95% CI 1.01-1.27) were found to be significant correlates of, emotional and psychological problems.

Non-availability of physical and human resources was not identified as a problem in schools studied. However, as identified by PSEP, in more than 20% of schools there were psycho-social environmental concerns. "Prevention of bullying, harassment and discrimination", "for bidding physical punishment and violence" and "valuing development of creative activities" were the main quality areas identified as those that needed prompt attention. Qualitative study came out with several strengths and difficulties encountered in promoting school psycho-social environment.

As the study revealed, the emotional and psychological problem is an emerging issue that needs attention. Most easily correctible areas were found in school environment. Effective, well targeted interventions by Ministry of Education and Ministry of Health should focus on improving mental health of adolescents and psycho-social environment of schools through school based programmes.

Keywords - Adolescents, emotional and psychological problem, correlates, psycho-social environment

0108.Senevirathne, K.M.

The burden of injuries to surgical wards in the District General Hospital Nawalapitiya.

MSc. Community Medicine – 2013   **D 339**1

Abstract

Injury is a major public health problem globally, accounting for 12 percent of total burden of diseases and injuries. More than 5 million people die from injuries and more than 278 million healthy life years are lost from injuries annually worldwide. Working age group males are more vulnerable for injuries and the highest morbidity and mortality is among this category. Morbidity and mortality of injuries are increasing worldwide.

Injuries are a neglected burden in developing countries and 90 percent of the world's injury burden occurs in them. In Sri Lanka, injuries contribute to 16.1 percent proportionate morbidity and around 4 percent proportionate mortality of total hospital admissions.

This descriptive cross sectional study was conducted to describe the burden of injuries to surgical wards in District General Hospital (DGH), Nawalapitiya to describe the external causes of injury, site of injury, type of injury, activity involved at the time of injury, outcome of injury, severity of the injury and the socio-demographic characteristics of injured person/s. A bivariate analysis of the above characteristics with the New Injury Severity Score (NISS) was performed to find associations.

All patients admitted to the surgical wards in DGH. Nawalapitiya in the study period, with immediate effects of injuries were included in the study. A pretested interviewer administered structured questionnaire was used for data collection from 360 patients included in the study.

The mean age of patients admitted with injuries was 32.65 years (SD =20.86 years). Patients admitted with injury were more likely to be married (48.1%) males (66.4%), aged between 19 years to 44 years (40.8%), Tamil ethnicity (52.5%) and engaged in unskilled employments (35%). Most of the patients' (57.5%) education level was Grade 6 to grade 11 and most of them (51.7%) were the major income earner of the family. The majority (44.2%) was injured in the evening and admissions were highest in the morning (45.3%).

Contusions were the most common injury type (58.6%) and 73.9% were admitted. Forty one percent patients were admitted with involvement of multiple body regions and among unintentional injuries right (18.5%) and left (16.1%) upper limbs involvement was high, while with intentional injuries, head and neck (21.6%) was the most vulnerable region. Among unintentional injuries, most of the patients were injured while at home (35.7%).

There were 6 deaths (1.7%) and thirty percent of the patients were discharged with *complete cure.*Mean NISS score was 8.14 (SD - 6.25) with a range of 1 to 35 and the median was 6. Most of the patients NISS were moderate (NISS 4-8 category - 36%). There was a statistically significant difference between age categories (F = 7.20, $p < 0.01$), ethnic groups (F = 5.86, $p = 0.003$), marital status (F = 6.99, $p = 0.001$) and employment state (t = 3.7, $p < 0.001$).

Although there was no statistically significant difference of NISS between unintentional and intentional injuries (t=l.038, $p = 0.30$), there was a statistically significant difference

between assault and self-inflicted injuries (t= 3.42, p = 0.001). In the unintentional injury group, there was significant difference of NISS means while *engaged work when compared to not engaged* in work *(t= 3.048. p = 0.003)* but *there* was no difference of mean NISS when considering the place of occurrence and external *cause of injury.*

Twenty two percent of patients were injured while under the influence of alcohol. There was a 14.8 risk of getting assault injury (CI - 7.85 -28.2, p<0.001) and 29.18 risk of self-harm injury (CI= 3.7 -226.5, p<0.001) in alcohol consumed group compared to the group not consumed alcohol.

In conclusion, working aged males were more vulnerable for injuries and most injuries occur *while engaged in work and the severity of the injuries tend to be high among* them. Injury prevention and safety measure promotion activities should be encouraged. Alcohol prevention activities should be strengthened in community level. Further studies are needed to develop context specific preventive strategies.

Keywords - Injury, Burden, New injury severity score

0109.Seneviwickrama, K.L.M.D.

Correlates of health related quality of life and the impact of coronary angioplasty on it and house-hold expenditure incurred due to coronary angioplasty among patients with coronary artery disease.

MD Community Medicine – 2013   D 3230

Abstract

Introduction : Coronary artery disease (CAD) is the leading cause of indoor morbidity in Sri Lanka. Percutaneous transluminal coronary angioplasty (PTCA) is becoming increasingly preferred method of coronary revascularization among stable CAD patients in Sri Lanka. Modern treatments, including angioplasty nowadays focus more on health related quality of life (HRQOL) as a means of measuring outcome of health care interventions among patients with CAD in a more patient-orientated manner compared to more objective traditional clinical outcomes such as morbidity, mortality and disability.

However, at present, due priority is not given to HRQOL as an outcome measure in the management of CAD patients in Sri Lanka. The present study was conducted with the objectives of validating a cardiovascular disease-specific HRQOL instrument to assess HRQOL among stable CAD patients and to determine the impact of coronary angioplasty on HRQOL, its correlates and house-hold expenditure incurred due to coronary angioplasty among same clinical group.

Methodology : The study comprised of four components. The first component was the validation of a heart disease specific HRQOL questionnaire to assess HRQOL among CAD patients. MacNew heart disease specific HRQOL questionnaire (MacNew) was selected at the end of a modified Delphi technique by a multi-disciplinary group of experts as the most relevant study instrument to meet the study objective. Translation of MacNew into Sinhala language (MacNew-S) was done according to translation strategy of the MacNew collaboration. Validity of the MacNew-S was assessed by triangulation method in the absence of a criterion. Judgment validity was assessed by form of content, face and consensual validity. Construct validity was explored by principal component analysis (PCA) and confirmed by confirmatory factor analysis (CFA) using robust maximum likelihood method and known group comparison The second component was a longitudinal study to assess impact of coronary angioplasty using percutaneous transluminal coronary angioplasty (PTCA) on HRQOL of stable CAD patients and to determine its correlates. Sample size was 260, when calculated according to the formula for comparison of two means. HRQOL was measured at baseline and three months after PTCA among a sample of stable CAD patients using a combination of disease specific and generic tools to gain complimentary information on HRQOL. Study instruments used to assess HRQOL were validated 23 item MacNew-S in the Component I (the disease specific measure) and the World Health Organisation's quality of life- brief (WHOQOL-BREF) (the generic measure).

The third component was a cross-sectional study on house-hold health expenditure related to PTCA procedure. Data was collected peri-operatively during the hospital stay and at the first review visit.

The fourth component was a qualitative study to get insight into the physical and socio-economical aspects related to impact of PTCA. In-depth interviews using an interviewer guide as the research technique was employed among a group of purposively sampled patients three months after the PTCA.

Results : PCA results confirmed the original 3 factor model *{Physical, Emotional* and *Social)* of the MacNew with a 53.42 % of variance in HRQOL being explained by these three factors. Four items of the original questionnaire were deleted considering the appropriateness of factor loadings and content analysis resulting in 23 item MacNew-S to carry out CFA. Two out of three model fit criteria of thus selected model showed adequate fit [RMSEA 0.044 (90% CI =0.031 to 0.056) and NNFI 0.99], Reliability in the form of internal consistency of the MacNew-S was found to be acceptable with Cronbach's a of the total scale being 0.92 with sub scale values ranging from 0.77- 0.91.

Test retest reliability was also found to be satisfactory with a Spearman's rho of >0.9 for total and sub scales.

Response rate of the Component II was 100% with an attrition rate of 4.2%. Both MacNew and WHOQOL-BREF scores were negatively skewed. The median MacNew *Global* score at baseline and three months follow up were 4.91 (IQR: 4.08- 5.48) and 5.69 (IQR: 5.04-6.09) respectively. Wilcoxon signed rank test yielded statistically significant incremental benefits in all 3 domains of HRQOL when median baseline and post operative values were compared. Clinically significant improvement (> +0.5) in MacNew Global HRQOL was observed in 61% (n=152) of the sample at three months after PTCA. However, HRQOL in 4.8% (n=12) had deteriorated while in 34.2% (n=85) it has not changed to a level which can be considered as clinically important. The median change in'Global HRQOL was 0.69 (IQR: 0.22-1.22). The highest median change was for the MacNew *Physical* domain (0.88; IQR: 0.38- 1.5) while the lowest was for the *Social* (0.67; IQR: -0.17- 1.33) domain.

Correlates of HRQOL identified in the current study concurred with the existing evidence. Multivariate correlates of higher baseline HRQOL were male sex (sex: (3= 0.104, 95%CI =0.005 to 0.407, p=0.045), lesser baseline anginal frequency (anginal frequency: p= -0.332, 95%CI = -0.314 to -0.607, p<0.001) and good psychological well-being (GHQ 30< 8) (GHQ 30: p= -0.537, 95%CI = -0.113 to -0.080, p<0.001).

The current study identified high standard of living (SLI: p= 0.160, 95% CI= 0.365 to 0.029, p= 0.022), less baseline anginal frequency (anginal frequency: (3 = -0.145, 95% CI= -0.026 to -0.320, p= 0.021), good baseline psychological well-being (GHQ 30< 8) (GHQ 30: p = -0.160, 95% CI= -0.043 to -0.005, p= 0.016), lesser post-op anginal frequency (anginal frequency: p = -0.248, 95% CI= -0.571 to -1.324, p<0.001) and good post-operative psychological well-being (GHQ 30< 8) (GHQ 30: p " -0.522, 95% CI= -0.114 to -0.054, p<0.001) as multivariate correlates of higher post operative HRQOL at three months following PTCA.

When adjusted for confounding, correlates of incremental benefits in HRQOL three months following PTCA were post operative good psychological well-being (GHQ 30< 8) (GHQ 30: p= -0.546, 95% CI= -0.101 to -0.059, p<0.001) & lesser anginal frequency (anginal frequency: p = -0.284, 95% CI= -0.141 to -0.336, p<0.001) and baseline good psychological well-being (GHQ 30< 8) (GHQ 30: p= -0.526, 95% CI= -0.057 to -0.098, p<0.001) & higher anginal frequency (anginal frequency: p= 0.321, 95% CI= 0.232 to 0.094, p<0.001).

Even though health service is claimed to be free of charge at the point of service delivery, PTCA procedure in a Sri Lankan state sector health institution amount to a median total HHEH of Rs. 255,916 (IQR: Rs. 190,010- 343,200). while Expenditure on surgical appliances comprised of the majority of the total HHEH (95.2%) with a median of Rs. 250,000 (IQR: Rs. 185,000- 328,625). Catastrophic expenditures incurred among 92.5% of the patients undergoing PTCA at state sector hospitals resulting in adopting varying coping mechanisms leading to dire consequences. Social security systems like President's Fund are of immense help to cope with the catastrophic levels of health expenditure among informal sector and elderly.

Conclusions : The present study concluded a statistically and clinically significant gain in HRQOL following PTCA among stable CAD patients. However, variations in HRQOL was observed among different sub groups of patients. Demographic, socio-economic and clinical & disease related correlates were identified for these observed variations in HRQOL. Psychological well-being (GHQ 30) and frequency of angina were the most strong correlates of HRQOL in all three stages considered in this study. Though majority of the patients have improved clinically, out of pocket expenses incurred by the individual or family have other downstream economic impacts such as loss of savings or sale of property to cover health costs.

Keywords:Stable coronary artery disease, Health-related quality of life, Percutaneous translumin; coronary angioplasty, MacNew, angina, correlates, House-hold expenditure on healt Psychological well-being, GHQ 30.

0110. Sonnadara, T.T.

Factors associated with non-fatal myocardial infarction among patients admitted to theNational Hospital of Sri Lanka.

MSc. Community Medicine – 2012   D 3216

Abstract

Eighty percent of global burden of cardiovascular disease occur in low and middle income countries. Sri Lanka Health Ministry sources claim myocardial infarction is the single leading cause of hospital mortality in Sri Lanka accounting for 13% of total deaths in 2007. Ischaemic heart disease is a major public health issue both in terms of the economic costs associated with the disease and the huge burden placed on individuals and society due to loss of productivity and premature deaths. Even though, the prevalence of risk factors for coronary heart disease is well known, the cause-effect

relationship is not adequately established. Therefore, exploring the effect of such factors on risk of myocardial infarction is widely useful for planning of preventive care services in most regions of the world including Sri Lanka.

Objectives: This study was conducted to determine the socio demographic-economic factors (i.e. area of residence, level of educational, income, employment), past medical history and family history, knowledge and attitudes towards risk factors and disease status, behavioral factors (i.e. Diet, Physical activity, smoking, harmful consumption of alcohol) and perceived quality of government health care services among incident cases of MI admitted to National Hospital of Sri Lanka (NHSL) from 17th August to 30th of November 2012.

Methods: A case control study of non fatal myocardial infarction among patients admitted to the National Hospital of Sri Lanka was conducted. One hundred and fifty cases and 150 controls were enrolled. One age-matched and sex matched control for case was recruited. Data was collected using interviewer administered questionnaire at the NHSL ward setting. McNemar chi square test was applied to see the significance by *p* value and odds ratios and their 95% confidence intervals were calculated for bi-variate and logistic regressionanalyses to determine association of risk factors to MI.

Findings: Area of residence (odds ratio 1.74 for urban vs rural), level of education (oddsratio 0.71 up to primary education *vs* more than primary education), monthly income (oddsratio 2.00 less than LKR: 25,000 vs more than LKR: 25,000), past medical history ofhaving at least one of the following diseases of hypertension, diabetes, stroke orhypercholesterolemia (odds ratio 2.90) vs absence of any of those disease, poor knowledge on myocardial infarction and risk factors (odds ratio 5.62 poor knowledge vs good knowledge), unsatisfactory attitudes towards modifiable risk factors (odds ratio 11.71 unsatisfactory attitudes *vs* satisfactory attitudes), dietary habits (odds ratio 4.00 unsatisfactory dietary habits *vs* satisfactory diet), smoking (odds ratio 3.90 current smoking *vs* not current smoking), consumption of alcohol (odds ratio 1.50 harmful use of alcohol vs others), obesity by BMI (odds ratio 1.08 top two tertiles vs lowest), abdominal obesity; by waist circumference (odds ratio 3.18 top two tertiles vs lowest), waist-hip ratio (odds ratio 2.90 top vs lower two tertiles). Multivariate

regression analysis of data, identified past medical history of having at least one of the following diseases of hypertension, diabetes, stroke or hypercholesterolemia (odds ratio 1.12), unsatisfactory attitudes (odds ratio 1.47), current smoking (odds ratio 1.12), abdominal obesity AVHR (odds ratio 1.15) as risk factors of incident cases of myocardial infarction.

Conclusions: The past medical history of having at least one of the following diseases ofhypertension, diabetes, stroke or hypercholesterolemia, unsatisfactory attitudes, current smoking, abdominal obesity determined by waist-hip-ratio account for most of the risk of myocardial infarction after adjustment for age and sex and possible confounders. Population level programs in partnership with mass media to increase the public awareness on

myocardial infarction and its modifiable risk factors aiming to change their attitudes and behavior should be started to prevent premature deaths due to myocardial infarction in Sri Lanka.

Keywords: Myocardial infarction, socio demographic factors, modifiable risk factors

0111.Subaskaran, S.

Quality of parenting and effectiveness of an educational intervention to improve parenting among parents of 13-15 year old school going adolescents in Jaffna District.

MD Community Medicine – 2014   **D 3587**

Abstract

Introduction : Parenting has been identified as an important factor in influencing adolescent health. The WHO identified parenting intervention as the first strategy to improve adolescent health. Parenting is a multi dimensional phenomenon with cultural diversity. Very few researches have been conducted in Sri Lanka on few aspects of parenting. As the adolescent health problems are high, understand the patterns of parenting and parenting interventions are a timely need.

Objectives : To develop and validate a tool to describe patterns of parenting in selected dimensions, to describe the patterns of parenting and its associated factors among

parents of 13 to 15 year old schooling adolescents and to assess the effectiveness of a parenting intervention.

Methodology : The study comprised of three components. They are the development and validation of an instrument to describe the patterns of parenting, a descriptive cross sectional study to describe the patterns of parenting and the associated factors, and a randomised control trial to assess the effectiveness of an intervention on parenting.

In component 1, the Principal Investigator (PI) developed and validated a 27 item, self administered multidimensional tool to describe the patterns of parenting- Parenting Patterns Questionnaire (PPQ). The PPQ was developed by the following steps: item selection, expert consensus and item analysis. The item generation was done using literature review and Focus Group Discussions and Key Informant Interviews. The reliability of the PPQ was demonstrated by internal consistency and test re - test reliability. The judgemental validity was established by an expert panel comprised psychiatrists, psychologists, community physicians, educationists and sociologists. The PPQ was used after pretesting in Kilinochchi district.

In component 2, a descriptive cross sectional study was carried out among 1863 schooling adolescents aged 13 to 15 years. The sample was recruited by multi stage cluster random sampling probability proportionate to the size. Ninety seven clusters were studied and the response rate was 96.28%. The data was analysed using SPSS 15 and the data was presented as proportions for each pattern of parenting and to represent an overall parenting quality. The association between parenting patterns and the socio, demographic and environmental factors was assessed using chi square test. As it is a descriptive study design and no comparison groups included, a regression analysis was not done to identify the confounding effect between the associated factors. This has to be considered as an important limitation of the study.

In component 3, a Parenting Education Package (PEP) was designed and an intervention was carried out to the parents of 13 -15 year old schooling adolescents. The PEP was developed with the help of literature review and expert opinion. A randomised control trial was conducted to assess the effectiveness of the intervention. Intervention and control groups had 73 parents each; the sample size was calculated using the equation by Pocock for experimental studies. The analysis was done using McNemar's test comparing the post intervention scores for intervention and control groups, according to the PPQ.

Results : The internal consistency of the PPQ and sub scales was found satisfactory (Cronbach's alpha > 0.7). The test re - test reliability also was satisfactory for PPQ, (Pearson's correlation Coefficient > 0.9 for selected items). The judgemental validity was established by an expert panel comprised psychiatrists, psychologists, community physicians, educationists and sociologists. The face, content and consensual validity were ensured by the expert panel.

According to PPQ, among 23.1% (95% CI: 21.2 - 25.0) of parents, parenting was good in overall parenting and 51.2% (CI: 48.8 - 53.9) , 23.7% (CI : 21.8 - 25.7) and 49.4% (47.1 - 57.1) of parents, parenting was good in 'connection', 'control' and 'respect' dimensions respectively.

The factors associated with overall satisfactory parenting were, being a female child (P0.00l), Type 1AB school (P0.00l), father educated above G.C.E (O/L) (P0.00l), mother educated above G.C.E (O/L) (P0.00l), father being in managerial or professional occupation (P<0.05), mother being in managerial or professional occupation (P0.00l), being both parents of same religion (P0.00l), living with both parents (P0.05), being in a nuclear family (P0.05), being a middle income family (P0.05), father consuming alcohol less than 3-4 times /week (P0.00l), father a non smoker (P0.00) and absence of Intimate Partner Violence (P0.05).

The factors associated with satisfactory parenting in 'connection' dimension were, a child of age 13 &14 (P0.00l), Type 1AB school (P0.00l), father educated above G.C.E (O/L) (P0.05), mother educated above G.C.E (O/L) (P0.00l), father being in managerial or professional occupation (P0.05), both parents of same religion (P0.00l), living with both parents (P0.05), father consuming alcohol less than 3-4 times /week (P0.00l) and father a non smoker (P0.05).

The factors associated with satisfactory parenting in 'control' dimension were, Type 1AB school (P0.00l), mother's age more than 38 years (P0.05), father educated above G.C.E (O/L) (P0.05), mother educated above G.C.E (O/L) (P0.00l), father being in the support and clerical workers of occupation (P0.05), mother being in managerial or professional occupation (P0.05), both parents of same religion (P0.05), being in a nuclear family (P0.05), living with both parents (P0.05), a middle income family (P0.05), father consuming alcohol less than 3-4 times /week (P0.00l) and father a non smoker (P0.05).

The factors associated with satisfactory parenting in 'respect' dimension were being a female child (P0.00l), Type 1AB school (P0.00l), father educated above G.C.E (O/L) (P0.05), mother educated above G.C.E (O/L) (P0.05), father being in managerial or professional occupation (P0.00l), mother being in managerial or professional occupation (P0.00l), both parents are of same religion (P0.00l), beir in a nuclear family (P<0.05), living with both parents (P<0.05), being a middle incon family (P<0.05), father consuming alcohol less than 3-4 times /week (P<0.05), father non smoker (P0.00l) and absence of Intimate Partner Violence (P<0.05).

The intervention revealed a significant improvement in overall parenting and parentir in all three dimensions (P<0.05) after 3 months from intervention.

Conclusions : The PPQ is a reliable and valid tool to assess parenting in selected dimensioi ('connection', 'control' and 'respect') in Jaffna district. According to PPQ, among 23.1' of parents, parenting was good and among 52.2%, 23.7% and 49.4% of parent parenting was good in 'connection', 'control' and 'respect' dimensions respectively.

The parenting patterns and the quality showed that improvement is needed. A numb of factors such as sex and age of the child, educational level and occupation of parent being in a nuclear family, both parents of same religion, substance use (alcohol and smoking) by fathers and Intimate Partner Violence were found associated with quality of parenting. As it a descriptive study design regression analysis was not done i eliminate the confounding effect of the associated factors. The intervention using PE resulted in an improvement in parenting, in 3 month period following the intervention.

Recommendations : The PPQ can be validated for different cultures and different areas and can be used 1 describe the parenting and to assess the parenting interventions. Among the facto associated with parenting, modifiable factors such as substance use, intimate partner violence can be modified in future by interventions. Comparative analytical studies can be carried out and a regression analysis can be done to identify the associated factors more precisely. The PEP can be used for parenting interventions in future, all over the country with modifications according to the culture.

Keywords: parenting, adolescent health, parenting interventions

0112.Soysa, H.N.D.

Knowledge attitudes and practices of personal hygiene among school children in MOH area – Kaluthara.

MSc. Community Medicine - 2014   D 3580

Abstract

Communicable diseases, mainly respiratory and intestinal infections, cause suffering, lifelong disability or untimely death of millions predominantly in developing regions of the world. Children remain particularly vulnerable to these preventable diseases. The main causes for them are inadequate sanitary conditions and poor hygiene practices. However knowledge, attitudes and practice of hygiene among young school children in Sri Lanka are poorly understood though it is critical for prevention and sustainable control of communicable diseases.

Objective: The objective of the research was to assess the knowledge, attitudes and practices of personal hygiene among school children in grade 7 in Kaluthara Medical Officer of Health area.

Methods:A cross sectional descriptive study was conducted among students of Grade 7 (aged 12years), in 12 out of 36 schools in Kaluthara Medical Officer of Health area. Study population consisted of 574 respondents (55.1% males, 44.9% females). The response rate was 92.58% (574/620). Data was gathered under personal hygiene, knowledge, attitudes and practices. Two checklists and a self-administered questionnaire were used. The completed questionnaires were collected within 2 days of distribution. Relationships between hygiene practices with sex of the student, parents' level of education and know ledge of the students, were evaluated in the study.

Results: Females had better practices of cleaning with soap and water after defecation (P = 0.041), drinking boiled water (P = 0.026) and washing hands after playing (P = 0.004). Males had better bathing practices (P = 0.000) and higher knowledge on personal hygiene (P =0.022).

Students with satisfactory knowledge on personal hygiene practiced cleaning with soap and water after defecation (P = 0.035). Conversely they used boiled water for drinking less than ones with unsatisfactory knowledge (P = 0.035).

Students with mothers having an education beyond Ordinary levels had better bathing practices (P = 0.001), better practices of brushing teeth (P = 0.004), washing clothes (P = 0.003), drinking boiled water (P = 0.004) and hand washing after playing (P = 0.008).

Students with fathers having an education beyond Ordinary levels drank boiled water (P = 0.016) and practiced of washing hands after using toilet (P = 0.001) more, but washed hands less frequently after playing (P = 0.009).

Conclusion: Majority of students were aware of personal hygiene and practiced it routinely. Most of the students had positive attitudes towards key aspects of personal hygiene like hand hygiene, oral hygiene, cleanliness of clothes etc. Most students also recognized that personal hygiene as an integral part of a good personality, education and interpersonal relationships. However, a large proportion of the students also believed that parents are responsible for children's' hygiene.

There is an alarming disparity between awareness on hygiene and its implementation especially on drinking boiled water. Mothers level of education has a prominent influence children's' hygiene fathers' play a less significant role.

0113.Theuwara, N.V.J.

Quality of care, quality of life and cost implications for patients with diabetes mellitus attending outpatient clinics at State Hospitals of Western Province.

MD Community Medicine – 2013   **D 3218**

Abstract

Diabetes mellitus is becoming a serious public health issue in Sri Lanka. Patients with diabetes mellitus (DM) need long term comprehensive care in order to minimize complications and improve their quality of life. Quality of care for DM and cost implications have not been quantified at outpatient clinic setting in Sri Lanka.

The objectives of the study were; to develop and validate instruments to measure the quality of services and facilities for DM in the state clinic setting and to assess the quality of services and facilities provided, to assess quality of life (QOL) and household costs for DM, among patients with DM attending outpatient clinics at primary, secondary and tertiary level state hospitals of the Western Province and to estimate the costs of the health system when providing diabetic clinics (DC) at these hospitals.

The study has four phases. In phase I, 'Care for DM Quality of services' (CD QS) instrument with 7 subscales: routine services, monitoring of glycaemic control, modifiable risk control, annual screening, patient empowerment, recording of information and functional aspects, was developed and validated to assess the quality

of services provided for patients with DM in the state clinic setting. Validation of CD QS was performed in a sample of 100 patients. Construct validity was established by multi- trait scaling analysis and known group comparisons. 'Care for DM Quality of facilities' (CD QF) instrument had 10 subscales: building, cleanliness and laundry, latrines, basic equipment and furniture, stationery and supplementary items, facilities for health education, laboratory services, supply of medicines, availability of human resources and facilities for smooth functioning of clinic process and community links. Validity of CD QF was established by the consensus of experts.

Phase II assessed the quality of facilities and services for follow up care of DM using Lot Quality Assurance Sampling technique (LQAS). The quality of facilities was assessed in all 10 DC and 13 medical clinics (MC) in all 3 levels of hospitals of the Western Province. A total of 300 patients were included for quality of service assessment; 25 each from 2 DC and 2 MC each at primary, secondary and tertiary level hospitals. Validated study instruments were used with record sheets and an interviewer administered questionnaire (IAQ) collected socio-demographic information. Blood HbAlC and Blood Pressure (BP) were assessed.

Phase 111 assessed the QOL among 300 followed up patients with DM 150 each from all DC (n=10) and 15 MC in all 3 levels of hospitals] using the locally validated WHOQOL-BREF. An IAQ collected data on socio-demographic and disease related factors.

Phase IV assessed the household cost (Direct: cost of treatment, travel and food for patient and accompanying person, Indirect: lost income due to clinic visit) among the 300 patients enrolled under phase II. To estimate system cost per patient per clinic visit, the scenario based costing exercise was carried out in 6 DC (2 each at primary, secondary and tertiary levels). System cost included current value of building, equipment and furniture with linear depreciation, utilization data and staff mid-point of salaries. Cost of drugs and investigations were excluded as it varied among patients.

Quality of facilities assessment found that privacy during consultation was not providedin 65.2% (n=15) of clinics. Quality of facilities for disabled persons was provided withstandard in only 8.7% (n=2) of clinics. Regarding toilets, cleanliness was meeting thestandard only in 43% (n=2), 20% (n=2) and 33% (n=3) of clinics in primary, secondaryand tertiary level hospitals respectively and regular inspection was highest at primarylevel (42.9%; n=2). Laboratory services were poor and functioning

laboratories werenot available in 83.3% (n=6) of hospitals in primary level. Blood HbAlC and urinemicroalbumin assessment were not available even at tertiary level. Quality of facilitiesfor HE was poor in 42.9% (n=3), 50% (n=5) and 33.3% (n= 2) of clinics respectively atprimary, secondary and tertiary levels. Supply of medicines was meeting the standard in42.9% (n=3), 10% (n=l) and 100% (n=6) in primary, secondary and tertiary levelsrespectively. However, all essential drugs were issued only at 30% (n=3) and 33.3%(n=2) of clinics in secondary and tertiary level and none at primary level. The quality offacilities for basic equipment and furniture was meeting the standard in 60 - 70% ofclinics in secondary and tertiary levels compared to the primary level (42.9%; n=3).Furthermore an ophthalmoscope, a stadiometer, a glucometer, a light source and a 10 gmonofilament or tooth prick for feet examination were not available in 21.7%, 43.5%,60.9%, 73.9% and 87% of clinics. Availability of human resources was meeting thestandard in all clinics (100%) at secondary and tertiary levels compared to primary level(85.7%). However, Health Education Nursing Officer (HENO) or Diabetes EducationNursing Officer (DENO) was not available in 40% of DC and 46% of MC even attertiary level MC (33.3%). In service training on DM was not provided for 91.3% of MO and 78.3% of NO s. A training plan was not available in 91.3% of clinics. None of the clinics had a patient recall system. Clinical audits and client satisfaction surveys were not carried out in 95.7% and 23% of the clinics respectively.

The mean age of patients with DM was 60.9 years (SD + 8.72). Male female ratio was 1: 1.4. Among patients 44% (n=132) had attended the same clinic for 5 or more years. Standard quality of services for routine care complying with the LQAS decision rule was provided in all MC and 5 out of 6 DC. Quality of services for glycaemic control was substandard in all the clinics and target blood glucose was achieved only by 34.3%. Mean HbAlC of the patients was 7.92% (SD $\pm$ 1.7) with the median of 7.5% (IQR 6.7, 8.97). Patients attending tertiary level hospitals had the highest median HbAlC (7.8%; IQR 6.9, 9.2) compared to primary level (7.1%; IQR 6.5, 7.8) (.X^7 = 8.16, df = 2, p < 0.05). HbAlC level did not vary according to the type of clinic (U=10941.5, Z=-0.41, p>0.05). Target BP of <130 /80 mmHg was achieved by 63.3% of patients. All the clinics provided standard quality of services for BP control complying with the LQAS decision rule. Annual lipid profile and Body Mass Index were performed meeting the standards in 39% and 19.7% of patients respectively. Quality of services for lipid management was substandard in 4 clinics

(33.3%) and none of the clinics provided standard quality services for weight monitoring and modifiable risk factor control.

Annual screening for peripheral arterial disease (10.3%), retinopathy (15%), proteinuria (11.9%) and feet examination (12.3%) were very low in addition to annual performance of ECG (34.3%) and serum creatinine (28.3%). Higher performance of examinations and investigations were observed in DC and at tertiary level. All the clinics were substandard except one DC at tertiary level for quality of services for annual screening and patient empowerment. Only 29.7% (n=89) of patients received group or individual HE at current visit. Information on foot care (72%), dietary assessment (86%), access to a dietician or trained Nursing Officer (60.3%), advice on food intake (50.7%), physical activity (91%) and intake of medicines (46%) were not provided. Recording of basic information was substandard in 9 (75%) clinics and recording of occupation, comorbidities, risk factors and physical activity were not observed in 93.3%, 33.3%, 60.7% and 92% of clinic records respectively. Quality of services for functional aspects was standard in all the clinics complying with the LQAS decision rule.environmental health and social relationships compared to the healthy people. Significantly higher QOL assessed by WHOQOL-BREF was observed in younger (<60 years), married, with higher education (passed O/L and higher) and higher household income (> Rs.20, 000/=) (p<0.5). With regard to disease related factors longer duration of DM (>5 years), high FBS (> ll0mg/dl), insulin treatment and presence of complications significantly (p<0.05) lowered QOL of the patients with DM.

The mean total household cost per clinic visit was Rs. 461.80 (SD + 559.56) while median cost was Rs. 300/= (IQR 150, 503.75). Direct cost was 92.4% of the total cost. Highest direct household cost was for medicines (46.9%) followed by investigations (31.9%). Patients attending tertiary level incurred statistically significantly higher (p < 0.05) cost for travelling. Patients attending secondary level incurred the highest total median cost (Rs. 390.00; IQR 220.50, 755.00; p < 0.001). Unit system cost excluding drugs and investigations ranged from Rs. 187.75-339.70, Rs. 67.02-108.79, Rs. 57.08- 102.57 at tertiary, secondary and primary levels respectively. Staffing is a major component of unit costs.

The development of instruments provides an opportunity for ongoing assessment and improving quality of care for patients with DM. Infrastructure facilities, HE facilities, laboratory services, medicines and equipment lacking in most DC and MC should be improved. Glycaemic control measured by HbAlC was poor in all three levels of

hospitals. Annual screening for complications was very poor in all levels of hospitals except at a DC at tertiary level. QOL was poor among the patients with DM. Direct costs are a significant share of patient costs and costs for medicines and investigations are a major share of direct costs. Essential medicines and investigations for follow up care for DM should be available in state settings. Costs borne by each clinic differ even at the same level of hospital. These findings should be used by health authorities and service providers to improve the quality of care for patients with DM attending state DC and MC.

Keywords: Diabetes Mellitus, Quality, Diabetic Clinic, Medical Clinic, Quality of Life, Health care cost, Household cost

0114. Wellappuli, N.T.

Knowledge, attitudes and practices of grade Medical Officers of two selected Teaching Hospitals of Colombo district in application of non communicable diseases prevention activities in ward settings.
MSc. Community Medicine - 2013   D 3402

Abstract

Currently, Non Communicable Diseases (NCD) have become the dominant health problem, in Sri Lanka, utilizing much of the limited health resources (Ministry of Health, 2009). The national policies on prevention and control of NCD and health promotion have reiterated the importance of strengthening of the health system to provide integrated NCD prevention and control activities through the preventive and curative health sectors. These policies have also strategized, building of capacity of human resources for health for NCD prevention activities.

Doctors play a key role as a leader and a member of a health team. Good knowledge and favourable attitudes are precursors of correct practices. Improvement of actions has to be mediated through enhancement of knowledge and favourable attitudes.

An assessment of knowledge, attitudes and practices of medical officers in the curative sector in NCD prevention activities has not been conducted in the country to date.

Objectives;The aim of this study was to assess the knowledge, attitudes and practices of grade medical officers of two selected teaching hospitals of Colombo district in applying Non Communicable Disease prevention activities in ward settings.

Methods : This was a descriptive cross sectional study conducted in National Hospital of Sri Lanka (NHSL) and Colombo South Teaching Hospital (CSTH). A study unit was defined as a grade medical officer employed at either of the above mentioned hospitals at the time of data collection. Grade medical officers who were on leave during the data collection period were excluded.

The estimated sample size was 465. The study utilized a multistage sampling technique and selected two samples of grade medical officers from the two hospitals in the proportion of grade medical officers attached to these two hospitals.

The instrument used to collect data was a pre-tested self- administered questionnaire. Data collection was performed by the principal investigator by meeting and inviting the Grade medical officers of the eligible wards to the study. All possible measures were taken to ensure that the study units did not discuss the responses among themselves or refer books. The study was completed among the whole study population within the shortest possible time to minimize contamination.

In data analysis responses to different questions related to knowledge were presented using frequency tables and overall knowledge was presented in four categories.

Based on the scoring a method overall attitudes were categorized in to 'favourable' and 'unfavourable' groups. Responses to the questions related to different practices were presented using frequency tables. Overall knowledge, overall attitudes and two key practices were cross analyzed to assess their association with selected factors. Statistical testing for associations were performed when considered appropriate using the Chi square test. A probability value of < 0.05 was considered as significant.

Results: A response rate of 90% was achieved. The study population was more or less equal proportions of male (50.6%, n=212) and female (49.4%, n= 207), while a majority was young in the 25- 34 years age category (50.3%). A majority was attached to medicine and medicine related units (56.4%).

A weighted score was developed for overall knowledge on NCD and NCD prevention activities and the proportion of grade medical officers with 'Good' level of overall knowledge was 43.7%.

In the aspect of knowledge regarding disease screening, only 41.4% accurately named three NCDs that could be identified by screening. The accurate identification of serving sizes per day per adult was also poor among grade medical officers for the food items of sugar, salt, fruits and vegetables with correct information given by 12.2% (n= 51), 39.1% (n=164) and 14.3% (n=60) respectively. Regarding the recommended physical activities

to prevent NCDs, only 22.7% knew the answer accurately. Only 66.7% knew the normal range ofBMI for adults. In spite of poor technological details of knowledge, 68% knew three primary and primordial prevention activities that can be applied in ward settings.

The overall attitudes of grade medical officers towards application of NCD prevention activities in ward settings were favourable (76.6%). However, a majority (92.4%) opposed the statement that 'doctors in hospitals should not implement NCD prevention activities as it is not part of curative services'. In addition, 27% believed that grade medical officers were overburdened with ward work and cannot contribute to the NCD prevention in ward settings.

In the assessment of practices it was identified that only 43% of grade medical officers provide life style related guidelines to all the inpatients diagnosed to have NCDs. Only 14.3% grade medical officers advised family members regarding their role on NCD prevention activities. Only a limited number of grade medical officers (26.3%) practiced giving advice to all patients with risk factors without manifest NCDs. Regarding alcohol, less than half (44.4%) advised all the inpatients on giving up alcohol. The proportion of grade medical officers who advised all the inpatients on stopping smoking was 34.3%. Two thirds of the study population (67%) provided advices to staff members having risk factors. The mostly used time for provision of NCD prevention information to the patients was while clerking admission (45.3%), during clinic follow up (44.9%) and during the ward rounds (43.9%).

In this study 85.9% of study population highlighted lack of time as the main barrier to implement NCD prevention activities in wards settings. In addition, 47% stated lack of training and another 32% stated lack of knowledge as the other barriers.

A good level of knowledge regarding NCD prevention activities was significantly associated with possessing or undergoing post graduate training (p< 0.001). As expected those with favourable overall attitudes showed better knowledge (p=0.003).The study could not identify any factors significantly associated with attitudes or practices.

Conclusion and recommendations : Overall knowledge on NCD prevention and strategies that can be applied in ward settings was poor among a majority of grade medical officers. Attitudes among grade medical officers were mostly favourable on implementation of NCD prevention activities in ward settings. The study identified gaps in application of primordial, primary, secondary and tertiary NCD preventive strategies in the ward settings by the grade medical officers on inpatients and their family members and the staff.

The study recommends improving accessibility to post graduate education to improve knowledge of medical officers on NCD prevention. The study also recommends taking steps to improve management of the wards to ease the burden and to promote medical officers to take up NCD preventive activities in wards.

Factor associated with poor practices of medical officers in applying NCD preventive activities in wards is recommended to be researched as a new study.

Key words: NCD prevention, Grade medical officers, Hospital settings

0115. Weerasekara, K.Y.P.K.

Nutrition literacy, its correlates and effectiveness of a skill development intervention to improve nutrition literacy among females aged 25 – 45 years in district of Colombo.

MD Community Medicine - 2014   D 3479

Abstract

Nutrition literacy is defined as the degree to which individuals have the capacity to , process, and understand nutrition information needed to make appropriate dietary decisions. Literacy encompasses a wide range of skills, from the ability to apply basic literacy skills in reading, writing and calculations in everyday health decision making, to the ability to apply more advanced literacy skills to independently obtain relevant information, to derive their meaning and to critical analyze the obtained information.few attempts had been made globally to assess level of nutrition literacy. Tests that been used were not comprehensive to assess all the facets of the construct of nutrition literacy. The body of literature amply emphasizes the importance of the nutrition literacy among adult females in view of the importance of their own nutritional status and their role in uplifting the nutritional status of their children and other family members. No research has been conducted in Sri Lanka to assess nutrition literacy among adult females.

With this background the present research aimed to determine prevalence and correlates of inadequate nutrition literacy among females aged 25-45 years in district of Colombo and to design, implement and assess the effectiveness of a skill development intervention to improve nutrition literacy of females aged 25-45 years in the district of Colombo.

The study comprised three components. First component was development and validation of a test to assess nutrition literacy among females aged 25-45 years in

district of Colombo. Second component was a descriptive cross-sectional study to determine the prevalence of inadequate nutrition literacy and correlates for inadequate nutrition literacy among the said study population. Third component was to design a skill development intervention package to improve nutrition literacy skills of females and to implement a cluster randomized trial to assess the effectiveness of the designed intervention.

The test that was developed in the present study to assess nutrition literacy among adult females was named, Nutrition Literacy Test. It comprised 30 single best answers multiple choice questions to elicit the different skills required for one to be nutritionally literate. The test was designed to be completed by the respondents and it did not specify a time limitation.

The development of the Nutrition Literacy Test was a stepwise process which involved a triangulation of quantitative and qualitative methods. The test was also adjusted to Grade 8 reading level to ensure its applicability to a majority of females in the Sri Lankan setting. Following development of the draft test a validation study was conducted to assess the validity and reliability of the test. The validation study included a detailed item analyses to assess the item-total correlation, Item difficulty index, Item discrimination index, inspection of the item characteristic curve, distractor analysis and a reliability analysis and an assessment of convergent validity. Establishment of the cut off score for the Nutrition Literacy Test was using multi Receiver Operating Curves.

Second component of the present study was a descriptive cross-sectional study to determine the prevalence of inadequate nutrition literacy and correlates for inadequate nutrition literacy among females aged 25-45 years in district of Colombo. A sample of 1220 females were selected using a multi stage cluster sampling with probability proportionate to the number of females aged 25-45 years from all the 13 divisional secretary (DS) divisions of the district of Colombo. A total of 43 clusters were included in study, and cluster size was thirty. Study units were recruited in a household survey. Validated Nutrition Literacy Test was used to assess nutrition literacy while an interviewer administered questionnaire was used to obtain information on correlates of nutrition literacy. Two trained female pre-intern medical officers collected data under supervision of the principal investigator.

In the third component to design a skill development intervention package to improve nutrition literacy of adult females, many steps were taken to design an educationally sound and culturally appropriate skill development intervention.

Principles of development of educational material were followed and the package comprising two training modules and supplementary teaching material were developed and pilot tested. A facilitator with expertise in the field of nutrition was selected and was trained to deliver the package uniformly. Effectiveness of the intervention was assessed using a cluster randomized trial to assess the effectiveness of the intervention. A grama niladhari area was defined as a cluster and as indicated by the sample size calculation, a total of 24 clusters which are situated geographically apart from each other from two DS divisions of the Colombo district were randomly selected to be included in the study. The selected clusters were randomly assigned the intervention and control status. From each cluster 10 females of 25-45 years of age were selected as the study units. Nutrition literacy assessed using the Nutrition Literacy Test was used as the outcome indicator of the success of intervention.

The study and control participants were recruited in a household visit where the pre intervention assessment was conducted by the same data collectors as in Component 2. The intervention was then delivered to females in intervention group, in groups of 10 in two sessions. Six months after the intervention the post intervention assessment was conducted using the same data collectors and the same study instruments.

The results of the validation test indicated that the Nutrition Literacy Test was a valid and reliable test to assess nutrition literacy.

Item total correlations of all items were satisfactory as the values were 0.3 or more for all items. Item difficulty ranged from 0.2-0.9 and the point biserial correlations were above +0.20 for all items. These results confirmed that all the items in the test were appropriate to be retained.

None of the item characteristic curves were flat and all distractors were sufficiently efficient and none of the items were found to be ambiguous or confusing. Item characteristic curves were found to be satisfactory for all items. The test also demonstrated adequate internal consistency as per KR-20 coefficient of 0.913, which were greater than 0.9 which indicate excellent reliability.

Assessment of convergent validity found that high nutrition literacy scores assessed by the Nutrition Literacy Test converged with high use of material on nutrition and high education level.

Based on the findings of multi ROCs, lower cut off offered a sensitivity of 97% and specificity of 95% and the upper cut off score, sensitivity, 100% and specificity 98%.

The present study found that the prevalence of adequate nutrition literacy among females aged 25-45 years in Colombo district to be 44.3% (95% CI 40.2-48.5). The prevalence of marginal and poor nutrition literacy level were 41.2% (95% CI 36.8-45.4) and 14.6% (95% CI 9.4-19.8), respectively.

Prevalence of adequate nutrition literacy level gradually increases with the increasing level of education. Adequare nutrition literacy also showed a gradually incearsing trend with increasing wealth quintile.

Multivariate analyses revealed that two socio economic correlates were significant correlates of inadequate nutrition literacy when adjusted for effects of confounding. They were having an education level below G.C.F. A/L (adjusted OR= (2.43(95%CI1.81-3.27) and not being employed (adjusted 0R=1.58(95%CI1.13-2.21).

Involvement in household food purchasing for more than 4 days per week (adjusted OR 1.63 (95%CI 1.19-2.23)), non=-receipt of formal education on nutrition related fields up to G.C.E. O/L (adjusted OR 1.58 (95%CI1.15-2.19)), not using of television to obtain nutrition information during the past six months (adjusted OR=2.47(95%CI 1.37-4.43), not using of newspapers to obtain nutrition information during the past six months (adjusted OR=2.90 (95%CI 1.96- 4.28)) and possessing low level of nutrition knowledge (adjusted OR=2.18 (95%CI 1.66-2.87)) were the other correlates that were found to be significant correlates of inadequate nutrition literacy when adjusted for effects of confounding.

In the cluster randomized trial, the findings showed that the intervention and the control groups were comparable based on selected socio demographic parameters and in levels of nutrition literacy of the study units.

Six months after completion of the intervention, at the post intervention assessment, proportion of study units with inadequate nutrition literacy level had significantly decreased in the intervention group (p<0.001) but not in the control group (p=0.061). Furthermore, the difference in the intervention group and the control group in the post intervention assessment was also significantly different (p<0.001), indicating that the intervention was effective at individual level.

The present study also found that the intervention was effective in improving nutrition literacy level at any age group (p=0.760) of the study units. The intervention was also effective in improving each of the skills related to nutrition literacy.

Comparison of cluster level proportion of the participants with inadequate nutrition literacy level in the intervention clusters between pre and post intervention assessments showed that the proportion of the participants with inadequate nutrition literacy in the intervention clusters had significantly decreased while the corresponding difference in the control clusters was not significant, indicating that the intervention was effective at cluster level. The present study also generated evidence that the females of 25-45 years old who underwent the intervention accepted the interventional activities well and perceived that participating in the study benefitted them.

The study concluded that inadequate nutrition literacy was a nutrition literacy was seen to be higher among low educated and poor. Correlates of inadequate nutrition literacy identified were mostly modifiable factors.

The intervention developed and implemented to improve nutrition literacy skills of the study population was found to be successful in improving nutrition literacy among adult females of 25-45 years in Colombo district. The intervention was proved to be effective in improving nutrition literacy both at individual and at group level.

The study recommends that the problem of inadequate nutrition literacy among females should be brought to the notice of the relevant authorities and that they should be lobbied to consider implementing the intervention to improve nutrition literacy, which was found to be effective and acceptable in the present study, to improve nutrition literacy skills of adult females.

Keywords: nutrition literacy, correlates of nutrition literacy, female, prevalence, nutrition literacy skills

0116.Weerasinghe, I.E.

Prevalence of physical disability among adults in the Kandy Municipal Council area and psychological distress impact, coping strategies and utilization of services by those with limb disability.

MD Community Medicine - 2013   **D 3227**

Abstract

Introduction: Physical disability is a major public health priority worldwide. Throughout history, a shift from the biomedical perspective of dysfunction to a broader social understanding of disability including physical disability has been proposed. Information and assessment of physical disability and psychological impact of limb disabled in the Sri Lankan community is scarce. Even though there are services for the

physically disabled they should be properly assessed after introduction at the community level. Therefore, the primary objective of this study was to describe the prevalence, extent and reasons for physical disability in Kandy Municipal Council area (KMC). In addition this study was aimed to describe the impact of limb disability on education, employment, economy, mental wellbeing and social life, their coping strategies and service utilization of limb disabled. Further, it was aimed to describe the psychological distress of limb disabled using a comparative group from the community.

Methods: In the present study physical disability is defined as physical impairment/s leading to activity limitation and participation restriction in an individual. Physical impairment/s are problem/s of neuro-musculoskeletal and movement related function/s. Activity limitation are problems in execution of a task by an individual while participation restrictions are problems in involvement in a life situation.

Study had three components. Component 1 with three parts was a descriptive cross sectional survey to determine the prevalence of physical disability among people aged 18 to 59 years in Kandy Municipal Council area (KMC). As the part l of Component 1, validation of World Health Organization Disability Assessment Schedule-Version II (WHODAS II)-Tamil translation in the community was performed in the Matale Municipal Council area (MMC) before its application in the main study. Part 2 was to develop and validate a study instrument to screen physical impairment- Physical Impairment Diagnostic Tool (PIDT). Part 3 included determination of prevalence of physical disability among 2460 adults aged 18 to 59 years in KMC area and to describe the demographic and socio-economic characteristics, extent and reasons for physical disability.

Component 2 was a comparative study to describe psychological distress among those with limb disability (n=61) and age and sex matched controls with no disability (n=61) from the community.

Component 3 was designed to describe the impact of limb disability on education, employment, and economy, mental wellbeing and social life, and the coping strategies adopted by limb disabled and utilization of services by them using qualitative research method (in-depth interviews).

Results: WHODAS II-Tamil showed good judgmental validity and high internal consistency (Cronbach's alpha=0.9) with a good inter observer variability. The lowest level of agreement as derived from kappa coefficient was 0.8.

PIDT-Sinhala and PIDT-Tamil demonstrated a good judgmental validity and good inter observer variability. The lowest level of agreement for PIDT-Sinhala and PIDT-Tamil given by kappa coefficient was 0.8 each.

Mean age of study participants in the community survey was 36.8 years (range=18-59 years). A majority were males (50.9%, n=1251), Sinhala (69.7%, n=1715), Buddhist (67.7%, n=1665) and were married (92.8%, n=2283). Among them, majority were educated beyond primary education (82.4%, n=2026), currently employed (56.3%, n=1384) and had a monthly household income less than Rs 30,000/= (58.8%, n=1446).

The prevalence of physical disability in the KMC area was 4.2% (95% CI: 3.5-5.1, n=103). The age adjusted physical disability prevalence for males and females were 2.6% (95% CI: 2.4-2.8) and 4.4% (95% CI: 4.2-4.6) respectively. Mean age of the physically disabled was 42.7 years (SD=11.5) and the majority belonged to the age group of 40 to 59 years (62.1%, n=64). Majority among the physically disabled 70.9% (n=73) were females, 79.6% (n=82) were married, majority were educated beyond primary education (69.9%, n=72) while 75.7% (n=78) were currently unemployed and 48.5% (n=50) had a monthly household income of less than Rs 30,000/=. There were significant associations between presence of physical disability and age (p=0.0), sex (p=0.0), ethnicity (p=0.0), religion (p=0.0), marital status (p=0.0), education status (p=0.0) and monthly household income (p=0.0).

A majority (42.7%, n=44) had physical disability onset between 40 to 59 years of age. Among the physically disabled, 98.1% (n=101) had limb/s affected and 1.9 % (n=2) had spine affected. Principal site affected was lower limbs (74.8%, n=77). There were 34 % (n=35) with unilateral lower limbs affected, 33% (n=34) with bilateral lower limbs affected, 2% (n=2) had unilateral upper limb affected, 8.2% (n=9) had bilateral upper limbs affected. Both upper and lower limbs were affected among 20.4% (n=21), spine was affected among 1.0% (n=l) while both spine and limbs were affected among 1.0 % (n=l). Among the physically disabled, 77.7% (n=80) had one site affected while 22.3% (n=23) had more than one site affected.

Intermittent pain (89.3 %, n=92) and joint swelling (17.5%, n=18) were the commonest complaints among limb disabled. Among them 4.9% (n=5) used assistive devices. Among the physically disabled, 82.5 %(n=85) participated in social activities and 23.3% (n=24) was unable to travel alone. Spouse was the major source of assistance for physically disabled (52.4%, n=54).

Rheumatological conditions were reported among 63.1% (n=65) of physically disabled being the commonest medical condition related to physical disability. Orthopaedic

conditions were observed among 12.6 % (n=13) while 11.7% (n=12) had congenital deformities. Trauma was a reason for disability among 13.6% (n=14).

A majority of the limb disabled used services provided by the Ministry of Health (86.1%, n=87) and 69.3% (n=70) used private sector services, 15.8% (n=16) used Government Aurvedha services and 2% (n=2) used Social Service Department services. Strikingly, limb disabled used more than one treatment modality. A majority utilized Allopathic treatment (93.1%, n=94) and 36.6% (n=37) used Ayurvedic treatment, 4% (n=4) Chinese acupuncture, 2% (n=2) homeopathy and 61.4% (n=62) ritualistic treatment methods. Among the ritualistic treatments obtained, a majority (41.9%, n=26) made wows for the god *("bara weema")*. Among the most common causes believed for obtaining ritualistic treatments were effect of god (45.2%, n=28) and planetary influences (29.0%, n=18). Problems in service utilization was encountered by 65.3% (n=66) of the limb disabled. Financial problems (62.1%, n=41), long queues at hospital (22.8%,n=15) (57.4%) and accessibility problems (12.1%, n=8) were the barriers for obtaining treatment for people with limb disability.Psychological distress was significantly higher among limb disabled compared to comparatives without limb disability (p=0.0).

The in-depth interviews among those with limb disability revealed that there had been an impact on education if the onset of limb disability was at an early age of life. Participants came out with effects on their occupation, economy, marriage, social life and the psychological well-being due to their limb disability condition. Some limb disabled people were stigmatized from their own families, friends, neighbours and society. Those who had disfigurement were embarrassed over their disfigurement and were sad. Almost all interviewees had feelings of sadness, loneliness, distress and shame. They have adopted varied coping strategies like finding solace in engaging in religious activities, engaging in recreational activities, engaging in their job, expressing anger, being alone and drawing emotional support from family and relatives to alleviate stress arising from limb disability condition and its consequences.

Conclusions and recommendations: WHODAS II-Tamil is a valid and a reliable tool to assess activity limitation and participation restriction among adults aged 18-59 years in the community. PIDT-Sinhala and PIDT-Tamil are valid and reliable tools to assess physical impairments among adults aged 18-59 years in the community. Both quantitative and qualitative research methods show that the limb disabled experience psychological distress and measures to improve psychological well-being of people with limb disability are necessary. Counseling programmes would be helpful to manage

psychological distress of the physically disabled in the community. Community home based care services need to be developed and implemented to ensure rehabilitation, proper referrals and psychological well-being among those with limb disability. Rehabilitation programmes should be implemented targeting the people with severe limb disability especially who are without proper family and community support.

Keywords: Physical disability, prevalence, psychological distress, coping strategies, utilization of services, limb disability

0117. Weeratunge, W.M.M.W.N.C.

Prevalence of stress and factors associated with stress among school going advanced level students in Gangawata education division , Kandy.

MSc. Community Medicine – 2013   **D 3384**

Abstract

Introduction:

General Certificate of Education Advanced Level (G.C.E A/L) is a major turning point in an adolescent's life in Sri Lanka. This period is particularly psychologically stressful due to several factors. The psychological stress, its prevalence and associated factors among adolescents who are G.C.E A/L students is unexplored to a greater extent in Sri Lanka.

Objectives: To determine the prevalence of psychological stress and its associated factors among G.C.E students attending government schools in Gangawata Educational Division, Kandy.

Methods: A descriptive cross sectional study was carried out among 840 G.C.E A/L students in 13 schools during August 2013 to January 2014. Stratified cluster sampling with probability proportionate to size was used and a class was considered as a cluster. A self administered questionnaire comprising of Stress Sensation Inventory and items on demographics, home environment, personal relationships, religious and leisure activities and tuition activities s utilized for data collection. Data were analyzed using chi square test with SPSS 17.0.

Results: The final sample was 813 with a response rate of 96.8%. The overall prevalence of psychological stress was 63.2% (95% C.I 59.9% - 66.5%) with 61% of the study sample having moderate level of stress and 2% having high stress. Among females 65.2% and 60.8% of male students were stressed. Ethnicity and religion were associated with psychological stress (p<0.03). Type of school, subject stream and

grade at entry to current school is significantly associated with psychological stress (p<0.02). Parents' education level, occupations or social class of the family were not significantly associated with psychological stress. Parents' enthusiasm and encouragement for academic work was significantly associated with psychological stress and 79% of stressed students were seen with over-enthusiastic parents (p<0.001). Presence of family financial difficulties was significantly associated with psychological stress (p=0.001). Discussion of personal problems with another person was significantly associated with psychological stress and the other party involved in discussion was most frequently a friend seconded by parents. Presence of a love affair (p=0.003) and force to start a love affair (p=0.001) were associated significantly with psychological stress however, among males, the association of presence of a love affair and psychological stress is not significant. The presence of supportive friends or presence of force for antisocial activities by friends is not associated with psychological stress. Presences of hobbies, religious activities or tuition activities were not associated with psychological stress.

Conclusions and recommendations: As psychological stress plays a major role in a G.C.E A/L student's life, there is a need to strengthen the stress management programmes, life skills program and counselling services within the school setting. Good parenting skills should be promoted among adolescents' parents. Programmes are needed to educate teachers regarding bullying in schools and empowerment of students against bullying.

Keywords: stress, psychological stress, student, adolescent

0118.Wellappuli, N.C.

Chronic periodontitis among 30- 60 year olds in the Colombo district.

MD Community Medicine – 2014   D 3480

Abstract

The aim of the present study was to determine the periodontal disease status, oral health related quality of life and risk factors for chronic periodontitis among 30-60 year olds residing in the Colombo district.

The study consisted of two components. The first component comprised of cross sectional- community based study involving 1400 of 30-60 year olds residing in the district of Colombo to assess the periodontal disease status and oral health related quality of life. The second component consisted of case control study to determine risk

factors for the c2hronic periodontitis in this sample. Having defined "chronic periodontitis", 694 cases and 706 controls were identified from the cross sectional study conducted under component one. Clinical case definitions proposed by the Centers for Disease Control and Prevention in 2003 for population based studies of periodontitis were used to identify cases, for the study. All cases and controls identified from cross sectional study were used for the case control study.

Data were collected by means of three interviewer administered questionnaires, a physical and a clinical oral examination. The first interviewer administered questionnaire consisted of three parts and was used to gather basic demographic, socioeconomic information, life style factors and medical history. The second questionnaire included the Sinhala version of the General Health Questionnaire (GHQ)-30 to assess psychological distress, while the third questionnaire included the Sinhala version of the Oral Health Impact Profile (OH1P)- 14 which has been validated for Sri Lankan population to assess the oral health related quality of life of individuals. Standing body height, weight and waist circumference were measured during the physical examination. The clinical oral examination included the assessment of bleeding on probing (BOP), measurement of periodontal pocket depth (PD), clinical attachment loss (CAL) and recession (R) on six surfaces of all teeth (mesio-buccal, buccal, disto-buccal, lingual and mesio-lingual surfaces) present in the mouth excluding the third molars.

Periodontal disease status was presented according to three dimensions namely prevalence ,the extent and the severity.

Prevalence of chronic periodontitis in the sample was 49.6% and of those with chronic periodontitis 36.1% and 13.5% had moderate and severe periodontitis respectively.

The mean percentage of sites with pockets of 4-6mm and > 7mm were 19.25 ($\pm$ 12.55) 3.37 ($\pm$ 4.17) in cases with chronic periodontitis while it was 2.56 ($\pm$ 2.63) and 0.0 0.32) in the controls (No periodontitis). The differences between the two groups were highly significant ($p < 0.001$).

The mean percentage of sites with clinical attachment loss (CAL) of l-3mm, 4-6mm a 7mm were 16.82 ($\pm$ 8.84), 11.44 ($\pm$ 4.91) and 5.18 ($\pm$ 4.11) in cases with chronic periodontitis while it was 3.00 ($\pm$ 2.88), 0.22 ($\pm$ 0.57) and 0.0009 ($\pm$ 0.023) in the con The differences between the two groups were highly significant ($p < 0.001$).

The prevalence of bleeding on probing (BOP) among the study sample was nearly 93°/a statistically significant association between bleeding on probing and age was evident ($p< 0.001$). Nearly 50% of the sample had at least one site with gingival recession of >

Age was significantly associated with gingival recession (OR = 46.25, 95% CI: 324 99, p< 0.001).

Pain (48.7%) was the most common impact experienced by those with chronic periodontitis. Nearly 41%, 60% and 69% of subjects with no periodontitis, moderate periodontitis and severe periodontitis had experienced at least one oral impact item often/very often. Total Oral Health Impact Profile-14 scores were significantly different between cases of chronic periodontitis and controls (p < 0.001). Except for the ha subscale, scores for all other subscales of the OHIP-14 namely functional limitation physical pain, psychological discomfort, physical disability, psychological disability and social disability were significantly different between cases with chronic periodontitis controls.

Bivariate analyses of data from case control study identified several risk indicators of chronic periodontitis. Age, gender, low educational level, employment status, average household income, alcohol consumption, combinations of types of alcohol drinking, pattern of drinking of arrack, beer and whisky, duration of drinking of arrack, beer and whisky, smoking, pattern and duration of cigarette smoking, pattern, duration and number of betel quid chewing, mode of brushing, history of dental care, last visit to the dentist, diabetes mellitus, hypertension and psychological distress were the factors significantly associated with chronic periodontitis. According to the multivariate analysis diabetes mellitus (OR= 4.46, 95% CI: 2.00-5.09, p =0.009), hypertension (OR= 3.38, 95% CI: 1.89-3.87, p= 0.007), age (OR= 4.40, 95% CI: 3.37-5.74, p < 0.001), gender (OR= 2.13, 95% CI: 1.58-2.88, p < 0.001) psychological distress (OR= 6.96, 95% CI: 3.07-15.74, p < 0.001), educational level (OR- 1.85, 95% CI: 1.45- 2.37, p <0.001), smoking habit (OR= 6.42, 95% CI: 2.66-15.46, p < 0.001) and betel chewing (OR= 1.76, 95% CI: 1.16-2.68, p = 0.008) emerged as risk factors of chronic periodontitis. In conclusion the prevalence of chronic periodontitis was high in this sample of adults and age, gender, low educational level, smoking, betel chewing, diabetes mellitus, hypertension and psychological distress, were risk factors for chronic periodontitis. Further, oral health related quality of life was significantly affected in cases with chronic periodontitis compared to the controls. Therefore, there is necessity to develop preventive strategies for the early detection and control of periodontal diseases. This study provides valuable information needed to develop such strategies as well as for planning services for treatment of chronic periodontitis. It is recommended that further studies are carried out to determine the additional risk factors for chronic periodontitis.

0119.Waragoda, W.A.J.L.

Peripheral arterial disease among adults in the district of Gampaha : prevalence, awareness , risk factors and risk prediction.

MD Community Medicine - 2014   D 3432

Abstract

Introduction : The peripheral arterial disease (PAD) is a slowly progressive atherosclerotic disease affecting vital organs of the body. Coronary artery disease (CAD), cerebrovascular disease (CVD) and peripheral arterial disease (PAD), are the leading atherosclerotic diseases contributing to global morbidity and mortality burden. The PAD is increasingly recognized as a health burden worldwide (Marso and Hiatt, 2006). The prevalence of PAD in European population ranges from 0.6% to 10% among the age 40-70 years and the prevalence of PAD among people over 70 years of age was 10% to 20% (Elizabeth and Erlinger, 2004, Norgren et al,, 2007, Sigvant et al., 2007). PAD has not emerged as a public health problem in Sri Lanka yet, possibly due to lack of data. For sustainable preventive strategies in a country, it is necessary to identify the magnitude of the problem and country-specific modifiable risk factors. The objective of the study was to describe prevalence, awareness, clinical and biochemical, characteristics and risk factors of peripheral arterial disease and to develop a risk prediction model to assess the risk of peripheral arterial disease among 40-70 years old adults in the district of Gampaha.

Methodology : The study comprised of three main components. Component I, was a community based cross sectional study to estimate prevalence and awareness of PAD, and to describe the clinical and biochemical characteristics of adults with PAD among adults age 40-74 years; component II, a case control study to identify risk factors of peripheral arterial disease; and component III was to develop and validate a risk prediction model to assess the adults who likely to have PAD.

The ABPI score obtained from arterial doppler that provide objective data to diagnosis of PAD. Since ABPI score has not been validated to identify PAD in Sri Lanka it was validated against the findings of the colour duplex scan. The best cutoff level ABPI score indicated in the ROC curve to diagnose PAD was 0.89. Thus those who had an ABPI score in either lower limb were diagnosed as having PAD. The sensitivity of ABPI score at 0.89 to diagnose PAD was 87% and specificity was 99.1%. The sample

size for the cross sectional study was 2912 adults age 40-74 years obtained from 104 clusters in four randomly selected divisional secretariat areas in the district of Gampaha using multi stage probability proportionate to size cluster sampling method. The clusters size was 28. The response rate for the cross sectional study was 95.4%. Data collection was carried out by a trained interviewer at the respondents' residence using an interviewer-administered-questionnaire. Arterial doppler study was carried out among all participants to assess the ABPI score by the principal investigator. The case control study was carried out to assess risk factors of PAD using 79 cases and 158 controls in order to have case to control ratio 1:2. Cases were selected from those who had ABPI 0.85 or less (ABPI <0.85) in either lower limb. Controls were selected from those ABPI score between 1.18-1.28 in both lower limbs.

Results : Eighty eight were found to have PAD. The crude prevalence was 3.16%. The age and sex standardized prevalence was 3.13%. The prevalence of PAD adjusted for the sensitivity of the ABPI was 3.6% (95% CI= 2.9-4.3). The adjusted prevalence of PAD among males was 3.7% (95% CI= 2.7-4.7) and in females 3.6% (95% CI= 2.7-4.5). No respondents found with PAD below 45 years of age. The prevalence of PAD among adults age 45-54, 55-64, and 65-74 years was 1.4%, 3.2% and 13.6% respectively. There was a statistically significant trend in occurrence of PAD with increasing age (x^2 trend = 109.4, df=l, p< 0.001). Among those with PAD a history of diabetes mellitus, hypertension and dyslipidemia were found in (n=63, 71.6%), (n= 69, 78.4%) (n=65, 73.8) respectively. Among those with PAD 10.2% (n=14) had history of coronary artery disease and 11.4% (n=10) cerebrovascular accidents while the erectile dysfunction was found in 62.2% (n= 28) of males with PAD. All these proportions were significantly higher among those with PAD (p<0.001). The awareness of PAD among respondents was only 4.1% and much lower than the awareness of cerebrovascular disease (67.3%) and myocardial infarction (57.6%). The physician, family member or friend was the source of information for more than 75% of respondents who were aware of PAD and only 10% had got information from electronic or printed media.

The case control study was carried out to assess risk factors of PAD and found diabetes mellitus (OR: 5.6, 95% CI=1.3-16.0), hypertension (OR: 3.6, 95% Cl=l.2-11.3) and dyslipidemia (OR: 4.9, 95% CI=1.6-11.3) were significant risk factors of PAD. The risk of PAD by having 10 years or more duration of diabetes mellitus (OR: 5.8, 95ᶜ CI=2.2-14.2), hypertension (OR: 3.8, 95% CI= 1.8-12.7) and dyslipidemia (OR: 4.9, 95% CI 2.1-16.2) were also found significant. The ever smokers compare to nosmokers

(OR: 2.9, 95% CI= 12.-6.9), hyperhomocysteinemia (OR: 3.0, 95% Cl=l.11 - 8.1) and Elevated HsCRP (OR: 3.7, 95% CI=1.2-12.0) were also found as significant risk factors.

A risk prediction model was developed to identify variables which would need to develop the risk assessment tool to detect adults who are likely to have PAD. The factors included for the risk prediction model was age, history of duration of diabetes mellitus, hypertension and dyslipidemia and ever smoking status. A single summary risk score which predicts the overall individual risk of having PAD was calculated per individual by summing weighted scores given for each risk predictor relevant to the individual. The total summary score ranges from 0 to 23. The risk prediction model was validated using individuals with and without PAD confirmed by colour duplex scan. The best cutoff level of total summary score indicated in the ROC curve to predict individuals those who likely to have PAD was 9.5. At the level of total summary score 9.5 the sensitivity of the risk prediction model was 82.4% and specificity was 64.6%.

Discussion : All individuals diagnosed as PAD in the cross sectional study were newly diagnosed. Therefore, PAD is a hidden disease in the community. The awareness of PAD in the community is also low. The identified risk factors of PAD are showing increase in trend in Sri Lanka. Therefore the prevalence of PAD also tends to be higher in future.

Ministry of Health should take this matter in to consider seriously and more comprehensive community based preventive programmes with primordial and primary preventive strategies need to be initiated taking in to account the modifiable risk factors associated with PAD. Screening programmes for PAD should be strengthened at primary, secondary and tertiary care hospitals and at field level screening clinics for non communicable disease. The risk assessment tool developed from the risk prediction model in the present study is recommended to use at each level of hospitals to identify people who likely to have PAD and refer them for confirmation and further management. For a successful preventive programme the public awareness is essential and should be improved by in-cooperating PAD to all awareness, health education or health promotion activities and social marketing programmes related to non communicable diseases.

Keywords: prevalence of peripheral arterial disease, validation of ankle brachial pressure index, risk factors of peripheral arterial disease, risk prediction model

0120. Wickramaararchchi, T.T.S.

Risk behaviours and their associated factors , willingness and barriers for protective behaviours for non-communicable dies among students of the Faculty of Engineering,

University of Ruhuna.

MSc. Community Medicine – 2013   D 3390

Abstract

Introduction: Non communicable diseases (NCDs) are thriving in the low and middle income countries. Risk behaviours for NCDs need early identification for successful preventive attempts. The lifestyles within universities differ from the general population as revealed by some studies done so far. In Sri Lankan context the availability of such data is scarce. This study aimed filling this information gap. The objective of this study was to describe the risk behaviours for NCDs and their associated factors among students of the Faculty of Engineering, University of Ruhuna and their willingness and perceived barriers for protective behaviours for NCD. Methods:

The study was a descriptive cross sectional study done at the Faculty of Engineering, University of Ruhuna over a period of one month. A sample of 421 students was selected by simple random sampling. A pre-tested self administered questionnaire was used to collect data on socio-demographic variables, diet, physical activity, smoking and alcohol use, willingness and perceived barriers for healthy behaviours. Chi square and t tests were used to determine the associations with level of significance at 0.05.

Results: The response rate was 93.1%. The mean age was 23.14 (SD=1.34) years with a majority) being males (78.4%). Sinhalese and Buddhists were 88.1% and 83.6% respectively Inadequate vegetable and fruit consumption was seen among 54.8% and 69°/ respectively. Only 1.9% consumed at least one fruit item per day. One quarter (25% was having 3 rice meals per day but 76.3% did not consume any other cereals for main meals. The proportions taking bread/buns/burgers (57.5%), short eats (40.5%) an instant noodles (29.6%) for main meals were high. According to World Health Organization standards, only 10% gained sufficient physical activity through the usual mode of travelling (walking and riding a push bike). Only 26.4% were using

the faculty gymnasium and 34.4% never participated in sports/recreational activities. Even among the users of the gymnasium or participants of sports/recreational activities, 48.3% did not have adequate physical activity levels. The majority (92.9%) was spending >4 hours of sedentary behaviour (being seated) per day. Current smokers and alcohol users were 11.16% and 25.7% respectively. The mean number of cigarettes smoked was 9.17 (SD =1.19) per week. Average weekly alcohol consumption was <5 units among 66.3% - the users. Being a non-Sinhalese, having an average monthly income of>Rs. 30,00 faculty canteen not being a source of meals and being a female were significantly associated with unhealthy consumption patterns of main meals. Amount of instant noodles consumed per week was high among the 1st or 2nd year students (p<0.001). Males (p=0.002) and non-Sinhalese (p0.00l) were consuming higher amounts of carbonated drinks. A positive family history of NCDs was associated with inadequate physical activity gained through travelling (p=0.009) in the study sample. Females (p0.00l) and 3rd and 4th year students (p=0.003) were less likely to use the gymnasium or engage in sports/recreational activities. Females have inadequate physical activity than males (p=0.036). Hours of sedentary behaviour spent per day showed no associations. Father (p=0.032; p=0.001) or a friend (p=0.001; p0.00l) being a smoker or an alcohol consumer was associated with the presence of respective behaviour in the respondent. Majority were aware of their unhealthy diet (75.1%) and insufficient physical activity (68.5%). Great proportions of inadequate fruit and vegetable consumers (90%), students with insufficient physical activity levels (92.9%) and current smokers (66%) were willing to change. But a minority of current alcohol users (28.6%) was willing to change. Non availability of healthy food in the canteen (61.7%) and in the outside food outlets (54.5%) were the commonest perceived barriers for healthy eating. The majority (92.7%) perceived lack of time as a barrier for adequate physical activities. The presumption that smoking and use of alcohol alleviate stress was the barrier identified among the most, who were willing to quit the behaviour. Majority (56.3%) did not want to give up smoking as they thought smoking relieved their stress. Consumption of a small amount of alcohol was the commonest (65.8%) reason for not considering quitting alcohol.

Conclusion and Recommendations: Risk behaviours for NCDs were common among the University students. Multiple factors such as sex, ethnicity, average monthly income, sources of meals, academic year, family history of NCDs and father/friend's alcohol and smoking behaviours were associated with risk behaviours.

Unavailability of healthy food, lack of time and presumption of alcohol and smoking as stress relievers were perceived barriers for a healthy lifestyle. Students should be made aware of the healthy coping strategies for psychological stress. Health promoting universities with environments conducive for healthy lifestyles need to be implemented to improve the students' lifestyles.

Keywords: NCD, risk behaviours, University students

0121. Wickramasinghe, S.A.

Prevalence , associated factors and the knowledge related to known risk factors of birth defects among pregnant mothers in Panadura Medical Officer of Health area.

MSc. Community Medicine - 2013   D 3422

Abstract

Introduction: Birth defects are rising in its importance as a cause for still births and neonatal deaths. Several factors have been identified as increasing the possibility of occurrence of birth defects. Prevention strategies are available for some of these risk factors.

Objectives: This study attempted to describe the prevalence and factors associated with known risk factors of birth defects among pregnant mothers in Panadura MOH area and their knowledge on risk factors and strategies available for prevention of birth defects.

Methods:A cross sectional descriptive study was conducted among pregnant mothers who were in their third trimester and were permanent residents in the Panadura Medical Officer of Health (MOH) area. Four hundred and forty mothers were selected by simple random sampling, among the eligible mothers who were registered at the Panadura MOH office. Data were collected via an interviewer administered questionnaire. SPSS version 17 was used for data entry and data analysis.

Results: The response rate was 96.8%. Most prevalent risk factors were failure to take preconceptional folic acid (49.3%), exposure to smoke of the firewood (45%), overweight and obesity (25.3%), advanced maternal age (12.7%) and exposure to cigarette smoke (10.1%). Over three fourths of the study group had at least one risk factor. Several socio demographic, socio economic and obstetric characteristics had significant associations with different risk factors. For example, low level of education (below secondary level) was significantly associated with failure to take preconceptional folic acid (p<0.000), not being vaccinated against rubella infection (Fishers' exact test 0.004), being exposed to 1 smoke (p=0.009).When their knowledge was assessed, 56.1% had knowledge above the average. Most commonly identified risk factors were folic

acid deficiency (98.4%), consanguinity (96.9%) and exposure to cigarette smoke (96.2%). Least commonly identified risk factor was exposure to X-ray during the first trimester (66.7%). Majority of mothers were aware of importance and correct timing of folic acid supplementation (98.1% & 97.4% respectively). Most of the mothers were not aware on the importance of vaccination against rubella infection (61.7%) and timing of vaccination (30.5%).

Conclusions and recommendations: Most of the assessed risk factors were present to some extent in the study pc Though overall knowledge was adequate, knowledge on some risk factors and p strategies available was inadequate. Measures should be taken to improve the knowledge on those factors.

Keywords:Neonatal mortality, Congenital anomalies, Prevention strategies

0122.Wickramasinghe, W.A.N.D.

The burnout subtypes and associated factors among police officers in the Kandy Police division.

MSc. Community Medicine - 2012   D 2964

Abstract

Though burnout, to a larger extent, and its subtypes, to a lesser extent, have been explored among individuals involved in a wide range of occupations across the globe, it has not gained much attention in Sri Lanka. Even though, policing has been identified as an essential human service profession involving very high levels of occupational stress and burnout, no studies have been conducted with regard to identifying burnout subtypes among police officers globally.

Hence this study was designed with a view to determining the distribution of burnout subtypes and associated factors among police officers in the Kandy police division.

A cross sectional study was conducted from August 2012 to January 2013 among a randomly selected sample of 495 police officers working in the Kandy police division with at least six months experience in the current police rank. The response rate was 100%. A self-administered questionnaire which also included the "Burnout Clinical Subtype Questionnaire" (BCSQ-36) to assess the burnout subtypes was used to collect data. The score corresponding to the 75th percentile was used as the cut off to categorize highly burn out officers from the rest. The associations of socio demographic and occupational factors with burnout subtypes were quantified using crude odds ratio in the

bivariate analysis. The multivariate analysis using a multiple logistic regression model estimated the adjusted odds ratios of the elicited associations.

All three burnout subtypes showed slightly skewed distributions which can be approximated to normal distributions given the display of having similar measures of central tendency. The police officers in the Kandy police division , on average had high for frenetic (mean=4.72,SD=0.97,% mean score 67.4%) and worn-out (mean=3.88, SD=0.95,% mean score 55.4%) subtypes in comparison to the under challenged (mean= 3.41,SD=0.94,% mean score 48.7%) subtype.

Even though bivariate analysis revealed several significant socio demographic factors for frenetic subtypes none of them showed statistical significance at the multivariate analysis. A monthly income of Rs. 20,000.00 or less was a statistically significant (p=0.034) socio demographic factor which had a positive association (adjusted OR=1.9; 95%CI=l .l-3.4) with under challenged subtype. Married police officers had a lower likelihood (adjusted OR=0.4; 95%CI=0.2-0.8) for being highly worn-out subtype in comparison to those who were not married and this association was statistically significant (p=0.005).

Among the occupational factors, gazetted police officers were predisposed (adjusted OR=l 8; 95%CI=l.l-3.0) to frenetic subtype as opposed to non-gazetted officers while, police officers who were working in the police stations in ASP Kandy I district were less likely (adjusted C)R=0.6; 95%CI=0.4-1.0) to have frenetic subtype than those working in police stations in other police districts. Both these associations were statistically significant (p=0.025 and p=0.034 respectively).

Service experience of less than 20 years was found to be a significant factor (p=0.024) predisposing for under challenged subtype (adjusted OR=1.8; 95%CI=11 -2 9) Satisfactory infrastructure facilities at work (adjusted OR=0.4; 95%CI=0.2-0.6) and satisfactory support from higher rank officers (adjusted OR=0.3; 95%CI=0.2-0.5) were identified as occupational factors with statistically significant lower likelihood of getting under challenged subtype (p<0.001). Overall job satisfaction (adjusted OR=0.4; 95%CI=0.2-0.8), satisfaction about allowances (adjusted OR=0.5; 95%CI=0.3-1.0) and satisfaction about the opportunity to serve the public (adjusted OR=0.2; 95%CI=0.1-0.6) emerged as statistically significant factors (p=0.005, p=0.050 and p=0.003 respectively) that showed negative associations with under challenged subtype.

Perceived satisfaction on staff adequacy (adjusted OR=0.5; 95%CI=0.3-0.9), more frequent superior guidance (adjusted OR=0.5; 95%CI=0.3-0.9) and satisfactory support from higher rank officers (adjusted OR=0.3; 95%CI=0.2-0.6) were found to be

statistically significant (p=0.027, p=0.013 and p=0.001 respectively) factors which showed lower likelihood for worn-out subtype. Police officers who were satisfied about the allowances (adjusted OR=0.4; 95%CI=0.2-0.8), about the opportunity to serve the public (adjusted OR=0.3; 95%CI=0.1-1.0) and who had overall job satisfaction (adjusted OR=0.5; 95%CI=0.3-0.8) were less likely to have worn-out subtype when compared with the officers who were not satisfied about the above aspects of their job (p=0.011, p=0.045 and p=0.006 respectively).

In conclusion it should be stated that the high mean scores for burn out sub types were indicative of high burn out subtypes existing among the police officers in the study population. Though only a few socio-demographic factors emerged as significant predictors of bum out sub types, there was a considerable amount of predictors related to occupational factors. Given the modifiable nature of many of these significant predictors it is recommended to design a package of interventions and implement adaptive measures to rectify the problems related to burnout subtypes among police officers.

Key words: Burnout subtypes, BCSQ-36, Police officers

0123. Wijegoonewardene, M.N.Y.F.

Knowledge, attitudes, practices and associated factors related to the use of emergency contraceptive methods, among Sinhala conversant married females of 15 – 49 years of age in the Dehiwala Medical Officer of health area.

MSc. Community Medicine - 2013   **D 3400**

 Abstract

Background: Emergency contraceptive methods (ECM) can be used by a woman to prevent an unintended pregnancy following unprotected or inadequately protected sexual intercourse. Despite the availability of effective contraceptive methods, a large number of induced abortions occur in Sri Lanka without any medical indication. If females were to use ECM in a needy situation, these abortions and their consequences could have been prevented or reduced.

Objectives: The study was aimed at describing the knowledge, attitudes, practices and associated factors related to the use of ECM, among Sinhala conversant married females of 15-49 years of age in the Dehiwala Medical Officer of Health (MOH) area

Methods: This study was a community based, descriptive cross-sectional study carried out in the Dehiwala MOH area among 420 Sinhala conversant, married females in the

15-49 years age group. Study participants were selected using simple random sampling and probability proportionate to sample size method.

The study instrument was an interviewer-administered questionnaire with close-ended questions. The knowledge was assessed on a scale of 0-15, while attitudes were assessed using the Likert scale. The associations were analyzed using the Chi square test, taking $p<0.05$ as significant.

Results: The awareness on ECM in the study participants was 35.5%. The knowledge, attitudes and practices were assessed only among the females with awareness. The commonest source of information on ECM was public health staff. Only 3.4% of the respondents with awareness had good knowledge, while 28.9% had very poor knowledge. Positive attitudes on ECM were observed in 51.7% of participants with awareness, while negative and neutral attitudes were seen in 25.5% and 22.8%, respectively. The proportion of females with awareness, whohad ever used ECM in the sample was 13.4%. The commonest reason for using ECP was non-use of a family planning method. Fifteen percent of the ever-users had misused product during their lifetime. The awareness of ECM was positively associated with Sinhala ethnicity, Buddhist religion, having an occupation, lesser number of children lower age of youngest child of the respondents ($p<0.05$). The non use of a regular contraceptive method was found to be positively associated with the knowledge level on ECM ($p<0.05$). The attitudes on ECM were significantly favourable in unemployed fen females with lower income, females with no previous unplanned pregnancies and females having more frequent sexual intercourse($p<0.05$). The ever-use of ECM was positively associated with increased age, absence of previous pregnancies and less frequent intercourse ($p<0.05$). Favourable attitudes of the respondents were positively associate higher ever-use ($p<0.05$). The level of education of participants was found to h; association with the awareness, knowledge level, attitudes or practices of ECM ($p>0.05$).

Conclusions and recommendations: The awareness on ECM in the respondents was poor, and the overall level of knowledge the subject seemed inadequate. The ever-use of ECM seemed to be low, even though of ECP was also observed. Health education programmes need to be carried out on increase the awareness and level of knowledge on ECM, and the attitudes on ECM n< improved through effective counseling. Future research should aim at identifying the knowledge, attitudes and practices of ECM in unmarried females of reproductive age.

0124.Wijesekera, N.M.

An assessment of quality of documentation in medical records by medical officers district of Sri Lanka and effectiveness of an educational intervention to improve the quality of documentation.

MD Community Medicine - 2014   **D 3421**

Abstract

The cross sectional survey carried out to determine the prevalence of Medical Records having 'good' overall quality of documentation of all entries in Kalutara district showed that it was only 6.1% (95% CI=4.7-7.5%). For the quality aspect 'availability' the prevalence of Medical Records categorized as 'good' for all entries in the Medical Record was only 6.3% (95% CI=4.9-7.8%) while for 'legibility' it was only 1% (95% CI=0.5-1.7%), for 'adequacy' 7.3% (95% CI=5.8-9.0%) and for quality aspect 'accountability' a paltry 0.2% (95% CI=0.0-0.5%). In analyzing the results it was found that quality of documentation in Medical Records by medical officers of the Out Patients Department, ward medical officers on initial contact with the patient as well as ward medical officers on separation of the patient were all poor. It was revealed that the quality aspect 'availability' of the administratively and statistically most important entry documented by medical officers, the principal/final diagnosis was high (84.5%). However, the 'legibility' (56.6%) and various aspects of 'adequacy' of the principal/final diagnoses were found to be low. Furthermore, in analysing the results of individual entries documented by medical officers it was revealed that the quality of documentation of most of these entries were poor. The cross sectional study to determine the prevalence of medical officers having a 'good' overall knowledge on Medical Record documentation was found to be only 15.6% (95% CI=11.3-20.5%). This study assessed knowledge on Medical Record documentation among medical officers under ten domains also and the results of all except one of them were poor.

The intervention study carried out to determine the effectiveness of the educational intervention showed that the overall quality of documentation in Medical Records was 'good' in only 6.1% Medical Records that were analyzed in Kalutara district (intervention district) while the corresponding proportion in Matara district (control district) was 7.1% and were not statistically significant at the pre-assessment stage (p>0.05). The levels of quality of documentation of different aspects of documentation, namely availability, legibility, adequacy and accountability of the intervention and control groups were also

similar and were not statistically significant (p>0.05) at the pre-assessment stage and the two groups were similar and comparable.

Twelve weeks after the education intervention, the 'good' overall quality of documentation in Medical Records has significantly increased to 69.7% at the first post-assessment from 6.1% at the pre-assessment stage in Kalutara district (p<0.001) while in Matara district the increase was marginal from 7.1% (pre-assessment) to 7.5% (first post- assessment) which was not statistically significant (p>0.05). In comparing different aspects of quality, 6.3% Medical Records were having 'good' quality with regards to 'availability' in the pre-assessment and this proportion has significantly increased to 65.1% in the first post-assessment in Kalutara district (pO.OOl) while for Matara district it was an insignificant change from 5.2% to 6.2% (p>0.05). Medical Records having 'good' quality with regards to 'legibility' significantly increased from 1.0% to 13.7% (pO.OOl), 'adequacy' from 7.3% to 72.8% (pO.OOl) and 'accountability' from 0.2% to 4.5% (pO.OOl) in the first post-assessment in Kalutara district while for Matara district the changes were non-significant for 'legibility' 1.6% to 2.2% (p>0.05), for 'adequacy' 8.2% to 11.0% (p>0.05) and for 'accountability' 0.2% to 0.1% (p>0.05). In comparing the results of individual entries documented by medical officers in the pre and first post-assessment Medical Record samples of Kalutara district it was revealed that they have improved greatly following the education intervention. It was observed that no such increase was detected in Medical Record samples analyzed from Matara district. In comparing overall knowledge on Medical Record documentation of medical officers in Kalutara (15.6%) and Matara (18.9%) districts at pre-assessment stage both groups were similar and comparable (p>0.05). The overall knowledge on Medical Record documentation among medical officers of the Kalutara district have significantly increased from 15.6% to 78.0% (p>0.001) in the post-assessment while in Matara district a non-significant increase from 18.9% to 24.0% (p>0.05) was observed. In comparing these results it is inferred that the education intervention carried out in Kalutara district is effective.

A second post-assessment to assess the quality of documentation in Medical Records by medical officers was carried out six weeks following the first post-assessment to determine the sustainability of the education intervention. On analysing the results of Kalutara district the 'overall' quality of documentation in Medical Records for first post- assessment was 'good' in 69.7% and for the second post-assessment the corresponding figure was 68.3%. The marginal decrease observed between first and

second post- assessments were not statistically significant (p>0.05). In comparing results of first and second post-assessments for the quality aspect 'availability' the figures were 65.1% and 63.7% respectively and the observed marginal decrease was not statistically significant (p>0.05). Furthermore, in comparing the results of first and second post-assessments for other aspects of quality of documentation in Medical Records 'legibility' (13.7% to 12.8%), 'adequacy' (72.7% to 71.3%) and 'accountability' (4.5% to 4.3%), the decreases were not statistically significant (p>0.05). In comparing the results of individual entries documented by medical officers in the first and second post-assessment Medical Record samples of Kalutara district it was observed that changes between them were marginal. When these facts were taken into consideration it is inferred that that the education intervention conducted for medical officers on proper documentation in Medical Records is sustainable over time.

The study concluded that the Physician Documentation Quality assessment Instrument was found to be a valid and a reliable instrument to assess the quality of documentation in Medical Records in the Sri Lankan setting. The overall quality of documentation in Medical Records and all aspects of documentation quality and knowledge on Medical Record documentation among medical officers were, mostly poor in selected hospitals of Kalutara district prior to the educational intervention. The educational intervention on proper documentation in Medical Records were found to be effective and sustainable over time.

It is recommended that educational intervention designed in the present study to be implemented as an in-service training in health institutions of other districts of the country and Physician Documentation Quality assessment Instrument to be used to assess, to evaluate the trainings and in periodic audits of quality of documentation in Medical Records to identify the lapses in quality of documentation. The study also recommends a revision of the format of Medical Record forms to be more user-friendly and brought to a single standard size.

Keywords: Medical Records, Medical Record documentation, medical officers, quality of documentation in Medical Records, knowledge on Medical Record documentation

0125.Wijesinghe, M.S.D.

Client –perceived quality of antenatal and intranatal care and its association with service utilization in Ratnapura district

MD Community Medicine – 2012   **D 2987**

Abstract

The antenatal period presents important opportunities for reaching pregnant women with interventions that may be vital for their health and well-being and that of their infants. To achieve the best outcome of the pregnancy, adequate, timely and hygienic intranatal care is considered crucial. Antenatal care and intranatal care are vital areas where quality of care can play a major role in ensuring the wellbeing of the mother and the child. Assessment of client perceptions of the services is widely recognized as a useful tool in maternity services in developed countries and such perceptions has been considered as one of the best measures of quality of care. Client perception of quality of care is critical to understand the relationship between quality of care and utilization of health services. It is also crucial for healthcare providers to identify the activities that require improvement. In Sri Lanka, where there is a widespread network of health care facilities for antenatal and natal care services with no geographical restriction on the use of the facilities for a given individual, it is not unusual for a pregnant woman to use antenatal services from different sources and make her own choice for intranatal services. These decisions are not necessarily linked to geographical access. This study developed and validated two study instruments, one each for assessing the client-perceived quality of antenatal care and intranatal care. These instruments were developed using multiple qualitative methods. They had satisfactory levels of validity and reliability. The four factor model proposed by the current study for antenatal care was able to explain 73% of the variance, while the four factor model proposed for the intranatal care was able to explain 78% of the variance. The Cronbach's alpha for the antenatal care instrument was 0.965. The Cronbach's alpha for the intranatal care instrument was 0.972   A cross-sectional study of antenatal mothers, who were followed up until after delivery was carried out in the Ratnapura district to assess the client-perceived quality of care. Logistic regression model was selected to study the association between client-perceived quality of care and service utilization. A geospatial analysis including collection of data on the location of the residencies of the participants, health institutions and other relevant attributes and analysis of data based

on the locations was conducted. The client-perceived quality of antenatal care was assessed in a sample of mothers using the developed instrument which included four domains. The lowest total mean score for a domain was reported from 'resources and accessibility' domain. There was a wide variation in the scores of client-perceived quality of antenatal care between MOH areas in Ratnapura district.

Community Dentistry

0126.Kodicara, P.L.B.C.S

Burden of dental caries and oral health related behaviours of 6-12 years old children of international migrant workers in Deltota divisional secretariat in Kandy District.

MSc. Community Dentistry – 2013   **D 3403**

Abstrct

Objective: The objective of the study was to describe the prevalence and severity of dental caries of 6-12 year old children of international migrant workers in Deltota divisional secretariat in relation to some selected socio demographic factors and oral health related behaviours, compared with children of same age group living with parents in the same locality.

Materials and Methods: A cross sectional study with a comparative component was carried out to fulfill the above objective. Using a two stage sampling method, a total of 420 children of 6-12- years of age who studied at 15 government schools of Deltota divisional secretariat in Kandy district were selected randomly. Of them, 210 were children of migrant workers (CMW) which is the study group. Another 210 children living with parents (CLWP) were selected to the study as the comparison group. They were clinically examined to assess the caries status by standard oral examination and they were interviewed prior to the oral examination. A questionnaire for the parents/guardians was sent through children. Chi Square Test was used to explore the association of the prevalence of dental caries, socio demographic factors, oral health care practices and treatment seeking behaviour patterns of these children to the parental migration status. Severity of dental caries was given as a mean DMFT/dmft and to assess the association of severity of dental caries and parental migration status, Mann Whitney-U test was used.

Results: The prevalence of dental caries of children of migrant workers and the prevalence of dental caries of children living with parents were 95.0% and 77.9%,

respectively. There was a significant association between dental caries prevalence and parental migration status (P < 0.001). Furthermore, according to the Mann- Whitney U test, a significant association was observed between severity of dental caries and parental migration status (P< 0.001). Children of migrant workers showed a mean dmft of 4.58 (95% CI =4.14-5.05) and mean DMFT of 1.34 (95% CI =1.12-1.56) while children living with parents showed a mean dmft of 3.45 (95% CI= 3.20-3.88) and a mean DMFT of 0.56 (95% CI=0.40-0.70).

Findings of this study do not reveal any association between prevalence of dental caries and the demographic factors studied, irrespective of the migration status of the parents. Oral health practices considered and the oral health treatment seeking behaviours studied were also not associated with parental migration status. Thirty one percent of children of migrant workers who ever visited a dental clinic (n=34) had regular dental visits compared to 42.7% of children living with parents (n= 50). More than 40% of children in both groups have never visited a dental clinic. Significantly high proportion of children of migrant workers {P =0.018) were not taken for dental checkups since there was nobody to accompany them to a dental clinic.

Conclusions and recommendations: The study revealed that the prevalence and severity of dental caries was high in children of migrant workers compared to their counterparts who are living with their parents in the same setting. The demographic factors, oral health practices and treatment seeking behaviours studied were not associated with the parental migration status. Therefore the factors considered within the scope of this cross-sectional study do not explain the high burden of dental caries among the children of migrant workers. Further research including comprehensive diet analysis coupled with a longitudinal study design may provide a possible explanation. However, the high burden of dental caries revealed in this study is an indication to strengthen the primary preventive activities aimed at this deprived group of children.

0127.Dhanapriyanka, H.H.M.

Prevalence and impact of tooth loss, knowledge, and attitude towards available treatment modalities for tooth loss among government school teachers aged 35 -44 year old in the education divisions of Colombo South and Borella.

MSc. Community Dentistry – 2012   D 2969

Abstract

Background - In order to maintain a better quality of life, maintaining good oral health is important. Oral diseases such as dental caries, periodontal diseases, tooth loss, oro mucosal lesions, oro pharyngeal cancers, oral manifestations of HIV/AIDS, necrotizing ulcerative stomatitis (norm), oro dental trauma, are still major public health problems in the developing countries as well as in the developed countries. Burden of oral diseases is growing in many low and middle income countries. Whereas industrialized countries spend 5-10% of their national public health resources (GNP) on dental care each year, no budget is allocated to control oral diseases in many developing countries (Kida 2006). Burden of oral diseases is likely to grow in many countries because of transition to unhealthy diet rich in sugar and increased consumption of tobacco products (Petersen 2005). Ultimate consequence of most of oral diseases will be tooth loss. Among Sri Lankan adults aged 35-44 year, tooth mortality was 5.64, and elders it was 19.85. Percentage with missing teeth and mean number of missing teeth were very high among adults and elders. Values were 81.10, 4.93 and 95.90, 15.21 respectively. Prevalence of complete tooth loss (edentulism) was very low among adults (0.1%) and 21.8% for elders. Even though tooth loss is prevalent people do not wear prosthesis. According to the prosthetic status there is a high percentage that does not wear prosthesis in 35-44 years age group. It was 88.03 and in elders it is 84.79. There is a marked discrepancy between normative need and perceived need for prosthesis in adults and elderly groups. In adults respective values are 44.4% and 11.9% for lower jaw and 34.7% andll.9% for the upper jaw (NOHS 2003 Sri Lanka). Studies from other developing countries also have reported a relatively high extent of tooth loss.

General objective - The aim of this study was to describe the prevalence of tooth loss, impact of tooth loss, among government school teachers aged 35-44 years in education divisions of Colombo South and Borella and describe the knowledge attitude towards available treatment modalities for tooth loss.

Methods - Descriptive cross sectional study design was adopted. The setting was the government schools where there were 10 or more than 10 school teachers aged 35-44 years in Education divisions of Colombo South and Borella. The study populations were all the government school teachers aged between 35-44 years working in education divisions of Colombo South and Borella. Minimum sample size was 390, after adding design effect and non response rate. Cluster sampling technique with probability proportionate to size was adopted to select the sample. Study instruments consisted of a pre tested self administered questionnaire and an oral health assessment form. Questionnaire was coded. Data entry was done using the codes by principle investigator. Data analysis was done using the statistical package for social sciences (SPSS) 17th version. Data will be presented in terms of percentages and frequencies. Chi square test was used to test the association between variables.

Results - Prevalence of tooth loss among teachers aged 35-44 years in Colombo South and Borella was 69.2%. There were no complete edentulous participants. Multiple tooth loss (60.5%, n=158) was more common than single tooth loss (39.5% n=103). Tooth loss in upper jaw as well as posterior segment was more common than in the lower jaw and anterior segment. Impacts due to tooth loss were considerable issues in this study population. Commonly felt impact due to tooth loss was pain and discomfort (23.5%). Second commonest was functional impact (19.6%). Third was social impact (13%). Last psychological impact is (5.3%). Among the study subjects who had tooth loss around 69% used prosthesis for tooth loss. Among them 82% were removable partial dentures. Only around 18% used fixed dentures. Around 50% of study participants, who had tooth loss, need further treatments. Around 38% of participants had satisfactory knowledge towards available treatment modalities. Study participants had gained knowledge most commonly through mass media (43.8%). Around 50% Of study participants had an attitude that removable dentures were better. The reason for preferring was low cost. Around 40% had an attitude that fixed dentures were better and the reason was suitability to profession. Around 3% said that there was no need of dentures for tooth loss.

Conclusions - Tooth loss as well as impacts due to tooth loss and knowledge attitude towards available treatment modalities for tooth loss was a considerable issue in this category of population. Cost effective public health interventions should target on

school teachers to improve their knowledge about the importance of healthy teeth, consequences of tooth loss, and also about the available treatment options for tooth loss as well as prevention of tooth loss.

Keywords- Tooth loss, Impact, Knowledge

0128.Hettiarachchi, R.M.

Oral health literacy status of the pregnant mothers and effectiveness of an intervention to improve the oral health literacy status of the pregnant mothers in a selected MOH area in Colombo district.

MD Community Dentistry – 2014   **D 3577**

Abstract

Introduction : Oral Health Literacy (OHL) can be defined as the 'degree to which individuals have the capacity to obtain the process and understand basic oral health information and services needed to make appropriate health decisions' (Sabbahi, 2009).

Pregnant mothers are more susceptible to oral diseases and their poor oral health is associated with adverse birth outcomes. Therefore Public health experts identified OHL as an important measure to empower women with skills and competencies to take appropriate health decisions for them as well as for their new born babies and family members. Oral Health Literacy is an unsolved area of research in Sri Lankan context and the present study is the first attempt to study OHL status among pregnant mothers in Medical Officer of Health (MOH) settings in Sri Lanka.

General objective : To describe the oral health literacy status and correlates of the pregnant mothers and to assess the effectiveness of an educational and skill based intervention to improve oral health literacy status of the pregnant mothers in a selected MOH area in Colombo district.

Methodology : This study comprised of three components.
The first component was the validation of an oral health literacy instrument to assess the OHL status of the Sinhala speaking adults in Sri Lankan context. Oral Health Literacy Instrument (OHLI) for adults (Sabbahi et al, 2009) was selected based on the more suitability to the Sri Lankan context and translated in to the Sinhala language. Modifications of the instrument were done based on the recommendations from the

multi-disciplinary group of experts. A community based cross sectional validation study conducted among 100 Sinhala speaking adults in Nugegoda MOH area. Interviewer administered questionnaire to collect basic details, adopted oral health literacy instrument (OHLI) for adults along with oral health knowledge test and previously validated, Sinhala version of short form of OHIP-14 were used as study instruments.

The second component was across sectional study to describe the OHL status and its correlates among pregnant mothers in a selected MOH area in Colombo district, conducted among 640 pregnant mothers in Piliyandala MOH area. Adopted and validated OHLI for adults and interviewer administered questionnaire to collect basic details and correlates of oral health literacy were used as study instruments. The third component was a quasi-experimental study carried out to design, implement and assess the effectiveness of an intervention to improve the oral health literacy status of the pregnant mothers. Piliyandala and Kolonnawa MOH areas were selected as an intervention and control areas respectively. Pre-intervention assessment was done among 100 pregnant mothers from each MOH areas. Adopted and validated OHLI for adults, interviewer administered questionnaire for basic details, oral health knowledge and oral health care practices of the pregnant mothers and WHO standard simplified oral health assessment form were used as study instruments. An intervention was developed and implemented to pregnant mothers' only in the intervention area and post intervention assessment was done after three months ahter the completion of intervention using the same study instruments as in the pre-intervention assessment.

Results : In the Component I of the study, majority of the study sample belonged to the age group 31 to 40 years of age (n=52), Sinhala ethnic group (93%) and educational level up to GCE O/L category (44%).

During the Component I of the study, Construct validity was established by finding outa statistically significant association of OHL scores with the higher education level (standardized P coefficient 0.280, p= 0.009) and oral health knowledge test score(Spearman's rho r= 0.549, p=0.000). Predictive validity was established by finding out significant association of OHL score with the OHIP-14 scores (standardized p coefficient - 0.348, p= 0.001) and participants' perception of their oral health status(odds ratio 1.108, 95% CI 1.036 - 1.185). Cronbach's alpha> 0.7 for the total OHL scores and test retest scores were high (Spearman rho > 0.7) for total OHL

as well as for the comprehension and numeracy components. Majority of the study sample of the Component II of the study belonged to the agegroup 21 to 30 years of age (n= 359), 98.9% of the study sample consisted of Sinhala ethnic group (n=633) and 44% of the sample had their educational level up to GCE O/L.

Mean score for the total OHL score was 80.99 (SD + 9.48) and median was 81.42 (IQR 15.06) of the study participants. Mean score for the comprehension score was 40.57 (SD + 4.96) and median was 40.0 (IQR 7.5).Numeracy score showed a mean of 40.42 (SD + 6.28) with a median of 41.7 (IQR 8.34). Majority of the participants had (72.8%) adequate OHL whereas only 1.6 % of the study sample had inadequate OHL. Four variables were found to be statistically significant correlates of the total OHL score during multivariate analysis. Income had the largest standardized P co-efficient (P = 0.217, p = 0.000), followed by no difficulty in reading oral health education materials (p = 0.172, p = 0.000), education level (p = 0.140, p = 0.001) and the skill of using internet (p = 0.095, p = 0.024). In the Component III of the study, oral health literacy scores, oral health knowledge scores and oral care practice scores of the pregnant mothers in the Intervention Group (IG) showed more improvement after the intervention compared to the Control Group (CG). In the IG total OHL score changed from the mean 71.12 (SD +12.74) and median 70.86 to mean 76.99 (SD +10.68) and median 76.42. In the CG total OHL score changed from the mean 72.28 (SD + 13.23) and median 73.08 to mean 74.11 (SD +11.78) and median 74.48. Considering the differences in the oral health literacy scores between the pre intervention and post intervention stages, pregnant mothers in the IG showed higher improvement of total OHL score with a mean difference of 5.88 and median 5.56. Pregnant mothers in the CG showed total OHL score with a mean difference of 1.83 and median 1.40 between pre and post intervention stages. Oral health literacy status of the pregnant mothers in the IG had improved more when compared with the pre- intervention stage and these pre and post differences of the oral health literacy scores were statistically significant between two groups (p=0.000).

Mean oral health knowledge for the IG was improved from mean of 11.65 (SD+ 2.54) and median of 12.0 at pre-intervention stage to mean of 13.16 (SD+ 2.12) and median of 13.0 at post intervention stage. However mean oral health knowledge for the CG had improved in small scale with the mean of 10.62 (SD+ 2.38) at pre-intervention stage to the mean of 11.09(SD+ 2.25) at post intervention stage despite the fact median is similar (11.0) in both pre and post intervention stages.

Oral care practices has improved in the IG with a mean of 6.73(SD+ 1.35) and median of 7.0 at pre-intervention stage to mean of 7.81(SD+ 1.04) and median of 8.0 at post intervention stage.

In the CG Oral care practices has improved with a mean of 6.57 (SD+ 1.25) and median of 6.0 at pre-intervention stage to mean of 6.92 (SD+ 1.13) and median of 7.0 at post intervention stage. These differences were significantly higher in the IG group than that of the CG at the post intervention stage (p=0.000).

Considering the differences in the oral health knowledge scores and oral care practice scores between the pre-intervention and post intervention stages, oral health knowledge of the IG had increased with a mean difference of 1.51 and median of 2.00.Improvement of the Oral care practices were also observed with a mean difference of 1.08 and median of 1.00 in the IG. CG reported an increase of Oral health knowledge with a mean difference of 0.47 and oral care practices with a mean difference of 0.35. These differences between two groups were found to be statistically significant (p=0.000).

During the pre-intervention assessment 70.5% of the IG and 68.8% of the control group were presented with dental caries. Around 76% of the IG and CG were presented with dental caries during the post intervention assessment. These differences were statistically not significant. Fifty (56.8%) participants in the IG and 54 (58.1%) participants in the CG had active caries at the pre intervention stage. There was no significant statistical difference of the active caries status during the pre-intervention assessment. At the post intervention stage, percentage of having active caries has been reduced to 42% in the IG and active caries percentage increased up to 68.8% in the CG at the post intervention stage. There was a significant statistical difference between the active caries status of the IG and CG during the post intervention assessment (p=0.001). The prevalence of periodontal disease was 92% for the IG and 93.5% at the pre-intervention stage. Periodontal disease prevalence was reduced to 88.6% in the IG whereas in the CG it is reduced only to 82.5%. However this difference was not statistically significant.

Conclusions : Present study concluded that adopted and validated Oral Health Literacy Instruments for adults (OHLI) was a valid and reliable instrument to assess oral health literacy status of the Sinhala speaking adults from a MOH area in Sri Lankan setting. Multivariate correlates identified by the present study were education level, income, skill of using internet and no difficulty in reading oral health education materials. The

intervention was successful in improving oral health literacy status, oral health knowledge and oral care practices and oral health status of the pregnant mothers.

0129. Jayaratne, S.S.

Knowledge, practices and associated factors regarding responsive feeding among primary caregivers of children aged 6 to 12 months attending child welfare clinics in Homagama Medical Officer of health area.

MSc. Community Dentistry – 2013   D3394

Abstract

Adequate nutrition is extremely important during childhood. This is paramount in the first two years which is a critical developmental window. Nutritional lapses during this period among a population carry heavy penalties ranging from not acquiring an individual child's full physical and cognitive potential to reduced lifetime individual earning capacity. As an evidence based intervention for reducing malnutrition in this age group, World Health Organization (WHO) recommends exclusive breast feeding for the first six months. During the next 18 months age appropriate complementary feeding in addition to breast feeding should be done. These guidelines have been incorporated into Sri Lanka's National Nutrition Policy (2010) and Maternal and Child Health Policy (2011) and are currently adopted as national recommndations.

Poor knowledge on nutrition and improper feeding practices lead to high rates of malnutrition in the below two year age group. The responsive feeding style has been shown to be of great benefit in improving the nutritional status as well as enhancing the cognitive development of the child. The community healthcare worker has a most important role to play in the development of knowledge and practice skills of the caregivers. The Public Health Midwife who is the grass root level community healthcare worker has a most important role to play in terms of strengthening infant and young child feeding practices. How far the concept of responsive feeding has entered the caregiver population of six to twelve month olds needs to be assessed in the light of the latest nutritional status assessment figures within the same age group of the country. There is a relative scarcity of data on responsive knowledge levels, sources of

knowledge and practices within the caregiver population of six to twelve month old infants.

A Descriptive Cross Sectional study was designed to assess the knowledge, practices and associated factors regarding responsive feeding among primary caregivers of children aged 6 to 12 months. Homagama Medical Officer of Health (MOH) area in Colombo district, Western

Province was selected as the study setting. The study was carried out from the 1st June to the 31st December 2013. Caregivers of 425 infants attending child welfare clinics in Homagama MOH area were included as study participants! A pretested interviewer administered questionnaire was used for data collection from all twenty five field clinics in Homagama MOH area, pre arranged with the permission of the MOH. A consecutive sampling method was used. Knowledge on responsive feeding knowledge and practices were assessed separately. Marks gained by the study participants were used to categorize them as having satisfactory or unsatisfactory knowledge or practices. The associations between knowledge and practices related to selected sociodemographic characteristics as well as some general feeding characteristics were assessed.

The majority (75.2%) were aware that breast milk with age appropriate complementary foods as most important after 6 months of age. The majority (almost 90%) were aware of the cues of satiety and 80% were aware about the proper pace for feeding a child. However gaps in the knowledge were identified regarding the earliest hunger cues and the timing of feeds as well as the need to minimize distractions during the feeding process..The source of knowledge on feeding was the Public Health Midwife (PHM) in one third of the participants. Of this only one third had been educated on responsive feeding within the preceding month by the PHM.

Almost 90% had used electronic or print media for obtaining knowledge on feeding within the preceding month. Only 28.5% had been educated on responsive feeding within the preceding month by the media. The majority (95%) gave a variety of foods to the child and 70% responded to cues of satiety. There were gaps in the practices in areas of having an appropriate, fixed place for feeding the child, talking lovingly making eye contact while feeding and speaking lovingly and trying to persuade the child to eat in food refusal. Improper practices such as distraction and forced feeding was identified.

The factors which were significantly associated with a "satisfactory", level of knowledge were participants who had a child of a higher birth order than the first, the study participants who felt that the child ate an adequate quantity at each meal and participants who were most frequently involved in feeding. The factors which were significantly associated with a "satisfactory practices" were the study participants who had completed GCE O/L and the participants who felt that child feeding was not adequate in quantity. Overall, better knowledge had better, highly significant practice scores. The study recommends that identified gaps in the service provision at field level be strengthened, Capacity building of resource personnel at MOH level, The prominent role of media in provision of knowledge on feeding be utilized to increase public awareness on responsive feeding and conducting further research especially with an observational component.

Keywords: responsive feeding. Public Health Midwife

0130. Jayashantha, P.L.P.

Dental anxiety in a Sri Lankan population.

MD Community Dentistry – 2013   D 2988

Abstract

Dental anxiety has always been one of the most common psychological conditions in the provision of dental care and it is a phenomenon that has from time immemorial contributed to the stereotyping dentists as "painful drillers and fillers of teeth". Many studies have been conducted internationally to explore dental anxiety, its causes, prevalence, and consequences and some studies have even investigated its impact on the use of dental services and oral health status. However, in the Sri Lankan context dental anxiety has been least focused on. Therefore the aim of this study is to describe the prevalence of dental anxiety in a Sri Lankan population and its association with the treatment seeking behaviours, **oral** health status and oral health impact. And further to describe the dental surgeons' knowledge on dental anxiety, attitudes towards dentally anxious patients and practices adopted in managing them. This study comprised of three main components;

(1). Selection and validation of dental anxiety measuring tool

(2).A community based descriptive cross-sectional study

(3). A survey on dental surgeons

DFS and MDAS were selected as a suitable anxiety measuring tool and validated after translated with cultural adaptation into Sinhala and Tamil languages. A validation study was conducted among patients within the age of 20-44 yrs attending the dental centers/clinics at the Air Force Bases of Ratmalana and Katunayake. Total of 105 participants were included in the study and their mean age was 29.82 years. The mean (SD) score for the MDAS was 9.85 (4.45) and median was 9.00. The overall mean (SD) for the DFS was 33.72 (14.44) and median was 27.00. Face and content validity was satisfactory and with ROC analysis the cut off points for DFS (40) and MDAS (12) were decided. Construct validity was in a moderate level although the correlations were significant. Reliability of the two scales were high (IC; DFS=0.956 & MDAS=0.897). Test-retest reliability also showed a high level of agreement (Kappa; DFS=0.877 & MDAS=0.788).

To measure dental anxiety in a Sri Lankan population a cross sectional descriptive study was conducted in the district of Kalutara among 20-44 years adults. Seven hundred subjects were selected by multistage, stratified, probability proportionate to size sampling and data were gathered by self administered questionnaire (including DFS and MDAS) and oral examination. Prevalence of dental anxiety is 39% and 32% for MDAS and DFS respectively. Females scored more in dental anxiety measures than males. Dental anxiety was significantly associated (p< 0.05) with factors such as age, gender and educational level. No significant difference was found between dental anxiety and sector or income level. Participants who received invasive type of treatment (65%) associated significantly (p< 0.05) with dental anxiety. Dentally anxious subjects had significantly fewer filled teeth and higher OHIP mean score than the non anxious.

The final component was based on a surveyconducted on dental surgeons working in the Western province to describe the dental surgeons' knowledge on dental anxiety, attitudes towards dentally anxious patientsand practices adopted in managing patients with dental anxiety. Total of 480 dental surgeons were mailed a self administered questionnaire and nearly 30% (142) had responded. This component revealed that the use of pre-treatment anxiety assessment questionnaires was low (4%) and were more

confident on behavioural diagnosis (49%). Considering the management of dentally anxious the widely used strategy was the behavioural management (more than 60%).

In conclusion DFS and MDAS are reliable and valid scales for measurement of dental anxiety in Sri Lanka. However, further research on DFS and MDAS in a specific population groups to determine the group specific norms and future research on this subject is recommended. This study revealed the requirement for including subjects and *practicals* on proper management of dentally anxious patients in par with the latest methods in undergraduate and postgraduate levels of the dental education in Sri Lanka. Finally, dental anxiety is to be identified as a barrier for service utilisation and therefore planning and implementing proper national and private sector programme is recommended.

0131.Jayathilake, K.A.R.

Oral health status , treatment need and related factors among students at Deaf and Blind Schools at Ratmalana.
MSc. Community Dentistry - 2013   D 3393

Abstract

Deafness and blindness are commonly found disabilities in Sri Lankan population, where children face many hardships in maintaining oral health care. These students with sensory impairments have limitations in maintaining proper oral hygiene compared to normal counterparts. Majority of them are from very low socio economic backgrounds, some of them without parental care and attention are at high risk of poor oral health.

Special education is provided at deaf and blind schools to differently able students, with accommodation and medical and dental care for them. Though medical inspection conducted by MOH staff routinely, sustainable dental treatment programmes are not available. Lack of routine dental checkups, preventive oral care and low level of knowledge on oral health among caregivers were identified in this institution. Identifying the prevalence and severity of common dental problems and treatment need of these deaf and blind students have a remarkable importance for planning a proper, sustainable, preventive and oral health promotion activity.

General objective : to describe oral health status, treatment need and related factors among students at Deaf and Blind schools at Ratmalana.

Methodology : A descriptive cross-sectional study was conducted. Two study samples participated. Student sample of all deaf and blind students registered at the Deaf and Blind schools at Ratmalana were selected. Available all 355 students (196 deaf and 159 blind students) during the study period aged 5 to 19 years, participated. Study sample of 135 of caregivers / mothers were included.

Three study instruments were used. Clinical examinations were done in the school sick rooms by principal investigator (Type III examination). The World Health Organization oral health assessment basic methods and form (1997) were used for data collection. Interviewer administered questionnaire was used for the students study sample and self - administered questionnaire was used for the caregivers. Data collection was done after obtaining administrative and ethical clearance. Data were entered into statistical software SPSS 15.0 and analyzed by applying the chi-squared test.

Prevalence of dental caries was reported as, 68.4% of deaf students and 66.7 % of blind students. The mean DMFT was 1.67 and daft was 2.14 for the study sample of differently able students. The mean DMFT for deaf and blind were 1.69 and 1.59 respectively. Mean daft for blind was 2.16 ±1.86 and 2.48±1.82 for the deaf students. According to plaque index one fifth (20.8%) of blind students and (5.1%) of deaf were with poor oral hygiene which was statistically significant (p =0.000).Higher scores for both gingival index and OHI - S Index were among the blind students. There was statistically significant difference in severity of gingivitis among deaf and blind students (p=0.001). Prevalence of malocclusion was nearly 27% among both deaf and blind students. The most prevalent type of malocclusion was proclined anteriors. Dental trauma was more prevalent among blind (18.2%) than 7.1% among the deaf. The difference was statistically significant (p=0.001).

Nearly four fifth (79.4%) of the study sample needed treatment for dental caries, where one surface fillings were mostly required. More than half required only oral hygiene instructions and scaling was required by 43.4% of study sample. There was 25% of orthodontic treatment need among deaf, 30.8% among blind students.

Blind students had the practice of brushing twice higher than deaf, with a statistically significant difference. Frequency of sweets consumption of deaf students was higher which would have led to higher mean DMFT for the deaf students.

Both study samples visited a dental clinic in the presence of symptoms related to oral health. Hospital clinics were mostly visited. Caregivers' knowledge on basic facts

related to oral health was adequate with a mean score of 57.5±18.46. Knowledge on vertical transmission of caries and identifying early carious lesion were poor.

Nearly 88% of the caregivers had the habit of brushing twice daily, with fluoridated tooth paste and tooth brushes. Nearly one third of caregivers had habit leading to horizontal transmission of caries. Twenty percent of the caregivers had the practice of providing sweets between meals when requested by deaf and blind students. More than half of the caregivers suggested conducting mobile clinics at the school premises, in order to improve the oral health status of these students.

Conclusion: Findings of this study highlight common dental problems were highly prevalent among these differently able A students where poor periodontal health and dental trauma were prevalent among blind students. High unmet need of treatment and lack of proper preventive and educational programmes for mothers/caregivers have to be addressed.

Key words: blindness, deafness, prevalence of common dental problems, practices, caregivers' knowledge and practices.

0132.Karunarathne, A.S.D.P.

Prevalence, characteristics, awareness and factors associated with arecanut chewing habit among 15 year –old school children attending public schools in Bandarawela educational zone.

MSc. Community Dentistry - 2013   **D 3404**

 Abstract

Objective : The aim of this study was to determine the prevalence, characteristics, awareness and factors associated with arecanut chewing habit among 15-year-old children attending public schools in the Bandarawela educational zone.

Method : A descriptive cross- sectional study was carried out in government schools in the Bandraewla Educational zone, Sri Lanka. Thirty five schools were selected using a two stage cluster sampling technique. Data were collected by a means of a self administered questionnaire from 633, 15-year-old students who were studying in grade 10 class. The questionnaire included information related to demographic information, arecanut chewing habits and about awareness of the harmful effects of arecanut.

Results of the total sample 6.8% were current users of arecanut while 48.3% of the sample were ever users. The mean age at which the ever raw areca chewers first started the habit was 11.5 years (SD = 1.6). The mean age at which the ever users of

commercially available areca products first started the habit was 13.6 years (SD = 1.46). Nearly 58.8% had stated that they had acquired the habit without others influence, 56.2% had first experienced the habit at home and 31.4% with grandparents. Areca chewing was significantly associated with sex, ethnicity and mother's education. There was a significant association between chewing raw arecanut and the presence of raw arecanut chewers at home ($p < 0.001$). The knowledge about the harmful effects of areca chewing was poor. The mean knowledge score was 28.2 (SD=15.44) out of a total of 65.

Conclusions : The results revealed that the current users of raw arecanut as well as commercially available areca products are presently low among 15-year- old adolescents. It is recommended that national wide awareness progarmmes be conducted among school children to educate them about the adverse effects of arecanut chewing in order to prevent them from acquiring the habit.

0133.Nanayakkara, N.A.R.

Prevalence and severity of early childhood caries (ECC) and associated factors among children aged 12-47 months attending weighing post in Medical Officer of Health area Ampara.

MSc. Community Dentistry- 2013   **D 3582**

Abstract

Back ground: Prevalence of Early Childhood Caries (ECC) varies around the world in a wide range but it is more common among disadvantaged population groups. According to the National Oral Health Survey Sri Lanka 2002/03 the prevalence of ECC among 5 year olds was 65.5% for the whole country, and it was 71.25% for Ampara district. The objective of this study was to identify the prevalence of ECC among children aged 12-47 months attending weighing posts in Medical Officer of Health area Ampara and its associated factors.

Methods: A Descriptive cross sectional study was carried out among 453 children aged 12-47 months and their mothers/caregivers. Multi stage cluster sampling technique was applied with probability proportionate to size to select the sample. Prior to examination of the child, pre-tested interviewer administered questionnaire was administered to the mothers/caregivers. The questionnaire was used to obtain information about knowledge of mothers/caregivers regarding oral health of their children and regarding oral health related practices adopted to their children by mothers/care givers. The examinations of the children were done using Dental Caries

Assessment Form for children suggested by the National Institute of Dental and Craniofacial Research, 1999. Sterile mouth mirrors and plastic probes were used to examine the children under day light. Chi-square test and ANOVA were used to find the statistical associations. $P < 0.05$ was considered as statistically significant.

 Results: The response rate was 98.47% and 453 pairs of mothers/caregivers and children participated in this study. The prevalence of ECC was 34.9%, Severe Early Childhood Caries was 27.6% and dmft was 2.08. ECC was significantly associated with age (P= 0.000) and the prevalence increased with age. The pre-term babies showed significantly higher prevalence of ECC than their counter parts (P=0.045). Children of mother's who had dental treatments during pregnancy had significantly lesser prevalence of ECC (P=0.015). Prevalence of ECC was high in low income families (P=0.005).

Majority of mothers/caregivers had overall good knowledge (61.6%).The knowledge was comparatively poor regarding the structure and important of primary dentition (53.5%). Neither overall knowledge nor its components were statistically significant with the prevalence of ECC.
Statistically significant associations were found between the prevalence of ECC and the tools used to brush the teeth (P=0.009), frequency of sweet intake (P=0.008), frequency of consumption of sweeten drinks (P=0.000) and whether the child visited a dental surgeon or not (P=0.000).

Conclusion: This study revealed one third of the population was affected by the ECC. Oral health managers should plan future Oral health programmes to improve oral health practices adopted by mothers/caregivers for their children.

Keywords: Early Childhood Caries, Severe Early Childhood Caries, dmft

0134. Udayamalee, S.R.M.I.

Parental perceptions on child's oral health, parenting style and oral health issues of 2 to 5 year old children seeking preventive dental care in the Dental Institute Colombo.

MSc. Community Dentistry – 2013   **D 3395**

Abstract

Introduction/Background: Parenting styles is a complex, multi-dimensional construct comprising of an emotional climate in which the parents' behaviors are expressed. Parental perceptions combined when combined influence the oral health status of children. The preventive dental clinic conducted by the Community Dental Unit, Dental Institute Colombo caters to preschool children from culturally diverse, disadvantaged social backgrounds.

Objectives: To describe the relationships between parental perceptions on child's oral health, parenting style and some oral health issues of 2- 5 -year-old children seeking preventive oral health care at the Dental Institute Colombo.

Methods: A cross-sectional descriptive study was conducted at Community Dental Unit among 434; 2-5-year-old children and their parental care giver (mother or father) were selected by systematic sampling of consecutive cases. A modified, translated version of 19-item-parenting style scale was used based on a version of Parenting Styles & Dimensions Questionnaire. A pre-tested interviewer-administered questionnaire, oral health examination form to record caries, 24-hour dietary recall, food frequency questionnaire and an observation chart of child's level of cooperation for simple dental treatment based on Frankel behavioral rating scale were used as data collection instruments. Descriptive statistics, Kruskal-Walis test and Chi-square test to compare proportions were used.

Results: The children and their parents belonged to culturally -diverse low socioeconomic backgrounds and parents needed substantial improvements on their perceptions of child's oral health. Authoritative and permissive parenting styles were prominent and there was statistically significant relationship between parenting style and caries status of children and their cariogenic snacking. Moreover, child's low caries status was statistically significantly associated with parents perceiving the oral health status of child was good and high caries status and being uncooperative for simple

dental treatments parental feeling guilty about their child's oral health status. Children were more cooperative among parents who perceived the importance of caring for milk teeth.

Conclusions & recommendations: Parental perceptions on child's oral health among : 5-year-old children seeking care at Dental Institute needs improvements as they influence caries status and level cooperation of children. Parenting style was associated with caries status and cariogenic snacking of children and need to be considered in providing i preventive dental care.

Keywords: parenting styles, parental perceptions, preventive dental care, dental caries level of cooperation.

0135.Uttara. A.A.M.

Oral health status and utilization pattern of oral health care services among 12 year old state sector school children in Kaduwela Medical Officer of Health area.

MSc. Community Dentistry – 2012   D 2982

Abstract

Back ground : Oral health means more than good teeth and it is integral to the general teeth. Poor oral health may have profound effects on general health as well. Despite great improvements in the oral health of population in several countries, global problem still persist. This is particularly among underprivileged groups in both developed and developing countries. Oral diseases such as dental caries, periodontal diseases, tooth loss, oral mucosal lesions, oro pharyngial cancers, oro dental trauma, and HIV/AIDS related oral diseases are major public health problems worldwide.

Objective : The main aim of this study was to assess the oral health status and utilization patterns of oral health services in 12 year old state sector school children in Kaduwela MOH area.

Methods : A descriptive cross sectional study was carried out in government schools in Kaduwela MOH area in Sri Lanka. 12 schools were selected using probability proportionate to the size sampling technique to obtain 20 clusters. One cluster was regarded as a one class. Data collected from 425, 12 year old students who were studying in grade 7 classes, by an oral health examination and by an interviewer administered questionnaire. Statistical package for social services version 17 was used

to analyze the data obtained and associations between categorical variables were analyzed using chi square test.

Results : Around 56% of the sample consisted of females and 91.5% were Sinhalese. Majority were from semi urban area (57.7%) and from type 1 AB schools (70.6%).When consider the oral health status, caries prevalence was around 28%, prevalence of gingivitis was around 45% and prevalence of malocclusion was around 13%. Around 18% need immediate care and meantime around 39% need referral to care.

When consider the oral health utilization out of the total sample only 37% had never visited to a dental clinic and around 30% visited to a dental clinic within 3 - 6 months. Around 16% received scaling as the last visit and majority had the treatment by a Hospital Dental Surgeon. Even though the hospital dental clinic was the most regular used oral health service (46.4%), private dental clinic was the most preferred type of oral health service to seek oral care (45.9%). The commonest barrier to seek oral care was the dental fear (33%). Majority (60.7%) was mentioned that most convenient time to seek care as the weekends and place was the private dental clinics (50.6%).

Conclusions and recommendations : Since the study group is 12 year old, the main care provider should be the school dental therapist in a school dental clinic setup. So the actions should be taken by the relevant authorities to promote the oral health through a health promoting school concept.

The Regional dental surgeon should be able to organize and coordinate the oral health promotion programmes with the medical officer of health in Kaduwela MOH area. Advocacy could get through the Regional Director of health services, HEB and FHB.

Keywords: 12 year old school children. Oral health status, service utilization,

0136.Ratnayake, D.R.D.L.

Awareness on risks of cross-infection and infection control measures in dental clinics among the patients attending the outpatient dental clinics in University Dental Hospital , Sri Lanka.

MSc. Community Dentistry – 2014   D 3624

Abstract

Introduction: There are now international, national and patient led obligations to empower patients to act as partners in their healthcare including its quality and safety. One factor which demands for patient's empowerment on safety healthcare is the

burden of infectious diseases in the society. A Dental care setting carries the risk of cross infection due to the nature of its procedures. Infection control in dentistry is aimed at reducing the occupational risk of infections among dental personnel and the risk of cross infections among patients. Patient's misperception on cross infection and infection control measures in dental clinics were revealed at surveys carried out overseas.

Objective: The aim of this study was to assess awareness on risks of cross-infection and infection control measures in dental clinics among the patients attending the Outpatient Dental Clinics in University Dental Hospital, Sri Lanka.

Methods: This study was a descriptive cross sectional study. A sample of 427 patients attended to the OPD clinics in University Dental hospital were selected to the study by means of systematic random sampling technique. A pre-tested, interviewer-administered, structured questionnaire was used to collect data. The descriptive statistics in terms of numbers, percentages, means and standard deviation were used to describe the respondent's awareness. The level of awareness was assessed against selected socio-demographic variables by applying Chi-square test at a p value of 0.05.

Results :A total of 57.4% and 60.2% of the patients possessed a satisfactory level of awareness on risk of cross infection and infection control measures respectively. The level of awareness on both aspects were statistically significant across the different age categories, ethnic groups and educational levels (p<0.05). Additionally the level of awareness on infection control measures were influenced by occupational category and previous experience at a dental clinic (p<0.05).

Conclusions and Recommendations: Patients possessed a satisfactory level of awareness which was associated with some of the socio-demographic variables. Public should be made aware about the absolute risk of cross infection and importance of infection control practices in dental clinics. Dental professionals should fill the information gap and empower the public. Further research should be conducted at national level on the study area.

Key words: **Awareness, Cross infection, Infection control**

0137.Wickramarachchi, M.V.

Knowledge, attitudes and behaviour related to oral health among diabetic patients attending Medical Clinic, District General Hospital, Kalutara.

MSc. Community Dentistry - 2013   **D 3383**

Abstract

Diabetes mellitus is a chronic disease with oral complications. The most prominent oral manifestation of diabetes mellitus is considered to be periodontal diseases. There is a bidirectional association between periodontal diseases and diabetes. Studies done worldwide have revealed that diabetes lack the knowledge on oral complications. Sri Lanka also faces the challenge of increasing burden of diabetes. Yet the knowledge on oral complications has not been assessed in the country. The study was conducted to determine knowledge, attitudes and behaviour related to oral health among diabetics. Four hundred and twenty two diabetics were selected on systematic sampling technique for the study. Study was conducted in District General Hospital, Kalutara. An interviewer administered questionnaire and a data extraction form were used for data collection. The study found that knowledge related to oral complications was poor among diabetics. In contrast they had a sound knowledge on systemic complications of diabetes. None of the participants knew about the effect of periodontal disease over glycaemic level. The proportions knowing about development of periodontal diseases, dry mouth and delayed wound healing following tooth extraction in uncontrolled diabetes were 25.4%, 48.6%, and 22.7 respectively. In contrast relatively higher proportions knew about kidney diseases 91.7%, foot ulcers 91.5%, eye diseases 89.6%, heart diseases 69.7%, stroke 72.3% and urinary tract infections among women 54.7%.

The majority of participants 64.7% had positive attitudes towards maintaining good oral hygiene. However most of them were either neutral 45.7% or negative 25.8% towards visiting a dental surgeon in the absence of oral disease.

Most of the subjects were performing daily oral health care practices. Approximately 90% of them brushed teeth twice daily. But their visits to a dental surgeon following being diagnosed as a diabetic remained very low. Only 32.9% of the subjects had visited a dental surgeon after being diagnosed as a diabetic There was a significant association between oral health knowledge and oral health behaviour with 95% confidence level with p = 0.025. It can be concluded that diabetics lacked the knowledge related to oral complications of diabetes.

Also their attitudes and behavior towards dental visits remained poor. Therefore special education programmes addressing the issue should be organized.

Keywords: diabetes, oral complications, systemic complications

Family Medicine

0138.Abbas Ali, S.

Study of prevalence of HIV infection and its clinical profile among tuberculosis patients and non-tuberculosis patients attending dots centre of SKM Hospital, Mathura, Uttar Pradesh, India.

MD Family Medicine – 2009- 2011   D 3331

Abstract

(38.4%) oral candidiasis (26%) lymphadenopathy (39.8%). The fever, loss of weight, loss of appetite.cough were common to both TB and HIV-TB. The difference in signs and symptoms among the HIV positive and HIV negative TB patients was found to be statistically significant. 17 (65.4%) HIV seropositive TB patients had **sputum AFB** negative and 9 (34.6%) had sputum AFB positive.

In this study extensive cavitatory lesions were common in **Tuberculosis patients** but in Co-infected (HIV-TB) patients' ill-defined fibrotic lesions on upper lobe were more common and **H1V-1** was the predominant viral subtype. Out of **26 HIV seropositive TB patients,** 16 (61.5%) had Pulmonary tuberculosis patients, 6 (20.1%) had extra-pulmonary tuberculosis and 4 (15.4%) had combined variety. The main site of extra-pulmonary involvement was mesenteric lymphadenopathy and abdomen (8 patients) followed by pleural (1) and cervical lymphadenopathy (1) and brain (1). In this stud\ we found 69.2% of cases (18 patients) were found in **Category** /, 27% of cases (7 patients) found in **Category** 2, and 3.8% of cases (1 patient) found in **category 3.** Maximum number of cases observed in **category 1**

In this study of CD4 cell count, 7 (26.9%) patients were found in the category range of 5 1 - 100 which includes 5 (21.3%) males and 2(28.6%) females. In this range we found 3 (18.8%) pulmonary, 2 (33.3%)extra pulmonary and 2 (50%) combined tuberculosis patients. In the range 101 - 200, we found 12 (46.2%) (10 (52.6%) males and 2 (28.6%) females) cases, in which 9 (56.2%) were pulmonary, 2 (50%) combined and 1 (16.7%) extra-pulmonary. In the range 201 - 300 we found 7 (26.9%) (4 (21.1%) males and 3

(42.8%) females) cases, of which 4 pulmonary and 3 extra-pulmonary. The mean CD4 cell count was 182.

If we compare the prevalence with previous studies, this study has shown a high prevalence of HIV infection among TB patients. Several authors stated that Tuberculosis is the most common cause of death in HIV patients but in my opinion it is the immunosuppression rather *than tuberculosis* is the cause of mortality in HIV-TB patients Knowledge of HIV status in a TB patient is critical from both patient and public health perspectives. In those patients who test seropositive for HIV, better care can be provided in the form of effective combine antitubercular (ATT) therapy and antiretroviral treatment. A very high prevalence of HIV infection was reported in this study among TB patients on the grounds that they had only TB. It is therefore important to screen for HIV antibodies among all TB patients.

0139.De Saram, E.M.I.

Emotional problems and reasons for encounter among mothers of infants at a suburban general practice in the Western province.

MD Family Medicine – 2012　　　　　　　　　　　　**D 3323**

Abstract not available

0140.De Silva, W.A.M.K.

Knowledge, attitudes and practices of natural family planning in women of child bearing age.

MD Family Medicine – 2011　　　　　　　　　　　　**D 3325**

Abstract

Natural Family Planning (NFP) is not offered as a significant choice to women who present for advice on family planning. Family physicians, obstetricians & gynecologists and other medical personnel generally have little exposure to newer methods of NFP, and often erroneously generalize the calendar rhythm method with NFP This misunderstanding is evident by the use of the term "rhythm method" for all methods of NFP (3) in medical literature. A study to assess the knowledge and attitudes on NFP methods among young mothers was carried out as the principal investigator (PI), had

considerable interest on the subject having worked at the Family Health Bureau for a few years.

This cross sectional study was carried out on mothers attending selected well baby clinics of the Colombo municipality council (CMC). The study was limited to two districts of the city, due to constraint on the time and resources. The city of Colombo was selected as the PI was familiar with the city administration, having had worked for the CMC for seven years. Ethical clearance was obtained from the SJMC ethical committee. The sample size was calculated as 384 but a total of 400 mothers were interviewed so as to allow for a few non responders. The permission was obtained from the Chief Medical Officer of Health (MOH) and the Deputy Chief MOH (MCH) of the CMC.

The pre tested questionnaire was administered by the research assistant and the analysis was done using a SPSS software package. The socio-demographic data, current practices of FP, the knowledge and the attitudes on NFP was tested during a period of two months in 2009-2010.

The sample consisted of young mothers, with 86% below the age of 36 years. The mean and the median was 29.5 and 30 years respectively, including a teenage population of 15.5%. Majority of the married mothers were Buddhists while all the other religions were also represented. Almost all the mothers had attended school (Table 1).

The sample had a very high current user rate in family planning (83.8%), the most popular method being injectables (DMPA). The NFP methods were the fourth most popular method of FP used currently, but the second most popular method in ever users (Table 15). The majority of mothers obtained family planning services from primary health care services of the government. Thus, the influence they had on decision making in family planning was considerable. The NFP methods are not promoted as reliable practices of FP even though rhythm method and the withdrawal are popular methods among mothers.

There is a fetal wastage rate that cannot be accounted for giving rise to the possibility of a considerable rate of abortions in the sample (Table 6). The reasons for such revelations gives rise to the need to explore the possible causes of abortions, which could either, be a method failure or non use of FP. These mothers might have benefitted from a sound knowledge of reproductive physiology and NFP methods.

In the group of mothers who were not using modern methods of FP the common reasons given were the fear of side effects, infrequent coitus and expecting to conceive (Table 14). Most of these of mothers would resort to modern NFP methods if proper guidance and direction was given by the government health sector. But unfortunately, they have resorted to unreliable traditional methods such as withdrawal and haphazard rhythm method that would result in unintended pregnancies.

As is to be expected from our cultural setting, the husbands were the main decision makers in family planning (Table 11). The percentage of users of NFP methods increased with the husband's age (Table 10). The possible reason could be the fear of side effects of modern methods as the couple gets older. Thus this is another potential group of clients for NFP methods.

But it was a surprise that only 9% of the sample had a good knowledge on NFP, while over 50% did not have any knowledge on NFP methods or the menstrual cycle (Table 19). This is in spite of the attempts to improve the knowledge on human biology in the students by the government.
A statistically significant positive correlation was observed with the level of education and the knowledge on NFP, even though overall knowledge was poor (Table 24). But the attitude was good in more than 50% of the participants towards NFP, while only 7.2% had a unfavorable attitude (Table 29).

There was a statistically significant positive correlation with the use of family planning and the number of children (Table 9). The majority of women with more than three children resorted to sterilization, which is similar to the observation made in the latest DHS survey. Twenty years ago, the sterilizations were observed in younger women after the second child.

A statistically significant association in knowledge was observed between the religions, the number of children and the FP method currently practiced (Table 22, 24, 25). A positive association was demonstrated with the NFP users and the level of knowledge (Table 25). But the attitudes did not have a positive correlation with the religion or with the number of children. A positive correlation was demonstrated with the age of the mother and the attitude (Table 31).

There would be a predicted deficit in funding for family planning in the near future, which will get worse as the population expands. The recent developments in NFP methods could be the answer to such a foreseen problem in the future.

0141.Chugh, S.

Evaluation of treatment for helicobacter pylori infection in patients presenting with dyspepsia

MD Family Medicine – 2011   **D 3326**

Summary

This randomized, double blind drug dispensing study was carried out in a suburb of sprawling Rohtak district in Haryana, in a 25 bedded nursing home facility. The basic aim of the study was to find / explore an answer to a very viable clinical question as to how many patients of non ulcer dyspepsia presenting to clinicians have *Helicobacter pylori (H. Pylori)* infection and what happens to those who have developed gastric mucosal changes as a result of this infection. Whether these patients should receive an established triple drug therapy meant for *H. pylori* infection and what is the impact of such a regimen on infectivity and histopathological changes in these dyspeptic patients, this study was envisaged for the above said purpose.

Five hundred and seventy two patients presenting with clinical symptoms of non ulcer dyspepsia and not depicting any clinically identifiable cause for dyspepsia were subjected to upper gastro intestinal endoscopy by GIF Olympus type 3 upper GI Scope and subsequently the updated CV 140 Olympus video endoscope. Out of these, three hundred seventy eight (378) patients were found positive for *H.pylori* infection on rapid urease test (RUT), Giemsa stain and also showed histopathological alterations in gastric mucosal biopsy. The prevalence rate of *H.pylori* infection presented in this semi rural hospital was 66% on the basis of this study. For this study all patients with *H.pylori* infection were explained the treatment procedure. The initial 100 patients who gave their informed consent were included for further study in this project.

Two groups namely viz. Group A (50 patients), Group B (50 patients), were constituted. Patients in Group A received triple drug therapy consisting of amoxicillin lOOOmg BID, clarithromycin 500mg BID and omeprazole 20 mg BID while group B received

identical looking placebo drugs in a double blind randomization for a duration of 2 weeks.

The study groups were subjected to repeat upper gastro intestinal endoscopy after 4-6 weeks on completion of triple drug therapy. *H.pylori* testing and gastric histopathological changes were carried out again.

Age ranges in both the groups were 16-65 years with mean age of 34.37 and33.34 years in Group A and Group B respectively. The sex distribution was similar in both groups. It has been observed that *H.pylori* infection was independent of gender. Study of socio-economic status revealed higher prevalence of dyspepsia in middle income group. Graham DY et al in their study observed that, *H.pylori* infection was closely correlated with socio-economic class. There was no association between *H.pylori* infection and consumption of alcohol or smoking. The mode(s) of transmission of *H.pylori* is unknown, but the social patterns of *H.pylori* infection are consistent with faecal-oral transmission as one important pathway. Smoking and social drinking patterns were identical in two groups and there was no association between these and *H.pylori* infectivity. Histopathological examination of gastric biopsy revealed diverse pathological entities namely chronic superficial gastritis (10 versus 5 patients), chronic active gastritis (11 versus 7 patients), chronic gastritis (24 versus 36 patients) and non specific gastritis (5 versus 2) patients in Group A and Group B respectively. Two groups were nearly matched for histological changes.

Response to triple drug therapy in Group A patients revealed *H.pylori* infection becoming negative in 65.95% patients while only 6% patients showed negative *H.pylori* infectivity in response to placebo therapy in Group B. Like-wise after drug therapy 13 patients (27.65%) showed normal gastric mucosa compared to 3 patients (06%) in placebo group. This finding was statistically significant. However, histopathological abnormality in gastric mucosa persisted in 72.35% patients despite eradication of *H.pylori* infection in 65.95% after triple drug therapy and predictably 94% after placebo. This was statistically significant (p <0.001). Adverse drug reactions to triple drug therapy were mild in majority (17 versus 5) while these were ever in 3 patients on triple drug therapy who withdrew from study. The outcome of the treatment group with triple drug therapy was designated successful in 31 patients as compared to the placebo

group (P < 0.001). However 16 patients (34.05%) failed to respond to triple drug therapy.

0142.Halambarachchige, P.P.

Planned and structures programme of foot care advice to patients with diabetes

MD Family Medicine – 2010   **D 3328**

Abstract

Diabetic foot complications are the most common cause of non traumatic lower extremity amputations, in our country. This could be prevented by complete foot care and early detection of patients who are at risk of foot ulceration. Prevention of foot problems can be best achieved through a family practice approach. The essence of family practice is to maintain the continuity of care with a good doctor patient relationship. Thus, the family physician can play a major role in preventing diabetic foot problems by enhancing the compliance with treatment, and education on self care management.

The term 'diabetes foot' refers to a spectrum of diseases. The major patho physiological factors for diabetic foot are ischemia, neuropathy and infections. Diabetic foot ulcer (DFU) is one of the most critical consequences of diabetes mellitus and a leading cause of hospitalization with impairment of quality of life. DFU, almost, always proceeds to lower limb amputations.

Monitoring and Self care management are the key aspect of management in diabetic foot. Diabetic foot screening could be practiced by family physicians (FP) according to risk assessment. Advice on foot self care education is a vital aspect of care at all stages of the disease. FPs should advise all their patients with diabetes in foot care and reinforce compliance in a friendly manner.

Diabetes is a chronic disease affecting the patients as well as society. Its rapidly increasing global prevalence is a significant cause for concern. Increased urbanization, westernization and economic development in developing countries have already contributed to a substantial rise in diabetes.

The chronic complications of diabetes are subdivided in to micro vascular complications and macro vascular complications. Peripheral neuropathy, which is a micro vascular complication and peripheral vascular disease, which is macro vascular complication predispose to diabetic foot problems.

The risk factors of foot ulcers are peripheral neuropathy, foot deformity, peripheral vascular disease, visual impairment, poor glycemic control, history of previous foot ulcers, cigarette smoking and previous amputation. The risk for amputation in these patients is higher compared to non-diabetic patients and they could never come back to normal life even with sophisticated prosthesis. Unfortunately, diabetic foot still remains a neglected area in hospital clinics as well as in busy family practices of Sri Lanka. The FP being the first contact care doctor is in a better position to deliver preventive foot care to his Diabetic patients.

Global as well as Asian disease burden of diabetes is high, and it is rising. Every 30 seconds, a diabetic foot amputation is performed somewhere in the world. This has become a significant public health problem with a massive economic burden.

This cross sectional analytical study was carried out in two stages to describe the outcome of a planned and structured program of foot care advice to patient with diabetes. This study was conducted in a well established Family practice centre in Ratmalana.

Ratmalana has an urban and semi urban population of 200 000 and is situated in the Colombo district. One hundred and two patients who fulfilled following eligibility criteria were selected and they were analyzed in three study groups.

- All male and female patients, between the ages of 25-75, diagnosed according to (WHO) criteria as type 2 diabetes, were included in this study.
- Patients with severe hearing or visual defects and psychotic patients who were unable to carry out instructions were excluded from the study.

Each group consisted of 34 patients. Age, sex, and level of education were m They were given foot care advices by different methods.

In order to discuss the study objectives, data was collected in two phases.

Phase 1: Pre tested collection sheet was used to collect socio demographic Biological data, clinical data, risk factors for foot ulceration, and foot care practices patients.

Three groups were selected to give foot care advice using three different methods i.e. only verbal advice (study group 1), using printed material in addition to advice(study group 2) and using visuals in the form of diagrams in flip charts in to verbal advice (study group 3). All three groups were given the same foot car on an individual basis. Foot care advices were reinforced after three month their follow up visits.

Phase 2:-Patient's foot care practices were recorded after the interventional f six months.

Mean ages were 56.2 years in Study group 1, 56.3 years in Study group 2, and in Study group 3. There was no significant difference in distribution of age g patients in all three study groups. There was no significant difference distribution and educational levels among study groups.

The prevalence of risk factors such as peripheral neuropathy, vasculopathy foot deformities and infection of the feet were high in this study population. (Table

The patients in all three study groups had fair knowledge of diabetic foot ca 17). This is because they have been followed up in this clinic for many years were given vocal foot care advices before.

A study done by Vatankhah N from Iran in 2009 has shown that a simple face-to-face education is an effective method of primary prevention in diabetic foot problems. [5]

Another study done by Lincoln NB, Radford KA, Game FL, Jeffcoate WJ., from UK on Education for secondary prevention of foot ulcers in people with diabetes in 2007 have shown that the intervention (one to one education) was associated with improved foot care behavior.[1521]

In the present study statistically significant foot care improvements were observed in all three groups.

- In comparison to foot care practice 1 (wash your feet daily at night) it was found that foot care improvement is statistically significant in study group 2 *[p=0.04; Table 19)* and in study group 3 (*p=0.03; Table 19).*

- Foot care practice 2 (keeping toe webs dry after washing) in study group 2 (p<0.001; Table 19) and study group 3 (p<0.001; Table 19).

- Foot care practice 3(Cutting the toe nails horizontally) in study group 1 (p<0.05; Table 19), in study group 2 (p<0.00; Table 19) and study group 3 (p<0.01; Table 19).

- Foot care practice 4(wearing well fitting shoes with the correct size) in study group 3 (p=0.003; Table 19).

- Foot care practice 5 (Inspect your feet daily with a mirror to see the soles) low improvement was observed in all three study groups. Study group 3 achieved an improvement of 20.6 % (00.0% to 20.6%; Table 19).

- Foot care practice 6 (Looking for foreign bodies inside the shoes before wearing) in study group 3 (p<0.001; Table 19).

- Foot care practice 7 (Using moisturizing cream when the skin is dry) in study group 3 (p=0.005; Table 19).

- Foot care practice 8 (Consulting family doctor if develop any abnormalities) in study group 3 (p=0.01; Table 19).

There were no comparable studies done on a planned and structured programme of foot care advice to patient with diabetes in a general practice setting.

In this study, it was found that, foot care practices were better perceived by educational leaflets and by flip charts compared to face-to-face education only. On comparison of foot care education by educational leaflets and by flip charts, it was clearly shown that flip charts were better perceived by patients, compared to printed educational leaflets. (Table 19)

0143.Haniffa, R.

A study on health seeking behaviour – with a particular reference to self-care , among undergraduates attending the University Medical Centre of the University of Sri Jayawardenepura.

MD Family Medicine – 2011   **D 3330**

Abstract not avilable

0144.Molligoda, D.D.J.

Knowledge , attitudes and intended practice on feeding issues related to acute diarrhoea, among mothers of children below 5 years presenting to a family practice.

MD Family Medicine – 2012   **D 3329**

Abstract

Background : Child mortality has dropped to half during last decade from 25 to 14/1000 live birth with respect to children in the fist year of life. Even though mortality has reduced significantly with time, morbidity due to childhood illnesses continues to be a problem. Acute diarrhoea is still considered as a public health problem in Sri Lanka. According to WHO 1.6 million children die every year from diarrhoeal disease. It is the 2nd biggest child killer and majority of them from developing countries. One of the main consequences of diarrhoea is dehydration, as a result of non compensating

fluid and electrolyte loss. Diarrhoea it self leads to malnutrition, following unnecessary stopping of food as a way of treatment. Both dehydration and malnutrition can be prevented by proper home management. Home health care practices include the practices of care givers of preventive, curative and utilizing health services appropriately. That will ensure the survival, growth and development of young children.

Studies done in variety of countries show that 70 -80% of home health care practices are performed by women, particularly by the mother and affects by socio demographic factors they encounter.

Objectives : This study was done to identify the knowledge, attitude and practices on feeding issues during acute watery diarrhoea, and knowledge of recognition of alarming signs to seek early medical attention among mothers of children below 5 years, presenting to a family practice.

Design / Methodology : Descriptive cross sectional study. Data was collected with an interviewer administered pre tested questionnaire. Study was carried out in a family practice at Mulleriyawa, Angoda,, semi urban area about 8km away from the city of Colombo. Study population was 397 mothers, presented to the family practice with child / children below 5 years. Study period was 3 months. (01/09/2010 to 01/12/2010).408 mothers attended to the practice during the study period, 11 were excluded. Sample size n = 397.

Results : Majority of the mothers, breast feed more frequently during and after the illness, had positive attitudes towards feeding with semisolids / solids, **V*** of mothers feed with semisolids / solids more frequently, positive attitudes towards breast feeding, feeding with semisolids / solids had significant relationship with the education level.

Majority had negative attitude towards feeding with food contents of animal proteins and had significant relationship with the education level.

Majority had satisfactory knowledge, better attitudes in relation to practices of fluid replacement, prevention of dehydration and awareness of "Jeewani". Majority of mothers believed on antidiarrhoea drugs.

More than 50% had recognized fever, abdominal pain, vomiting, blood and mucus with stools, lethargic or drowsy child as alarming signs. Less than 20% recognized dry mucosal, less of or no tears, as alarming sings.Mothers with negative attitude regarding

semisolids / solids believed it will be too heavy to digest.Mothers with negative attitude regarding food contents of animal proteins, believed it will aggravate the illness

Conclusions : It is recommended to strengthen the positive practices of breast feeding, supplement of fluids other than breast milk, feeding with semisolids / solids during the illness. Discourage the negative practices and attitudes of not feeding with animal proteins during convalescence, belief of antidiarrhoea drugs. Should improve the knowledge of signs of dehydration and other alarming signs to seek early medical advice.

0145.Kuttikuppala, S.R.

Quality of life of HIV/AIDS patients attending Sri Surya Hospital Visakhapatnam India.

MD Family Medicine - 2010   **D 3324**

Summary

As the Quality Of Life (QOL) of Human Immunodeficiency Virus (HIV-1) Acquired Immunodeficiency Syndrome (AIDS), HIV/AIDS patients is influenced by several socio demographic characteristics such as, age distribution, sex distribution, age and sex distribution, religion, ethnicity, place of residence, educational level and sex distribution, occupation and sex distribution, income and sex distribution, social class and sex distribution, duration of illness and age, duration of illness and sex distribution, illness and treatment and all such relevant factors have been studied. Similarly QOL and sex, QOL and age, QOL and educational level, QOL and occupation, QOL and social class, QOL and illness related variables, QOL and severity of illness, QOL and compliance to treatment, QOL and compliance to counseling, QOL and other factors, like QOL and family support have been evaluated.

Since various factors as stated above are associated with quality of life of HIV/AIDS patients an extensive literature search, and wide ranging review of relevant studies have been done to find out the available pertinent data so as to analyse the quality of life of 315 subjects registered in the present study. In Indian context this is the largest study where 315 HIV/AIDS patients were systematically studied for the Quality of Life of HIV/AIDS patients using different statistical methods for cross checking and more accuracy. "We are running scared….. (I can) not imagine a worse health problem in this country. We stand nakedly in front of a very serious pandemic as

mortal as any pandemic as there ever has been. I don't know any greater killer than AIDS ,not to speak of its psychological, social and economic maiming", Dr Haldon Mohler, the then Head of the World Health Organization stated nearly 30 years back.

The AIDS is continuing its supremacy over the human intelligence even today. In India HIV/AIDS is nearly 25 years old. This epidemic has had significant effect on all countries world over, threatening to slow down the progress made by many developing countries. AIDS has wiped out majority of males in economically productive age groups in many countries of sub Saharan Africa. Everyday 15000 new people get HIV infection, half of them are females and 90% of them are in developing counties. Focus is shifting from African to Asian continent with vast population of India and China showing rising prevalence of HIV. In India the estimated prevalence of HIV is 0.91% (UNAIDS 2007).

With the dawn of antiretroviral therapy in 1987, what was once often thought as a rapidly progressive fatal disease of young people has been transformed into a highly treatable chronic condition, with an estimated survival now measured in decades rather than months (Paul E sax 2007). With the tremendous progress in treatment, however complexity it is, the key issue like quality of life of HIV/AIDS patients have come into frontline.

For long time after the introduction of Anti Retroviral Therapy (ART) in the developed world, this treatment did not even begin to reach the masses of HIV infected people in resource poor settings (Joep M.A. Large 2009). For estimating the burden of the disease it is important to asses the quality of life of HIV/AIDS patients in view of being HIV/AIDS is a chronic debilitating disease with long term adverse side effects. Further the social stigma attached to HIV/AIDS at times compels the positive individuals to change the place of living, to go away to an entirely new city, to leave the job and all these changes, do cause stress and strain to already depressed patients. It aggravates financial crisis, social and psychological trauma which leads to progressive deterioration of health. Away from the supporting family members, social isolation, unknown environment, repeated medical consultations, frequent absenteeism of duty, stinging rebukes from the management and this vicious cycle of events ruin the quality of life.

Quality of life is a multidimensional concept whose definition and assessment remains controversial (Susan S 1999). It depends up on how the people perceive it and how one understands it. Attitude towards life plays considerable role in feeling

the quality of life. Quality of life relates both to adequacy of material circumstances and to personal feelings about these circumstances. It includes overall subjective feelings of well being that are closely related to morale, happiness and satisfaction (Mc Dowell M 1987).

Therefore this study of quality of life (QOL) of HIV/AIDS patients is designed basing on extensive research conducted by various research bodies in the world using World Health Organisation (WHO) quality of life QOL Bref. BREF is not an acronym - it was borrowed from the French to indicate the short version of the WHOQOL. The outcome of the study is very significant and several factors associated with QOL of HIV/AIDS patients have come into light, which are presented here.

Perception of overall QOL:

In the study group of HIV/AIDS patients, considering perception on overall QOL, the minimum score is (1) one and the maximum score is (5) five. Out of 313 positive patients studied one person has the maximum score of (5) five indicating the maximum perception on quality of life and one person has the minimum score of (1) one indicating the minimum perception on quality of life. 134 patients had a score of (3) three and 111 patients had a score of (4) four and 66 patients had score of (2) two. The two respondents were excluded since their responses to the WHO QOL-Bref were not adequate to compute their quality of life scores.

On comparing the means of perception of Overall QOL between categories of various relevant variables, < 35 years aged patients had significant perception of Overall quality of life (p .049) than => 35years old patients. The female patients (p .038) in the study and the non-Hindus (others) (p .004), the patient living in urban areas (p .025), theHIV/AIDS patients (p. 000) and their spouses (p. 000) who have studied intermediate and above have significant perception of overall quality of life. Both the married currently and un-married reported the same perception of overall QOL. The employed currently and employed ever, patients living with spouse and children and in extended family and those living in own house have more or less equal perception of overall QOL. The patients who had monthly income => Rs. 5,000/- are having significant perception of overall quality of life (p .000), than whose income was < Rs. 5,000/- per month.

Further the patients who can care themselves (p .000), who visit treatment center regularly (p .000), who takes medicines regularly (p .000), and who attends to counseling sessions on a regular basis (p. 000) have better perception of overall QOL than their counter parts.

Perception of overall Health:

The perception of overall health of the study subjects is shown under descriptive statistics of overall health scores. The minimum score is (1) one and the maximum score is (5) five. Out of 313 positive patients studied one person has the maximum score of (5) five indicating the maximum perception of overall health and one (l)person has the minimum score of (1) one indicating the minimum perception of overall health. And 119 patients had a score of (4) four and 112 patients had a score of (3) three and 80 patients had score of (2) two indicating the perception of overall health accordingly. On comparing the means of perception of Overall Health between categories of various relevant variables the HIV/AIDS patients in the study who are <35 years age had significant perception of Overall health (p .044) than => 35years old patients. The female patients (p .025), the non-Hindus (Muslims, Christians and others) (p .004), the patient living in urban areas (p .000), the HIV/AIDS patients (p .001) and their spouses (p .000) who have studied intermediate and above have significant perception of overall health. Both the married currently and un-married reported the same perception of overall health. The employed currently and employed ever, patients living with spouse and children and in extended family and those living in own house have more or less equal perception of overall health. The patients who had monthly income => Rs. 5,000/- are having significant perception of overall health (p .000), than whose income was < Rs. 5,000/- per month.

Further the patients who can care for themselves (p .000), who visit treatment center regularly (p .000), who take medicines regularly (p .000), and who attend to counseling sessions on a regular basis (p. 000) have better perception of overall health than their counter parts in the study.

Physical QOL and determinant factors:

The quality of life in respect of physical health of patients less than 35 years is significantly higher than those of 35 years old and older (P.017). The female patients are having significantly higher quality of life than male patients (P.004). The patients

of other religions are having better physical quality of life (P.018) than Hindu patients. This may be because most of the Hindus have higher degree of superstitions. If they loose weight for first time they imagine that it may be due to devils and spend lot of time and money in satisfying those evil forces, rather than consulting a qualified physician. In case that loosing weight is due to tuberculosis or malignancy or HIV/AIDS, the delay in consultation results in landing in the late stage of the disease. This attitude is basically ruining the quality of life.

HIV/AIDS patients living in urban areas (P.006), patients who are (P.000) or whose spouses (P.001) are educated above intermediate level, and patients who are earning more or equal to Rs 5000.00 are having a significantly (P.000) higher scores for physical domain than their corresponding counterparts. Further those patients who are able to do self care (P.000) are having a significantly higher score for physical domain than those who are unable to care themselves. All those patients who engage in these 3 activities, namely visiting treatment (P.000) centre regularly, taking medicines regularly (P.000) and attending counseling sessions regularly (P.000) are all associated with significant physical health as they have higher mean score for physical domain than their counterparts.

Psychological QOL and determinant factors :

The mean psychological health scare of HIV/AIDS patients in <35 years age group, is higher than => 35 years group which indicates that the young are having significant (P.009)psychological health than the old patients in the study, patients living in the urban areas (P.004)have significant quality of psychological health when compared to patients living in rural areas. The reason may be that in urban areas the patients have better access to information and medical facilities than the rural areas. Both wife(P.000) and husband (P.000)who are educated above intermediate have a higher mean score than the patients who are educated lower than intermediate which reveals that patients with higher education have significant psychological health.

Patients who are having income => Rs. 5,000/- have a significant(P.000) psychological health than the patients who are earning less than Rs. 5,000/- per month. Also patients who can take care themselves (P.000) who visit treatment center regularly, who take medicines regularly (P.000) and who attends counseling sessions (P.000) regularly have significant level of psychological health than their counterparts in the study.

Social QOL and determinant factors:

On comparing the means of social health, between categories of various relevant variables, it is evident that the HIV/AIDS patients with <35 of age have significantly (P.012) higher social score than that of those who are 35 years or more old. The young patients have significant quality of social health than the old people. The other variables such as area of living, (P.046) education of HIV/AIDS patients (P.000) and their spouses, (P.007) income (P.000)of the patients, yielded similar significant results as that of, psychological domain. Patients who are able to take care of themselves, (P.001) who are visiting regularly treatment centers(P.000), who take medicines regularly (P.000)and who attend the counseling center(P.000) regularly have higher score of social health on comparison with their corresponding counter parts in the study of quality of life of HIV/AIDS patients. Patients who have good psychological health have good social health also.

The Environment QOL and determinant factors:

On studying the environmental health of the HIV/AIDS patients it is revealed that contrary to the other three domains, physical, social and psychological, where the mean score is significantly higher for the young patients <35 years age than the old patients => 35 years, in the environmental domain, the age factor has no significance (P.057). It looks that the environmental health is equal to young and old as well. But the female patients (P.038) have significant environmental health score than male patients. Patients who are living in urban(P.000) have higher environmental health score than the patients who are living in rural areas, patients(P.000) and their spouses(P.000) who have educated up to intermediate and above have significant environmental health than those who are educated less than intermediate.

HIV/AIDS patients who have more than Rs. 5,000/- income (P.000), who can able to take care of themselves(P.000), who visit treatment centers regularly (P.000)and who take medicines (P.000) and attend the counseling centers (P.000) regularly have significant mean environmental health score in the study than their corresponding counter parts.

To sum up, the salient features in our study are that the young who are less than 35 years of age have significant QOL in Physical, Psychological, and Social domains where as the health in environmental domain is equal for both young <35 years of age

and old => 35 years of age. The educated more than intermediate, subjects living in urban areas, patients with more than Rs 5000/- income per month, patient who take care of themselves, patients who attend treatment center regularly, take medicines regularly and attending counseling center regularly have significant QOL in all four domains. The female patients in the study cohort have significant QOL than males in Physical and Environmental domains. The non Hindus have significant QOL than Hindus only in Physical domain. The status of marriage, the mere employment, living with spouse and children or living in own house did not have any significant impact on the QOL in any domain studied. However few similar studies (Copfer 1996) conducted earlier have shown the influence of employment and family support significantly on the Quality of life of HIV/AIDS patients in the environmental domain, and occupation and clinical categories affected the physical health domain scores, while occupation and family support significantly affected the environmental domain scores.

0146.Senaratne, L.P.K.

Perception of improvement of quality of life with a reinforcement programme on lifestyle modification (RPLM) in patients with knee joint osteoarthritis.
MD Family Medicine – 2010   **D 3327**
Abstract

Sri Lanka being a country with increasing ageing population, OA of the knee w become a disease with major public health importance in the near future. With an aging population, the prevalence of chronic diseases like OA is increasing.

This study aimed to improve the adherence to a non- pharmacological management pi by introducing a Reinforcement Programme on Lifestyle Modification (RPLM) improve the perception of quality of life of patients with OA knee. Measurement quality of life among patients with osteoarthritis would help health care providers understand the impact of the disease from the patients' own perspective and make health care services more patient-centred.

A randomized controlled single blind study was carried out at the Rheumatology clinic in National hospital of Sri Lanka. A total of 60 patients with osteoarthritis of the knee were selected for the study. Using block randomization according to the soc demographic and physical characteristics, patients in the study sample were assigned intervention and control groups.

The data were collected in two phases by a trained research assistant. The first phase the data collection was done just after the enrolment for the study, using the study instrument WHOQOL-BREF. A reinforcement programme named, Reinforcement Programme on Life style Modification (RPLM) designed by the principal investigator that was based on NICE guidelines for OA, was offered to the intervention group. This programme was repeated twice over a period of three months before the second phase of data collection. The second phase of data collection was done three months after the enrolment to the study to assess the improvement of perception of quality of life of patients in both the intervention as well as the control group.

The WHOQOL-BREF measures quality of life in four different domains: physical, psychological, social and environmental. The scores of each domain of the WHOQOL-BREF ranged from a minimum of 0 to a maximum of 100, with higher scores indicative of better quality of life.

Data were analysed using SPSS statistical package. Mean age of the study sample was 62.5(SD7.6) years, 88.3% of them were over age of 55 years and 90% patients were females. Majority (75%) were married, and the level of education among 60% of the patients was between grade five and Ordinary Level (O/L). The mean body mass index (BMI) of the sample was 27.4 (SD 3.4) kg/m^2.

Seventy percent of patients were not known to have any of the surveyed medical illnesses and the most common co morbidity was hypertension (HTN) and it was 20% followed by diabetes (DM) which was 10 %. There was no statistically significant difference between the intervention and control groups when socio-demographic and physical characteristics were considered.

Analysis of quality of life of the participants according to the WHOQOL-BREF at the enrolment showed the mean scores in physical, psychological and environmental domains were above 50 except in the social domain which was below 50. Calculation ofmean scores in all domains in both intervention and control groups were done separately at the enrolment and three months later to compare the results before and after the intervention. The comparison of mean scores in all domains at the enrolment (visit I) and three months later (visit II) showed a statistically significant (p < 0.05) improvement in quality of life pertaining to physical health domain and the psychological domain in the intervention group. However, the improvement of mean scores in social and environmental domains in both groups after three months was not statistically significant. The measurement of overall quality of life of the study sample showed a statistically significant (p < 0.05) improvement in patients who had been on

the reinforcement programme but there was no meaningful change in the perception of overall quality of life of patients who were in the control group.

This observed improvement of the quality of life related to physical and psychological domains as well as the overall quality of life after the reinforcement programme in the intervention group could be attributed to the effectiveness of the RPLM programme. It can be concluded that the RPLM programme appears more appropriate to increase the perception of quality of life related to the physical and psychological health and the overall quality of life of patients with knee osteoarthritis.

Health Sector Disaster Management

0147.Achchuthan, M.

The knowledge and attitude of public health midwives on sexual and reproductive health services in disaster situations in Batticaloa district.

Postgraduate Diploma in Health Sector Disaster Management - 2016   D 3504

Abstract

Reproductive health is the complete physical social and mental wellbeing not merely the absence or infirmary in all matters related to reproductive system and its function. The international mandates and policies addressed the right of reproductive health time to time since 1948. The ICPD highlighted the right of the all migrants, refugees, asylum seekers and internally displaced should receive the basic education and health services. The awareness on sexual and reproductive health during emergency situations identified as one of the major necessary service after formation of inter-agency working group for reproductive, which subsequently became the minimum initial service package in late 1990s.

In Sri Lankan health framework public health midwives are the grass hood level service providers of reproductive health. This study analyzed the knowledge and attitude of public health midwives in the provision of sexual and reproductive health services in disaster and emergency situations.

The result concludes that their knowledge is deficient even though they showed very positive attitudes towards the practice of reproductive health in crises situations.

0148. Aravindan, K.

Healthcare related risk reduction activities of responsible health institutions and community in the flood prone area of medical officer health, Vavuniya division of Vavuniya district due to flood.

Postgraduate Diploma in Health Sector Disaster Management – 2014   D 3501

Abstract

Disaster management become an important issue globally. It helps to reduce the impact of disaster and save a lot of money - minimize the economical loss. Disaster risk reduction is a group of activities to reduce the impacts of disaster. Floods become a major issue worldwide due to climate changes, deforesting and unplanned land use.

In MOH Vavuniya division, there were 14 Grama Niladhari division were selected and 396 families were selected through probability proportional to size sampling technique. Most of the participants were men. Educational qualifications were less than A/L. their monthly total income was within 20,000.00 LKR. 50% of additional income flow in by livestock.

They have own land and living in semi permanent houses due to poor economical status and frequent floods.81% of families had an experience with floods more than one time during last 10 years period. 48% of families were living in the same place for more than 20 years.

Other than acute injuries, there was no major problem to health due to floods 94% of families have mobile phones and it could be use for issuing alert about disaster.

The knowledge and attitude about disaster was good but practice was low. It is because of negligence or due to myths.

Health care access was poor and institutional capacity also below for disaster management.

Keywords: Disaster, Risk Reduction, Health Accessibility.

0149.Fernando, K.R.

Knowledge , attitudes and practices on climate change and its effects on humans among medical officers attached to the National Hospital of Sri Lanka (NHSL), Colombo.

Postgraduate Diploma in Disaster Management – 2014   D 3499

Abstract

Climate change poses serious threats to human health and well-being. It affects all areas of human existence. It threatens the basic foundations of public health, namely safe drinking water, sufficient food, secure shelters and good social conditions. Climate change contributes to increase the global burden of disease, deaths and disability through multiple pathways. It could also give rise to disaster situations such as floods, draughts and storms with resultant effects on human health and existence. Socio-economic disruption due to disaster events will also give rise to variety of health effects.

As well recognized social leaders, doctors need to be sensitized on the problem of climate change which affects all aspects of health of mankind in many direct and indirect ways including increase frequency and magnitude of disasters.

Up to present, there are no studies undertaken in Sri Lanka to assess the knowledge, attitudes and practices on climate change and its effects among doctors. Even in other countries, there were only few studies on the subject in comparison to other areas of knowledge. It is of paramount importance that doctors who are the cream of the health workforce should have adequate knowledge and correct attitudes and practices regarding climate change. Then only they would be able to enlighten, advice and advocate the policy makers as well as the general public on the need for improvements in the health sector to respond adequately to the challenges posed by the climate change.

A descriptive cross-sectional study among grade medical officers attached to the National Hospital of Sri Lanka (NHSL), Colombo on knowledge, attitudes and practices on climate change and its effects on humans was conducted with the objective of describing the knowledge, sources of knowledge, attitudes and practices on climate change and its effects on humans among medical officers attached to the National Hospital of Sri Lanka (NHSL), Colombo and to recommend methods to improve their knowledge, attitudes and practices regarding climate change. A randomly selected

sample of 404 grade medical officers were enrolled for the study using a pre-tested, self-administered questionnaire. (Data collectors, who were Pre-Intern medical officers, waited with each respondent till the questionnaire was completed)

The knowledge of climate change and its effects on humans among the participant grade medical officers were good. But there were some areas which need to improve.

Television is the most preferred medium in which the participant doctors obtain information on climate change.

All the participant medical officers are rightfully concerned about the fact that Sri Lanka is affected by the climate change. Majority of the participant doctors have a correct and good attitude about their roles and responsibilities with relevance to the effects of climate change.

The most favoured action of the respondent medical officers in reducing climate change is the proper waste disposal.

Provisions to encourage the reading of scientific journals and books by the medical officers by way of providing scientific journals and selected books in the hospital premises itself, inclusion of climate change and its effects in all Continuous Medical Educational(CME) programmes conducted by all professional medical organizations and in the postgraduate courses in all disciplines conducted by the Postgraduate Institute of Medicine(PGIM), provision and arrangement of a scheme of incentives to medical officers who take part in certain number of CME programmes per year by way of salary increments etc. can be recommended from the findings of this study

0150.Gangodawila, U.C.

Disaster preparedness among patient's visiting out patients. Department in Base Hospital , Agalawatta.

Postgraduate Diploma in Health Sector Disaster Management – 2014   D 3505

Abstract

Disasters are increasing worldwide in recent few decades, ultimately causing significant economic loss to the countries. Preparedness for these unexpected events can minimize the damage significantly. Despite extensive disaster preparedness activities carrying out by government, each person should be prepared to response to a disaster, which will significantly minimize the impact of disasters. This research is in

the area of personal disaster preparedness, which describes disaster preparedness among patients visiting Out Patients' Department in Base Hospital, Agalawatta.

A cross-sectional descriptive study was carried out among patients visiting Out Patients' Department in Base Hospital, Agalawatta. Data was collected from 27th January2014 to 3rd February 2014. The sample included 178 patients selected by systematic sampling method.

Patients were predominantly from Agalawatta MOH area (46.6%), Sinhalese (89.3%), female (73.6%). married (84.3%), middle-aged (mean 47 years of age) and monthly income between 10 000 and 14 999 rupees (mean 15 676 rupees). Fourteen percent of patients had disabled person. 76.4% of patients had person below 18 years of age and 52.2% of patients had elderly person at home.

Twenty seven percent of patients had damage to property, 15.7% of patients had previous displacement and 15.7% of patients had fear of disaster.

Almost all the patients had no previously discussed preparedness plan (99.4%). None of the patients had a disaster kit at home. Majority of patients had not keep their valuables at a safe place(64%), no battery operated radio (88.8%) and not participated to a first aid training programme (78.%).

There was a statistically significant association of disaster preparedness with having an elderly person at home (p=0.024), with increasing age (p=0.037) and being single status (p=0.011)at p<0.05 level.

The conclusion is disaster preparedness is very poor among patients visiting Out Patients' Department in Base Hospital, Agalawatta.

Disaster Management Coordination Center in Kalutara District in collaboration with Health Education Unit in Base Hospital, Agalawatta should implement disaster preparedness awareness programmes to this population, which will improve knowledge of disaster preparedness. DMCC, Kaluatra should carryout simulations periodically specially for vulnerable population which is more practical than awareness programmes, that can assess how much people are being prepared and can use as a learning tool. The MOH should carryout Basic Life Support programmes to the area population which will assist to secure life till proper curative medical services are

available in a disaster situation. Base Hospital Agalawatta should be strengthening with infrastructure and cadre and establishment of a disaster focal point to Base Hospital Agalawatta are recommended.

Further research is needed to assess the effectiveness of the training programmes to prove disaster preparedness is increased as a result. Also disaster preparedness of Base Hospital Agalawatta should be assessed.

0151. Kannangara, P.D.C.N.

Knowledge and practices of nursing officers on disaster preparedness in Base Hospitals in Monaragala District.

Postgraduate Diploma in Health Sectore Disaster Management – 2014D 3506

Abstract

This study attempted to identify knowledge and practices of nursing officers (NOO) on disaster preparedness in Base Hospitals (BHH) in Moneragala district. The NOO should be able to respond in all serious events that could threaten the life of others and must be prepared to meet new challenges on disaster management and emergency response. The present studywasconducted to describe knowledge and selected practices of NOO on disaster preparedness. It was also aimed to identify gaps between knowledge and practices while assessing the perceived need for conducting training programmes to improve knowledge and skills among the nurses.

The study was a cross sectional survey carried out among all NOO in Bibila, Wellawaya and Siyambalanduwa BHH in Monaragala district. It utilized a self-administered questionnaire to assess the knowledge and training needs and observational check list to observe the selected practices of NOO with regard to disaster preparedness. Almost two thirds of the NOO scored between 40-59, while only seven respondents obtained i score over 80. Practices of NOO in Wellawaya and Bibila were 15 and 17 out of 24 selected practices respectively, while BH Siyambalanduwa only had a total of 5. The vast majority disagreed (n = 94, 94%) on having adequate knowledge on DM while 83 respondents felt they possessed adequate skills on DM. The results revealed that knowledge among nursing officers on different aspects of disaster management is not adequate and practices were not up to the satisfactory level. The gap between the current knowledge and practices is evident. There is great need to conduct disaster management training during the basic and in-service training of NOO.

0152.Kugaendiran, V.

Knowledge, experience, and training received on emergency preparedness among doctors in General and base hospitals in Trincomalee district.

Postgraduate Diploma in Health Sector Disaster Management – 2014   D 3507

Abstract

Emergency is a sudden occurrence demanding immediate action that may be due to epidemics, to natural, to technological catastrophes, to strife or to other man-made causes (WHO, 2007).In the recent past disasters and emergencies are increasing in frequency and numbers, causing more damages and loss of lives due to increasing population and density. WHO has stated that in the past decade the total number of catastrophic events has almost doubled, showing a trend in increase in major emergencies from 450 to 800per year. The increase is more marked in middle and lower income countries, where emergency preparedness is often insufficient (WHO, 2007)

During the past three decades, due to civil conflict in the Northern and Eastern province of the country, all hospitals in the district had to face emergencies in their day to day activities apart from the natural calamities like cyclones, floods and Tsunami. Though there were many training programmes conducted by the Ministry of Health and other agencies for the doctors during that period, there were gaps in the system due to ad hoc manner trainees are selected.

A well prepared health system and workforce is able to respond promptly and more effectively. Preparedness helps to mitigate the magnitude of the crisis and its adverse health impacts.

As there was no major emergency or a disaster faced by the health staff after the end of the conflict, it was important to conduct an assessment of knowledge, experience, and training among the doctors to plan for the disaster preparedness activities for the district.

Hence a hospital based descriptive cross sectional study was carried out in Trincomalee District General Hospital, and Kanthalai, Kinniya and Mutthur Base Hospitals among doctors to assess the knowledge, experience and training received in emergency preparedness .This was carried out using a self-administered structured questionnaire with predominantly closed ended questions and ten multiple True, False type (MCQs)

at the end of 2013. There were 166 doctors in the study sample and study achieved a response rate of 90 %(149).

The mean age of the study sample was 34 years and median was 32 years, youngest person interviewed was 27 years and oldest was 55 years. Sex distribution of study sample male 60.4% (90) and female 39.6 % (59) respectively. Most of the doctors 42.9% were newly appointed.

Among the respondents 43% (64) of doctors had the experience of floods 38.9% (58) of doctors had experienced Tsunami, 32.9%(49)of doctors had experienced an event of food poisoning ,22.8%(34) had experienced an epidemiological out break 43.6%(65)of doctors had experienced in civil war, 44.3%(66)of doctors had experienced in mass casualty event and only 8.7% (13) had experienced an event of a cyclone. Most of the doctors were involved in the civil war and mass casualty management during these events.

Some of the participant 40% (59) doctors had received some type of training locally. Only7% (10) of doctors had received foreign training in the emergency management. About 40 %(60) of doctors had the knowledge about their institutional emergency management plan but others were not aware of any such management plans. Among the participants, 24.8% (37) of respondents had the experience on drills for emergency management. 45% of participants had the knowledge on their hospital emergency or disaster stocks in their institutions.

Among the participants 92.6% of doctors had a good knowledge on disaster and emergency preparedness, and 7.4 % of doctors had a poor knowledge. Knowledge and exposure on emergency preparedness plans and the drills among doctors were not sufficient

This study shows that doctors have received this knowledge from their exposure to the disaster situations and not from formal training programmes conducted on disasters. There was no significant relationship observed with training received and the level of knowledge. In this study population most of the doctors (43%) were less than 2 year experience in service and it shows that there is no difference between the experienced doctors and the newly appointed doctors on the knowledge on disaster management.

Hence it is important government authorities systematically plan regular training on emergency management in the district for all the staff to face any impending disasters.

Ministry of Health should take the lead in arranging the regular drills and other training so that doctors are constantly made aware of newer techniques and methods to be adopted during the disasters.

0153.Kumara, P.G.H.

Knowledge, attitudes and practices among nursing officers on hospital disaster response and associated factors at Base Hospital Horana.

Postgraduate Diploma in Health Sector Disaster Management – 2014   D 3623

Abstract

Health sector plays a vital role in disaster response. Hospitals are the first responders to disasterproviding immediate and subsequent healthcare to the disaster affected communities. Nursing officers are an important category who plays an important role in hospital disaster response. A good knowledge on disaster management principles, positive attitudes towards disaster response and updated practices are essential for the nursing staff of a hospital to provide a comprehensive institutional care. Objective of this study was to describe knowledge, attitudes and practices nursing officers on hospital disaster response and associated factors at Base Hospital Horana.

Institution-based descriptive cross sectional study was carried out at Base Hospital, Horana from April 2014 to December 2014. Self-Administered questionnaire was developed to cover socio-demographic characteristics, information about the work station, previous experience on hospital disaster response, knowledge on hospital disaster response and attitudes on hospital disaster practices. A check list was developed to assess the emergency medic surgical supplies, emergency drug cupboard and supplies necessary for triage of casualties. Data analysis was done with standard data analysis software. Proportion of nurses with satisfactory knowledge, attitudes and practices was calculated with the use of a scoring system out of 100.

Number of nursing officers participated was 295 with a response rate 93.9%. Most of the nursing staff consisted of Nursing Officers (272, *92.2%)* with twenty nursing sisters (6.8%) and three matrons (1%). Most of the nursing staff were less than 40 years of age (175, 59.3%) and were female (274, 92.9%). All the respondents were Sinhalese and Buddhists. Most of the study participants were Diploma holders (259, 87.8%). Post basic category had 28 officers (9.5%). Most of the study participants had equal to or less than 10 years of service period (113, 38.3%). Sixty seven (22.7%) study participants were 21-30 years category. The least number of study participants were from > 30 years of service period category. Majority (95.3%) of the nursing staff

were aware about the difference between natural and manmade disasters. Only 25.4% of the nursing staff knew that the response to natural and manmade disasters are done in the same manner. The percentage of the nursing staff who were aware of the disaster cycle was 48.8%. Majority (89.5%) were aware of the disaster preparedness and response plan of their hospital. Only 64.4% told that they could find and activate disaster management plan of their hospital very easily. Among the nursing staff,98.3% responded that drills are important to test disaster response and preparedness plans. It was found that *94.9%* of the nursing staff knew that the most experienced person should conduct the categorization of disaster victims. Only 59% were aware of CPR. It was found that 45.4% participants had a good attitude score. Nursing sisters and matrons had higher good attitude scores (52.2%) than nursing officers (44.9%). Attitudes among nursing staff was not related to level of education, period of service, age and sex. Percentage of good practices among nursing sisters and matrons was higher than among nursing officers (69.6%. vs. 32%). Age, sex and level of education was not related to practices. Good practices were more among those with > 10 years group (40.1%) than those with less or equal to 10 years (26.5%).

It is recommended that nursing staff need to be educated more on disaster preparedness 2nd response with special! emphasis on the similarity of response in natural and manmade disasters, disaster management cycle and CPR. Nursing staff should be educated with response to hospital disaster management plans with special emphasis on activating the plans. Interventions to improve attitudes of all categories of nursing staff to wards disaster preparedness and response needs to be done as a high priority. It was found that 45.4% participants had a good attitude score. Good practices on disaster preparedness and response need to be promoted with special emphasis on nursing officers.

0154.Kuruppu, L.S.

Assessment of knowledge attitude and practice of cardiopulmonary resuscitation among the staff of the accident service of the National Hospital of Sri Lanka .

Postgraduatate Diploma in Health Sector Disaster Management – 2014   D 3498

Abstract

Introduction : The knowledge and skills of Cardiopulmonary Resuscitation is a vital tool in saving lives. Therefore timely affective and correct intervention in an emergency is expected from health professionals throughout the world as per UK guidelines.(Brown TB, et al.2006) Accident Service(AS) of the National Hospital of Sri Lanka (NHSL)being the leading institution in the city of Colombo needs to have skilful well trained medical personnel to deal with the ever increasing number of emergencies that are admitted to the Accident Service on a daily basis.

This study was done to find out the knowledge attitude and practice of CPR among medical staff of this institution and to identify any prevalent gaps in training.

Methodology : A descriptive cross sectional study was done using a self- administered questionnaire. There were separate questions to assess knowledge and practice and clinical scenarios to assess attitude in performing CPR. The study population was doctors and nurses of different departments of the AS of NHSL. The questionnaires were given in the morning and collected at the end of the shift.

Results and Discussion : Data was analysed and the results obtained. Out of 302 members of staff who responded only about 5% of doctors and 2% of nurses scored more than 75% of marks for the knowledge part. In the assessment of attitude, around 42% of doctors and 27% of nurses scored the pass mark of 50%, while an appalling 10% and 24% of figures were shown for attitude, respectively. From 179 members of staff who has had training after graduating only less than 17 % of staff members had training within the last 2 years. Resuscitation UK Guidelines recommend that medical professionals should have refresher courses every 2 years to keep up with the changes as well as to update training. The study revealed the low numbers of staff of the AS who underwent recent training in CPR.

Conclusions & Recommendations : The knowledge attitude and practice of CPR was poor among the staff of the AS of the NHSL. It is recommended that the staff members undergo a refresher program of CPR every 2 years.

155.Medaduwage, K.S.

Knowledge and preparedness and response practices on fire safety among staff in motor vehicle fuel filling stations in Gampaha district.

Postgraduate Diploma in Health Sector Disaster Management – 2014   D 3620

Abstract

Fire is a known hazard to community. Fuel station is a place highly vulnerable for fire disaster because fuel filling stations highly inflammable petroleum products are stored and distributed. Fire safety is very important in motor vehicle fuel filling stations to ensure occupational and environmental health. It is important to find out the knowledge preparedness and response practices on fire safety among staff in motor vehicle fuel filling stations to motor vehicles in Gampaha district. A descriptive cross sectional study was carried out to achieve the above objective. Majority of the staff in motor vehicle fuel filling stations had good knowledge, preparedness and good response practices on fire safety irrespective of employment category.

0156.Nizar, M.H.F.

Knowledge on basic life support among grade 10 students of selected schools in Colombo District.

Postgraduate Diploma in Health Sector Disaster Management – 2015   D 3630

Abstract

Introduction : At a scene of cardiac arrest, medical personnel may not be present. It is important for the community to acquire knowledge and skills on Basic Life Support (BLS) in order to minimize morbidity and mortality. Empowering school students with same is an effective way to reach this objective. This study describes the present knowledge that students have received from various sources and recommends ways for improvement.

Methodology : A descriptive cross sectional study was conducted in 5 selected schools located in Colombo district based on the maximum number of opportunities

available to learn BLS. A total number of 1331 students in Grade 10 responded to a self administered questionnaire.

Results : The maximum score for the questionnaire was 100 for which 681(51%) respondents scored less than 30 which was considered to be poor. Further, 616 (46%) scored between 30 and 60 which was rated average, and 34(3%) scored above 60 which was determined good. Average score of total respondents was 25.6 (poor)

Discussion / Recommendations :The knowledge among students on BLS is unsatisfactory. The Ministry of Education could play a pivotal role to enhance the knowledge of BLS among students by including a separate new chapter on BLS, ideally placed as the 1st chapter in grade 10 Health Science curriculum, making Health Science a compulsory subject for grade 10 students, ensuring graduating school teachers of health are able to demonstrate and teach BLS.

Further, College of Physicians, Surgeons, Paediatricians, Anaesthesiologists and Community Physicians together with St. Johns Ambulance brigade and Sri Lanka Red Cross societies could conduct BLS workshops in schools to empower teachers and students with BLS knowledge and skill Health educational programs through print and electronic media on BLS could also help to educate the masses.

0157.Perera, W.D.S.C.

Knowledge , attitudes , and practices of medical officers in National Hospital of Sri Lanka on psychological first aid during a disaster response.
Postgraduate Diploma in Health Sector Disaster Management – 2014   D 3621
Abstrac

Background: Most people experience acute mental distress and suffering after exposure to traumatic events/disasters. It is important to overcome such acute suffering or distress to prevent long term negative consequences. Psychological first aid is humane, supportive and practical assistance to fellow human beings who is suffering and who may need support Doctors play a key role as a leader and a member of a health team. Good knowledge and favorable attitude are precursors of correct practices. Upgrading of actions need to do through improvement of knowledge and favorable attitudes. A description of knowledge, attitudes, and practices of Medical Officers on psychological first aid during a disaster response has not been conducted in the country to date. Objective:

To describe the knowledge, attitudes, and practices of Medical Officers in National Hospital
of Sri Lanka on psychological first aid during a disaster response.

Methods: Institution based descriptive cross sectional study carried out among 165 Medical officers work in National Hospital of Sri Lanka. Simple random sampling was used as the sampling technique. A pretested self- administered questionnaire was used to collect data. Data collection was performed by the principal investigator by meeting and inviting the eligible grade medical officers.

Data was analyzed by a computer using Statistical Package for Surveys and Solutions (IBM SPSS) version 15.0 package. Over all knowledge, overall attitudes, and practices were cross analyzed to assess their association with selected factors. For description of variables, descriptive statistics was be used. Chi square test was used to compare discrete variables. A probability value of < 0.05 was considered as significant.

Results: From the respondents 55.2% (n=91) were females and 44.8% (n—74) were males. The majority 33.4% (n=55) were from the service category of three to six years. Out of the 165 individuals involved in the study 56.4% (n=93) had good knowledge on psychological first aid. Those who were with service of =< 9 years 61.7% (n=71) possess good knowledge than population with service >9 years and it was statistically significant ($p<0.05$). Out of the respondents 57% (n=94) had good attitudes and 62% (n=101) reported good practice. As expected, those with good overall attitudes showed good knowledge and it was statistically significant ($p<0.05$).The study showed that respondents with good attitudes had good practice and it was highly statistically significant($p<0.005$).

Conclusion: There were good knowledge attitudes and practices on psychological first aid among Medical Officers work in NHSL on psychological first aid during a disaster response. Service experience was negatively associated with the knowledge on psychological first aid. The attitudes of the respondents reflect the importance in providing of psychological first aid to victims and implementation of psychological first aid training among medical officers.

Recommendations : Despite the good knowledge attitudes and practices among medical officers on psychological first aid during a disaster response the existing knowledge on psychological first aid should be encouraged and maintained.

The study recommends further training to medical officers with service more than nine years to update their knowledge on psychological first aid as their knowledge was not adequate. As the results of this research cannot be generalized further research encourage for field health staff. Individual educational programmes on psychological first aid should be organized for field health staff to overcome with psychological problems arise in the community in disasters.

Keywords :Psychological first aid, Disaster, Knowledge, Attitudes, Practices

0158. Rajapaksha, R.M.N.U.

Capacity assessment for the management of mass fatalities incidents following disasters in District General Hospital Trincomalee, 2014.

Postgraduate Diploma in Health Sector Disaster Management – 2014.   D 3622

Abstract

Introduction: This study was intended to assess the capacity of District General Hospital (DGH) Trincomalee for the management of mass fatalities incidents following disasters. Capacity assessment is a term for the process by which the capacity of a group is reviewed against desired goals. Individual level, organizational level and the capacities at the level of the enabling environment are the three levels of capacity which are not mutually exclusive. The individual level is the knowledge, experiences, attitudes and skills which some of these are acquired formally through education and training, while others come informally, through observing and doing. Access to resources and experiences that can develop individual capacity is largely shaped by the organizational and environmental factors which in turn are influenced by the degree of capacity development in each individual.

Methodology: This study comprised of two components which had covered two specific objectives. Component one was an institutional based descriptive cross sectional survey, which carried out to assess the individual level of capacity and the component two was an institutional based descriptive cross sectional survey which carried out to describe the organizational capacity.

The study had conducted in District General Hospital-Trincomalee, Sri Lanka, in 2014. Data collected during the month of September to November 2014.For the individual level capacity assessment, 165 proportionate stratified sample had taken as study population from 145 doctors, 195 nursing officers and 197 minor employees. The required number of 45 from doctors, 60 from nursing officers and 60 minor employees had taken randomly.

Self-administered pre-tested questionnaires had used for data collection. Data entered into a Microsoft Excel data sheet and analyzed using SPSS version 21. Descriptive statistics used for description of variables. Mean comparison and correlation techniques from SPSS had used for the variable comparison.

Organizational capacity assessment was intended for self-guided by the institution. Various levels of the organization key informants from disaster management committee invited to complete the assessment individually and one set of ratings that best represents the institution was the one of that submitted by the administrative officer on behalf of the institution.

Results and Discussion: Among the study sample, 75.2% (n = 118) had more than average knowledge on mass fatality management. There was a statistically significant (p < 0.01) me knowledge between selected three groups of health care workers at DGH Trincomalee. Amos them, mean knowledge values among different age groups were not statistically significant (> 0.05).

There was no statistically significant correlation of knowledge on mass fatality management and the previous experiences on managing disasters *(p>* 0.05). But there was a statistical significant correlation of knowledge on mass fatality management and the training received t them during their life (p < 0.05).

Attitudes among all three group of health care workers regarding mass fatalities management were favorable towards positive attitude. Among the random sample of the study population half of the workers had less than five year of working experiences at health sector and 36.9°/ (n=58) of total study participants have had prior experience in managing disasters. Among ; total, only 3.8% had undergone mass fatality management training programs. Lack of training of health care workers can be associate with the reduction of the capacity to handle disaster situations.

According to the findings of the institutional capacity assessment, there was a clear need for increase the capacity in the areas of financial allocation and the vision and passion of head of the institution and the dead body management team staff. There was a basic level of capacity in place in the areas of aspiration (mission and vision), strategy. contribution

of staff members, contribution of volunteers for the management of mass fatalities incidents following disaster situations. Human resource planning, infrastructure, coordination and cultural believes and norms have placed in moderate level for the management of mass fatalities *incidents. Then* was a *high level of* capacity in place in the areas of planning for a disaster situation and the community participation for an event of a disaster.

Results concluded that overall capacity for mass fatalities management following disasters at DGH Trincomalee needs to be improved by conducting capacity development programs.

Keywords: capacity, institutional capacity, organizational capacity, disaster, mass fatality plan, knowledge, attitudes, capacity development]

0159.Weerasekara, W.K.L.M.

Prevalence and risk factors related to chronic kidney disease of unknown origin (CKDu) among the residents of Grama Niladhari Divisions of Buththala divisional secretariat area.

Postgraduate Diploma in Health Sector Disaster Management – 2014   D 3502
Abstract

Chronic Kidney Disease (CKD) has become a major health problem worldwide. The increase in the number of Chronic Kidney Disease of Unknown origin has become a major health issue of national concern in Sri Lanka. In Sri Lanka, there is a high prevalence of CKDu in the NCP. There is also a marked increase in Chronic Kidney disease in Monaragala district in the recent past.

Monaragala is the second most poorest district in Sri Lanka and the majority of population are farmers and they are the most affected group with CKDu.

A descriptive cross sectional study was conducted among farmers in the selected villages in Monaragala district with the objective of determining the prevalence of CKDu,

relationship between sugarcane cultivation and CKDu, and to describe associated factors of CKDu among the residents.

In this study population, we have obtained 28.9% of CKDu prevalence among 25-75 age group Iij the present study, there was no significant association (p = 0.931) between CKDu and cultivation of sugarcane among the study population.. Though there was no significant association between any specific drinking water source in this study population, there may be a common factor contaminating all drinking water sources.

There is no strong association between cooking vessels and CKDu.There is a significant association between CKDu and smoking and alcohol consumption. This could be due to toxic substances in cigarettes and alcohol.

0160.Wickrama, K.W.B.K.

An assessment of knowledge attitudes and practice on disaster preparedness among healthcare workers at provincial General Hospital Badulla.
Postgraduate Diploma in Health Sector Disaster Management – 2014   D 3500
Abstract

Disaster management become an important issue globally. It helps to reduce the impact of disaster and save a lot of money - minimize the economical loss. Disaster risk reduction is a group of activities to reduce the impacts of disaster. Floods become a major issue worldwide due to climate changes, deforesting and unplanned land use.

In MOH Vavuniya division, there were 14 Grama Niladhari division were selected and 396 families were selected through probability proportional to size sampling technique. Most of the participants were men. Educational qualifications were less than A/L. their monthly total income was within 20,000.00 LKR. 50% of additional income flow in by livestock.

They have own land and living in semi permanent houses due to poor economical status and frequent floods.81% of families had an experience with floods more than one time during last 10 years period. 48% of families were living in the same place for more than 20 years.

Other than acute injuries, there was no major problem to health due to floods94% of families have mobile phones and it could be use for issuing alert about disaster.The

knowledge and attitude about disaster was good but practice was low. It is because of negligence or due to myths.Health care access was poor institutional capacity also below for disaster management.

Keywords: Disaster, Risk Reduction, Health Accessibility.

Medical Administration

0161.Adikari, A.M.P.S.

eHealth awareness among Medical Officers of Kurunegala District, Sri Lanka.

MSc. Medical Administration – 2013   **D 3486**

Abstract

Background : eHealth solutions are important to improve the efficiency and effectiveness of the health services and to strengthen evidence based decision making.

Objective : To assess eHealth Awareness among Medical Officers of Kurunegala District, Sri Lanka.

Methodology : This is a cross sectional study (n=288) conducted among grade medical officers of the Kurunegala District. A self-administered questionnaire was used to assess knowledge on basic ICT literacy, eHealth awareness, and to identify possible barriers for implementation.

Results : Grade medical officers' usage of internet and email was above 85%. They use common computer applications like word processing and presentation software is above 65%. More than 80% grade medical officers used internet to improve patient care (n=263). About 58% grade medical officers used smart phones and approximately 53% used it to improve patient care (n=266). However there awareness on some of the important eHealth applications, for instance elMMR was a mere 30%.

Of the respondents, 50% were in opinion that computer related health information is moderately secure. More than 95% were aware of computer viruses but 64% were not aware of malware. Skill in using computers (86.5%), lack of breakdown response (84.6%) and cost of computer software (72.2%) has been highlighted as major barriers for the adoption of eHealth solutions.

Conclusion : Grade medical officers' knowledge in basic ICT applications was considered good. Their awareness on certain selected eHealth applications revealed poor. Their awareness on basic security threats such as viruses is good but awareness on modern threats, for example malware, considered low.

Recommendation : Human, technical and economic barriers have to be overcome for successful adoption of eHealth programs.

0162.Akilendran, K.

Factors influencing selection of outpatient care in private and public sector in Vavuniya district.

MSc. Medical Administration – 2013   **D 3405**

Abstract

A descriptive cross sectional study was conducted to explore the factors influencing in selection of private and public OPD services in Vavuniya district. A structured interviewer administered questionnaire was used as the study instrument. Total of 840 participants were selected for this study including patients from both private & public OPD services equally. The study included patients and participants view on improving the OPD services within Vavuniya district.

Factors which had significant relation with OPD selection were age, social status, education, marital status, number of family members, family income, OPD distance from resident, nature of transport system, travel cost, type of OPD visit, previously used OPD type, perceived quality of medical services, perceived medicine issuing quality via OPD counters and perceived patient care focus.

Factors that were not significant in influencing were the patients gender, perceived doctor's consultations and treatment pattern, perceived high patient attention, perceived promptness in OPD service, perceived patient responsiveness, perceived overall OPD service quality, perceived patient problem understanding, perceived promptness in laboratory service, perceived medical equipment quality and perceived welcoming approach.

Within significant factors group some factors are favouring the public OPD selection and some are favour private OPD selection and some are favouring both OPD services in different levels. Surprisingly this study revealed that most of the public officers are using public OPD services and patients present to private & public OPDs are come as shift, bypass respectively from public OPDs.

Findings point to the need for to private OPDs to raise their standards to serve high and middl income groups, they need to take steps on improving the communication skills and they need t< focus on covering more geriatric patients in future.

For Public OPD services recommendations are, OPD hours, hours need to be extended, attention on prompt service delivery in public OPD service and pharmacy systems , the need for appointment systems to patients, steps to improve patient focus care by sequence of training to OPD staff, appointing family care consultant physician at OPD, frequent trainings to OPD Medical Officers, training to other OPD health staff to improve medical service quality, clear labeling of medicines, improving the OPD pharmacy performance, appointing a consultant family physician as an in-charge of OPDs at General and Base hospitals and regular supervisory visits by RDHS (Regional Director of Health Services) to primary care units will improve the supervision over public OPD care system and fulfill most of the patients expectations.

0163.Amarasinghe, P.V.N.P.

Selected aspects of knowledge and perception on medical ethics and medico-legal duties among medical officers in government hospitals in Kaluthara district.
MSc. Medical Administration – 2014   **D 3489**

Abstract

Introduction: There are several issues related to medical ethics and medico-legal duties of doctors due to the lack of knowledge and challenges of rapidly changing society. Medical ethics and law is also changing with time. In addition, ethical dilemmas occur time to time with the advancement of science and technology. These problems can be resolved with proper education and training on medical ethics and medico-legal duties for doctors. Universities, ministry of health and professional bodies have a major role for it.

Objectives : This study intended to assess the knowledge and perception of selected aspects of medical ethics and medico-legal duties among medical officers in a district of Sri Lanka.

Methodology : A cross sectional descriptive study was conducted among 500 doctors in the curative sector in Kaluthara district. All the doctors in these hospitals were

considered as the study population and no sampling method was employed. A Self administered questionnaire was used to collect the data.

Results : The results indicated that most of the doctors were from the 31-40 age category(55 %%), married(89.2%), females(51.9%) grade 2 medical officers (66.6%) who are working in the base hospitals (45%) of the area with a basic medical degree (86.2%). A large proportion of them (59.7%) had training on this area as undergraduates (47.5%).

The overall knowledge of the medical ethics and medico-legal duties was poor ((52.2%).. Knowledge of the medical ethics is poorer than the medico-legal duties.

The overall perception was positive (80.7%). They have identified in- service training (86.2%) and medical education (87.3%) on medical ethics and medico-legal duties is needed for the for improvement of the ethical clinical practice.

The main sources of information to them were ministry of health (31.8%), and professional bodies like SLMC and SLMA (7.2%). The most preferred sources were the same (58.0%) (20.4%).

It was found that there is an association with the total perception and marital status. This difference is statistically significant (x^2 =8.995, p=0.029, df=3). And also, educational qualifications have an association with the total knowledge. This difference is also statistically significant (x^2 =4.158, p=0.041,df=l) The grade also has an association with total knowledge and this difference is also statistically significant (x^2 =6.053, p=0.048, df=2).

The results of the study further indicate that there is an association between the total knowledge and perception. This difference is statistically significant (x^2 =7.137, p=0.008, df=l). This may be due to the impact of knowledge for the perception.

Conclusion : A poor general knowledge and positive perception regarding medical ethics and medico-legal duties as well as a poorer knowledge regarding medical ethics than medico-legal duties were revealed by this study. There is a further need of researches in this subject. Consideration should be paid to including those topics in undergraduate and postgraduate curriculums in a substantial manner. Continuous professional development, in-service training programmes should be arranged for doctors and special orientation programmes should be done for pre-interns and interns.

Keywords. Medical ethics and medico-legal duties Knowledge Perception

0164.Aththanayake, S.S.A.B.M.S.K.

Patient's perception on responsiveness of a Government Hospital.

MSc. Medical Administration – 2014   **D 3495**

Abstract

Health system s' responsiveness is a measure of the performance of a health system of a country in relation to meeting the non- medical expectation of its service seeker. The assessment of responsiveness should be done by the service seeker who is in best position to assess it. The concept of health systems' responsiveness was described by WHO in late 1990s and only few study have been conducted to measures the non medical expectation of service seeker.

The descriptive cross sectional study was conducted with systematic sampling method with the objective of assessing the level of Responsiveness in relation to inward care, to identify the domains of Responsiveness relevant to the healthcare delivery system, and to compare the level of Responsiveness with socio demographic characteristic of the inward patients.

The assessment of health systems' responsiveness was carried out at Base Hospital Nikeweratiya in four specialized units with participation of 422 respondents. An interviewer administered questionnaire was used to measure the level of Responsiveness and its domains and a check list was used to assess the Responsiveness in relation to selected characteristics of the service delivery system at B.H. Nikaweratiya.

The rating of responsiveness as 'very good or good' in relation to each of the domains were, 86.6% in relation been treated with dignity, 81.6% in relation to autonomy. 79% in relation to confidentiality, 74.3% in relation to communication. 80.9% in relation to prompt attention. 76.2% in relation to basic amenities. 86.8% in relation to social support and 77.8% in relation to choice of care provider. The overall level of responsiveness was rated as 'very good" or "good" by 82.5%.

The cross tabulation of results with patient related factors shows the significant difference with age ($/^2$ =0.017,p=0.007), current position(x^2 =1.902,p=0.000) and duration of current illness($/^2$ =0.015,p=1.284).

Though the health systems' responsiveness was rated by the majority of the participants as 'good or 'very good' some aspects of responsiveness including the communication and basic amenities for the clients need to be improved in delivering the inpatient health care.

Keywords: Health systems' responsiveness, B. H. Nikaweratiya.

0165.Balasuriya, M.

"Assessement of psycho-social needs of people living with HIV/AIDS in Sri Lanka"
MD Medical Administration – 2012   **D 3409**
Abstract

Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDS) is still a global epidemic causing around 8000 deaths a day. Anti-retroviral (ARV) and related improvement of the medical care has stabilised growth of this epidemic Nevertheless People Living with HIV and AIDS (PLWHA) need to live like the rest of the society and their psycho-social needs and medical needs hinder their quality of life. Thus it is timely to look at the quality of life of People Living with HIV and AIDS (PLWHA) through assessing psycho-social needs and medical needs. It was established through publications that there is a definitive gap between psycho-social needs and medical needs and the services delivered to them. Further the gap would have a direct effect on the effectiveness of the quality of services delivered in HIV/AIDS programs. The essence of this study was to investigate the possible relationship between the fulfilment of medical needs and psycho-social needs of PLWHA and how it affects their satisfaction. A quantitative study was performed with qualitative support directed to PLWHA in Sri Lanka. The conceptual framework and the variables were formulated based on recently published studies. The study comprised of 100 respondents who were registered HIV patients in Government Medical Clinics in the Western Province of Sri Lanka. The interviewer administered questioner was distributed among the sample and a qualitative interview was carried out with a medical administrator and a person living with HIV/AIDS to validate the data collected by the study proper. It was revealed that they are concerned about both Medical needs and Psycho-social needs, and the latter has the lesser concern. The findings of the study indicate that HIV patients showed that overall satisfaction that is significantly related to both Psycho-social needs and medical needs. The findings further showed that patients

attach a higher importance to medical needs and that the medical needs cluster around four key factors; patient access to clinical care; spiritual and home care; patients concern for the family and stigmatisation. It was also found that, access to practice religion, health care for the family, accessibility to clinics have significant influence, and the relationship with the health care workers have a considerable impact on satisfaction of PLWHA. The study arrived at valued conclusions that significant improvements should be made in assuring medical needs as well as administrators should focus on psycho-social needs, which should complement the medical needs.

0166.Chandrasena, A.P.R.S.

Evaluation of the healthy life style clinics [HLC's] in primary health care Institutions in the District of Matara.

MSc. Medical Administration – 2013   D 3416

Abstract

Advanced stage of Demographic Transition leading to increase in life expectancy and aging of the population, together with the Epidemiological Transition has shifted the disease burden of the Communicable, Maternal and Child Health towards the NCD's in Sri Lanka. The country has transitioned to a middle income country from a low income country but the transition of disease pattern was much similar to that of a developed country.

Non Communicable Diseases are defined by the WHO, "include chronic diseases, principally Cardiovascular Disease, Diabetes, Cancer and Asthma/Chronic Obstructive Pulmonary Disease, in addition to Mental Illness and Injuries". Chronic NCD's are the leading cause of morbidity and mortality world wide, in Sri Lankan context chronic NCD's accounts for the 71% of all deaths. Chronic NCD's causes a huge socio economic impact to the country.

Ministry of Health has realized the future trends of chronic NCD's, principally the CVD and taken a policy decision to establish HLC's at Primary Health Care level in district wise, since 2011 there were over 700 HLC's established and function according to national guidelines. Since starting them only a single study was carried out by a group of experts in the Ministry of Health as a telephone survey in 2013, on assessment of functions of HLC's. But the established HLC's were needed a much detailed evaluation in many aspects.

General study objective - To evaluate the Healthy Life Style Clinics established in the Primary Health Care Institutions in the District of Matara

Study design was a Cross Sectional Descriptive study.

Study population was 17 established HLC's in the district and 14 randomly selected HLC's were studied with the staff and clients attending to the clinics. An observational check **list,** self administered questionnaires and interviewer administered questionnaire were used to collect data.

Results revealed that the mean duration of functioning of the studied HLC's were 18 months and availability of staff is satisfactory at the level of type B DH level but not at the level of type C DH and PMCU level. Study found out that the studied HLC's were available with essential facilities to have their functions but the supply of Glucose strips to check fasting blood sugar were at a low level. Further more the study showed that most of the HLC's were providing essential services to the community with a good information system of their clients, but the follow up of clients were not up to the expected level. Studied sample of clients were mainly females as compatible with the routine clinic attendance at national and district level and the study population mostly confined to a range of 2 Km's from the HLC. Majority of clients were aware on HLC but they didn't visited unless referred by some one. Client satisfaction was very high in the HLC's.

In conclusion the system of HLC is a good method to have at the level of PHC with many areas to develop further. Supportive staff at lower level PHC was not suitable enough in providing expected services, coverage of the urban and estate population was not adequate, need to have a risk assessment of each and every patient, establishing a follow up plan for all the clients is a necessity, need to improve male participation and introduction of an additional blood test like total cholesterol can improve the HLC functions further more.

Scaling up of the HLC facility to all PHC, General Hospital and all Base Hospitals will be useful to overcome certain issues that were recognized in the study. Appointing capable officer to each and every HLC to conduct supportive aspect is highly essential, especially for the lowest level of the health care. Monitoring of functions of HLC's with a good set of indicators should be considered by the Health Administrators at different levels: Good supply of supplies are critically important in providing services to the

community, proper reviews and follow up trainings will streamline the functions of HLC.

0167.Dahanayake, L.A.C.S.

The utility of core standards and minimum standards for health sector disaster preparedness and response programme in Ampara RDHS Region.

MSc. Medical Administration - 2013   D 3407

 Abstract

Introduction Disasters have direct and indirect impact on health and well-being of people, frequently with a large number of people is displaced, killed or injured and making them vulnerable to epidemics of communicable diseases (WHO, 2002). The importance of disaster as a major public health problem is widely recognized. (Godschalk, 1999). Little knowledge is available about utility of core standards and minimum standards by health sector disaster preparedness and response programs worldwide. No study has been conducted in Sri Lanka on this subject area. Therefore, the objective of study was to assess the utility of minimum and core standards for health sector disaster preparedness and response mechanism.

Method The study is a descriptive cross sectional survey at Ampara RDHS region. It consisted of three categories of health workers respectively health managers, environmental health staff and maternal and child health staff. For each category two separate study instruments were applied. All these six study instruments are based on Sphere Project Humanitarian Charter and Minimum Standards in Disaster Response, 2011 edition. A scale based on scores for awareness, availability, acceptance and practice was developed to determine the level of utility of standards among each relevant study group. The level of utility was described as poor (0/4), low (1/4), satisfactory (2/4), good (3/4) or excellent (4/4).

Results The study explored that the level of utility of majority of standards among health managers is poor, the level of utility of majority of standards among environmental health workers is good and the level of utility of majority of standards among maternal and child health care workers is good.

 Conclusions and recommendations This study found that the special disaster management training programme should be conducted for study population. Encouraging health managers to develop their operational plans based on core standards are recommended. Disaster training module should be included to the basic

professional curriculum of health managers. Periodical refresher programme are recommended to enhance the utility of standards among public health workers.

Key words:**Disaster, Core standards, minimum standards, disaster response, level of utility**

0168.Dharmatilake, N.H.

Health needs and health care service utilization by retired government servants in a MOH area in Colombo district.

MSc. Medical Administration – 2014   **D 3491**

Abstract

Retirement of a government servant marks the end of a service of an employee in the state sector which can happen at the statutory age of 55 years or could be extended up to the mandatory age of 60 years or else could occur well prior to these ages. Due to the nature of its duties military personnel are entitled for retirement after the completion of the services for 22 years and 15 years for males and females respectively. Health concerns play an important role on a person's decision on retirement. Retirement signifies an important event in a person's socio-economic life, thus the correct transit and adaptation from employment to retirement is crucial for the future life of the retiree, especially in matters pertaining to health.

This is a descriptive cross sectional study conducted as a household survey in the Homagama Medical officer of health (MOH) area. Multistage cluster sampling technique was employed for data collection. The pensioners list was obtained from the Divisional Secretariat office Homagama from which 450 participants were randomly chosen out of 30 randomly selected Public Health Midwife PHM areas. Information from 404 participants was gathered via interviewer administered questionnaire. Data analysis was done by using SPSS software - version 20.

Retirees spend their retirement in many different ways, which ranges from re-employment to just being at home. The social structure of the community in which they live has paved the way for them to get involved in social and religious endeavors. However state programs for a planned and a healthy retirement had failed to catch the attention of most of them. The pension has become the sole income of more than 75 percent of the retirees in the study.

When behavior pertaining to health was assessed through the "Super Eight" health targets most of them lack the knowledge and practice.

Hypertension (155), Diabetes Mellitus (123) and Hyperlipidemia (71) were the commonly diagnosed medical conditions while Cataract (116) was the commonest surgical condition. For Non Communicable Diseases (NCDs) and minor ailments most of them had sought treatment from western general practitioner while for surgical conditions government health care facilities were commonly used Retired military personnel and police officers mostly utilize their own department hospitals.

0169.Dharmagunawardene, P.V.D.S.

Achievement and sustainability of millennium development goals 4 and 5 in selected districts of Sri Lanka

MD Medical Administration – 2013   **D 3418**

Abstract

Health sector plays an important role in achievement of Millennium Development Goals (MDGs'), as outlined in the "Millennium Declaration. The target for MDG 4 is to reduce the under-5 mortality rate by two-thirds between 1990 and 2015, and the target for MDG 5 is to reduce the maternal mortality ratio by three-quarters.

With two years to 2015, progress towards MDGs 4 and 5 and their regional disparities need to be monitored by the health sector administrators. Geographical Information Systems (GIS) are widely becoming a standard tool for information management that can effectively be used to assess these dimensions.

Objective was to analyse the previous rates of maternal and child mortality, coverage of packages of interventions and access to maternal and child health services. Subsequently they were used to forecast the achievement and sustainability of MDG with regional disparities within the selected districts by 2015. Additionally it expected to analyse the perception on present effort by health managers of the selected districts.

Study design was a Descriptive; Retrospective-Prospective one. Study settings were Mannar, Vavuniya, Kurunegala, Puttalum and Anuradhapura Districts. Study utilized structured formats to collect coverage data from Medical Officer of Health (MOH) division level and access data from district level. Perception on present effort was obtained using an e-mailed questionnaire using a structured format developed by RossJA, and et.al, as Maternal and Neonatal Program Effort Index. Access and coverage data for each MOH division was utilized to develop the Sustainability Index using Causal Effect Model. Achievement of MDG targets in each MOH division was

done by trend analysis using forecasting models. Finally, regional disparities in all these parameters were analysed using Geographical Information Systems.

Total of 33 MOH areas (53.23%) in selected districts will achieve the MDG target in relation to Maternal Mortality. MDG target of Neonatal Mortality will be achieved only by 21 MOH areas (33.87%). Infant Mortality target will achieved by 26 MOH areas and this is 41.94% of the total MOH areas. Positive trends were noticed in majority (more than 50%) of the MOH areas in relation to all the ante-natal, peri-natal and family planning service coverage parameters except for Rubella Immunization. But postnatal and infant care service coverage parameters show negative trends. Highest value of Coverage Sustainability Index (CSI) of Neonatal Mortality and Infant Mortality was for Madhu MOH. Highest CSI for Maternal Mortality was for the Vavuniya North MOH. The lowest CSI for all three parameters were from Karuwalagaswewa MOH. Highest Access Sustainability Index (ASI) for neonatal care was evident in the Marawila MOH and the lowest was observed in Madhu MOH. Similar results were observed in relation to ASI of infant care. In relation to ASI of maternal care highest was noticed in Chilaw MOH and the lowest was from the Padawiya MOH. Perceptions of health managers on present effort indicates that, efforts in relation to skilled service provision at divisional hospital level, maintenance of partogram, management of obstructed labour, management of post-partum haemorrhage at rural settings, post natal care and training arrangements for staff were comparatively low. Therefore, it is recommended to concentrate efforts to low achievement areas, to natal and post natal care of service provision, to improve training of staff and to enhance quality and safety of service provision during the planning stages of maternal and child health services to improve MDG targets and to improve equity.

0170. Dharmagunawardene, P.V.D.S.

Assessment of perception of towards dimensions of qualityof patients care service provision

MD Medical Administration – 2013   D 3419

0171. Dias, A.P.A.D.C.

Factors related to job satisfaction of government dental surgeons in central province.

MSc. Medical Administration – 2013   D 3410

Abstract

Job satisfaction is defined as the employee's perception on how well the job provides factors that are viewed as important. Thus, job satisfaction among Government Dental Surgeons is a very important factor for developing the public health sector in Sri Lanka.

This study was focused on finding the present level of job satisfaction among Government Dental Surgeons in the Central Province and its association with selected socioeconomic-demographical, intrinsic and extrinsic factors. A descriptive cross sectional study was carried out using a self administrated questionnaire. An internationally validated questionnaire was adapted to suite the local context .The eligible population was 186 Dental Surgeons and response rate was 81 %.

Approximately 55% of Dental Surgeons were satisfied with their job and 45% were not satisfied. Association of the job satisfaction level with selected socioeconomic - demographical factors was described .In addition, association between the level of the job satisfaction with satisfaction to intrinsic and extrinsic factors was explored. Autonomy, Achievement, Career Development, Supervision showed statistically significant association.

According to the identified factors of job satisfaction, recommendations have been put forward to enhance satisfaction and minimize dissatisfaction.

Keywords; Government Dental Surgeons, Job Satisfaction, Central Province

0172.Dissanayake, D.M.A.K.

Assessment of the utilization of 16 essential non communicable disease (NCD) drugs in government curative health care institutions in the Kandy district.

MSc. Medical Administration – 2013   **D 3627**

Abstract

Introduction: Non communicable diseases (NCDs) are chronic illness and c< disabilities and death unless an appropriate timely management regime is implemented Seventy one percent of the total annual death in Sri Lanka is caused by chronic Is Ministry of Health realized the rising burden of chronic NCDs and issued circulars, and 16 essential NCD drugs were recommended to be available in curative health < especially in primary level health care institutions with a two month buffer stock.

Objective: To assess the utilization of the 16 essential NCD drugs in government curative health care institutions in the Kandy district in 2013

Methodology: Study design was a descriptive cross sectional and the study setting was all curative health care institutions in the Kandy district. Two study instruments were used.

Component I- A data extraction sheet was used to gather data from drug registers and records to assess availability, distribution, and supply of the 16 essential NCD drugs.

Component II- Self administered questionnaires were used to assess drug ma systems through heads of institutions and those in charge of drug stores.

Data was analyzed using SPSS version 20.

Results: Regarding the availability of 16 essential NCD drugs, 67.4 %(n=4342) drug quarters had high availability. There was a statistically significant difference of

availability in Chlorphenamine Injection l0mg, Frusemide Injection 20mg/2ml and Hydrocortisone Hemisucci Injection l00mg among categories of institutions in all four quarters in the year 2013 (p<0.001,p<0.001,p<0.001 respectively). Aspirin l00mg tablet and Metformin 850mg were not supplied and not available throughout the year. Fifteen drug preparations (65.2%) had been supplied equal to or more than their estimate, in more than 50% of the institutions in the Kandy District in the year 2013. Sixty three (90.0%) institutional heads knew about the 16 essential NCD drugs. The knowledge of NCdrugs among categories of curative healthcare institutional heads were different and it was statisticallysignificant (Chi-square=l 1.522, df=3p=0.009). Only 5(7.2%) institutions had a two months buffer stockduring year 2013. Only 22(46.4%) officers in charge of drug stores had training related to drug management.

Conclusions: The availability of the 16 essential NCD drugs in government curative health care institutions in the Kandy district in 2013was satisfactory. The majority of oral drug preparations weredistributed in outdoor pharmacies. Most of the institutions were supplied a significant percentage of theestimated amount of drugs, even though it was not sufficient to maintain a two month buffer stock.

0173.Fernando, G.H.S.

A study on the consumer perception and quality of hospital food at the Teaching Hospital Karapitiya.

MSc. Medical Administration – 2012   **D 3415**

Abstract

Introduction: Patients' meal is an integral part of the treatment of in-ward patients. The hospital meals are strongly expected to be balanced, nutritious, and hygienic. The quality of hospital food service influences much for the overall satisfaction of the hospital stay of the patients. However, there is a scarcity of research on this important area in Sri Lanka.

Objectives: This study was a pioneer attempt to investigate the quality and level of patient satisfaction with regards to the food service at Teaching Hospital, Karapitiya - a major tertiary care setting in Sri Lanka.

Materials and methods: This study was a descriptive, cross sectional study. A sample of 316 patients receiving in-patient care from the medical, surgical, eye, ENT, neurosurgical and orthopedic wards of the TH Karapitiya, and are on normal hospital diet were included in the study using a convenient sampling method. The study

comprised of two parts; an observational study to evaluate the quality of food preparation and a survey to evaluate consumer satisfaction. Observation was conducted on twenty randomly selected days over a period of two months. An interview-administered questionnaire was used to collect data on client satisfaction with regards to hospital food service.

Results: Only 27% of the in-ward patients in the TH, Karapitiya consume hospital diet. Unit cost for the breakfast, lunch and dinner are approximately Rs. 17.00, Rs.60.00 and Rs.88.00 rupees respectively. The physical and human resources of the kitchen was not adequate. General cleanliness of the kitchen, conditions of the utensils, hygienic practices of the kitchen staff, the way that they are dressing were not satisfactory. Lack of inspections and the supervision by the higher authority was observed. Garbage disposal procedure of the kitchen was good. Amount of spices and flavoring agents added to the food was less than the recommended amounts. The quality, quantity and diversity of the vegetables and green leafy vegetable were found to be unsatisfactory.

The majority of the respondents (59.7%) rated the overall quality of hospital food service as fair, while 13.6% and 26.6% have rated it as good and as unsatisfactory respectively. Patients were mostly satisfied with the quantity of all types of food provided (above 85%), time of food distribution (90%), temperature of food (85%) and texture (86%). However, 31% of patients were unsatisfied with taste, 40% were unsatisfied with the smell of food and 29% were unsatisfied with the diversity of food provided. There was no significant association found between overall satisfaction regarding food service with the age, gender, ethnicity, educational level and length of hospital stay.

Conclusions and recommendations: The general cleanliness, availability of physical and human resources, hygienic practices of staff and quality, quantity and diversity of the hospital meals were unsatisfactory, while the waste disposal practices of the kitchen were found to be good. Majority of the patients on hospital meals rated the overall quality of food service as fair. The least satisfied aspects of food service were the taste and smell of food.

Corrective measures such as renovating the building, recruiting more staff, training the staff on food safety and hygiene and better cooking methods should be implemented to improve the unsatisfactory aspects of the food service and regular supervision and surprise observations must be conducted at the kitchen by the higher authority to maintain the standards of food service.

0174.Hamdani, A.M.

An assessment of the adequacy ofservices available for patients with major injuries following road traffic accidents at Teaching Hospital Kandy.

MSc. Medical Administration – 2014   D3625

Abstract

Road traffic accidents are corollaries of ongoing expansions, industrialization and the availability of limited resources for humans to cope up with potential challenges. In this aspect the health division has to participate with foremost responsibility in harmonizing with the other sectors which involve in the day to day activities of individuals.

Though the Teaching Hospital Kandy remains the second largest hospital in the country, lack of an established accident and emergency unit is a major disadvantage in terms of quality of care to the victims following road traffic accidents.

Ministry of Health has focused its attention to the importance of establishing accident and emergency units across the county as one of its main priorities. In 2015 Ministry of Health is planning to build a separate accident and emergency unit in Kandy in order to provide a better quality emergency care services to the patients.

This research was carried out with this scheme in sight. The main objective of the study was to assess the adequacy of services available for the victims following road traffic accidents, to recommend measures to improve the existing services and the requirement to establish a proper functioning accident and emergency care unit.

A descriptive study prospectively done with an analytical component was carried out from 21st of June to 20th of July 2014. All victims with major injuries admitted to the surgical and orthopedic units were taken into consideration and an observation was done by the principal investigator on 43 occasions amongst 57 staff nurses based on their knowledge, attitude and responsiveness, with a focus group discussion among the respective unit heads to insert a qualitative importance to the study

This study analyzed the socio demographic characteristics of victims. It showed male predominance linking the productive age group. Most common usual mode of transport was by foot followed by motorized two wheelers. Majority of the accidents occurred between 12 noon to 3p.m.

Nearly 50% of the victims had to wait for more than one hour to receive the initial car and supportive services breaching the golden hour rule which is vital on an accident victim.

Only 17% of victim required computed tomography (C/T) for investigation. Among this 17% about 33.3% were taken within an hour and the next were taken within 4 to 5 hours.

Out of 261 victims 140 victims needed surgical interventions. Among this 140 victims 97 had to wait for more than eight hours.

Most common site of injury was upper and lower extremities of the body. Commonly denoting about 52.8% needed orthopedic referral of clinic follow up.

Only about 43.9% of staff nurses had undergone some sort of training in handling emergencies. Which made majority 172 (65.9%) of 261 victims dissatisfied regarding the services provided at the Teaching Hospital Kandy.

Among the staff 63.2 % of staff nurses agreed that there unit had 3 to 5 required equipments to handle the emergencies.

Only 24.5% had complete knowledge regarding triage activities but 57.9% had an idea regarding assessing Glasscow coma scale

Among the staff nurses 64% were able to maintain airway and 39% were able to give cardiac massage when it is required.

Findings of this study reveal the importance of constant monitoring and administration along with the providing of sufficient physical and human resources. Given that clear guide lines to the staff with continuous availability of in-service training to update their knowledge with continuous medical education to motivate them to carry out a satisfied job is essential to give enhanced patient care.

This study shows the need for policy directions and technical guide lines in establishing an Accident and Emergency unit at Teaching Hospital Kandy.

0175.Kavisekara, H.K.M.M.B.

Perceptions on continuous professional development programs and on introducing a process for medical license revalidation in Sri Lanka – A study among medical professionals.

MSc. Medical Administration – 2013   **D 3412**

Abstract

Continuous professional development is very important for medical professionals. It improves patient safety and other patient care outcomes. Revalidation is a process to ensure standard of practicing medical professionals by regular assessment. Sri Lanka currently does not have a proper CPD process or a revalidation system for medical professionals. In this descriptive cross sectional study, medical professionals were surveyed on perception to introducing CPD program. In addition, it is also surveyed on knowledge of revalidation and perception to introducing a revalidation process. A self-administered questionnaire was given to 461 medical professionals from teaching hospital in central province and full time general practitioners in the province. In addition, in-depth interviews with key stakeholder (SLMC, SLMA, GMOA, Ministry of Health, Professional colleges) were also held. On analysis, it was found that medical professional have very good perception on CPD program with average score of 85.95. Knowledge on revalidation programs were 64.24. However, perception to introducing a revalidation programs were comparatively low with a mean of 49.64. Significant differences on average scores observed among different categories of medical professionals. However, there were no significant differences based on other demographic characteristics. Based on the results and in-depth interviews, it is recommend to start a formal CPD program in the country with collaboration of all stakeholders. In addition, CPD program should either connected to career development or/and financial incentives to ensure sustainability and acceptance. There is no place for revalidation at present. Revalidation process should only be introduced only after successful establishment of sustainable CPD program in entire country. Therefore, revalidation program should not be implemented until further researches establish the acceptance.

0176.Kurukulasuriya, B.I.

Factors associated with utilization of oral health care services by the children between the ages of 1 to 3 years attending wighing centers in Gampaha district.

MSc. Medical Administration – 2014   **D 3515**

Abstract

Background: The aim of this study was to determine the utilization pattern and the factors associated with utilization of oral health care services by the children between the age of 1 to 3 years attending weighing centers in Gampaha district.

Methodology: A descriptive cross-sectional study was conducted among 402 children who were between the age of 1 to 3 years attending weighting centers in 15 M.O.H areas in Gampaha district during 31 July to 17 of August 2014. Information on socio demographic data, knowledge and attitudes related to oral health during childhood and utilization pattern and barriers to utilization of services were obtained using a structured interviewer administered questionnaire which was given to the mother/caregivers who attended the weighing center with the child during the data collection period. .

Statistical analysis was done using software SPSS version 15 and the association were assessed using statistical test chi-square.

Results: Though the knowledge 59.95% and attitude 57.7% were relatively good among the mothers/care givers of the children only 26.6% utilized both Government and private oral health care services. Having a oral health problem was the main reason for utilization .Out of the children who utilized oral health services, The majority of children (50.5%) belonged the age group of 31 to 36 months. . The child not having any oral health problem was the main reason given for not utilization of the oral health care services.

Conclusion :There was a low level of utilization of oral health care services among the study population due to lack of awareness of mothers /care givers on oral health problems of their children.

0177.Muraleeswaran, R.

Assessment of knowledge, attitudes and selected practices of heads of Institutions regarding management at primary health care Institutions in the Eastern Province of Sri Lanka.

MSc. Medical Administration – 2013   **D 3417**

Abstract

Objectives of study: The objectives of this study were to assess the knowledge, attitudes and selected practices of heads of the institutions regarding management at primary health care institutions in the Eastern Province of Sri Lanka.

Methodology: This was a descriptive cross sectional study, carried out at primary health care institutions in the Eastern province. There are 102 primary health care institutions in the Eastern Province. All the heads of primary health care institutions in the Eastern province of Sri Lanka during the period of study were included. The study has two components. The first component was the assessment of knowledge and attitudes regarding management among the heads of primary health care institutions in the Eastern Province. The second component was the assessment of selected practices on management among the heads of primary healthcare institutions in the Eastern Province.

A self administered structured questionnaire was used in the first component. The checklist was used to gather information about management practices. The questionnaire was completed by 85 heads of primary healthcare institutions out of 102 who were selected for this study. To assess the practices, Random sampling method applied to select required number (10) of sample from each RDHS area due to limitation of time.

Results: Overall knowledge of heads of primary health care institutions on management was found to be satisfactory. Knowledge about self management^5.5%), planning and assessment (52.4%), organization and supervision(70.2%), information management and decision makinsf86.7%) and human resource management(90.6%) were found to be satisfactory. There was a statistically significant association between managerial experience and level of knowledge on information management and decision (P=0.037). However Knowledge about finance management was not satisfactory. Only 7.2% of the respondents had satisfactory level of knowledge.

Attitudes of heads of primary health care institutions were also satisfactory. Out of the study population of 85, majority (64.7%) of the respondents had desirable attitudes on management. Attitudes of them had a significant association with their work place (P=0.027).Practices of heads of primary health care institutions were not satisfactory. Only 25% of them had satisfactory level of practices regarding management. High proportion (87.5%) of them was poor or very poor in writing and displaying a year plan, them (75%) were poor or very poor in updating their diaries. Out of the study population, only 15% of the participants were good in supervising in the form of educating and helping rather than criticizing. Most of the participants were poor or very poor in conducting regular drug review meetings (85%) and arranging in service training programme (82.5%) to their hospital staff. Highest percentage (65.8%) of heads of primary healthcare institutions has agreed that staff shortage as a major obstacle to practice management at institutional level. Lack of communication skill and lack of computer knowledge have also been identified by 58.8% and 56.4% of them respectively as the barriers to practice the management.**Conclusions:**Although knowledge and attitudes of the heads of primary health care institutions on management were satisfactory their practices on management were satisfactory. There was a significant association between managerial experience and level of knowledge on information management and decision making. Attitudes primary health care institutions also had a significant association with their work place.

0178.Nishshanka, W.A.

An assessment of level of work-related stress among nursing officers in Sri Jayewardenepura General Hospital.

MSc. Medical Administration – 2013   **D 3406**

Abstract

Stress is a state of emotional, cognitive, behavioral and physical reactions to unfavorable situations and is characterized by high levels of arousal, distress and feelings of not coping. It has major behavioral and health implications. Stress has a special significance in health care where the workers experience both psychosocial and physical stress. As front-line health care workers who are in the wards for twenty four hours a day, Nursing Officers are at high risk of stress, due to their enormous responsibilities. In the ward setting they act as the link between the physicians, patients and the community.

This hospital based descriptive cross-sectional study was aimed to assess the level of work-related stress, describe the factors affecting, relationship of stress with relevant socio-demographic factors and to describe the coping strategies used in Sri Jayewardenepura General Hospital.

A self-administered questionnaire developed in accordance with the *Nursing Stress Scale* was used to evaluate the level of stress in Nursing Officers of Sri Jayewardenepura General Hospital. The response rate was 90.0% (402 participants).

Analysis of variance (ANOVA) and post hoc analysis was carried out to assess the association of socio-demographic and service related characteristics with the different factors which affect level of stress of Nursing Officers. This study revealed that amongst the above characteristics 24-33 years age group, residing in hospital quarters and rented houses, loneliness, lack of spouse's support and poor financial status were significantly associated with high levels of stress ($p < 0.05$). Additionally, children of less than six years of age, three to five years of service, nursing grade II and III and working in paying wards also demonstrated a significant association with high levels of stress ($p < 0.05$).

Though the coping strategies are differ from one problem to the other, important strategies such as problem solving and duty arrangements by consensus, close supervision, and ongoing welfare activities, occasional rotation of units are practised to manage the arising stress in Sri Jayewardenepura General Hospital.

High level of stress among Nursing Officers is a considerable health issue in this semi-government hospital which needs to be addressed by further implementing effective coping strategies.

Keywords: Stress, Nursing Officers, associations, coping strategies and NSS.

0179.Perera, D.A.K.

Determine the factors affecting underutilization of in-house blood donor programme of Government Hospitals in Western province.
MSc. Medical Administration – 2013   D 3413

Abstract

Blood and blood component transfusion is one of the major therapeutic practices through out the world. National Blood Transfusion Service in Sri Lanka requires approximately 300000 blood units annually. NBTS has two blood donor programmes. In 1998, 80% of blood collection was from the In- house blood donor programme. Currently it is less than 10% and highly underutilized. Therefore, studying factors affecting the underutilization of In-house donor programme of government hospitals is useful to improve the utilization of In- house blood donor facility in Western province. To determine the factors affecting underutilization of In-house blood donor programme of government hospitals in Western province was the general objective of this study.This was a cross sectional descriptive study. The study composed of three components .First, the factors that cause the blood donor to select a blood donor programme; second, the facility survey of blood banks In-house donation; third, perception and perspective of health staff (medical officer and nurses) regarding Mobile and In- house blood donor prgramme. Three populations were considered in this study. An interviewer administered questionnaire was used to collect data from a sample of 410 Mobile blood donors. A self-administered questionnaire was used to collect data from blood bank medical officers. Focus group discussion was conducted with blood bank nursing staff .Facility survey was done using a checklist. The dependant variables were the attendance of the blood donors to Mobile blood donation and In-house blood donation. Independent variables included were the factors related to socio demography, service quality, accessibility, availability and intrinsic / extrinsic motivation.Descriptive

statistics applied in this research was frequency and percentage.The analytical statistics applied for testing the association of factors with the blood donor programme was chi-square test. The study has shown some important findings. There was significant association between income level and donating blood. Only 3.3% of In-house blood donor population was female. Majority of In-house population belonged to 30-41 age group.A statistically significant association exists between age and repeat blood donation. The female blood donors' tendency of becoming repeat donors was very low. Distance problem and non availability on easy days were the main de- motivational factors for donating blood to In-house blood donation. This study revealed that perspective of health staff of In-house blood donation programme was optimistic.However, sufficient attempts have not been made to bring In-house blood donor programme sufficient to be in par with those of developed countries.It appears that utilization of In-house blood donor programme could be improved by addressing the physical and psychological barriers and provision of quality service. This study further pointed out the need to reformulate health policies and utilization of information technology to improve the national blood transfusion service.

0180.Panduwawala, S.

Knowledge, attitudes , and practices on continuing professional development among medical practitioners in Gampaha district.

MSc. Medical Administration – 2013   D 3487

Abstract

The aim of this study was to investigate and identify the present status of Continuing Professional Development (CPD) among Medical Practitioners in the   district of Gampaha and to make recommendations for further development National CPD programme in Sri Lanka.

Study was carried out in the district of Gampaha to assess the knowledge, attitudes and practices on CPD among Medical Practitioners. It was done as a descriptive cross-sectional study. Sample was selected from 47 preventive and curative government sector medical institutions and from 38 General practitioners registered at College of General Practitioners. Population proportionate sampling method was applied to select Institutions and the participants were ran selected. Required sample size was 384 and

425 of participants were enrolled with a margin of 10%. Several visits were made to collect data and 95.97%

response rate was achieved. Self-administered questionnaire was used as the data collection tool, which included socio demographic data, data on current knowledge on statements towards and practices on of CPD. Data collection was done Principal investigator.

Among respondents, majority of Medical Practitioners (55.1% n=223) belonged to grade II category. Nearly 55 %(n =225) of Medical Practitioners were females. Twenty-two percent (n =89) of Medical Practitioners had good level an< (n=134) had poor level of knowledge on CPD. There was a significant association between sector of working and level of knowledge. Medical Practitioners those obtained their basic degree from foreign countries had better know compaired to those who obtained degrees locally (p=0.34,x^2 =6.75).Knowledge of participants also varied between the categories of different duration of service (p =0.004,x^2=l9.415).Significant findings on attitudes were,73 %(n=296) agreed on the statement that the CPD is the most important component of the revalidation. Out of participants87.9 %(n=356) of participants agreed on that the CPD will improve medical practice. Nearly 88 %(n=358) of participants agreed on that CPD will keep them up dated. The common practices were formal continuing medical education programmes (CME) and online CME.

The study showed that most of the participants were aware of CPD though they were not having much interest on it. It is evident from results proved that they were unaware of the importance of CPD and its benefits.

The knowledge and practices of CPD is unsatisfactory and attitudes are favorable among the Medical Practitioners in this study.

The Investigator recommends, guidance book on CPD, developed by Sri Lanka Medical association (SLMA) should be provided to all Medical Practitioners. Ultimate benefits of CPD programs to be highlighted for both government and private sector medical practitioners as to gain their attention. There should be a proper way of communicating among both government and private sectors as well as within each sector. This will help to conduct the programs in effective manner. Possibility of

implementing island wide web based CPD programme is recommended for future studies.

Keywords: Continuing professional development. Continuing Medical Education,

0181.Pathirage, L.D.

Public and private sector utilization for antenatal care by pregnant women delivering in government hospitals in Kalutara district.
MSc. Medical Administration – 2014   D 3488
 Abstract

Background and objectives: Regardless the extensive antenatal care coverage provided by the government sector, many pregnant women seek antenatal care from the private sector. The purpose of this study was to describe and compare antenatal services received from the public and the private sector, identify reasons behind making such a choice and its financial implications on pregnant women who delivered in the government hospitals of the Kalutara district.

Methodology: A descriptive cross sectional study was carried out on pregnant women admitted for delivery in specialized obstetric units in Kalutara District. The study sample was selected using multistage sampling method and the data was collected over 2 months using interviewer administered questionnaire.

Results: Out of 406 participants 73.4% were living in rural areas and 80.3% had planned pregnancies while 70.2% had registered before 8 weeks. All had received shared care and 93(22.9%) had visited both hospital and private sector for specialized care. Ethnicity, residence, planned pregnancy and not having children were significantly associated with private sector clinic attendance while field staff had more influence over family in selecting private health services. Majority had done the investigations at private sector and only 15 pregnant women were able to receive all antenatal care services from public sector. Considerable proportion had taken extra micronutrients from the private sector. Majority had no problems regarding the affordability in utilizing private sector.

Conclusions: All had received shared care and antenatal care coverage was satisfactory considering both National and WHO recommendations. Apart from thesocio demographic, socio economic factors and public concern; the health sector itself had great influence on private sector utilization for antenatal care.

Keywords: Antenatal care, private health sector, factors affecting, satisfaction, cost of care

0182.Priyangani,Y.M.M.

Prevalence, factors associated and response to needle stick injuries among nursing officers in District General Hospitals in Sri Lanka.
MSc. Medical Administration – 2014   **D 3626**

Abstract

Exposure to blood and body fluids through percutaneous give rise to serious health consequences. Hence this study was carried out in to find out the existing prevalence rates of the injuries among nursing officers in Sri Lankan health delivery system and identify the factors associated with injuries including the level of knowledge, attitude and practice on prevention such injuries.

A descriptive cross sectional study was conducted in three District G< Hospitals namely Kegalle, Gampaha and NuwaraEliya. Five routine working identified from each hospital excluding emergency departments. Proportional allocations were made with a final step of simple random sampling to select sample. Self- administered questionnaire was used for data collection.

 A response rate of 95% was observed and prevalence rate of NSI was 43'%. IV cannulation was the most risky procedure (51%) and while withdrawing the needle from the patient 67% got injured. Needle re-capping was seen in 24% i exposed group. Medical wards accounted for 78% of the NSIs. There significant association of reduce NSIs were seen in maturity in age (p=0.01: increase working experience (p=0.044) but no such association was found with increase work load (no. of patients seen per day, p=0.765),increase num working hours per week, p=0.204) and participation in in-service training programs (p=0.592). Pre exposure Hepatitis B immunization was seen in only 64%. Majority 49% did not report the injury and the main reason was assume

risk (46%) of transmission of infection. It can be concluded that prevalence of NSIs were still found to be high considerable ignorance and neglect is seen among health care workers. Health education and in-service training should be mainly directed at inculcating knowledge into practice and changing attitudes towards safe practices. Hepatitis B immunization should be provided as early as possible when the nursing off enter the profession.

0183.Rathnakeerthi, H.A.

Knowledge attitude and practices of dental surgery assistants on infection control in the armed forces of Sri Lanka.

MSc. Medical Administration – 2014   **D 3490**

Abstract

Dental setting is a hazardous workplace having infective aerosols and direct contact with blood and saliva. Dental surgery assistant play a major role in infection control in dental settings. In Sri Lanka there is no specialized training program for DSAs both in government and private sector. Specialized training is only provided to DSAs working in three armed forces, namely Army, Navy and Airforce. It is interesting to know how these DSAs apply their training experience in to practices. At present, Sri Lankan armed forces recruit and train DSAs and utilize this group of professionals to deliver dental health care service. This study was conducted to assess the knowledge, attitude and practices of dental surgery assistants on infection control in dental surgeries of armed forces.

Therefore the present study aimed at assessing knowledge attitude and practices of DSAs on infection control in dental settings.

A pre tested self administered questionnaire was used among 325 DSAs to assess the knowledge, attitude and practice of DSAs. A separate pre tested self administered questionnaire was also used to obtain the views of in charge dental surgeons regarding practices and training needs of DSAs on infection control. Indirect observation was carried out in 30 DSAs to assess practices on infection control.

Only 46.3% of DSAs were having satisfactory knowledge on infection control. Participants knowledge on purpose of sterilization (90.5%), sterilization time (84.0%) and sterilization temperature (88.0%) was high. Knowledge on surface disinfection of a blood spill (41.5%) and sputum spill (38.5%) was low. Knowledge on mode of

transmission of infections through saliva (85.2%), blood (81.5%) and general routes (72.0%) was also high. Knowledge on infective aerosols (64.0%) and impression disinfection (63.4%) was moderate.

Percentage of DSAs having positive attitudes towards infection control was 36.6% positive attitude towards hand hygiene practices including washing hands before treatment (97.8%) and washing hands after treatment (96.9%) was high. Lowest positive attitude was towards transmission of infection through dental water lines (25.3%) and use of oral mouth rinse (34.8%). Positive attitude towards HIV was seen in moderate number among the participants (50.0%).

When assessing practices through questionnaire it was seen that prevalence of use of gloves was 94.8%. Similarly good practice was stated for use of new suction tip for each patient (86.5%), no reuse of gloves was practiced (82.2%) and proper disposal of sharps (92.0%). Poor practice was seen in use of colour code for waste disposal (39.4%). An overall prevalence of 10.5% was observed for needle stick injuries.. Following needle stick injuries 38.5% reported through proper channel, whereas only 23.5% has given a blood sample for testing and even lesser number of DSAs sent the patient s blood for testing (14.7%). Approximately 50% of DSAs have not taken any action.

During the observation study ,majority of DSAs practiced handling of instruments well (93.3%).Washing hands before examining the patient was observed in only 60.0% of DSAs when compared to washing hands after treatment of patient (80.7%). Only 3.3% of DSAs practiced proper waste segregation.

Majority of in charge dental surgeons (62.2%) stated that they were satisfied with the practice of DSAs but 41(91.1%) highlighted the need for further training of DSAs on infection control. Though there is a separate training programme for DSAs in the three armed forces, the need for continuous professional development is important to improve and update their knowledge attitude and practices.

0184.Samarakoon, D.S.

Study on perceived and expected quality of services by patients attending accident and emergency unit provincial General Hospital Kurunegala.

MSc. Medical Administration – 2013   D 3496

Abstract

Service quality is a salient aspect of patient care. Emergency departments are an important entry point to medical care. Therefore the objective of this study was to determine the perceived and expected quality of services by patients attending the Accident and Emergency unit in Provincial General Hospital Kurunegala.

This study is a descriptive cross sectional study with three components. The first component attempts to describe the relationship between service quality and socio demographic status of the patient. The second part aims to determine the functional quality of services expected by patients and, the third part aims to determine the functional quality of services perceived by patients. An interviewer administrated questionnaire was used for this purpose. Calculated sample size was 422 and 398 responded to the questionnaire giving a response rate of 94.3%.

Statistical analysis was done by using SPSS version 15 and the associations were assessed using statistical t test and ANOVAs.

The study revealed that the overall quality of care provided at Accident and Emergency unit of Kurunegala hospital is good as perceived by patients .However, patients expectation were even higher. Thus, there is a significant gap in service quality. Present study recommends that simple measures such as improving communication skills of staff can improve the service quality in the accident and emergency unit.

0185.Somaratne, C.J.K.

Knowledge, attitudes & practices on healthsystem responsiveness among nursing officers at secondary care hospitals in Kandy District.

MSc. Medical Administration – 2013   **D 3414**

Abstract

Health System Responsiveness is one of the major goals in assessing Health System Performances. This has been evolving and objectively introduced in to the Global Health System since year 2000 by the World Health Organization. Sri Lanka with its remarkable achievements in Health sector has much focused on the "Non health aspects of patients" or responsiveness. The Sri Lankan policy "Mahinda Chinthana 2010" has very clearly identified "Improving Responsiveness" as one of the major challenge in Sri Lankan Health sector. In this background "Knowledge, attitudes and practices of Health care workers regarding Health system responsiveness" is paramount of importance. Out of all Health care categories, nursing officers' category is one of the key technical categories who spend more time with the patients. This study was done to identify gaps in knowledge, attitudes and practices regarding responsiveness among nursing officers at secondary care hospitals in Kandy district. A self-administered questionnaire based descriptive cross sectional study was done to assess the level of knowledge, to describe the attitudes and practices and to assess the associated socio demographic and professional factors with the level of knowledge. Study was done at District General Hospital-Nawalapitiya, Base Hospital-Gampola and District Base Hospital- Teldeniya (n=303). Response rate was 90.7% and majority (80.5%) was female nursing officers Grade I and Grade II nursing officers accounted for 73.2% of the participants Major proportion (38.0%) of nursing officers belonged to the age group of 31 t 40 years and second highest proportion (31.7%) belonged to the age group of 411 50 years.

Level of knowledge on responsiveness among study population was good and mean score was 83.5 and median was 86.9. However their attitudes and practices were relatively poor. Statistically significant association was found between the status of participation in training programmes and level of knowledge ($x^2 = 9.243$, $p = 0.002$).

Further, higher age group (41 to 60 years) had a statistically significant association with the level of the knowledge ($y2 = 5.833$, $p = 0.016$).

The study shows the need for further improvement of existing capacity building programmes on or related to Health system responsiveness and introduction of responsiveness to the training curriculum of the Health care workers. Improving responsiveness is one of the major aspects in Sri Lankan health sector. Domains of responsiveness are human rights of the people. Therefore, development of a policy document and integration to the Sri Lankan health system is vital for its clear recognition of importance.

0186.Sudusinghe, P.W.M.

Knowledge, attitudes and practice on hospital acquired infections among ward nursing officers in District General Hospital , Matara.

MSc. Medical Administration – 2014   D 3497

Abstract

Each year, hundreds of millions of patients suffer around the world with Hospital Acquired Infections (HAI) (WHO, 2002). HAIs cause significant economic burden on the healthcare system of a country. In addition, HAI causes significant morbidity and mortality and antimicrobial resistance. Nursing officers frequently make close contact with patients. Improving knowledge, attitude and practice of nursing officers are important to prevent Hospital Acquired Infection. It improves health care quality and safety.

The present study is conducted to describe the Knowledge, attitude and Practice on Hospital Acquired Infections among ward Nursing Officers in District General Hospital Matara.

A descriptive cross sectional study was conducted at DGH Matara. Study population was nursing officers in general wards. All nursing officers who had fulfilled the selection criteria were enrolled. There were three components. In the first component a self administered questionnaire was administered to all nursing officers fulfilling selection criteria. The questionnaire covered areas of socio-demographic information, details of in-service training received, and knowledge and attitudes on HAI. In the second component hand washing was observed using a check list developed for the purpose. Fifty two nursing officers were randomly selected for this component. During component three an assessment was made of the infrastructure facilities and supplies of wards relevant to hand washing. Ethical approval for the study was obtained from

University of Colombo and necessary administrative approval was obtained. The data collection was for a period of two weeks at DGH Matara.

Majority of respondents were females (n=245, 91.4%). Thirty percent of them had 5to 9 years of service experience. There were 32.8% participants who had never taken part in an in-service training program on HAI. Out of those who have participated in a training program for HAI only 20% have participated in a program within the past one year.

The knowledge score ranged from 5 to 18.The mean knowledge score was 13.3 ±2.9. There was no significant difference observed in the knowledge score with sex, age, years of experience, and participation in in-service training programs.

Majority of participants (77.3%) believed that they have enough knowledge on HAIs. Most of nursing officers in this study (57.9%) had attitude that patients themselves should get protection from HAI while 74.6% had agreed that HAIs may get transmitted from the health staff. Around 24% of participants felt that there are many important things to improve than hand washing. It was observed that 38.5% of participants have demonstrated a good technique in hand washing. But no one could perform all the steps correctly.

There was only two sink with surgical scrub and 4.91% was proper washing area with proper tap. The availability of the soap at the hand washing sinks was 81.9%.

Many gaps observed in infrastructure facilities and supplies need to be corrected to implement a successful program to control HAI. The Knowledge gap must be filled by regular in-service training programs.

Keywords: knowledge, attitude, practice, hospital acquired infections.

0187.Thilakarathne, G.A.C.S.

Factors associated with utilization of oral health services among pregnant mothers attending antenatal clinics in Colombo District.

MSc. Medical Administration – 2013   **D 3492**

Abstract

Background: The aim of this study was to determine the utilization pattern and factors associated with utilization of oral health services among pregnant mothers attending antenatal clinics in Colombo district.

Methodology: A descriptive cross-sectional study was conducted among 401 pregnant women, who are in their 3 rd trimester of pregnancy, attended to antenatal clinics in Colombo district during 12th August-04th November 2013. Information on socio demographic data, knowledge and attitudes related to oral health during pregnancy and utilization pattern and barriers to utilization of services were obtained using a structured interviewer administered questionnaire. Mothers' pregnancy records were used to obtain information related to obstetric profile of the mother, referral status to oral health care facility and procedures performed in the dental clinics, using data extraction form. Statistical analysis was done using software SPSS version 21.0 and the association were assessed using statistical test chi-square.

Results: The responses rate was 100% and 65.4% of the pregnant mothers (N=262) utilized oral health services during current pregnancy. However, majority of the mothers (72.3%) had good knowledge and 48% had good attitudes related to oral health care during pregnancy. Referral by the antenatal clinics (82.4%) was the main factor associated with utilization of dental services and utilization was significantly associated with the knowledge and attitudes of mothers related to oral health care during pregnancy. No time to obtain dental treatments (28.1%), perception of not having any oral health problems (26.6%) and scared of dental treatments (24.5%) were the main barriers identified by this study.

Conclusion: Though a large proportion of pregnant mothers (86.3%) were referred for oral health care by antenatal care providers, only 65.4% had utilized dental services during current pregnancy. More knowledge has to be provided to the pregnant mothers as well as antenatal care providers and oral health professionals in order to improve oral health during pregnancy as well as improve oral health of their children also.

0188.Wanninayake, W.M.I.K.

Factors affecting implementation of national guidelines on management of dengue fever and dengue hemorrhagic fever in the preliminary care settings of secondary care hospitals in the Kaluthara District.

MSc. Medical Administration – 2013   **D 3411**

Abstract

Dengue Fever is a one of the major public health problems in Sri Lanka. It has significant social and economic impact. National Guidelines on Management of dengue fever and dengue heamorragic fever has been developed and implemented by Ministry of Health with collaboration of world Health Organization and Sri Lanka College of pediatricians and Sri Lanka College of physicians. In 2012 two guidelines have been

issued for each child / adolescent and adult. Development and Implementation of clinical Practice Guideline is a process.

A descriptive cross sectional study was designed to assess factors affecting Implementation of the National Guideline on Management of Dengue Fever and Dengue Heamorrhagic fever in preliminary care settings of secondary care hospitals in Kaluthara District. This study had three components. Assessment of medical officer's knowledge and attitude about National Guidelines of Management on Dengue Fever (DF) and Dengue Haemorrhagic Fever(DHF) was done as component 1. Sixty nine Medical officers were given self administered questionnaire for assessing knowledge and attitudes. Study of Bed Head Tickets(BHT) of patients admitted with fever to observe the implementation of National Guidelines of Management on DF and DHF at preliminary care setting was done as component 2.About 402 BHTs of Preliminary care unit of BH Horana were observed through data extraction sheet. A survey of facilities available in preliminary care settings of secondary as component 3.Observation of preliminary care settings of secondary hospitals in Kaluthara districts were done. About 23% of Medical officers have obtained Knowledge from National Guideline on Management of Dengue Fever and Dengue Heamorrhagic Fever. Majority of Medical Officer's Knowledge were not satisfactory. Most of the participant did not know about some important signs and symptoms of the Dengue Fever and Dengue Haemorrhagic Fever mean while their attitudes were positive toward the implementation of National

Guideline management of DF and DHF. Child guideline was not available in most of OPD(75%) and adult guideline was also not available in most of OPD (50%).

Multiple strategies should be adopted and continuous evaluation should be done for implementation of National Guidelines on DF and DHF

Keywords: National Guideline, Clinical Practice Guideline, Dengue Fever and Dengue Heamorrhagic fever.

0189.Werawatte, W.K.C.P.

Occupational eye injuries presenting to National Eye Hospital, Colombo : Factors influencing non-adherence of work safety practices & the cost implications.

MSc. Medical Administration – 2013 **D 3408**

Abstract

Occupational injuries are a worldwide problem faced by many of its' stakeholders. Occupational Eye Injuries (OEI) forms one of the important areas of occupational injuries as it is considered largely preventable by wearing protective eye wear.

The study was carried out to describe the circumstances related to Occupational Eye Injuries and usage of eye protective equipment and to estimate the cost of the OEI among patients presented to National Eye Hospital, Colombo.

A descriptive cross-sectional study was carried out using an interviewer administered questionnaire among patients with Occupational Eye Injuries at the Emergency Treatment unit at the Eye Hospital during a one month period.

Out of 384 eligible participants, 99.5% (382) were males and 58% (223) were between 21 to 35 years of age. A substantial proportion amounting to 76.6% (294) was not wearing eye protective equipment at the time of the injury. The main occupation category injured was welders (42.2%; n=162) and a majority (44%; n=169) injured were due to grinding. However, around one fourth (n=90) of the participants who were using eye protective equipment has also sustained injuries. The average service cost per patient was SLR 253.84, out of which 66.86% was spent on staff. Only 2% (8) had to spend Out of Pocket for the service.

It was evident that Occupational Eye Injuries poses an important obstacle for the labour force. A large proportion of injuries could be reduced by wearing appropriate eye

protective equipment and the usage could be improved by carrying out targeted interventions.

Keywords: Occupational Eye Injuries, Person Protective Equipment

0190. Wimalasena, T.B.

Standard precautions to reduce hospital associated infections : Knowledge and practices of doctors working in two Teaching Hospitals of the Southern province, MSc. Medical Administration – 2013   D 3493

Abstract

Introduction:-Hospital associated infections (HAIs) are a growing challenge to health care systems worldwide. At any given time more than 1.4 million people suffer from an infection or its complications contracted while being treated in a hospital. Prevalence of HAIs in Sri Lanka is between 10-25% .One of the important strategies to minimize the occurrence of HAIs is to practice standard precautions. Non adherence to standard precautions could cause adverse consequences to both patients and health care workers (HCWs). Therefore this study was conducted among doctors working in the Teaching Hospital Karapitiya (THK) and Teaching Hospital Mahamodara (THM) with the objective of describing their knowledge, and practices and associated factors with regard to standard precautions.

Methods:-A hospital based cross sectional study was conducted among a sample of doctors from THK, THM including, interns, grade medical officers, registrars, senior registrars and consultants. Knowledge was assessed using a self-administrated questionnaire using a sample of 248 doctors, selected using satisfied random sampling method. To assess practices of doctors, three observation tools were used , 13 units were selected using convenient sampling methods. Facilities assessment was done in the same units using three check lists. Ethical and administrative clearance was obtained. Written consent was obtained from the participants, SPSS version 17.0 was used for data analysis.

Results:-Out of 248 doctors, 85.1% and 14.9% were from THK and THM respectively. The sample consisted of 42 (16.9%) consultants, 33 (13.3%) registrars and senior registrars, 148 (59.7%) grade medical officers and 25 (10.1%) interns. Majority (71.0%) of doctors had good overall knowledge and only 7% had poor knowledge.

All (100%) registrars and senior registrars had good knowledge. Doctors with post graduate training had significantly higher level of knowledge compared to those without training (p < 0.001). Level of knowledge was not related to number of years in active service. Doctors working in the ICU had higher knowledge compared to those from other units (p = 0.036). Almost 70% of doctors had training on standard precautions during under graduate period. However 62.9% (n=107) of them felt training is inadequate. Only 31.4% (n = 77) had training after graduation.

Sharps injuries were sustained by 21.5% of doctors during a period of 6 months and 64.3% of them were not notified. The occurrence of sharps injuries was significantly higher among intern and registrars compared to other categories of doctors. (p< 0.01.) Hand hygiene compliance was poor (14.5% - 21.7%) except in ICUs. Overall facilities provided for hand hygiene practices were satisfactory in spite of having some deficiencies like non availability of alcohol hand rubs and single use hand towels. Facilities for sharps disposal were good.

Conclusion:-Doctors working in THK and THM have adequate knowledge on standard precautions.. Doctors with post graduate training had significantly higher level of knowledge. Doctors perceive that the training they have received on standard precautions is not adequate .Incidence of sharp injuries was high especially amongst interns. Notifying of sharps injuries is poor. Overall hand hygiene is poor in all units except ICUs.

Although doctors have good knowledge, the practices are not up to the standard and there are wide gaps in practice to be filled. Periodic on-going training programmes, providing adequate facilities, regular audits with feedback are needed to improve knowledge and practices. Quality improvement programmes, help of mentors and rewarding systems to encourage the practice would be helpful to further improve the situation.

Medical Microbiology

0191. Dinapala, S.K.

The usefulness of the widal test in the diagnosis of enteric fever in Sri Lanka.
MD Medical Microbiology – 2013   D 3377
Abstract

Introduction : Widal agglutination test is widely used to diagnose enteric fever especially where culture facilities are limited. The diagnostic utility of the Widal agglutination test was evaluated time to time due to the controversy in interpretation of the results. Any interpretation to the significance of the test results must be made on the baseline antibody titres of a given population and locally determined cut off points to the particular region.

Objectives : This study was conducted to determine the usefulness of the Widal test in the diagnosis of enteric fever in Sri Lanka.

Method : 325 healthy volunteers were included as the first group. Number of samples from each province was collected according to the percentage population. Second group consisted of 56 confirmed enteric fever patients with a positive blood culture. Third group included 180 febrile non-enteric fever patients. 3ml of venous blood was collected from each participant. Serum was separated and stored at -20°C until the test is performed. Widal tube titration test was performed on each sample to assess the O and H antibody titres against **Salmonella enterica** serotype **Typhi** and AH antibody titres against **Salmonella enterica** serotype **Paratyphi A.**

Results : Among the healthy volunteers, 63 .4% showed sero prevalence to O antigen, 7.7% to H antigen and 7.7% to AH antigen. In comparison to male healthy volunteers, female healthy volunteers showed significantly higher sero prevalence to O antigen of **Salmonella Typhi.** There was a detectable variation of sero prevalence to these antigens among the provinces. Non-enteric fever group demonstrated a significant cross reaction in H and AH antibodies.

The cut off value was calculated as 1:320. At this titre, O antibodies had 50% sensitivity and 99.4% specificity, H antibodies had 50% sensitivity and 95.5% specificity and AH antibodies had 57.9% sensitivity and 97.2% specificity. The O antibody is the better indicator than H antibody at is titre for infections with **Salmonella enterica** serotype **Typhi.** The Widal test has a good egative predictive value which ranged from 93.3% to 97.2% for O antibodies against **Salmonella yphi,** 92.55% to 97.4% for H antibodies against **Salmonella Typhi** and 89% to 94.3% for AH antibodies against **Salmonella Paratyphi A.**

 Conclusion With > 1/320 titre in O, H and AH antibodies in the Widal test could be helpful in making a ' gnosis of enteric fever in an appropriate clinical setting. A negative Widal test is indicative of a febrile illness other than enteric fever. Absence of antibodies against O antigen of **Salmonella enterica** serotype **Typhi** possibly can exclude Typhoid fever.

0192.Francis, V.R.

Rapid detection of rifampicin and isoniazid resistance in mycobacterium tuberculosis culture isolates : an evaluation of a line probe assay.

MD Medical Microbiology – 2013   D 3375

Abstract

Background: Molecular methods allow rapid detection of drug resistance in *M.tuberculosis.* One such commercially available method is the Line Probe Assay (LPA). The aim of this study was to assess the performance of a commercial line probe assay the Geno Type MTBDR plus test (Hain Life science GmbH, Nehren, Germany) for rapid detection of rifampicin and isoniazid resistance in Sri Lankan *M.tuberculosis* culture isolates.

Methodology:A total of 74 *M.tuberculosis* culture isolates, consist of 17 multi-drug resistant (MDR), 4 rifampicin mono-resistant, 15 isoniazid mono-resistant and 38 susceptible strains, were tested with the GenoType MTBDR plustest and the performance was compared with the conventional phenotypic drug susceptibility testing using the proportion method.

Results: All seventy four strains tested with the GenoType MTBDR plus test gave interpretable results. The sensitivity of the assay in this study was 90.5%, 90.6% and 88.2% and the specificity was 98.1%, 100% and 98.2% in detecting rifampicin resistance, isoniazid resistance and multi-drug resistance (MDR) respectively.

Conclusion & Recommendation:

The GenoType MTBDR plus test is very user friendly and is easy to perform. It is highly specific and sensitive in detecting rifampicin resistance, isoniazid resistance and multidrug resistance. As our MDR-TB rate is low, we recommend performing this assay on culture isolates or on direct specimen of high risk patients who can harbour MDR-TB. The conventional DST should be performed routinely.

0193.Herath, H.M.A.K.

Immunogenicty study following reduced dose (4 doses) intradermal vaccination for anti-rabies post exposure theraphy.

Postgraduate Diploma in Medical Microbiology – 2013   D 3374

Abstract

Background : Rabies is zoonotic 100% fatal viral encephalitis, but preventable by prompt application of post exposure prophylaxis. However due to the high cost of vaccines and long duration of vaccine regimens, a variety of affordable and practical empirical schedules, vaccine doses and routes of vaccination have been recommended over time. Theses schedules have been based on immunogenicity studies, clinical experience and epidemiology as modern biologicals have improved and scientific knowledge has grown dramatically during the last few decades. Historically the total number of rabies vaccine doses administered for human prophylaxis has decreased and this not only reduces the number of clinic visits but also increase patient compliance.

Objectives

To study the immunogenicity of WHO approved reduced dose (4 doses) 2-2-2-0-2 on DO, D3, D7, and D30 intradermal (ID) vaccination for anti-rabies post exposure therapy (PET) in healthy Sri Lankan adults following exposure to suspected rabid animals.

Evaluate the degree of protective antibody levels in patients following anti-rabies post exposure vaccination on day 14 and day 90.

Methodology : This cross sectional prospective study was carried out from October 2011 to April 2012. Eighty healthy adults presented to the ARU (Anti Rabies Unit) at NCTH (North Colombo Teaching Hospital) Ragama with minor exposures to suspected rabid animals were recruited in the study after informed written consent. 3 ml of blood from each subject was drawn on days 0, 14 and 90. Antirabies neutralizing antibodies

were assessed by RFFIT (Rapid Fluorescent Focus Inhibition Test). The titer of virus suspension was calculated using the method of Reed & Muench. Ethical clearance was obtained from scientific and ethical review committee, Medical Research Institute, Colombo.

Results : All subjects had NAT (Neutralizing antibody titres) above 0.5IU/ml, WHO approved minimum protective titres on day 14 (11.44 IU/ml) and day 90 (5.375 IU/ml). Five who had initial antibody titres, developed very high NATs due to anamnestic reaction.

Conclusion : The new modified 4 dose ID antirabies post exposure therapy recommended by WHO is effective and produces adequate neutralizing antibody levels against rabies virus infection.

0194.Kumarage, J.

Diagnosis of specific antibody deficiency in patients with recurrent respiratory tract infections.

MD Medical Microbiology – 2013   D 3372

Abstract

Background: Specific Antibody Deficiency (SPAD) is usually diagnosed by 23 polyvalent pneumococcal vaccine challenge. High cost and multiple cut-offs for protective levels have been a major concern. I undertook this study to assess the antibody response to low cost Typhoid Vi vaccine in patients with recurrent lower respiratory tract infections (LRTIs) and compared with healthy controls to diagnose patients with SPAD.

Methods and materials: Patients were recruited from the central chest clinic at the MRI and Chest Hospital, Welisara. Both the patients and controls were given the Typhoid Vi vaccine and sero-conversion was assessed four weeks later with Widal test and ELISA.

Results: There were 66 controls and 68 patients (26-children; 42-adults). Lower 10th percentile of post vaccination antibody titer in healthy controls was considered the protective cut-off point (65EU/ml). Two patients with SPAD were diagnosed. Forty four (64.7%) and 24 (35.2%) patients had normal and low IgG levels respectively.

Eleven adults had low IgG and IgA. Three children had elevated IgM. Seroconversion was positively correlated with serum IgG levels. Lymphocyte subsets were normal in all but one who had low B lymphocytes. Seventy seven percent of patients had received minimum of one course of IV antibiotics. Four children and 29 adults had bronchiectasis. In the patient group, pre and post vaccination GMTs of anti Vi IgG were 9.9EU and 298.5EU respectively. Both patients and controls showed a significant sero-conversion. Significant difference in sero-conversion noted between patients with normal and low IgG (p<0.05). Widal test showed a sensitivity of 85% and a specificity of 53%. Seven CVID, 1 hypogammaglobulinemia, 3 Hyper IgM syndrome, 2 SPAD, 1 X-linked agammaglobulinemia patients were diagnosed.

Conclusions: Two patients with SPAD were identified. SPAD is uncommon in patients with LRTIs and a larger cohort of patients with recurrent otitis media and sinusitis need to be studied before drawing conclusion on the usefulness of this technique. The ELISA test identified the difference in immune responses between patients with normal and low IgG. Widal test cannot be used to diagnose SPAD.

0195.Nakkawita, W.M.I.D.

Seroprevalence of herpes simplex virus type2 infection among female sex workers attending Central Sexually transmitted disease clinic, Colombo.

MD Microbiology – 2012   D 3381

Abstract

HSV2 seroprevalence of FSW and pregnant mothers were 66.9% and 6.5% respectively (OR 29.01, 95%CI 13.1-64.7, p<0.001). Of FSWs who were seropositive, only 14.3% reported a history of genital herpes infection (p=0.03). Age >35 years (OR 3.35, 95%CI 1.54-7.31, p=0.002), education < grade 5 (OR 8.35, 95%CI 13.1- 64.7, p<0.001), lifetime sexual partners > 200 (OR 5.33, 95% CI 2.3-12.36), p <0.001), duration of sex work > 1 year (OR 4.5, 95% CI 2.09-9.65, p <0.001) and presence of other STIs in the past (OR 4.52, 95% CI 1.9-10.78, p <0.001) were statistically significant risk factors for HSV2 infection in FSWs. Regular condom use by commercial partners in last 3 months was not a significant protective factor for HSV2 infection (OR 0.44, 95% CI 0.15-1.26, p = 0.12).

Conclusions : Seroprevalence of HSV2 is very high among Sri Lankan FSW and it is much less in antenatal mothers. A majority of FSW who were seropositive did not have

clinical genital infection, but they can shed the virus intermittently and act as potential sources of infection. Advancing age, low educational level, increase numbers of sexual partners, increase duration of work in the industry, presence of past STI were significant risk factors for HSV2 in this population. Serological testing of all high risk populations and interventional programs to educate them on the disease will be helpful in reducing the transmission of genital infection with HSV2.

0196.Palangasinghe, S.

Bacterial pathogens causing postoperative infections following abdominal surgery at a Tertiary Care Hospital in Southern Province of Sri Lanka.

MD Medical Microbiology – 2013   D 3373

A prospective study was carried out in 5 general surgical units at Teaching Hospital

Karapitiya,

Galle, Sri Lanka from January to April 2012 with the general objective of studying

postoperativeinfections among patients undergoing abdominal surgery.

Specific Objectives

   1. To find out the incidence of postoperative infections following abdominal

surgery

   2.   To identify the common bacterial pathogens causing postoperative infections.

   3.   To assess the antibiotic sensitivity pattern of the bacterial pathogens causing
          ostoperative infections.

   4.   To determine the most effective empirical antibiotic/s for the treatment of

postoperative infections.

Materials and Methods : All patients undergoing abdominal surgery in general surgical units at Teaching Hospital,Karapitiya over 3.5 months were included in the study. They were followed up for 30 days postoperatively to detect hospital acquired infections (HAIs). Presence of postoperative infections was determined according to standard definitions.

Relevant specimens for microbiological cultures were collected accordingly when HAIs were identified. Collection, transport, processing of specimens, identification of organisms and antibiotic sensitivity tests were done according to standard techniques.

Results : Total number of the study population was 385. Mean age was 39.9 years and 57.7% were females. Of them 48.6% underwent appendicectomy and 26.8% underwent laparotomy.Thirty patients (7.8%) developed postoperative infections and total episodes of postoperativeinfections were 37(9.6%). The commonest postoperative infection was SSIs with an incidence of 5.97% followed byUTI (1.82%) HAP/VAP (1.56% and CRBSI (0.26%). Majority of SSIs (82.6%) were seen following laparotomy and 87% of SSI were superficial incisional SSIs.There were 7.5 episodes of CAUTI for 1000 urinary catheter days, 15.2episodes of VAP for 1000 ventilator days and 5.3 episodes of CRBSI per 1000 CVC days. Coliforms were the commonest pathogens isolated in SSIs (36.36%). Equal numbers of*Staphylococcus aureus* and *Acinetobacter* isolates were seen (18.18% each). Among coliforms 62.5% were ESBL producers, 87.5% were sensitive to amikacin and all were sensitive to carbapenems. *Acinetobacter* isolates were resistant to almost all antibiotics

Fifty percent of *Staphylococcus aureus* were MRSA.Among seven pathogens causing

UTI/CAUTI were 2 coliforms, 1 *Acinetobacter* species, 1 *Enterococcus* species and 3

Candida species. Both coliform isolates were ESBL producers. *Acinetobacter* isolate was resistant all antibiotics tested including carbapenems.

Of the 5 pathogens isolated in HAP, there were coliforms (3/5), *Pseudomonas* species (1/5) and *Streptococcus pneumoniae* (1/5). Coliform isolates showed 100% sensitivity to carbapenems and amikacin and only one (33.33%) was ESBL positive.

Acinetobacter species were isolated in both patients with VAP and were resistant t all tested antibiotics.*Pseudomonas aeruginosa* isolated in **CRBSI** was resistant to carbapenems.

Conclusions : Surgical site infections were the commonest postoperative infections. UTI, H/ VAP and CRBSI were also detected. Gram negative organisms were the predomin pathogens.

Most of the postoperative infections (86.49%) were seen among those who underlaparotomies. Of them 24.3% acquired postoperative infections and those [1] acquired HAIs showed a significantly higher mortality rate.

Gram negative organisms were the commonest pathogens causing SSIs. Majori[1] SSIs were superficial incisional SSIs in which wound cleaning alone may play an important role in the management. If antibiotics are indicated carbapenems amikacin are the most effective empirical treatment.

ESBL production among coliforms (61.5 % of all coliforms) is a significant problem when treating infections in this population.

Infections caused by carbapenem resistant Gram negative bacteria (37.5% of all Gra negative bacilli) are treatment challenges detected in this study.

0197.Prasanna, P.M.A.

Bacterial aetiological agents in acute childhood meningitis and factors affecting the detecting the detection of these agents.
MD Medical Microbiology -2013   D 3371
Abstract

Bacterial aetiological agents in acute childhood meningitis and factors affecting the detection of these agents

Introduction and justification :

Acute bacterial meningitis is a life threatening infection. Antibiotic **treatment** should not be delayed due to any reason. It is essential to have data on local prevalence patterns of causative agents and antibiotic sensitivity patterns to determine the empirical therapy.

Objectives : To determine the bacterial aetiological agents and the antibiotics susceptibility patterns of acute childhood meningitis, to identify the factors which affect

isolation of organisms from CSF specimens, to describe socio demographic features and to describe other parameters of CSF analysis in the study group.

Methodology :

This is a descriptive prospective study.

CSF and blood samples of children suspected of having acute meningitis received by LRFI microbiology laboratory from 1st January 2012 to 31th March 2012'Were analysed. CSF cell count, Gram stain, CSF culture and ABST and CSF antigen were performed on all samples.

Interviewer administered questionnaire was used to collect socio-demographic data.

Result : Sample size was 140.Confirmed, probable and suspected meningitis patients were 5 (3.6%), 29 (20.7%), 106 (75.7%) respectively. Bacterial aetiological agents were detected in 5 (3.6%) of samples and 4 out of 5 were *Haemophilus influenzae* . Out of these four, one sample yielded a growth of *Haemophilus influenzae* and other three were positive by latex antigen test. One patient belonged to 1 - 3 month age group and other 3 to 3- 59 months age group.

The other isolate was Chryseobacterium meningosepticum. 87.9% of CSF samples and 45.8% of blood cultures were taken following antibiotic therapy. 124 (88.5%) CSF specimens were not centrifuged due to low volume. 76.4% of confirmed and probable groups were males.

No significant relationship observed in analysis of race, parental education, number of siblings and community exposure.

Conclusion : *Haemophilus influenzae* was the commonest aetiological agent and 1-59 months age group was the most vulnerable group. However small sample size and prior.antibiotic therapy were limitations.

A large multi centered study is needed to evaluate the aetiological agents andantibiotic susceptibility pattern of meningitis pathogens in Sri Lanka.

0198. Sanjeewani, H.D.A.

The prevalence of KPC –type carbapenem resistance in enterobacteriaceae isolated in two selected Teaching hospitals in Sri Lanka.

MD Medical Microbiology – 2013   **D 3380**

Abstract

Klebsiella pneumoniae carbapenemases (KPC) are carbapenemases acquired via mobile genetic elements. KPC-type carbapenemase producers are highly drug resistant and have exceptional ability of rapid dissemination. Initially it was confined to *Klebsiella pneumoniae,* but now it has been found in a wide variety of Gram negative bacteria. KPC-type carbapenem resistance in *Enterobacteriaceae* are now emerging and challenging to the current infection control and antibiotic therapy. Although initially it was confined to the US, now it is spreading worldwide. Most countries have reported sporadic cases of KPC-type enzyme producers. It has caused outbreaks in some parts of the world and it is endemic in some countries. Up to date no data has been published regarding KPC-type carbapenemase producing organisms in Sri Lanka.

The objective of this study was to determine the prevalence of KPC-type carbapenem resistance in *Enterobacteriaceae,* isolated in two selected teaching hospitals in Sri Lanka and the risk factors associated with the prevalence of KPC-type carbapenem resistance.

Enterobacteriaceae isolated from blood cultures and respiratory tract specimens from National Hospital of Sri Lanka (NHSL) and North Colombo Teaching Hospital (NCTH) Microbiology laboratories within the period of 11 weeks from January 2012 to April 2012 (590 isolates) were included in this cross sectional analytical study. Clinical data of the relevant patients were collected using a data extraction sheet. All isolated *Enterobacteriaceae* were screened with initial screening test for carbapenemase production with disc diffusion method using 10|ug Epm discs. The isolates which gave positive screening test results were subjected to the CLSI (2011) phenotypic confirmatory test (MHT or Modified Hodge Test) for carbapenemase production.The prevalence of KPC-type carbapenem resistance in *Enterobacteriaceae* isolated in the NHSL is 7.9% and in the NCTH is 0%. The prevalence of KPC-type carbapenem

resistance in Epm nonsusceptible isolates in the NHSL is 44.0%. The implementation of strict infection control practices is necessary to limit their spread. This is an infection control emergency and an indication for strengthening of active surveillance.

The identified risk factors which are significantly associated with the prevalence of KP type carbapenem resistance in *Enterobacteriaceae* are prolonged hospital stay (> 5 day admission to special care units (ICU, Burns unit, Renal unit etc..), Previous admissions hospitals or any health care institutions, use of third generation cephalosporins a carbapenems and use of invasive devices (central venous catheters, femoral lines, endotracheal tubes, tracheostomy tubes). The appropriate measures should be taken avoid exposure to these risk factors as far as possible to prevent the acquisition of KP< type carbapenemases in health care facilities.

KPC-type carbapenemases are responsible for a significant proportion of carbapenem resistance in *Enterobacteriaceae* in NHSL. Misidentification of KPC-producing bacteria is common with standard disk diffusion susceptibility testing but the precise identification of those organisms is essential in routine clinical laboratories to provide data for appropriate antibiotic treatment and infection control purposes. The screening test with Epm disk diffusion and the confirmatory test with MHT for the detection c KPC-type carbapenemases in *Enterobacteriaceae* should be established in routine clinical laboratories and tests for the detection of other mechanisms of carbapenem resistance also should be established.

199. Senanayake, D.T.

Sero-prevalence of leptospirosis among asymptomatic paddy-field workers in Kalutara district.

MD Medical Microbiology – 2012   D 2995

Abstract

Sero-prevalence of Leptospirosis among Asymptomatic Paddy-field Workers in Kalutara   District.

Introduction : Leptospirosis, which is the most prevalent zoonotic infection worldwide, has become a prominent contributor for the communicable disease burden in Sri Lanka during the recent years. The disease is now endemic in most parts of the country, especially in areas of agricultural farming. With the changing epidemiology of

leptospirosis in the country, updates on sero-prevalence are of paramount importance for formulation of effective strategies and activities for prevention and control.

Objectives : To determine the sero-prevalence of leptospirosis among paddy-field farmers in Kalutara district

Method : Samples of 3-5ml of blood were obtained from 607 apparently healthy paddy-field workers having at least fifteen hours of exposure in the field per week, through cluster sampling technique involving 54 clusters. Samples transported to the MRI within 24 hours of collection were subjected to MAT with the Patoc 1 strain of Leptospira. Epidemiological data were collected using an interviewer-administered questionnaire.

Results : Of the 607 samples tested 217 (35.7%) were seropositive for Leptospirosis at a MAT titre of =/>1/100. The difference between the seropositives and seronegatives is statistically significant with a p value of 0.008.

Only 34 subjects (5.6%) of the study population gave a previous history of leptospirosis, of whom 20 (59%) were sero-positive while 14 (41%) had a MAT titre < 1/100. Al 34 subjects however were clinically diagnosed as 'Leptospirosis' depending i symptoms and signs without laboratory confirmation.

There is a significant difference in seropositivity between the subjects who has had history of clinically diagnosed leptospirosis and the subjects without such a history.

There is a significant difference in the seropositivity rates between males and females 37.8% and 23.3% respectively with a p value of 0.009.

There is no significant difference of seropositivity between various adult age group

Seropositive results were seen in 197 farmers (90.8% from all seropositive temporary farming-helpers (7.8%) and 3 others (1.4%) like agricultural field officers who occasionally got in the field when on duty. Of the seronegative population, 86% fr seronegatives (n=335) were farmers, 12% (n=47) were temporary farming helpers *2%* (n=8) were others like agriculture field officers.

Statistical analysis proved that there is no significant difference in serostatus among these various categories of paddy field workers.

A MAT titre equal to or greater than 1/400 was detected only in 7% (n = 43) seropositive study population, while 93% (n = 564) yielded a titre < 1/400.

Conclusion : Infection with leptospira is much more common than clinically diagnosed cases, i regular paddy field-farmers, the probable reasons being misdiagnosis due to con with other illnesses, mild infections and lack of laboratory investigations. C diagnosis of leptospirosis without laboratory confirmation, may give rise to both diagnosis and under-diagnosis as evidenced by the sero-prevalence data.

The results highlight the increased risk of infection in exposed populations such as regular paddy field workers (who work in the paddy field for more than 15 hours a week), thus warranting for detailed sero-epidemiological surveys of at-risk populations for the determination of correlates of infection, for effective prevention and control.

0200.Weerakoon, W.M.S.A.

Bacterial and fungal aetiology of corneal ulcers and endophthalmitis in patients attending the eye units in Central province.

MD Medical Microbiology – 2013   D 3382

Abstract

This study was a descriptive Hospital based study on bacterial and fungal aetiology ol corneal ulcers and endophthalmitis in patients attending the eye units of the Central Province.

Objectives : The objectives of the study were to determine the specific bacterial and fungal pathogenic agents of corneal ulcers and endophthalmitis, to identify the specific demographic factors and the risk factors associated with two diseases, to assess clinical outcome and tc determine suitable empirical treatment options for the target population in the Central Province.

Methodology : Samples were collected from 106 patients with corneal ulcers and 60 patients with endophthalmitis from January to April 2012. Corneal scrapings and corneal biopsy samples were collected for corneal ulcers and, vitreous fluid and anterior chamber aspirates were collected for endophthalmitis in order to evaluate the aetiology. Data collection was done by an interviewer administered questioner.

Samples were processed according to the standard laboratory methods to identify both bacterial and fungal pathogens.

Data analysis

Data was analyzed with Minitab software. **Results**

Corneal ulcers-

The study group included 70 (66%) of males and 36 (34%) of females. Affected mean age was 51 years. A fungal aetiology was seen in 54.1% and 43.2% cases were due to a bacterial etiology. The commonest fungal isolate was **Fusarium** species and the commonest bacterial isolate was **Streptococcus pneumoniae.** Majority of corneal ulcers were recorded in agricultural workers (37.7%). The main cause was trauma 76.4% and injuries associated with paddy cultivation accounted for (30.9%). Vision loss was observed in 3.8% and the majority was associated with a fungal aetiology. Both Gram positive and negative isolates were sensitive to moxifloxacin.

Endophthalmitis-

The study group was equally distributed among males and females with majority of patients being over 55 years. Out of the 60 samples 8.3% were culture positive and all had a bacterial etiology. **Staphylococcus aureus** and coagulase negative **Staphylococci** were the commonest pathogens with each contributing 40%. Fungi were not isolated during the study period. Majority of endophthalmitis cases (63.3%) were observed following ophthalmic surgery mainly due to intra ocular lens replacement (cataract surgery). Analysis of outcome showed that 8.3% of the patients had gone in to vision loss mainly following trauma. Local susceptibility patterns showed that all Gram positive isolates were sensitive to vancomycin.

Conclusion : The aetiology of corneal ulcers in the Central Province during the study period was mainly fungal in origin with **Fusarium** species being the commonest isolate. Commonest bacterial pathogen was **Streptococcus pneumoniae.** The greatest risk group was adult males involved in agriculture based occupations. Moxifloxacin and natamycin can be used as empirical treatment for the target population in the region.

The main aetiology of endophthalmitis was due to Gram positive bacteria. The commonest risk factor was ophthalmic surgery. Administration of empiric antibiotic therapy covering both Gram positives and negatives and adoption of universal precautions will minimize the occurrence of endophthalmitis.

0201.Welikumbura, R.S.

A study to compare genus specific MAT with genus specific PCR and culture for diagnosis of leptospirosis in clinically suspected patients.

MD Medical Microbiology – 2012   **D 3378**

Abstract

Introduction : Leptospirosis is endemic in Sri Lanka with outbreaks occurring frequently. The disease is potentially serious, but treatable. Clinical illness varies from asymptomatic to severe multi-system disease with high mortality. Owing to its varied clinical presentation its mimicry to other diseases, laboratory diagnosis is essential for confirmation of disease.

Objectives : To compare genus specific Microscopic Agglutination Test (MAT) with a genus specific Polymerase Chain Reaction (PCR) and Culture for diagnosis of leptospirosis.

 To recommend an appropriate test depending on duration of fever.

To compare the cost of MAT,PCR, and Culture

To determine the prevailing sero types

Methods : The prospective study carried over a four month period from January 2011, involve patients, from four base hospitals and a teaching hospital who were clinically susf as having leptospirosis. Following an interviewer based questionnaire, paired samples ie 5ml initially for culture, PCR and MAT, followed by 3ml for MAT 1 later were collected. Bedside inoculation of culture and typing isolates, PCR with pi G1/G2 and MAT with Patoc 1 strain were performed.

Results : The study consisted 92% males, majority (75%) being regular farmers of age range 20-60yrs. Among them, 85% gave a contact history with paddy fields or muddy water. Mean day of presentation was fifth day of fever. At least one of the three tests was positive in 28% of the study group. Positive results were PCR 8%, culture 7% and MAT 25% confirmed with paired sera. PCR and culture were positive only in patients presenting within 5days of fever and MAT was positive later. Cultures were identified by WHO Reference Centre as belonging to three serogoups Autumnalis, Pyrogens and Icterohaemorrhagiae. Each PCR costs Rs.3252.00 while a MAT test was Rs.505.00 and Cost of Culture was Rs. 1672.00

Conclusions

Strains identified are prevalent in buffaloes and rats, hence awareness on exposure should be increased. Duration of illness should be considered when requesting a test for diagnosis of leptospirosis. PCR is useful to confirm diagnosis in early illness especially during outbreaks of undiagnosed fever in the community.

0202. Wickramasinghe, S.S.

Surgical site infections after coronary artery bypass grafting at the Teaching Hospital – Karapitiya.

MD Medical Microbiology – 2014   D 3376

Abstract

This study was a descriptive study on surgical site infections in patients undergoing Coronary Artery Bypass Grafting (CABG) in the Cardiothoracic Unit at the Teaching Hospital, Karapitiya (THK).

Objectives

General objective

To identify the incidence, risk factors and causative micro-organisms of surgical site infections (SSIs) associated with coronary artery bypass grafting (CABG) and to find out their antibiotic sensitivity pattern in patients admitted to THK *Specific objectives*

1. To determine the incidence of surgical site infections (SSIs) associated with sternotomy and leg harvesting site following CABG
2. To identify risk factors of SSIs
3. To assess the relationship of perioperative carriage of *Staphylococcus aureus* and the development of SSIs
4. To identify the causative micro-organisms associated with SSIs and to determine their antibiotic susceptibility patterns

Study design :

Study type: A prospective study

Study population: Fifty-five patients who were admitted to that unit for CABG from January to April 2010

Methodology : Data collection was done by an interviewer administered questionnaire. Pre-operative MRSA screening was performed in all patients and repeat screening was done for the patients who were colonized with *Staphylococcus aureus.*

Post-operative clinical samples were collected on clinical suspicion of surgical site infections according to CDC criteria. Direct smears and cultures were performed and isolated pathogens were identified by biochemical tests. Antibiotic susceptibility tests were done according to CLSI method. The data analysis was done by using SPSS (a software package used for statistical analysis).

Results : The 55 patients included 40 males (72.7 %) and 15 females (27.3 %). The mean age was of 57.5 years (range39 to 71 years). Majority of patients of either sex (49.1%) were in the 56- 65 year age group. Most of the patients (67.3%) were of average weight (BMI 18-25 kg/'m j and were non-smokers during the previous 3 months duration before getting admitted to the ward.

Out of all patients, 38% (21) had diabetes, 2% (1) had COPD and 49% (27) had hypertension. 20% (11) were colonized with *Staphylococcus aureus* and MSSA rate was 90.9% (10) and MRSA was 9.1% (1). *Staphylococcus aureus* was mainly colonized in nose of patients (16.4%). The mean duration of stay was 14.6 days preoperatively (range 4-27 days) and 15.4 days postoperatively (range 8-35 days).

SSIs

Incidence of SSIs was 18.2% (10/55). Sternal infection rate was 10.9 % (6/55) and leg - donor site infection rate was 7.3 *% (4/55).* All were superficial incisional infections and none of them had deep incisional infections or infections involving mediastinum (mediastinitis). None of the patients died following infections after surgery. Mean duration of stay of patients with SSIs was 20.2 days and for those without SSIs was 14.3 days.

60% (6/10) males and 40% (4/10) females had SSIs. Among the patients who developed SSIs, 50.0% (5) had *S.aureus* colonization while 13.3% (6) of patients who did not develop SSIs had *S.aureus* colonization. There was a statistically significant difference in SSI rate among patients having *Staphylococcus aureus.*

Diabetes and chronic obstructive pulmonary disease seem to be associated with the development of SSIs. Female sex, age >65 years, obesity, hypertension, prolonged

hospital stay (>7 days) and smoking did not show any association with the development of SSIs.

Microbiology of SSIs

Out of all SSIs, 50% (5) samples did not show any growth, in 30% (3) *Acinetobacter* spp. were isolated, in 10% (1) *Pseudomonas* spp. were isolated and in 10% (1) coagulase negative Staphylococci were isolated.

Except *Pseudomonas* spp., all other species were multiresistant organism. No polymicrobial infections were seen in SSIs.

Conclusion : In our study, SSI incidence of superficial incisional was 18.2%. But deep infections, mediastinitis and mortality rate were zero. Diabetes, chronic obstructive pulmonary disease and nasal colonization of *Staphylococcus aureus* seem to be risk factors for the development of SSIs. Majority of pus samples did not show any growth even though direct smear showed pus cells and organisms. Commonest organisms causing SSIs were Gram negatives (*Acinetobacter* spp. & *Pseudomonas* spp.). Only 10% of infections were caused by Gram positives.

0203. Wimalagunawardhana, H.A.P.

Determining the proportion of patients with IgG. IgA and IgG subclass deficiencies in a group of Sri Lankan patients with recurrent acute otitis media and chronic suppurative otitis media.

MD Medical Microbiology – 2011   D 2994

Abstract

Background. Otitis media, though not usually life threatening is a disease causing significant morbidity. The disease is more severe in patients with underlying immunodeficiency leading to greater complications.

Purpose. This study was carried out to determine the frequency of underlying humoral immunodeficiency in patients with otitis media as indicated by IgG2, IgG, and IgA deficiency.

Method. 64 Patients with recurrent acute otitis media and chronic suppurative otitis media were evaluated for IgG2, IgG and IgA deficiency using an ELISA technique **for** IgG2 and Radial Immunodiffusion for IgG and IgA. A matching control group was also

evaluated and compared with patients. The study group consisted of 64 patients (30 adults and 34 children over the age of 4 years) with a history of recurrent acute otitis media (RAOM) or chronic suppurative otitis media (CSOM). A control group of 31 adults and 32 children were also investigated.

Results. One paediatric patient and one paediatric control had marginally low IgG levels, with the 9 year old male patient having an IgG concentration of 754 mg/dL the normal level being 779-1456 mg/dl for that age group. The ten year old control had an IgG concentration of 747 mg/dL. The patient with low levels of IgG had a diagnosis **of** chronic suppurative otitis media with a significant clinical history, mastoiditis, ear drum perforation and a right attic pocket. None of the adult patients had low IgG levels, whereas one of the adult controls had an IgG concentration of 540mg/dL with the normal adult range being 569-1919 mg/dL, along with an IgG2 concentration of 71mg/dL with the normal range being 149-586 mg/dL. One 4 year old male patient had a low IgA level along with low IgG2 levels as shown in Table 4. This patient had a diagnosis of chronic suppurative otitis media, a history of frequent exacerbations and frequent upper and lower respiratory tract infections and sinusitis. This patient had a central perforation of the tympanic membrane. None of the adult patients or controls had low IgA values and six adult patients and eight adult controls had low IgG2 levels. There was no statistically significant difference between the IgG2 values of the patient and control groups.

Conclusions. In my study no relationship was seen between middle ear infections and IgG, IgG2 and IgA levels. Measurement of functional antibody status may be needed in addition to isotype levels for determining susceptibility to infection, as it appears that IgG2 subclass levels may not be useful in identifying patients with significant susceptibility. The individuals with low levels of IgG, IgG2 and IgA should undergo further investigation.

0204. Wimalaratne, K.B.D.

Analysis of incidence, antibiotic susceptibility pattern and factors associated with ventilator associated pneumonia in intensive care unit patients, in Rathnapura district.

Postgraduate Diploma in Medical Microbiology – 2013   D 3379

Abstract

Introduction : Ventilator associated pneumonia (VAP) has emerged as an important challenge in the intensive care units (ICU) and it remains important cause of morbidity and mortality despite advances in antimicrobial therapy, better supportive care modalities and the use of wide range of preventive measures.

Since ICUs are functioning with minimal infrastructure facilities it favour the transmission of infections. So it is important to assess the etiological agents, antibiotic sensitivity and associated factors for the development of VAP.

Objectives :

1. To determine the incidence, causative organisms and antibiotic susceptibility pattern (ABST) of VAP in ICU patients.

2. To asses any association factors for the development of VAP. Methodology

Prospective cohort study was conducted at ICU in PGH Rathnapura and BH Embilipitiya from 1st of January to 30th of April 2012. All patients who were ventilated for more than 48 hours were included in this study except children less than 12 years and patients who were having pneumonia prior to ICU admission.

VAP was diagnosed by modified Clinical Pulmonary Infection Score (CPIS). Etiological agents were isolated up to species level by API method and other biochemical tests. ABST of isolates were done according to CLSI method. Associated factors were statistically tested by logistic regression

Results

59 patients were studied for 470 ventilator days and 589 ICU days. There were 16 cases of VAP with overall incidence of 27.12% and 34.04 VAP per 1000 ventilator days . Out of 16 cases 5 cases(31.25%) were polymicrobial origin. The commonest organism isolated was *Acinetobacter baumannii* (38.09%) and others were

Acinetobacter lowffii (9.52%),*Pseudomonas aeruginosa* (28.57%), *Aeromonas hydrophila* (4.76%) *Klebsiella*

pneumoniae (9.52%) *Escherichia coli* (4.76%) and Methicillin resistant *Staphylococcus aureus* (4.76%).

Resistance to ciprofloxacin and carbapenems were 87.5% and *62.5%* for *Acinetobacter baumannii. Acinetobacter lowffii* were 100% resistance to carbapenems and cephalosporins.

Among *Pseudomonas aeruginosa* isolates, 83.33% of them were sensitive to ciprofloxacin and carbepenems and 100% sensitive to Piperacillin- tazobctam. *Klebsiella pneumoniae* were sensitive to all antibiotics except gentamicin. Multi drug resistance of *Acinetobacter baumannii, Acinetobacter Iwoffii* were 75%, 100% respectively. Among the associated factors tested, number of suctions was significantly associated with the of development of VAP.(P<0.05) and there were 31.57 chances to develop VAP if the number of suctions were more than 10.

Conclusion

VAP has become a considerable threat to ICU patients. Majority of organisms were multidrug resistant and carbepenems resistant. Frequent suctioning of endotracheal tubes has significantly contributed for development of VAP. Therefore unnecessary suctioning of the patients should be minimized and it should be done aseptically, and staff awareness about the emergence of multi resistant organisms and the importance of adherence to infection control measures should be enhanced.

0205. Yapa, A.G.D.T.L.G.

Prevalence and risk factors for colonization with MRSA on admission in patients presenting to the orthopaedic ward at Teaching Hospital Peradeniya.

MD Medical Microbiology – 2012   **D 2996**

Abstract

Methicillin resistant *Staphylococcus aureus* is a major problem in Orthopaedic units as infection of prosthesis has many dreaded complications including loss of prosthesis, increased morbidity and increased cost to the health care system. Colonization with MRSA on admission is a known factor associated with increased rate of subsequent infections. Identification of patients colonized with MRSA is needed to prevent infections and also to reduce the burden of MRSA within a unit. Target screening is a

cost effective method in a resource poor country to identify colonized patients. Prevalence and risk factors for colonization with MRSA has to be known to employ target screening. This screening method is not suitable if the prevalence of MRSA is high in patients without any health care associated risk factors.

In this study prevalence and risk factors for colonization with MRSA on admission was studied in patients presenting to the orthopaedic ward, Teaching Hospital Peradeniya. Prevalence of MRSA in patients without any health care associated risk factors was also studied.

A prospective cohort study was carried out in 276 patients admitted to the Orthopaedic ward, Teaching Hospital, Peradeniya from 01st January to 30th April 2011. Nares, throat and groin were sampled within 36 hrs of admission to the unit and processed to identify MRSA. Information on risk factors for colonization was gathered through a validated questionnaire.

Prevalence of MRSA on admission was 3.2 % in the study population. Male gender (odds ratio 4.67, 90% CI 0.80 to 27.05), history of surgery (odds ratio 4.25 90% CI 1.30 to 13.90), history of nursing home admissions (odds ratio 75.71, 90% CI- 9.17 to 624.97), and history of hospital admissions (odds ratio 3.71, 90% CI- 0.98 to 14.11), within the previous 12 months were associated as significant risk factors for colonization with MRSA on admission. None of the patients without any health care associated risk factors carried MRSA. Hence MRSA surveillance and control programmes in this unit would be more cost-effective if targeted at these risk groups.

Medical Virology

0206.Dasanayake, W.M.D.K.

Seroprevalence of varicella zoster antibodies in patients with chronic renal failure.
MD Medical Virology – 2012   **D 2998**
Abstract

Chronic kidney disease (CKD) is recognised as a major public health problem owing to the rapid increase in prevalence and enormous cost burden on health care systems world wide. In Sri Lanka too, it has become an important focus of health care planning during recent times. This is evident by the increased detection rates of CKD and

improvement in management facilities and increased number of renal transplantations that has taken place over a short period of time. Chickenpox can be severe with high mortality in transplant recipients. In tropical countries age of acquiring chickenpox is delayed compared to temperate countries. In Colombo district, seropositivity of Varicella Zoster (VZV) antibodies has been 36% during 1999 to 2000.

Main objective of this study was to assess the seroprevalence of VZV antibodies in potential transplant recipients. Vaccination is effective in renal failure patients. Therefore identifying susceptible patients is important for implementation of preventive measures.

Currently in most nephrology clinics in Sri Lanka, positive history of chickenpox is taken as immunity to the primary infection. Determination of correlation between history and serostatus is important to formulate a policy for screening renal transplant candidates.

Blood samples and relevant data were taken after obtaining informed written consent from 196 participants. These patients were allocated from four hospitals in Colombo District. VZV specific IgG antibodies were detected using a whole VZV infected cell lysate antigen containing commercial ELISA kit.

Estimated seroprevalence of VZV antibodies was 71.94%. Therefore, a considerable number of CRF patients remain susceptible to VZV infection. Out of the patients with a positive history of chickenpox 96.26% were seropositive. Considering the severity of possible infection, use of history alone to assess immunity is not satisfactory. As 85.45% of history negative patients did not show VZV antibodies, vaccination of all history negative potential transplant recipients should be considered when there are no facilities for serological assessment.

VZV Vaccine efficacy in the study population could not be assessed due the limited number of vaccinated participants.

0207.Muthugala, M.A.R.V.

Molecular diagnosis of hantavirus infection among clinically suspected patients having haemorrahic fever with renal syndrome (HFRS) in three selected hospitals.
MD Medical Virology – 2012   **D2997**
Abstract

Hantavirus disease is an emerging zoonotic viral infection with high fatality. The causative agent, hantavirus is a rodent borne RNA virus belonging to the family *Bunyaviridae.* Transmission is by inhalation of virus via aerosols generated virus contaminated rodent excreta. There are two major clinical forms of hantavirus infections, haemorraghic fever with renal syndrome (HFRS) and hantavirus pulmonary syndrome (HPS). Clinical features of HFRS, often mimic leptospirosis. Large number of cases of leptospirosis like illness is reported in Sri Lanka annually during paddy cultivation harvesting seasons. Although there was serological evidence of hantavirus infection among humans, diagnostic facilities are not available.

This study was conducted to establish a reliable test to diagnose the hantavirus infection. Genus specific polymerase chain reaction (PCR) was established, evaluated and optimized. Established PCR assay was able to detect wide range of hantavirus specie at minimum detection limit of 70 copies/ reaction.

Molecular diagnosis of hantavirus infection among suspected patients with HFRS was carried out in three hospitals which are serving Colombo and Gampaha districts. Study was conducted from 01st of January 2011 to 31st of April 2011.

Study population was selected according to case definition of HFRS and 61 adult patients were recruited in to this study.

Hantavirus reverse transcriptase polymerase chain reaction (RT-PCR) was performed on collected samples after extraction of RNA by TRIzol® method. Of 61 tested samples, 05 were positive for hantavirus genome.

Of the 53 samples tested, 06 samples were positive for hantavirus IgM by in-house ELISA. Five of the IgM positive samples were positive for hantavirus genome by RTPCR.

All patients with hantavirus infection had clinical and biochemical features of liver involvement. All had a history of exposure to paddy fields within 3 weeks prior to onset of the illness.

Epidemiology and natural host/ hosts of hantavirus infections in Sri Lanka still remain unknown. Further studies are needed to get the full picture of hantavirus infection in the country.

Molecular Medicine

0208.Abeysekara, C.M.

MTHFR C677T Polymorphism in a sample population of Sri Lankan patients diagnosed with ischaemic stroke.
MSc. Molecular Medicine- 2012   **D 3005**
 Abstract

Introduction: Ischemic stroke is a major cause of morbidity and mortality in developing countries. Therefore, stroke prevention should be one of the immediate priorities of health authorities in developing countries. Elevated homocysteine level (hyperhomocysteinaemia) is an independent and modifiable risk factor for cardiovascular disease including ischemic stroke.

Hyperhomocysteinaemia may be acquired or inherited and a frequent inherited cause is the methylenetetrahydrofolate reducatase (MTHFR) C677T polymorphism. The frequency of the 677C—»T polymorphism is surprisingly high worldwide and varies significantly among different ethnic groups as well as in different geographical locations. Studies assessing the strength of association between the ischaemic stroke and MTHFR C677T polymorphism are scarce in developing countries including Sri Lanka.

Methods: This study was aimed at determining whether the MTHFR mutation is a risk factor for patients with ischemic stroke in the Sri Lankan Sinhalese population living in the Southern part of the country (Matara district). This was a case-control study carried out on a sample population of 20 young adult patients (16 to 45 yrs) with ischemic stroke and on 20 control subjects (age and sex matched adults without history of thrombosis). MTHFR C677T assessment was performed by the qualitative

PCR followed by Restriction Fragment Length Polymorphism (RFLP) with the restriction enzyme **Hinfl.**

Statistical Analysis: Prevalence of the T allele polymorphism and MTHFR genotypes in two groups were calculated. Fisher's exact test was used to determine the significance of the association of MTHFR C677T polymorphism with cerebral infarction in this ethnic group. P value < 0.05 was considered as significant.

Results: The prevalence of MTHFR T allele was 15% in cases and 7.5% in controls (OR: 2.18, 95% CI: 0.42 - 14.36). The prevalence of the MTHFR C677T genotype was 25% (CT, 20%; TT, 5%) and 15% (CT, 15%; TT, 0%) in cases and controls respectively (OR: 1.89, 95% CI: 0.3 - 14.04). The allelic and genotype prevalence were not significantly different between the two groups (P = 0.481 and P = 0.695 respectively)

Conclusion: This study shows that the MTHFR 677C—>T polymorphism is not a risk factor for cerebral infarction in this group of Sri Lankan Sinhalese from the southern part of the country.

0209. Adikari, A.M.K.B.G.

Haplotype analysis of the myotonic dystrophy type 1 (DMI) locus among healthy Sinhalese in Colombo Municipal Council area.
MSc. Molecular Medicine – 2012 **D 3010**
Abstract

Introduction

Myotonic Dystrophy 1 (DM1) is an autosomal dominant multisystem disorder affecting skeletal and smooth muscles, heart, eye, endocrine system and the central nervous system. The genetic basis of this disease is the expansion of CTG repeat sequences in the 3' untranslated region of the Dystrophia Myotonica Protein Kinase gene located on chromosome 19. Normal individuals have $(CTG)_{5\_35}$ repeats and patients with mild, classic, and congenital forms of disease have $(CTG)_{50-149}$, $(CTG)_{150-1000}$ and (CTG) >2000 repeats respectively. The severity of the disease increases with the number of CTG repeats. Populations having high frequency of alleles with (CTG) 13.35 have a higher prevalence of the disease. Polymerase chain

reaction and Southern blot hybridization are the two methods that are commonly used to diagnose myotonic dystrophy 1.

The objective of this study was to develop a polymerase chain reaction assay for the diagnosis of myotonic dystrophy 1, assess the frequencies of CTG repeat allele distribution in myotonic dystrophy 1 locus among the Sinhalese population in Colombo municipal council area and compare the frequencies with other populations in the world.

Material and Methods

Blood samples (n = 126) from healthy individuals (with respect to DM1) were collected and DNA extracted. A first round PCR was carried out using extracted DNA followed by a nested PCR. The amplified products of the nested PCR were resolved on a 3% Nusieve agarose gel. The fragments.
were sized by the Bio-Rad molecular Imager, Gel DocTM XR+ with Image Lab software. The copy number of the CTG repeat was then determined from the size of the amplified fragment.

Results

There were 18 different CTG repeat alleles of which $(CTG)_5$ was the commonest. The majority of alleles ranged between $(CTG)n.i_6$ and only seven alleles had (CTG) 18-27

Conclusion

This PGR assay established in this study can be used for the diagnosis of myotonic dystrophy 1. Only 7 alleles were found with the large normal allele ($(CTG)>ig$) repeats and the distribution of CTG repeat alleles are very similar to the pattern of distribution of Kuwaiti, Thai, Iranian and Indian population but different to the European and some Middle east populations. These results predict a low prevalence of myotonic dystrophy 1 among the Sinhalese population.

0210. **De Silva, J.L.P.**

Development of a thermo-stable reverse transcriptase for routine molecular diagnostics

MSc. Molecular Medicine – 2012   **D 3000**

Reverse transcriptase enzymes are vital in reverse transcription of RNA into complementary DNA. Naturally reverse transcriptases are found in retroviruses and they copy the viral RNA genome into DNA prior to its integration into host cells. This process has been used as an in-vitro tool in molecular diagnostics and research purposes. Avian Myeloblastosis Virus Reverse Transcriptase (AMV-RT) and Moloney Murine Leukaemia Reverse Transcriptase (M-MLV-RT) virus are the two widely used enzymes in Reverse Transcription PCR (RT-PCR). Out of these, M-MLV-RT is more popular due to its ability in synthesizing long cDNA strands, despite its substantial activity drop at temperature above 45°C. In addition, the price of commercially available M-MLV-RT is considerably high which makes unaffordable to use in molecular diagnostics or for research purposes in Sri *Lanka.* Therefore, there is a need to produce a low cost and temperature stable M-MLV-RT.

Methods: Moloney Murine Lukaemia Virus Reverse Transcription domain (RT) and full length containing RT domain, linker region and RNase H domains of M-MLV-RT tagged with six histidine residues were cloned into expression plasmid vectors pTTQ18 and the activity of the enzymes was studied following expression and purification of the recombinant protein using his-tagged protein purification protocols and Ni-NTA columns. RT-PCR assays were carried out to study the activity of proteins containing RT domains and full length of M- MLV-RT enzyme while comparing with commercially available M-MLV-RT warranting further improvement to the enzyme.

Results: Enzyme isolated from the clone containing full length of M-MLV-RT was substantially stable than the enzyme isolated from clone containing only RT domain. The recombinant protein containing full length of M-MLV-RT was able to convert different RNA templates into cDNA. The optimum results were obtained when protein purification is carried out at 28 °C.

Conclusion: The full length recombinant M-MLV-RT produced in this study was able to convert different RNA templates at a lower efficiency, compared to the commercially available M-MLV-RT warranting further improvement to the enzyme.

0211.Cooray, N.S.A.R.

Prevalence of toxoplasmosis in immunocompromised cancer patients

MSc. Molecular Medicine – 2012   **D 3009**

Abstract

Introduction : Toxoplasmosis is caused by the intracellular parasite *Toxoplasma gondii.* Acute toxoplasmosis in an otherwise healthy person is often asymptomatic. However, in immunocompromised hosts toxoplasmosis can be life threatening. The reported seroprevalences of toxoplasmosis in Sri Lanka are mostly based on studies conducted on pregnant mothers.

Aims : To assess the prevalence of toxoplasmosis among immunocompromised cancer patients

Methods :108 patients attending the Out Patients' Department of National Cancer Institute were recruited following informed written consent. All had a confirmed diagnosis of malignancy and had undergone at least one dose of radiotherapy or chemotherapy. Five milliliters of venous blood was collected from each patient. PCR was performed to detect a 193bp non variable region of B1 gene of *T. gondii.* Direct Agglutination Test was performed to detect anti *Toxoplasma gondii* IgG antibodies.

Results : The ages of the patients ranged from 19 to 83 years. The overall prevalence of toxoplasmosis was 11.1%. *T. gondii* DNA was detected in two patients. Ten were positive for anti *Toxoplasma gondii* IgG antibodies. The highest titre was 1/400. None of those positive by PCR showed seropositivity. Those patients positive by PCR had received both chemotherapy and radiotherapy. Testing positive for toxoplasmosis was not associated with any of the treatment methods.

Conclusions : This study confirms the presence of undetected toxoplasmosis in immunocompromised patients. A case control study based on a more representative patient population would verify the true magnitude of this infection. Regular screening by PCR would help in early detection of infection in those with impaired immunity.

0212.Herath, H.M.A.K.

Transmission of leishmaniasis in Sri Lanka

MSc. Molecular Medicine – 2012   **D 2999**

Abstract

Leishmaniasis is an immerging disease in Sri Lanka. The disease is caused by a protozoa belonging to the genus *Leishmania,* transmitted by the bite of an insect vector, the *Phlebotomus* sandfly. Overall objective of this study was to study on transmission of leishmaniasis in Sri Lanka

In this study a rapid molecular-based method for laboratory detection of *L. donovani* in vector species, *P. argentipes* was established in the laboratory. The assay could detect minimum of 10 |ig/ml parasite's DNA. A total number of 965 *P. argentipes* and 150 *Sergentomyia* female adult sand flies were collected from 14 recent leishmaniasis-case reported stations and 2 fixed-monitoring stations situated in two possible high risk areas. When these field-caught vector species tested by the molecular-based assay it was resulted none of the field-caught *P. argentipes* sand fly sample was infected with *L. donovani* parasites indicating Minimum Infection Rates (MIR) of *P. argentipes* sand fly species for *L. donovani* parasite in study areas were zero. This may be due to low density of infected vector and/or escaping/death of infected sand flies from selected stations.

Entomological risk factors relating to environmental and other variables known to affect transmission of leismaniasis were examined with regard to the recent leishmaniasis case-reported and fixed monitoring stations. Results indicated that the high prevalence of *P. argentipes* from both recent leishmaniasis case-reported and fixed monitoring stations indicating this species may be the major species transmitting leishmaniasis in selected areas in Sri Lanka. Further, this study clearly demonstrated that distribution of confirmed leishmaniasis cases coincided with the distribution of *P. argentipes* [78% (11/14)], presence of recent confirmed leishmaniasis cases [57% (8/14)] and situated in rural areas [100% (14/14)].

Monthly entomological and climatic factors in two fixed monitoring stations situated in two geographical areas were analyzed. Results showed a positive correlations between the vector density and minimum temperature (Pearson Correlation = 0.46, P=0.9), rainfall having one month lag period (Pearson Correlation = 0.42, P=0.25) and day and night humidity (Day-Pearson Correlation = 0.18, P=0.63: Night- Pearson Correlation = 0.008,

P= 0.98) in Delgoda station (Gampaha District). There were positive correlations between the vector density and mean temperature (Person Correlation = 0.15, P= 0.70), humidity (day) (Person correlation = 0.01, P=0.96) were observed in Pannala station (Kurunegala District). Monthly data including disease incidence, vector species and density and climatic factors were entered to the data base and spatially presented on the digital maps. These types of Geographical Information System (GIS) based risk maps can be used as an important tool to find out spatial and temporal distribution of vectors, their density and other possible risk factors in a selected station. Further, information regarding long term surveillance activities conducted in a leishmaniasis risk area can be manipulated and presented using these maps. This would enable health authorities for better understanding of the local situation of the disease and monitor vector population trends spatially. This would help to predict impending epidemics and prioritize implementation of interventions for vector control activities.

Information obtained from this study would be useful for better understanding of the transmission of leishmaniasis which would undoubtedly contribute to carry on better and effective control measures for leishmaniasis vectors of the disease.

0213.Hewavitharane, H.M.P.

Transmission study on malaria in forest areas in the dry zone of Sri Lanka.

MSc. Molecular Medicine – 2012　　　　　　　　**D 3003**

In Sri Lanka, malaria has disappeared from many part of the country and most of the limited number of malaria cases reported recently was from the dry zone forest areas of the Northern Province. Therefore, a transmission study was carried out in forest fringe villages belonging to six MOH areas of Kilinochchi, Mannar and Mullaitivu districts. Malaria prevalence and mosquito infectivity in dry zone forest fringe villages were studied between August 2011 and March 2012.

Of the 20 411 people screened at government medical institutions, 17 cases were reported as positive by microscopy. For nested PCR analysis, 10 samples were enrolled after blinding the microscopy result. They were re-examined for four human malaria parasites and for *Plasmodium knowlesi* by nested PCR assays. Microscopy diagnosed all 10 cases as *Plasmodium vivax* mono infections; while genus specific nested PCR identified only 9 samples as positive. As the number of samples analyzed was very low,

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statistical comparison between microscopical diagnosis and PCR was not carried out. Prevalence of *P. vivax* in the study group (n=10) was 88.9% and for *Plasmodium falciparum* 11.1% by PCR. Therefore, use of PCR as an optimum diagnostic facility in malaria foci targeting malaria elimination from Sri Lanka is recommended.

Furthermore, none of the malaria cases (n=9) was positive for *P. knowlesi* infections by species specific nested PCR. This was indicative that malaria foci in forested areas of Sri Lanka are free of knowlesi malaria unlikely in forest malaria context reported recently from other South East Asian countries.

The phylogenetic analysis performed using sequences already submitted to GenBank revealed two main clades, one for *P. vivax* and related monkey malaria parasites, *P. cynomolgi, P.fieldi and P. knowlesi* and the other for *P. falciparum* parasites.

Entomological investigations employed indoor hand catches and human landing catches for mosquito sampling. A total of 472 anopheline mosquitoes belonging to 10 species from the northern dry zone forest fringe areas were caught throughout the study period. *An. subpictus* (84.32%) was found to be the predominant mosquito species, followed by *An. culicifacies* (8.69%) as the second most abundant. *An.culicifacies* presented the highest outdoor man biting rate (0.121 bites per man per hour) and *Anopheles subpictus* presented the highest indoor resting densities throughout the study period.

Of the collected mosquitoes, 304 were dissected out for salivary glands to examine sporozoites, and same glands stored in saline were subjected to *Plasmodium* genus specific nested PCR analysis. None of the mosquito salivary glands were positive for *Plasmodium* sporozoites by microscopy or PCR indicating low infectivity status during the study period.

From the information gathered, it can be concluded that malaria transmission intensity is very low in dry zone forest fringe areas of northern Sri Lanka and *P. vivax* is the most prevalent malaria parasite. Preponderance of *An. subpictus* in the human dwellings and highest man biting rate and parity rate observed in *An. culicifacies* indicate their probable role in malaria transmission in the forest fringe areas.

0214.Mohamed Jiffriy, A.

Molecular diagnosis of human leptospirosis.

MSc. Molecular Medicine – 2012   **D 3002**

Leptospirosis is one of the most important zoonotic disease in the world, caused by pathogenic bacteria belonging to the genus *Leptospira.* It is an emerging and reemerging disease in Sri Lanka. Diagnosis of leptospirosis mainly depends o clinical symptoms and signs in Sri Lanka. Clinical diagnosis may result in over c under estimation of the disease as it is not specific enough. Therefore, laboratory confirmation of leptospirosis suspected patients is important to measure the real incidence of the disease and proper patient management. Objective of this study was to establish a simple molecular diagnostic assay which could be used even at a rural hospital with minimum facilities.

Loop Mediated Isothermal Amplification (LAMP) assay was established and analytical sensitivity and specificity were determined. A panel of serum samples and clinical information were collected from 150 leptospirosis suspected patients after obtaining written consent. Acute blood samples were collected during 1-5 days of fever and convalescent blood samples were collected from 106 patients after 7-14 days of the collection of acute blood sample. Acute samples were tested with Polymerase Chain Reaction (PCR) and LAMP assays. Convalescent samples were tested with Leptocheck immunochromatography kit and Microscopic Agglutination Test (MAT) to detect anti-*Leptospira* antibodies. Differences in clinical and laboratory data were analyzed on the basis of the final diagnosis assigned as leptospirosis or non leptospirosis. Chi-squre test or Fisher's exact test were used for comparison of data.

Newly established LAMP assay showed 87% positivity and PCR assay gave 19% positivity on same acute blood samples. The LAMP assay showed high sensitivity of 49 fg/ml. All 150 patients presented with clinical features of leptospirosis. The proportion of laboratory diagnosed leptospirosis patients among the suspected patients were 97%. On comparison of presence of clinical features used for diagnosis of leptospirosis according to World Health Organization (WHO) criteria, only meningeal irritation showed significant association with leptospirosis infection (1/146 vs 1/4, $X^2=3.98$, p= 0.048). In conclusion LAMP assay which shows high analytical sensitivity and specificity can be used for early, definitive and rapid diagnosis of human leptospirosis using a single blood sample.

0215.Munasinghe, J.U.

Mutation analysis of kras gene in a selected population of colorectal cancer patients in Sri Lanka : A step towards personalized medicine.

MSc. Molecular Medicine – 2012   **D 3006**

Colorectal cancer (CRC) is rapidly increasing in Sri Lanka. The epidermal growth factor receptor (EGFR) signaling pathway, which is frequently activated in CRC, has proved to become a therapeutic target for most CRC patients. But the presence of mutations in KRAS gene predicts poor response to anti-EGFR monoclonal antibodies. In fact, KRAS gene is an important biomarker for treatment of CRC with anti-EGFR therapy. Therefore, KRAS mutation testing has become an important diagnostic procedure in many countries, although it is not practiced in Sri Lanka. To this end, analysis of the KRAS gene mutations in Sri Lankan patients is critical in designing a reliable mutation detection assay in order to personalize anti-EGFR therapy. Therefore, objective of this study was to analyze the mutations in the KRAS gene, as an initial step for the development of a mutation detection assay for CRC patients in Sri Lanka.

Genomic DNA was extracted from macro-dissected formalin fixed paraffin embedded (FFPE) tumor tissue sections of 30 CRC patients, using the CEYGEN GenoSpin G™ Genomic DNA extraction kit. Extracted DNA was subjected to three different techniques in order to analyze the mutations. Allele specific PCR and real time PCR were performed targeting only the most common seven mutations in codon 12 and 13 of the KRAS gene. In all of the seven most common mutations Glycine (Gly) has altered in to a different amino acid. Specifically the changes of amino acids are Gly 12 Ala, Gly 12 Asp, Gly12Arg, Gly12Cys, Gly12Ser, Gly12Val and Gly13Asp. Thereafter, amplification of exon 1 (115 bp) and exon 2 (175 bp) of the KRAS gene was carried out, in order to identify the mutations in exon 1 and 2 of the KRAS gene. Finally the amplified PCR products of exon 1 and 2 were subjected to single strand conformational polymorphism (SSCP) technique with the intention of identifying the point mutations in those amplified regions. Data was analyzed by comparing the results of allele specific PCR and the real time PCR with MS Excel Software (Microsoft Corp).

According to the results of the allele specific PCR, mutations in the KRAS gene we identified in 36.6% (n=ll) of tumors. Codon 12 mutations were detected in 30% (9/2 of the study group whereas mutations in the codon 13 were present only in 10% (3/30) the

study group. Real time PCR detected all the mutations that were identified by allele specific PCR and an additional mutation which was not detected by allele spec: PCR was detected in real time PCR for codon 12.

In conclusion, we suggest that KRAS mutation testing will benefit the Sri Lankan C patients prior to prescribing anti-EGFR therapy, since this study has revealed one thin the CRC patients harbor a mutation in the KRAS gene. Development of a muta detection assay for CRC patients in Sri Lanka will revolutionize the treatment of C when its potential is fully explored in the upcoming era of personalized medicine.

0216.Pushpamalie, E.K.P.

Molecular characterization of isolated bacteria which has bioremediation activity.
MSc. Molecular Medicine – 2012   D 3004
Abstract

Heavy metal pollution is a global problem affecting all living organisms. Heavy metal bioremediation is a promising solution for heavy decontamination with minimum harm to the environment and is a cost effective method compared to traditional heavy metal remediation systems. The strategy used in bioremediation may be based on metal tolerant mechanisms of bacteria, fungi or plants. Bacteria living in heavy metal contaminated environment evolve with several mechanisms to tolerate heavy metal stress in the environment.

Identification of bacteria which show bioremediation potential is an important fact in bioremediation applications. Introducing genes responsible for proteins involved in bioremediation into well characterized bacteria is an effective way to enhance the bioremediation potential of bacteria in engineered bioremediation application.

The objective of the present study was to identify bacterial strains growing under heavy metal stress and determine the possible mechanisms for heavy metal tolerance activity. Nine bacterial strains collected from textile dying effluent rich in heavy metal contaminants (copper, zinc, cadmium and lead) were selected for identification using 16S rRNA gene sequence analysis.

16S rRNA gene amplification (PCR) products (~ 1550 bp DNA fragment) of all nine bacterial strains were selected for sequencing. DNA base sequences of - 1550 bp 16S rRNA gene fragments were clearly read for eight bacterial strains except G strain.

Homology comparison of 16S rRNA gene sequences with NCBI BLAST and ClastalW revealed that the isolated bacteria belong to threeBacillus species, three Staphylococcus species and two Paracoccus species.

The strains B1 and B3 have shown 99 alignment score with Bacillus flexus and O strain has shown 99 alignment score with Bacillus marisflavi. B4 and D1 have shown 97 alignmet score with Paracoccus pantotrophus and 98 alignment score with Paracoccus pantotrophus respectively. D5 has shown 99 alignment score with
Staphylococcus epidimidis *while D7 has shown 99 alignment score with both* Staphylococcus epidimidis *and* Staphylococcus capitis.

Phylogenetic relationship of the three **Bacillus** and three **Staphylococcus** strains were then compared with known **Bacillus** species and **Staphylococcus** species using Bioedit and PHYLIP software. The close relationship was observed in the phylogenetic analysis with known species, which indicate that, the metal tolerance mechanisms to be similar to the known species. The maximum copper tolerable concentration of P strain was detected to be 6 ppm. Hence P strain has a potential to accumulate Cu^{2+} ions.

0217.Ranasinghe, G.S.P.

Sero-prevalence of anti-leishmania antibodies in cutaneous leishmaniasis patients.
MSc. Molecular Medicine – 2012　　　　　　　　　　D 3001

Abstract

Cutaneous leishmaniasis(CL) in Sri Lanka is caused by a usually visceralizing species *L. donovani.* Visceralizing potential of *L. donovani* in Sri Lanka is not known. An ELISA was developed and patients with a laboratory-confirmed cutaneous leishmaniasis in Sri Lanka were examined by the newly developed ELISA. There was a 14.85% sero-prevalence of *anti- Leishmania* antibodies in the study group.

Altogether 101 serum samples obtained from patients with confirmed cutaneos leishmanasis were tested by this newly developed ELISA and 15 of them were positive. Two of the positive patients were also positive by rK39 assay which is used for diagnosis of visceral lieshmaniasis.

There was evidence for an association between a high serological response with younger age groups and single, early lesions in initial developmental stages. However, it was not associated with the gender or occupation.

Locally prevalent *L. donovani* parasite strain either has the ability, at least to some extent, to raise an antibody response in the host while resulting in CL or some of them may have the ability to visceralize. An in depth study including more samples and long-term follow up would be useful to investigate these possibilities.

0218.Ranaweera, D.M.

Molecular diagnosis of Williamms syndrome in selected Sri Lankan patients.

MSc. Molecular Medicine – 2012   D 3008

Introduction: Williams Syndrome (WS) is a developmental disorder caused by a deletion of chromosome 7q 11.23, which spans a region of 1.5 to 1.8 Megabase (Mb). Within this deleted region is a 1.2 Mb region (called the Williams Beuren Syndrome critical region) which if deleted, results in WS. The common deletion involves the loss of around 23 genes of which the Elastin (ELN) gene is the most commonly investigated as well as the FZD9 (Frizzled Drosophila homolog of 9) gene. The prevalence of WS is estimated to be between 1/7,500 to 1/10,000 births. Children with WS have a combination of features including a characteristic facial appearance, congenital cardiac defects and mental retardation being the most commonly observed. Other features include cognitive, behavioral, neuromuscular, growth and endocrine problems. This study was to develop a semiquantitative polymerase chain reaction (qPCR) method to diagnose WS in a group of clinically diagnosed cases from Sri Lanka.

Methods: Dosage analysis of genes within the deleted region using semiquantitative polymerase chain reaction was used for the diagnosis of 16 patients with a clinical diagnosis of WS. Deoxyribonucleic acid (DNA) was extracted using the QIAamp DNA Blood Mini Kit. The yield and purity of the samples was determined by spectrophotometric analysis. Using a multiplex reaction normal control (N), positive control (with a confirmed deletion) and patients' (P) DNA was amplified using 2 primer pairs. One of the primers was within ELN and the second was in the Cystic Fibrosis Transmembrane Conductance Regulator (CFTR) gene on chromosome 7 but outside the deleted region. Following agarose gel electrophoresis, the amplified products were quantified using Bio-RAD, Molecular Imager, Gel Doc™ XR+ with Image Lab™ software. A ratio of P:N of 0.5 indicated the presence of a deletion while a ratio of 1 indicates the absence of a deletion. Suitable positive and negative controls were used in each reaction.

Results: Out of 16 patients studied, 12 were found to have a deletion of ELN, 3 patients had no deletion and 1 patient's result could not be interpreted and needs further analysis.

Conclusion: This investigation was successful in confirming or refuting the clinical diagnosis of WS in the majority of the cases. Using more loci within and outside the critical deleted region would increase the accuracy of the results and may make it a useful diagnostic test.

0219.Weerasinghe, L.

The association between interferon gamma insulin resistance in obese lankan women with polycystic syndrome.

MSc. Molecular Medicine – 2012   **D 3007**

Abstract

Background:

Heterogeneous Polycystic ovary syndrome (PCOS) is a low grade inflammatory condition and it is associated with insulin resistance (IR).

ObjectiveTo compare total serum interferon gamma (IFN y) and IR in obese Sri Lankan women with PCOS with obese controls without PCOS and to see the association of IFN y with insulin resistance (IR) in obese women with PCOS.

Materials and methods: It was a descriptive cross sectional study carried out on 28 obese women with PCOS; diagnosed on the basis of Rotterdam criteria and 19 Body Mass Index (BMI) matched controls. Fasting insulin and IFN y levels were assessed by Enzyme Linked Immunosorbent Assay (ELISA) technique. Fasting serum Follicle stimulating Hormone (FSH), Luteinizing Hormone (LH), prolactin, testosterone, triglycerides and glucose levels were measured. IR was calculated by Homeostasis Model Assessment (HOMA-IR), Quantitative Insulin Sensitivity Check Index (QUICKI) and McAuley (McA) index.

Results:

The median fasting glucose levels were similar (89.42 mg/dl, IQR= 85.2 - 98.1 vs. 90.77 mg/dl, IQR= 85.8 - 100.5, p = 0.71), the mean fasting insulin higher (49.73 ^ilU/ml, SD = 23.23 vs. 23.19 nIU/ml, SD = 9.82, p < 0.0001), and insulin sensitivity lower by

QUICKI (0.28, SD = 0.02 vs. 0.30, SD = 0.02, p < 0.0001) among women with PCOS when compared with controls. IR was higher by HOMA-IR (11.18, IQR= 6.17-16.12 vs.

4.61, IQR= 3.47 - 7, p < 0.001) and McA (3.74, IQR= 3.52 - 4.40 vs. 5.08, IQR= 4.41 - 5.42, p < 0.0001) in women with PCOS than controls. In addition significantly greater serum testosterone (2.08 ng/ml, SD = 0.59 vs. 1.36 ng/ml, SD = 0.67, p < 0.0001), LH (12.15 IU/1, SD = 5.82 vs. 6.76 IU/1, SD = 4.29, p < 0.001), and FSH (8.11 IU/1, SD = 2.36 vs. 5.92 IU/1, SD = 2.63, p < 0.005) levels were observed in women with PCOS, but this difference was not evident for IFN y (197 pg/ml, IQR= 142 - 239 vs. 180 pg/ml, IQR= 170 - 191, p = 0.36). Serum IFN y was not correlated significantly with fasting insulin (p = -0.004, p = 0.9), HOMA-IR (p = -0.02, p = 0.9), QUICKI (p = -0.11, p = 0.54) or McA (p = -0.15, p = 0.41) in obese women with PCOS.

Conclusion: Obese Lankan women with PCOS show higher fasting insulin and IR than BMI matched controls, but similar serum IFN y values, IFN y was not correlated with IR in obese women with PCOS.

Obstetrics and Gynecology

0220.Bhabu, B.

Strategies to reduce lower segment caesarean section rates

MD Obstetrics and Gynecology – 2013   **D 3251**

Abstract Title — Strategies to reduce Lower Segment Caesarean Section Rates

Introduction - Caesarean sections (CS) are sometimes carried out without proper indications. The CS rates have reached pandemic proportions over the past few decades . During the 1970s the CS rates were around 5% in well resourced countries but it has reached a dramatic figure of >50% in certain countries during the past decade.

Objective - To obtain CS rates , distributed according to the Modified Ten Group classification of CS in 2011-2012 and compare it with the previous data obtained in 2010 and to assess the effectiveness in reduction of CS rate after adoption of the strategies identified by the previous study in 2010.

Method - A study was conducted among all women who underwent CS in the academic unit, Teaching Hospital, Mahamodara, Galle , between 1st July 2011 to 31st March 2012. Robson's Ten Group classification with modification of some groups with the addition of sub groups A and B, was used in this study. CS rates and the group wise analysis were compared with the data obtained in 2010.

Results- Normal vaginal deliveries had increased from 65.4% in 2010 to 74.5% (p<0.001) in 2011/12 .During this period the CS rates have declined from 31.8% in 2010 to 27% in 2011/12 (p<0.001).

The CS rates in multiparous women at term with a singleton fetus in a vertex presentation (MTSV) having one previous CS scar had increased from 21% in 2010 to 25.3% (p < 0.05) in 2011/12. The CS rates in MTSV after induction of labour (IOL), MTSV after Spontaneous onset of Labour (SOL) and in the miscellaneous group showed significant decrease from 2010 to 2011/12 (from 5% to 3.1%, from 3.8% to 2% and from 7.9% to 5.5% respectively, p<0.05).

Fetal distress as an indication for CS has decreased from 22.3% in 2010 to 17.6% in 2011/12 (p< 0.05), where as failure to progress as an indication for CS has increased from 10.8% in 2010 to 13.5% in 201 l/12(p < 0.05) . Severe pre-eclampsia as an indication for CS also increased from 3.5% in 2010 to 4.6% in 2011/12 (p < 0.05). Maternal admission to Intensive Care Unit has decreased from 2.8% in 201.0 to 1.6% in 2011/12 (p < 0.001) while no significant changes were seen in perinatal morbidity or mortality.

Emergency CS for fetal distress in nulliparous women at term with a singleton fetus in a vertex presentation (NTSV) after IOL, has increased from 23% in 2010 to 43.7% in 2011/12 (p <0.05). Subfertility and elderly mother as indications for emergency CS after IOL in NTSV has markedly decreased from 14% to 0.6% and 9% to 0% respectively (p< 0.001), from 2010 to 2011/ 12

Compared to 2010, emergency CS in MTSV for failed IOL and failure to progress after SOL has decreased from 30% to 5.3% and *29%* to 0% respectively in 2011/12 (p <0.05).

Conclusion — Even though CS rates have significantly reduced in 2011/ 12, compared to 2010, there is room for further reduction.

0221. Dangalla, D.P.R.

Surgical treatment versus expectant care in the management of incomplete miscarriage : A   randomized controlled trial

MD Obstetrics and Gynecology – 2010   D 3248

Abstract

Introduction : Expectant care and awaiting spontaneous expulsion of retained products conception (RPC) has been recommended for the management of incomplete miscarriage. However in Sri Lanka, it is not routinely practiced yet.

Objective : To determine whether expectant care of incomplete miscarriages < significantly reduce the need for surgical evacuation of retained products conception (ERPC), without increasing complications.

Design and Setting : A Randomized controlled trial conducted at the University Gynecological Unit of Teaching Hospital Mahamodara Galle.

Method : Ethical approval was obtained from the Ethical Review Committee of Faculty of Medicine, Galle. The trial was registered in the Clinical T Register, Sri Lanka. Consecutive women with uncomplicated incomplete miscarriages of less than 14 weeks , admitted during the period 1 January to 15 July 2009 with RPC measuring 15-50mm in the anteroposterior (AP) diameter on Transvaginal Sonography (TVS) were randomized in to ERPC (n = 80) and expectant care (n=80) groups. Informed written consent was obtained.

The ERPC group underwent ERPC under general anaesthesia. Both groups were reviewed after one week clinically and with TVS. . The expectant care group was re-assessed in same manner as outpatients weekly up to four weeks unless complete expulsion of RPC was confirmed earlier.

Results : Age, parity, period of gestation, socio economic status, distance of residence from the hospital and the AP diameter of RPC at recruitment were similar in both groups. In the expectant care group, complete expulsion of RPC occurred within one week in 73 %, and after four weeks only one patient needed ERPC. The durations of abdominal pain and the time off normal duty were similar in both groups. The expectant care group had a longer duration of vaginal bleeding (p <0.01) than the ERPC group. Complications were rare and similar in both groups and not of clinical significance.

Conclusion and recommendations

In the absence of significant complications, expectant care appears to be a safe option in the management of uncomplicated first trimester incomplete miscarriage. Therefore routine ERPC for incomplete miscarriage seems to be unnecessary. However possible long-term complications should be evaluated in a larger study with long-term follow up.

0222.Deepani, P.J.T.

Predition of spontaneous preterm delivery from endocervical length change between 11-13 weeks and 18-22 weeks : A prospective cohort study

MD Obstetrics & Gynecology – 2013   **D 3245**

0223.Dissanayake, D.J.

A randomized controlled trial comparison of the effectiveness of intra-cervical balloon catheter versus vaginal prostaglandin E 2 for pre –induction cervical ripening

MD Obstetrics and Gynecology – 2011   D 3255

Abstract

Introduction : Induction of Labour (IOL) is the initiation of uterine contractions prior to its spontaneous onset, leading to cervical dilatation, effacement and delivery of the fetus. According to the World Health Organization Global Survey on Maternal and Perinatal Health in 2010, world's highest rate of IOL (35.5%) was reported in Sri Lanka. Induction of labour had been shown to be associated with beneficial outcomes as well as adverse outcomes. Failed induction is one of the drawbacks most of us encounter with IOL in current obstetric practice. This is particularly so when IOL done with unfavourable cervix. Hence, pre-induction cervical ripening is necessary to increase the likelihood of successful labor induction, and a subsequent successful vaginal delivery. Intra-cervical Balloon catheter and vaginal Prostaglandin E2 are two main methods that are currently being used widely for this purpose. This study aimed to assess the efficacy of these two methods with regards to pre-induction cervical ripening.

Objectives : To compare the effectiveness of intra-cervical balloon catheter and vaginally administered prostaglandin E2 tablets for pre-induction cervical ripening for Lankan pregnant women and their effects on the mother and the fetus.

Method : Single blinded randomized controlled trial was carried out in a study sample of 140 subjects to receive an intra-cervical balloon catheter or vaginal prostaglandin E2 tablets for pre induction cervical ripening at 40 weeks and 4 days from June 2009 to May 2010. Data were obtained from the Bed Head Tickets of the relevant patients who have successfully fulfilled the selection criteria of the study. Mean increase in Modified Bishop Score was taken as the primary outcome measure.

Results : The study sample was randomly divided in to two equal sub groups to receive Balloon catheter (Group A, n=67) and vaginal prostaglandin E2 (Group B, n=73), as the cervical ripening method. Both samples were demographically equal at the commencement of the study. The mean increase in the Bishop score in group A was 2.86 (SD=1.26, Range 1 to 8), while it was 4.17 (SD=T.01, Range 1 to 9) in patients treated with vaginal prostaglandin E2. There was no statistically significant difference in the pre-

induction to delivery interval, side effects profile, necessity of augmentation, mode of delivery and fetal distress between each group.

Conclusion : Vaginal prostaglandin E2 was more effective as a pre-induction cervical ripening method compared to balloon catheter. This observed difference in increased Mean Bishops score in the patients treated with vaginal prostaglandin Ei group was not at the expense of fetal well-being, as evidenced by similar APGAR scores, and the statistically insignificant incident of passage of meconium stained liquor.

0224.Ekanayake, C.D.

Teenage pregnancy : socioeconomic risk factors and outcome.

MD Obstetrics and Gynecology – 2011   **D 3257**

Abstract

Introduction : Teenage pregnancies account for approximately 8% of total pregnancies in Sri Lanka. A poor socioeconomic status is considered a risk factor for teenage pregnancies.

Objectives : To determine the socioeconomic risk factors and outcome of teenage pregnancy.

Design and setting : A cross-sectional descriptive study carried out at ward 06, Teaching Hospital, Kandy commencing from December 2009 for a period of 7 months.

Method: 182 primiparous teenage mothers who admitted for delivery were selected and filled a pretested self administered questionnaire, which included the validated Sinhala or Tamil translation of the Edinburgh Postnatal Depression Scale and factors relating to socioeconomic status. The second part of the questionnaire was filled by the investigator on the obstetric outcome of the pregnancy.

Results : The majority (92%) of the sample was 17 years or more. Although 60% of the pregnancies were either unplanned or unwanted, 97% was either living with their parents or partner. The mean birth weight was 2.69 kg (2.57-2.8 l kg) with one fourth being low birth weight. Preterm labour was present in 9.7% of cases. Hypertensive disorders were present in 11% of cases. Vaginal, instrumental and caesarean section rates were 68%, 7% and 25% respectively. The mean POA at booking visit was 14 weeks with a mean of 6 visits. 16.5% of patients were screening test positive (EPDS score>9) for peri-partum depression.

43% of patients lived alone or with one parent at some point during their childhood. One third of parents were educated up to middle school with half being either unemployed or in unskilled professions. The monthly income of parents was less than Rs.7515 in 42% of

patients. All were from lower (53%) or lower middle (47%) socioeconomic classes. appeared to have a 2.32 times higher risk of having peri-partum depression (EPDS score>9). Teenagers of parents who were not educated up to middle school had almost a 3 times higher risk of having peri-partum depression (EPDS score >9).

The occupational status, total monthly income, or the socioeconomic class of parents was not associated with a peri-partum depression. The educational status of the patient, pregnancy status and birth weight of the baby were not found to be associated with peri-partum depression.

Conclusion : The rates of peri-partum depression, low birth weight, pre-term labour, mode of delivery and hypertension for teenage pregnancy was comparable to local and international studies. Teenage pregnancies were associated with a low parental socioeconomic class. Disruption to family structure during childhood and educational level of parents was associated with peri- partum depression in teenage pregnancies.

0225.Jayalath, G.K.C.

The correlation between stage of pelvic endometriosis and serum CA 125 level

MD Obstetrics and Gynecology – 2010 D 3260

Abstract

Introduction : Despite a high prevalence of endometriosis, there still exist many challenges in diagnosing the disease. Although laparoscopic examination is considered as the gold standard method for diagnosis of the presence, intensity and relapse of endometriosis it is both invasive and expensive. This study aims to evaluate non invasive and practical diagnostic method by measuring serum CA 125 levels in patient with endometriosis.

Objective : Find out correlation between CA125 levels and stage of endomeriosis

Find out the value of endometriosis in diagnosis of endomeriosis

Design & setting : A cross sectional study was carried out at teaching hospital Peradeniya Sri Lanka for a period of 8 months commencing 1st July 2008.**Method :** Sixty women who underwent laparoscopy for benign condition were divided in to two groups, based on laparoscopic findings; one group included patient with endometriosis (39 Patients) and the second group patients free from endometriosis (32 patients). Serum samples were obtained at the time of surgery and serum CA 125 levels were assessed.

Staging of endometriosis was performed during the laparoscopy by using the classification method introduced by the American society of reproductive medicine.

Results: Mean serum peritoneal fluid CA125 levels were significantly higher in women with endometriosis as compared to the control group.(29.6 ± 22.1 IU/ml versus 8.4 ± 3.4 IU/ml $p < 0.05\%$) CA 125 levels were also varied proportionately with the stage of endometriosis; but showed significant difference only in higher stages of disease.

Conclusions : Serum CA125 levels are simple and non surgical tool for diagnosing and staging endometriosis. This marker has greater diagnostic value in higher stages of the disease.

0226.Jayarathna, Y.R.J.

Antibiotic prophylaxis versus absence of antibiotic prophylaxis in laparoscopic surgery for benign gynecological conditions : A randomized controlled trial.

MD Obstetrics and Gynecology – 2013   D 3247

Abstract

Introduction : Laparoscopy is an invasive procedure; the most frequently used diagnostic therapeutic operative procedure in Gynecological practice. The use of ant prophylaxis in laparoscopic procedure is debatable. Available evidence i necessity of antibiotic prophylaxis is limited and most of this evidence i developed countries where the prevalence of vaginal infection and Inflammatory Disease (PID) may differ from the South Asian population. Therefore is vital that we have clear evidence regarding the necessity for antibiotic prophylaxis for elective laparoscopic procedures.

Objective : The aim was to investigate the need of prophylactic antibiotics to prevent ear operative infection and febrile morbidity in elective laparoscopic surgery.

Method: A randomized controlled trial was used. The subjects were allocated in groups as A and B by simple randomization. Group A subjects received a prop antibiotic regimen (Oral Azithromycin one gram daily). Group B subjects receive any prophylactic antibiotics. Post-operative outcomes were monitored presence of fever, surgical site infection, presence of Pelvic Inflammatory (PID) and Urinary Tract Infection (UTI). All subjects discharged from the ward were reviewed in the clinic after a two week period to screen for infection. Data was collected by an interview administered questionnaire.

Results : There were 218 laparoscopic surgeries and 115(52.7%) were in group A. The mean age was 32.4 (S.D. ± 5.97) years. The indications were subfertility (68.8%),

subfertility and endometriosis (15.1%), endometriosis alone (1.8%), sterilization (0.9%)

and others. The rate of post-operative fever in group A and B were respectively 8(7.0%) and 8(7.8%) *(P* = 0.5). The rate of surgical site infection in group A and B respectively were 0(0%) and 1(1.0%). None of the participants got pelvic or urinary infections. There was no statistically significant difference in presence of fever and infection in either of the two groups.

Conclusion : This study revealed that antibiotics prophylaxis was not able to achieve a statistically significant reduction in post-operative febrile or infective morbidity in laparoscopic gynaecological surgery for benign uncomplicated conditions.

0227.Jayasinghe, J.A.J.N.

Roadline amniotic fluid volume as a preditor of adverse perinatal outcome in low resource in low resource settings.

MD Obstetrics & Gynecology – 2013   **D 3250**

0228.Mathota, C.

A prospective study to evaluate a risk factor based screening tool in screening for gestational diabetes at first trimester and 24 – 28 weeks.

MD Obstetrics and Gynecology – 2010   **D 3258**

Abstract

Title: A prospective study to evaluate a risk factor based screening tool in screening for gestational diabetes mellitus at first trimester and 24 - 28 weeks.

Introduction: Gestational diabetes mellitus (GDM) is associated with adverse maternal and neonatal outcome. Identification of women with GDM through screening at appropriate gestational age results in lowering of maternal and foetal complications. However, routine screening for GDM is not practiced in Sri Lanka due to high costs and limited resources. We propose a risk factor screening survey as a mechanism to identify mothers who may benefit from proper screening with OGTT. This screening tool may be used to effectively focus, limited clinical resources on those in need.

Objective: To evaluate detection rates of gestational diabetes mellitus from a risk based screening programme at first trimester and 24 - 28 weeks of gestation.

Design and setting: A prospective study was carried out at the antenatal clinic of the Teaching hospital - Kandy

Subjects and method: Three hundred and twenty one women were followed up in this study. All the women were assessed for risk factors, namely BMI >25 kg/m^2 at booking visit, previous gestational diabetes mellitus, first degree relative with diabetes, previous history of bad obstetric outcome. All the participants were offered with 75g oral glucose tolerance test at booking visit (before 12 weeks) and between 24-28 weeks period of amenorrhoea.

Results: In this study population, we found that the prevalence of Diabetes Mellitus is 2.18% at first trimester booking visit, and 11.65% at 24 - 28 weeks.

Risk factor based questionnaire has depicted a sensitivity of 0.85 (95% CI 0.42-0.97) and specificity of 0.97) and specificity of 0.67 (95%CI 0.61-0.72)   for screening at first trimester. Therefore, our tool detects 85.8% of patients with GDM by screening only 34.5% of the pregnant population at first trimester. Applying an age threshold of 25 years decreased the number of subjects who would be missed to from 14.2% to 0% at first trimester; however, the number of subjects who would need to be screened was increased from 34.5% to 82.5%. Our tool has sensitivity of 0.79 (95% CI: 0.6027 to 0.9195) and specificity of 0.72 (95% CI: 0.6395 to 0.7640) for screening at 24 - 28 weeks of gestation. For the second trimester screening, our tool detects 79.3% of GDM by screening 35.3 % of the pregnant population.

Applying the age threshold of 25 years decreased the number of subjects who would be missed to from 13.6% to 6.8% at second trimester; however, the number of subjects who would need to be screened was increased from 42.9% to 81.3%.

Conclusions: In our study population, prevalence of diabetes was 2.18% at first trimester and 11.65% at 24 - 28 weeks. For the first trimester screening, our tool detects 85.8% of Gestational Diabetes Mellitus by screening only 34.5% of the pregnant population. For the second trimester screening, our tool detects 79.3% of GDM by screening 35.3 % of the pregnant population. We recommend that risk factor based screening can be used in low resource settings to focus limited clinical resources on those in need.

0229. Niruthan, T.

Comparison of short term and long term complications of continuous versus interrupted episiotomy suturing technique.

MD Obstetrics and Gynecology - 2013   **D 3246**

Abstract

Is the continuous episiotomy suturing method associated with less short term and long term complications compared to the interrupted episiotomy suturing method?- A randomized control trial

Setting: Colombo North Teaching Hospital, Ragama

Objectives: The comparison of short term and long term complications of two methods of episiotomy suturing; continuous method versus interrupted method

Method: 160 primis who had episiotomy were randomly selected for the two methods. Episiotomy suturing was done according to protocol under local infiltration of 2% lignocaine. Pain score was assessed using visual analogue pain scale at 24 hours as the primary outcome. Requirement of additional analgesia, haematoma formation at episiotomy site and wound dehiscence were also assessed at 24 hours. Wound dehiscence and wound infection were assessed on day3 and day7. Presence of superficial dyspareunia, granuloma over the episiotomy scar and patient satisfaction were assessed at 3 months.

Result: No differences existed between the two groups with respect to the demographic characteristics of the women. When comparing the continuous suture group with the interrupted group, there was no statistically significant difference in pain score which was assessed at 24 hours of delivery (p=0.26). Wound haematoma at 24 hours(NR), wound infection within 7 days(OR,3.6,95% CI:0.7-17.7), wound dehiscence at day 3(NR), day5(NR), day7(OR,2.9,95% CI:0.3-28.7), superficial dyspareunia at 3 months(C)R,0.8,95% CI:0.2-2.9), granuloma over episiotomy scar at 3 months(OR,0.8,95%CI:0.2-2.7) and patient satisfaction at 3 month(OR,0.6,95% CI:0.2-2.6) were assessed. However, results were not statistically significant.

Conclusion: By considering the assessed factors, adaptation of continuous episiotomy suturing technique is not superior, in both terms of the short and long term complications and outcome when compared to the interrupted episiotomy suturing technique. Our result

of primary outcome is reinforced by other published studies that compared continuous and interrupted suture technique. However, our result of primary outcome contradicts with recent meta-analysis, so further study with improved methodology is needed

0230. Pannila, C.M.

Health related quality of life in diabetics during pregnancy :A cross sectional study
MD Obstetrics and Gynecology – 2013   **D 3249**

Objective: To study the health related quality of life of pregnant women with gestational diabetes mellitus and diabetes mellitus during pregnancy.

Method: A cross sectional study was done on pregnant women with gestational diabetes mellitus and diabetes mellitus during pregnancy (n=294) and compared with a control group (n=306) of pregnant women with uncomplicated pregnancy from September 2011 to September 2012. SF 36 a validated instrument for assessment of health related quality of life was used. Responses were decoded as per SF 36 protocol. Independent sample t test was used to compare the final outcome of physical and mental health components. Mann - Whitney U test was used to analyze within the sub groups. The level of statistical significance was $P<0.05$. The questionnaire was filled by the participant.

Results: A total of 600 participated with 294 in the study group and 306 controls. There was a significant difference in the physical component summery statistic between the two groups, with the gestational diabetes mellitus/diabetes mellitus group showing a lower health related quality of life index, while there was no significant difference in the mental component summery statistic. Two components of the physical component summery, physical function and bodily pain scores showed significant difference between the two groups with the Gestational diabetes mellitus/Diabetes mellitus group showing a lower health related quality of life index.

Conclusion: The physical health of Gestational diabetes mellitus/Diabetes mellitus pregnant women was lower than that of healthy pregnant women while there is no difference in the mental health between them. –

Keywords: health related quality of life, pregnancy, gestational diabetes mellitus, diabetes mellitus

0231.Ranaweera, A.K.P.

Value of sonographic hydrotubation using agitated saline as a screening test for tubal patency.

MD Obstetrics & Gynecology – 2013   **D 3252**

Background : Establishing tubal patency is necessary for the treatment of subfertility. Many methods are available for screening for tubal patency. Hysterosalpingo contrast sonography (HyCoSy) is the current recommended screening test but is expensive. Use of agitated saline and size 8 Foley catheter instead of expensive contrast medium and hysterosalpingography catheter the cost can be reduced significantly. This will make vaginal sonographic hydrotubation, feasible to use in a low resource setting as a primary screening test for tubal patency.

Objective : To determine the diagnostic accuracy of vaginal sonographic hydrotubation using agitated saline as a screening test for tubal patency.

Method : Forty-two patients suffering from primary or secondary infertility were evaluated for tubal patency. All patients underwent vaginal sonographic hydrotubation using a size 8 Foley urinary catheter and agitated saline solution as a contrast medium to assess tubal patency. The uterine tubes were evaluated separately and the results were compared to the findings at laparoscopy and chromotubation performed independently. All patients received prophylactic antibiotics prior to procedure.

Results: The findings of both methods agreed in 71 out of 84 tubes (concordance, 84.5%). The sensitivity of sonosalpingography in diagnosing tubal patency was 84.9% and the specificity 81.8%. The positive predictive value for tubal patency by sonosalpingography was 96.8% and the negative predictive value 45.0%. There were eleven false positive and two false negative results compared to laparoscopy. The likelihood ratio for open tubes was 4.67; the pretest probability for tubal patency was 86% and posttest probability 96%. Other pathologies detected during sonography include two patients with sub-mucosal fibroids distorting the cavity, two other patients with multiple fibroids and one patient with large fundal fibroid, one patient with endometrioma and five patients with bi lateral polycystic ovaries. Six patients with mild to moderate endometriosis and one patient with pelvic inflammatory disease with tubal adhesions, were not detected during sonography. Adverse events of sonosalpingography included moderate to severe abdominal pain in two patients and mild discomfort during procedure. No infectious complications were recorded.

Conclusion : The results confirm that vaginal sonographic hydrotubation utilizing agitated saline as a contrast medium and a size 8 Foley urinary catheter instead of an expensive hysterosalpingography catheter is a reliable, simple and well-tolerated method to assess tubal patency in an outpatient setting. In addition, detection of other pathologies related to subfertility is also possible at the time of screening. This will further help to reduce, the number of patients undergoing laparoscopy and this expensive potentially dangerous investigation can be reserved for patients with a history of endometriosis or previous severe pelvic inflammatory disease.

Keywords: Subfertility; laparoscopy; agitated saline; hydrotubation; sonosalpingography; tubal patency

0232. **Saman Kumara, Y.V.A.L.**

Induction of labour in a Teaching Hospital .

MD Obstetrics & Gynecology – 2011   D 3259

Abstract

Objective: To study the Induction of labour (IOL) and its outcome in a Teaching Hospital

Design: A prospective observational study.

Setting: Ward 18 Colombo South Teaching Hospital, Kalubowila, Dehiwala.

Method: Data was collected from consecutive women who underwent induction of labour during a period of six months commencing 1[bt] November 2009, using a pre-tested form.

Results: Induction of labour rate was 47.3 %.The main indications for induction of labour were Past dates(63.1%),Pre labour rupture of membranes(19.0 %), Pregnancy induced hypertension(6.1%), Gestational diabetes mellitus(5.7 %).To ripen the cervix before induction of labour Stripping of membranes carried out in (41.0 %), Foley; catheter was inserted (18.0 %).Prostaglandin vaginal pessaries (PGE2) was introduced (6.0 %).

Conclusions: Induction of labour was associated with significantly higher rates of instrumental deliveries and caesarian sections. The main indications for IOL were past

dates and pre labor rupture of membranes. Modified Bishop's Score (MBS) was good indicator for prediction of outcome after IOL.IOL had no significant foetal or maternal outcome.

Recommendations: Induction of labour should be done after assessing the cervical favorability when it is necessary. When cervix is unfavorable cervix has to be ripen with suitable agent.PG is more effective in cervical ripening than Foley catheter insertion.

0233.Senaratne, H.M.S.

Importance of symphysiofundal height chart as a screening test for the assessment of fetal growth disorders.

MD Obstetrics and Gynecology – 2010D 3628

Abstract

Objectives; 1. To develop a symphysiofundal height chart (SFH) with 3rd, 10th, 50th, and 90th
centiles. 2. To determine validity of locally constructed SFH chart as a screening test in detecting fetuses of low birth weight (LBW) and macrosomia from normal weight fetuses.
Methods; A prospective observational study was carried out for duration of ten months commencing from 1st June 2009 in ward 7 & 8, Castle Street Hospital for Women, Colombo 08,Sri Lanka. 1. A SFH chart with centiles was constructed using serial SFH measurements of 196 ultrasonically dated singleton pregnancies followed up until the delivery. 2. Serial SFH
measurements of a cohort of 462 consecutively recruited singleton pregnancies were plotted in the locally prepared SFH chart until delivery and birth weight was recorded. The validity of
locally constructed SFH chart was determined.
Results; The newly constructed SFH chart was different from the chart provided from the Family Heath Bureau (FHB). Sensitivity and specificity in detecting LBW fetuses by using one or more SFH measurements below 10th centile were 60.29% & 84.77% respectively while it was 50% & 89.34% respectively when 3rd centile was used. Sensitivity and

specificity in detecting macosomia were 87.5% & 78.85 respectively.

Conclusion: Serial SFH measurements in a locally prepared SFH chart is a useful screening test in detecting growth disorders. Each unit should have its own locally constructed SFH chart.

Recommendation: SFH chart with centiles would be a useful as a screening tool in growth disorders addition to the standard Pregnancy record and would enhance communication betweenmidwife, general practitioner, and obstetrician in antenatal care.

0234. Silva, G.R.C.

Progress of first stage of spontaneous labour in multiparous women : An observational study.

MD Obstetrics and Gynecology - 2011   **D 3253**

Title - Progress of first stage of labour in multiparous women: An observational study.

Introduction - Multiparous labour is relatively faster. Alert and action lines of the partogram were originally derived from studies of spontaneous labour in primigravidae. Some studies I conclude that progress of labour is similar among primigravidae and multigravidae, while I some do not.

Objective - The objective of this study is to describe progress of first stage of labour for multiparous women.

Method - An observational (cross-sectional) study was done among uncomplicated I multigravidae at term admitted to labour ward of university obstetric unit, NCTH, in I spontaneous labour. In the active phase of first stage, vaginal examination was performed two hourly, either to the end of the 1st stage of labour or to the point of transfer for I intervention. Cervical dilatation was recorded on the 'National partogram' which was I adopted from the WHO model. Mean rate of cervical dilatation and its relationship to I mother's height, parity, initial dilatation of the cervix, station of the fetal head at first vaginal I examination and birth weight were studied.

Results - Of the 208 multiparous women the mean age was 30 years and mean height was 1154.9 cm. 104 (50%) women had previously given birth once, 59(28.3%) twice, B33(15.9)three times and the remaining 12(5.8%) four times or more. At the first vaginal

I examination 166(79.8%) had intact membranes and in 129(62.0%) the cervical dilatation was \ equal or less than five centimeters. During labour 70(33.7%) had opiates. Spontaneous vaginal delivery was achieved by 194(94.7%) while six (2.9%) underwent instrumental delivery and five (2.4%) were delivered by caesarean section.

The mean rate of cervical dilatation was 2.83 cm/hour and the 5th, 10th, 50th, 95th centiles were 0.92, 1.00,2.49, 6.00 cm/hour respectively. There was a weak negative correlation between rate of dilatation and birth weight($r = 0.112$).

0235. Tilakaratna, T.J.

Vaginal birth after caesarean section success rate and the contributory factors : a prospective cohort study

MD Obstetrics and Gynecology – 2011   D 3254

Abstract

Caesarean section rate is increasing globally. One of the main indications for caesarean section is repeat caesarean delivery due to past section. Women opting for vaginal birth after caesarean section will be one of the strategies to reduce elective repeat caesarean section rate. Option of VBAC is highly depend on maternal preference as well as physician's choice. Decision making is influenced by success rate and antenatal and intrapartum predictors of success.

Objectives : This study aims to determine the success rate of VBAC in a tertiary care setting in Sri Lanka, and the contributory factors for the success.

Method : This prospective cohort study was conducted at ward 21, 22 CSTH Obstetric Professorial Unit from July 2009 to April 2010 and ward 05 and 02 of the De Soysa hospital for women, Colombo 08, from May 2010 to April 2011. A total of 161 eligible pregnant women who delivered at above units with one past LSCS and no contraindication for vaginal delivery were recruited from 36 weeks onwards of gestation. Data was obtained by a structured data sheet before and after the delivery.

Results : Out of 161 women, who attempted VBAC, 112 women (69.6%) achieved successful vaginal birth. 49 women (30.4%) were delivered by emergency caesarean section. Factors such as indication for the previous LSCS other than lack of progress in labour [OR=2.32,(1.05 - 5.14),p=0.02] number of previous vaginal deliveries before or after the LSCS[OR=2.99(l.09-8.67),p=0.01), birth weight less than 3000g[OR=2.;

4.43),p=0.03], cervical dilatation more than 2cm at the entry in to the labour ward[OR=4.43(1.77-11.16)p=<0.001], OA position of the fetal head [OR=12. 31.19),p=<0.001] were found to be significantly associated with the success VBAC. Following multivariate logistic regression analysis birth weight less than [adjusted C)R=3.89(1.01 -4.43), p=0.03], cervical dilatation more than 2cm at t in to the labour ward [adjusted OR= 7.33(1.77-11.16) p=<0.001], OA position fetal head [adjusted OR=18.39(4.91-31.19), p=<0.001] are the most significantly associated factors for the success rate of VBAC. Maternal BMI less than 30 in the success rate even though not statistically significant. Advanced maternal augmentation of labour are factors that decrease the likelihood of success Gestational age and inter delivery interval did not associate with the success VBAC.

Conclusion :VBAC is an effective method to reduce rising caesarean section rate. Several antenatal and intrapartum factors associate with the success of VBAC. Identifying these f in individual patients will be helpful in counseling and decision making, multicenter studies are needed to see the applicability in both well resource am resource settings.

0236.Wijesooriya, L.R.A.

Psychological morbidity of women following miscarriage : A descriptive study .
MD Obstetrics and Gynecology – 2011   **D 3256**
Abstract

Title-Psychological morbidity of women following miscarriage, a descriptive analytical study

Objectives - This study was carried out to assess the psychological morbidity of women after spontaneous miscarriage and to compare with pregnant control, and to identify the possible associating factors which affect the psychological outcomes.

Method - This study was carried out at an obstetrics and gynaecology unit, teaching hospital, Ragama. A total of 198 consecutive Women who admitted to gynaecology ward and given a diagnosis of spontaneous miscarriage were compared with 179 consecutive pregnant women who registered at the antenatal clinic in the same hospital, using validated Sinhalese version of the 30-items general heath questionnaire and Edinburgh post natal depression scale. For both groups, these questionnaires were given at initial contact and after six to eight weeks for self answering.

The results were analysed by using chi-squared test for categorical variables and independent sample t - test for continuous variables. Descriptive statistics will be used to describe the demographic characteristics between two groups.

Results - Out of 198 women in the study group, 177 women completed the two questionnaires at second time and for the control group it was 171. Women in the miscarriage group were found to have a higher mean score in both scales than pregnant group in both occasions .at initial stage 84(42.4%) women of the miscarriage group were screening positive for general health questionnaire(GHQ-30) and that for antenatal group was 21(11.7%). At six to eight weeks it was 44(24.8%) and 17(9.9) for the miscarriage and the antenatal group respectively. There were 47(23.7%) women in the miscarriage group and 18(10.1%) in the antenatal group who were screening positive for the Edinburgh post natal depression scale at the initial stage and that for at six to eight was 44(24.8%) and 18(10.5%).there results showed that significant number of screening positive women in the miscarriage compared to the antenatal group. Certain demographic and obstetric factors such as advanced age, higher level of education, history of sub fertility, previous miscarriage and childlessness have shown to be associated with increase psychological morbidity following miscarriage.

Conclusion - This study clearly highlights that miscarriage is associated with it psychological morbidity among women. Number of demographic as well as some < factors has a positive impact on psychological outcome. As miscarriage is a common is more important to consider the need for professional care follow up for i miscarriage women in term of psychological support and treatment if necessary to them from such psychological morbidity.

Ophthalmology

0237. **Bandara, M.R.C.K.**

Wide excision of periocular basal cell carcinoma What is the safe depth for deep surgical margin?

MD Ophthalmology – 2014   **D 3321**

Abstract

Aim: To work out the depth of periocular BCC extension in the study population and to discuss the safe depth of deep surgical margin for standard wide margin surgical excision of Periocular BCC and identify variables influencing it.

Methods: Retrospective analytical study involving review of medical records of histologically confirmed periocular basal cell carcinoma managed in Northampton General Hospital during the period between 2008 and 2012 . The study sample was

selected from applying relevant inclusion and exclusion criteria. Relevant demographic ,clinicopathological and histopathlogical data was collected systematically.

Results : Total of 78 BCC cases were recruited .All were managed with conventional wide margin enblock excision. 85% were excised with 3mm peripheral surgical margin with overall clearance rate of 89.7% .Deep surgical margin was positive for tumor cells only in 1.3%(l).On skin surface tumors had their widest diameter ranged from 2 to 13mm (mean, 7.0132±2.8 mm). Thickness of Surgical specimen had a median of 3mm (range, 2 to 6 mm).Tumor clearance of deep surgical margin had frequency distribution skewed to left with 1.5mm median. Calculated tumor depth was in the range of 0.2 to 4.7 mm. Its distribution was skewed to left with median of 1.6 mm. 60% were nodular and 25% were infiltrative or mixnoduloinfiltrative .Period of follow up ranged between 1 to 57 months(mean 16.09 months).

Conclusion: Tumor depth for periocular Basal cell carcinoma was below the range of 3.5 to 4 mm, in over 90% of instances . During conventional wide margin excision, a satisfactory deep clearance rate can be achieved by adhering to general rule of excising through subcutaneous tissue. But more precisely, if the deep surgical margin is in 1.5 - 2.0 mm depth in the subcutaneous layer (about 3.5 to 4 mm from the surface of the tumor) , there is over 90% chance of achieving primary clearance. We did not find any statistically significant association between tumor depth and demographic or tumor characteristics

0238.Fernando, K.A.E.

A descriptive cross sectional study of non military trauma related ocular injuries, requiring posterior segment intervention and their long term outcome of patients admitted to the National Eye Hospital , Sri Lanka.

Vitreoretinal Subspeciality – Ophthalmology - 2009   (D 3368)

Abstract

Background - Information regarding ocular injuries requiring posterior segment intervention in the Sri Lankan setting is minimal. The data available includes the injuries encountered in the 30 year old civil war but no analysis of civilian ocular injuries has been done.

Methods - This was a retrospective cross sectional descriptive study with a follow-up component . All patients who sustained ocular injuries requiring posterior segment intervention at the National Eye Hospital from 1/1/2012 till 31/12/2012 were taken up for the study. Military injuries were excluded. Demographic data, injury circumstances and interventions were analyzed. Patients were followed up for 6 months and anatomical and functional outcome at the study period was analyzed.

Results - Study included 61 patients and at 6 months 1 patient had defaulted (n=60). Penetrating injuries constituted 39% and 16.4 % of patients had an intra-ocular foreign body (IOFB) . 70% of the patients with IOFBs were injuries associated with work. Onl;y 6.7% was documented to have worn protective eyewear. Majority were males (82%) and the females had a statistically significant better functional outcome at 6 months. (81.8% vs 53.06%). Patients had a statistically significant better anatomical outcome in the absence of endophthalmitis (90.7% vs 60.0%).

Conclusions - Ocular injuries requiring posterior segment intervention is commoner in males. The long term functional outcome apperars to be better in the female gender in the Sri lankan setting lack of attention to protective eyewear was evident. Absence of endophthalmitis was associated with a statistically significant better long term anatomical outcome.

0239.Jayasinghe, L.S.

Comparison of endoGlide donor insertion device to sheet glide in descemet's stripping automated endothelial keratoplasty three year outcomes.

MD Opthalmology -   2014   D3536

Abstract

Purpose : To compare 3-year endothelial cell loss and graft survival following Descemet's stripping automated endothelial keratoplasty (DSAEK) using the EndoGlide (AngioTech, Reading, Pennsylvania, USA/Network Medical Products, North Yorkshire, UK) donor insertion device compared to donor insertion using the sheets glide technique. **Design :** Prospective comparative case series

Methods : Consecutive patients who underwent DSAEK with Fuchs endothelial dystrophy or pseudophakic bullous keratopathy at a single tertiary center were considered to the study. Clinical data with outcomes, donor and recipient characteristics were obtained from the ongoing prospective cohort from the Singapore Corneal Transplant Study. Main outcome measures were percent endothelial cell loss and graft survival up to 3 years.

Results : Overall percent endothelial cell loss was significantly lower in the EndoGlide group (100 eyes) compared to Sheets glide group (119 eyes) at 1 year (16.3±16.6% vs. 29.5±22.2%, PO.OOl), 2 years (23.8±17.8% vs. 35.7±22.9%, P=0.001); and at 3 years (29.7±20.9% vs. 38.5±24.1%, P=0.015) post-operatively. Overall graft survival was greater in the EndoGlide compared to Sheets glide group up to 3 years (97.9% vs. 86.5%, log-rank P value=0.005). In eyes with Fuchs endothelial dystrophy, endothelial cell loss was significantly lower in the EndoGlide group (3-year: 28.2±17.9% vs. 43.4±27.1%, P=0.032). In eyes with pseudophakic bullous keratopathy, the EndoGlide group had a superior graft survival compared to Sheets glide (log-rank P=0.031).

Conclusion : Endothelial cell loss was lower using a donor insertion device during DSAEK, compared to using the sheets glide technique for DSAEK in Asian eyes with Fuchs endothelial dystrophy, and resulted in better graft survival in eyes with pseudophakic bullous keratopathy.

0240.Malaravan, M.

Ocular hypotensive efficacy of bimatoprost (0.03%) over 64 hour period in patients with primary open angle glaucoma- bimatoprost endurance study.

MD Opthalmology – 2012   D 3349

Abstract

Background : Prostamides are effective ocular hypotensive agents and are being used increasingly in the treatment of Primary open angle Glaucoma. These agents are typically dosed once daily.

Objective : A Preliminary study was conducted to evaluate the duration of Bimatoprost (0.03%) ophthalmic solution's intraocular pressure - lowering efficacy up to 64 hours after the final dose, with no ocular hypotensive medications, in patients with primary open - angle glaucoma.

Methods : In the preliminary study, the consecutive newly diagnosed patients of primary open- angle glaucoma received self-administered 1 drop of 0.03% Bimatoprost in both eyes at 8 pm for 3 weeks. At the end of 3rd week, intraocular Pressure was measured 12 hours after the last dose [8 am]. Then the Intraocular Pressure was measured at 16 hours, 20 hours, 36 hours, 40 hours, 44 hours, 60 hours and 64 hours after the last dose with no ocular hypotensive medications.

Results : The preliminary study included 17patients (29% male, 71% female ;age range, 44-73 years; Mean age, 60.06 ± 8.17years) with open angle glaucoma. The study group

mean intraocular pressure was 24.65 ± 2.39 mmHg. The mean intraocular pressures were, 14.00 ± 1.96 mmHg at 12 hours (8am), 14.18 ± 1.99 mmHg at 16 hours, 14.65 ± 1.95 mmHg at 20 hours, 15.59 ± 1.89 mmHg at 36 hours, 16.53 ± 1.98 mmHg at 40 hours, 17.88 ± 197 mmHg at 44 hours, 19.65 ± 2.23 mmHg at 60 hours and 20.18 ± 2.43 mmHg at 64 hours after the final dose of 3 weeks treatment of Bimatoprost. The study group was period. Intraocular pressure values were significantly below the base line at all time points up to 64 hour period after the final dose of Bimatoprost (p < 0.001).

Conclusions : The results of the preliminary study suggest that Bimatoprost produces reduction in intraocular pressure that may be sustained for up to 64 hours after dosing.

0241.Ratnayake, R.M.K.S.

Evaluate the effectiveness and safety of trans-epithelial collagen cross linking in the treatment of progressive keratoconus and compare the effects with conventional collagen cross-linking (epithelium off procedure.
MD Ophthalmology – 2014   **D 3525**

Abstract

Aim of the study: To evaluate the effectiveness and safety of trans-epithelial collagen cross-linking (TE CXL) in the treatment of progressive keratoconus and compare the effects with conventional collagen cross-linking (epithelium off) procedure done earlier at the same centerin the context of patient satisfaction and symptoms, rapidity of visual recovery, clinical behavior of the disease, corneal stromal changers, side effects and cost efficiency.

Background: The collagen cross linking is the only treatment option known to halt the progression of the disease. It uses ultra violet A (365nm) and Riboflavin to stabilize the cornea by inducing cross-links within and between collagen fibers and increase the biomechanical strength of the cornea.

Conventional 'Epithelium-off Collagen Cross Linking procedure (Epi-off CXL) showed promising results. However de-epithelialization is associated with pain, discomfort and infections.

A variant of standard CXL without de-epithelialization was developed recently and appears to offer effective, safer and faster cross linking with its documented reports.

Methodology

Study Design: Evaluate the effectiveness of TE CXL was a single center prospective, interventional, clinical trial commenced July 2012 and completed in July 2013 at Eye Institute, Apollo Hospitals, Hyderabad, India. Then the results were compared with Epi-off CXL done, earlier at the same center.

Study Population: Thirty eyes of 19 patients with progressive keratoconus was selected.

Methods: All patients were treated with Trans-epithelial collagen cross-linking (TE CXL) using rapid CXL protocol (18 mw/cm^2; 5 min)

Main outcome measures: Uncorrected visual acuity (UCVA), spherical equivalent, topography and pachymetry were evaluated at baseline, and at 1, 3, 6 and 12 months follow up. The patients' comfort level and complications (if any) were noted at each visit.

Results: Evaluate the effectiveness of TE CXL

After 1 year follow up, mean UCVA had improved to 0.4610.30 from base line 0.33±.27. The mean spherical equivalent was -3.2i0.30 preoperatively and -2.94±3.47 at 1 year. The pre-operative mean K max and average K values were 49.7714.60 and 47.1113.62 were decreased to 48.0714.09 and 45.9313.50 respectively at 1 year. Mean pachymetry was 482.21130.63 pm pre-operatively and 479128.52 pm at 1 year. Demarcation line noted around 180-200 pm of anterior stroma. Patients were comfortable, pain free and no significant complications were noted.

Results: Comparative analysis with Epi-off procedure

All were comfortable after the TE CXL and UCVA was not changed, however with Epi-off technique, 96 %(28.8) patients complained of tearing, photophobia and discomfort in dayl. Rapidity of visual recovery was delayed and noticed after 12 days for 24 patients (80%) and 14 days for 4 patients.

The topographic and refractive data are comparable with TE CXL. The mean pachymetry improved to 483.87±28.75 at 1 year from 481.27129.12. The demarcation line visible around 281-300rim. Delayed epithelial healing and anterior stromal opacity were noted.

Gross total cost estimated for each procedure was similar and 580$ per single eye. Average additional visits required for the Epi-off procedure were 3 and 1 for TE CXL.

Conclusions: TE-CXL treatment appeared to stop keratoconus progression, with a statistically significant improvement in visual and topographic parameters. The treatment was safe and well tolerated.

Comparative analysis with Epi-off CXL showed significant improvement of UCVA and topography in TE CXL. The mean pachymetry slightly improved in Epi-off CXL.

No significant differences in cost for both procedures. The number of clinic visits were significantly higher among patients underwent Epi-off CXL treatment.

0242.Udupihille, T.S.

Pattern of refractive errors in retinopathy of prematurity

MD Opthalmology – 2014   **D 3537**

Abstract

Introduction: Retinopathy of prematurity (ROP) is a significant problem in paediatric ophthalmology Sri Lanka. In addition to monitoring and treating ROP in its acute stage, it is also necessary to monitor these children for subsequent development of refractive errors. The main aim of this study is to quantify the proportion of those with ROP who develop refractive t and to identify the risk factors which make them prone to refractive errors, thus *enabling* ophthalmologists to follow-up those with risk factors more stringently than others.

Methodology: All children who presented to the eye clinic at the Lady Ridgeway Hospital for Ch between March and December, 2012 and were found to have stage 1-3 ROP and attended the follow-up examination at 6 months of age were included. Treatment with laser was performed according to ETROP guidelines and those with severe ROP received intravitrealbevacizumab on the advice of a vitreo-retinal surgeon. Period of amenorrhoea (POA) weight, stage of ROP, zone of ROP, presence of plus disease, laser treatment and Cycloplegic refraction was performed at the age of 6 months to identify the presence of amblyogenic refractive errors: more than 6D of myopia, 5D of hypermetropia or 2D of astigmatism. Data were analyzed to identify the risk factors contributing to the amblyogenic refractive errors.

Results: A total of 150 eyes in 75 patients were included. 11% of eyes with ROP developed amblyogenic myopia and 19% developed amblyogenic astigmatism. None developed amblyogenic hypermetropia. Where astigmatism was present, the steeper axis was almost exclusively at 90° or close to 90°. There was no statistically significant relationship between amblyogenic astigmatism and any of the risk factors. Amblyogenic myopia was related (Chi square or Chi square trend) to lower zone of ROP, plus disease, laser treatment and bevacizumab treatment, but not to the other risk factors.

Conclusion: Closer attention to refractive errors should be paid to eyes with ROP involving inner zones, plus disease and eyes requiring laser and/or bevacizumab treatment.

0243. Samarakoon, M.N.

Visual outcome of vitrectomy for intra ocular foreign bodies in explosive combat ocular trauma.

MD Opthalmology – 2013   D 3322

Abstract

To describe visual outcome of Past Plana Vitrectomy (PPV) for intra ocular foreign bodies(IOFB) in explosive combat ocular trauma.

Introduction : Ocular injuries caused by explosive materials are strongly associated with severe ocular morbidity and visual impairment. This study was designed to describe ocular morbidity as well as to predict visual prognosis of intra ocular foreign bodies sustained in combat ocular trauma (COT) during war in Northern part of Sri Lanka in "Operation Wanni" from January 2008 to May 2009.

Objective :

To determine favorability of visual outcome following PPV for retained explosive related posterior segment IOFB.

Specific Objectives:

- To describe demographic characteristics of study participants, types of weapons and time gap between injuries to surgery.
- To determine the favorability of visual outcome in relation to the type of weapon and time gap between injury to surgery.
- To determine the favorability of visual outcome in terms of presenting visual acuity.

- To determine the favorability of visual outcome after PPV by assessing injury patterns at the presentation.

Achievement of postoperative visual acuity, equal or better than Snellens 1/60 (approximate log MAR 1.8) was considered as favorable surgical outcome.

Materials and Methods : This study described all combat related IOFB injuries which underwent PPV at National Eye Hospital of Sri Lanka from 1st December 2008 to 30th November 2009. The study included 48 patients (52 eyes). Age, gender, type of weapon, time between trauma and PPV, VA at presentation, after 1 and 3 months and injury pattern were recorded using interviewer administered questionnaires and hospital in patient and out patient records.

Initial and post-operative visual acuities were categorized using the Ocular Trauma Classification Group (OTCG) grading system. All the visual acuities recorded on Snellen notation converted to Log MAR for statistical analysis.

Results : All study participants were males, aged 18 to 38 with a mean age of 26.08 years. Out of a total of 51 combat related causalities, there were 23 victims (45.1%) with Improvised Explosive Devices (IEDs). Eleven (21.6%) eyes had artillery/ mortar injuries. Three victims each injured by hand grenade and Anti- Vehicular Land Mines (AVLM). The median for PPV to initial injury was 81 days. Earliest PPV for IOFB removal was performed at 16 days of injury. The longest duration from injury to surgery was 555 days. The mean VA prior to PPV was 2.45logMAR with a range of 0.2 log MAR to 4 log MAR. Mean VA after 1 and 3 month post vitrectomy was 1.74 log MAR and 2 log MAR respectively.

Conclusions :

- Extreme posterior segment surgery has made it possible to salvage severely traumatized eyes which were earlier considered as unsalvageable.
- Delayed removal of explosive related IOFBs is not a risk factor for unfavorable visual prognosis.
- Presenting visual acuity is a good prognostic indicator of final visual outcome.
- Retinal detachment and extensive retinal damage associated with IOFB injuries had dismal visual prognosis.

0244.Samarasinghe, J.C. De. L.W.

Awareness. prevalence and common risk factors for glaucoma and glaucoma suspects at an eye clinic in a rural area in Sri Lanka.

MD Opthalmology – 2014   **D3538**

Abstract

Awareness, Prevalence and Common Risk Factors for Glaucoma and for Glaucoma Suspects at an Eye Clinic in a Rural area in Sri Lanka

Purpose - To assess awareness, prevalence and common risk factors for Glaucoma and the prevalence of suspected Glaucoma of eye clinic attendees in rural Sri Lanka

Design - Hospital Based Study

Methods - The study included 384 patients above the age of 20 years who attended the eye clinic from October to December 2013 and analyzed data included socio-demographic information as well as clinical findings

Results - Prevalence of Glaucoma in this population was 7.8% and the prevalence of Glaucoma suspects was 7.3%. Prevalence increased with increasing age. There was no significant gender preponderance. There was no significant association with positive family history. Primary Open Angle Glaucoma was far commoner than Angle Closure Glaucoma. Majority of patients knew the disease as 'eye pressure' rather than as 'Glaucoma'. Overall disease awareness was 34%. The degree of awareness increased with increasing level of education. Of the patients with other medical conditions, those with Bronchial Asthma and those with Hypertension recorded the highest prevalence.

To the vast majority of patients, the source of information on Glaucoma and on Health related facts as a whole, were the hospital and doctors. Mass media, though a common source in urban areas, seemed to play only a small role in this rural community.

Conclusions - Glaucoma prevalence in the Eye Clinic attendees was 7.8% which was higher than what is observed in community based studies. Disease awareness is low, but with potential to improve with better education level in the community. The best

method to improve health education among these people is via the local hospital and doctors.

0245.Sriharanathan, P.

Ocular coherence tomography characteristics differences in epiretinal membranes as a predictive factor for surgical outcome.
MD Opthalmology -   **D 3350**

Abstract

Purpose: To evaluate whether anatomical differences in idiopathic epiretinal membranes seen on optical coherence tomography may help predict surgical outcomes.

Seventy-five eyes of 74 patients who underwent primary pars plana vitrectomy with membrane peeling were retrospectively reviewed. Outcome measures included visual acuity, macular contour on optical coherence tomography, central macular thickness, and reoperation rate.

Results: Depending on the pre operative macular anatomy , 75 eyes were classified into 4 types: 42 eyes were included in the diffuse type, 12 in the cystoid macular edema type, 14 in the pseudolamellar hole type, and 7 in the pseudolamellar type. Surgical procedure significantly improved vision in all types except for the pseudolamellar type .There was a significant relationship between pre- and postoperative macular contour. All preoperative vitreomacular traction showed normal morphology on postoperative optical coherence tomography but had the highest reoperation rate.

Conclusion: Surgical intervention for the pseudolamellar type epiretinal membrane was not associated with the visual improvement seen in other epiretinal membrane types, and the vitreomacular type had the highest reoperation rate.

Philosophy

0246. Hewageegana, N.S.R.

''Exploration of adolescent sexuality and pregnancy in Sri Lanka- A quantitative approach''
MD Philosophy – 2012   **D3123**

Abstract

Justification-. Rigorous research into the patterns and determinants of adolescent pregnancy in Sri Lanka is scarce. Compared to many Western populations and other

South Asian countries, levels of adolescent pregnancy are low in Sri Lanka. Nevertheless, anecdotal evidence indicates that pregnancies outside of marriage are stigmatized among large sections of the population and that unwanted adolescent pregnancies, illegal abortions and suicides linked to adolescent pregnancy are a concern. Evidence shows low levels of knowledge and restricted access to contraception for adolescents in Sri Lanka. There is a need for more reliable data on adolescent sexuality and pregnancy encompassing a wider range of views in order to shape a culturally appropriate policy and practice response to meeting the reproductive health needs of Sri Lankan adolescents.

Objective: To understand the context and patterns of adolescent pregnancy and sexual behaviour in a district in Sri Lanka.

Methodology: Population based questionnaire surveys of random samples of pregnant adolescents (n=450, interviewer-administered), their partners (n=150, interviewer-administered) and school going adolescents (n=2,020, self-completion). Descriptive and multivariate analyses were performed for each sample separately, followed by an integration of the data across the three data sources.

Findings: Out of the 450 pregnant adolescents, 409 (91%) were in their first pregnancy. From this 409; 121(30%) were<18 years and 288 (70%) > 18 years old. 263 (64%) pregnant adolescents reported that they had planned their pregnancies and 146 (36%) had not planned. Among the 150 partners, 100 (67%) reported they had planned the pregnancy and 50 (33%) had not planned the pregnancy. Among the 2,020 school adolescents (521 boys and 1,499 girls), just 1.5% of the girls and 8.8% of the boys reported experience of a sexual relationship, and only 0.3% of girls and 5.7% of boys had experienced an intimate sexual relationship.

Adolescent pregnancies, whether planned or unplanned, were found to be largely welcomed, and adolescent pregnant girls were living within stable and supportive family environments. Pregnant adolescents parents' low education level, parents having married earlier than 18 years, and pregnant adolescents' siblings having children were more apparent compared to the school adolescent girls hinting that pregnant adolescents are from a subculture within which early childbearing is the norm.

Conclusions and Recommendations: Findings confirm that pre-marital adolescent sexual activity was not generally condoned and remains rare. Relationships are

predominantly monogamous. Gender difference in sexual activity exists. Reproductive health knowledge was very low across the samples and requires attention. Although the majority of pregnancies were planned and welcomed, given the inter-generational consequences of early childbearing, policy makers must find ways to tackle the structural and cultural factors that hamper a shift towards later childbearing among certain sections of the population. A proper collaboration between the education, health and community action can harness a long-term sustainable adolescent risk reduction and adolescent development. The difference of the age of consent (16 years) and the legal age of marriage (18 years) require policy debate.

Psychiatry

0247. De Silva, M.W.P.I.

Alcohol use among male patients admitted to medical units of a Tertiary Care hospital

MD Psychiatry – 2015   **D 3519**

Abstract

 Introduction

Mental disorders are responsible for 10% of the global burden of disease (Murray & Lopez 1997), and alcohol dependence is the most important cause of neuropsychiatric problems after major depression, ranking among the 10 leading causes of disability (Brundtl and 2000). Alcohol also causes more years of potential life lost through death and disability than tobacco or illegal drugs [World Health Organization (WHO) 2001] and is related to several chronic degenerative diseases and violent causes of death. While in developed countries a reduction in consumption can be observed, in developing countries consumption is rising (WHO 2001). Problems related to alcohol misuse in Sri Lanka are on the rise. Although there are many studies done in western countries about early identification and management of alcohol problems in our country it is a scarcity. **Objective :**To describe the prevalence of alcohol use, frequency and amount of alcohol use and economic implications in patients admitted to medical wards in NHSL and to describe the management of alcohol use in said wards

This was a cross sectional descriptive study of patients who were more than eighteen years and admitted to two randomly selected male medical wards in National Hospital

of Sri Lanka over a period of one month. The patients who were critically ill, who were delirious and non Sinhala speaking were excluded from the study.

The survey included a screening test (Alcohol Use Disorders Identification Test - AUDIT) to detect the alcohol problems and a questionnaire to get the demographic data from the patient.

Results : Calculated sample size was 196 and the response rate was 100%. Respondents were mainly in the age group of 46-65years of age. (n=86, 43.9%).majority were Buddhists (n=174, 88.8%) and residing in Western Province. (n=110, 56.2%)

Quarter of the population (n=49, 25%) were unemployed. Out of the employed population 42 (28.6%) were engaged in skilled jobs and majority earned 15,000-20,000 rupees per month.

Alcohol prevalence in the study population was 36.7%. Half of the alcohol consumers scored less than 8 in AUDIT score. (n=42, 24.5%) Out of the alcohol consumers who scored more than 8 only 6 (3.1%) scored more than 20. 6.6% of the study population were admitted, directly due to alcohol related problems. From 134 (68.4%) respondents, substance history was inquired into.

Out of the alcohol consumers 3 (1.5%) had been referred to psychiatry unit for alcohol management .There was no significant association between the alcohol risk status as assessed using AUDIT and whether they were referred in management or not.

The association between monthly income and the amount spent on alcohol were significantly associated. Those with monthly income < 10,000 spend less on alcohol compared to those with monthly income>10,000 (p=0.037).

Conclusions and recommendations

As the prevalence of alcohol misuse is high on medical admissions it is a great opportunity to identify alcohol problems at an earlier stage. Therefore application of alcohol screening tests in all medical admissions is a worthwhile attempt as there are proven methods (such as brief intervention) to manage these patients without waiting until they go into alcohol dependence and present with medical complications.

Emphasis on screening and necessity of early management of alcohol misuse during undergraduate training will also make them to implement what they learnt during their internship.

0248. Ellepola, A.

Association between obesity and attention deficit hyperactivity disorder (ADHD) in children at outpatient setting, Lady Ridgeway Hospital for children.

MSc.Psychiatry – 2013   **D 3367**

Abstract

Objectives: As the prevalence of childhood overweight and obesity increases in the developing countries, identifying morbidities associated with thecondition is important. ADHD is a recently recognized morbidity in this group. The current study estimated the prevalence of ADHD among obese and non-obese children and adolescents attending out patient clinic at Lady Ridgeway Hospital, Sri Lanka. Demonstration of the association between ADHD and obesity in Sri Lankan children was the main focus of this study.

MethodoIogy: It was a comparative cross sectional study of 209 children aged 6 to 12 years attending Out Patient Department, and out patient clinic for obese children at Lady Ridgeway Hospital for Children, Colombo 08. Height, weight and the BMI of each child were assessed by the author using the same measuring device to confirm the obese/non-obese status. Demographic data of the subjects were collected using a prepared format. Obesity was defined as BMI of more than 95th centile in reference charts. Assessment of the ADHD was done with the DSM IV criteria using K-SADS PL. The tool was translated to Sinhalese, and retranslated to English by two independent doctors. A pilot study was performed with 10 children prior to the main study. Collected data was analyzed using SPSS.

Results: The prevalence of ADHD among the obese was 17.15% (n=18) compared to 5.7% (n=6) among non-obese. The difference was statistically significant (P=0.010). Combined type ADHD was the commonest sub type,- (10.47% obese (n=l 1) and 3.8% non-obese (n=4)) followed by Predominantly Hyperactive-impulsive type,- (3.8% obese (n=4) and 1.9% (n=2) non obese). Least number of children were affected by predominantly inattentive type,-(2.85% (n=3) obese and 0% non-obese). There was a male preponderance with the diagnosis of ADHD (62.5% males Vs. 37.5% females). Predominantly inattentive type of ADHD was more prevalent among females (male: female = 1:2). Predominantly Hyperactive-Impulsive type and combined type of ADHD were commoner among males (male: female = 2 to 1).

Conclusions: This study highlights the higher frequency of ADHD among obese children and adolescents compared to non-obese. Reasons behind this co-morbidity are unknown. If replicated in future studies, these findings will have important implications

in prevention and management of ADHD by early detection and management of obesity and its risk factors.

0249.Ellepola, A.

Effects of a structured parent training programme as an adjunct to routine clinical care in children with attention deficit hyperactivity disorder.
MD Psychiatry - 2013   **D 3524**

Abstract

Objective: To investigate the effectiveness of a parent training programme as an adjunct to routine care in children with Attention Deficit Hyperactivity Disorder.

Method: 100 children with diagnosed attention-deficit/hyperactivity disorder (ADHD) aged 4 to 12 years , attending child psychiatry clinics in Lady Ridgeway Hospital Colombo, were randomly assigned to behavioural parental training plus routine clinical care (n = 50) or to clinical care alone (n = 50) . Behavioural parental training consisted of a 2 sessions: one, in one to.one basis and the other in a group setting and a printed parental training booklet was provided to the parents . Routine care included usual clinic follow-up and pharmacotherapy when appropriate. Parents who were unable to read and write were excluded, children were included in the study regardless of whether they were prescribed medication or not. Children's ADHD symptoms, were measured using the SNAP IV questionnaire before and after treatment. Initial scores were assessed when the children were recruited to the study. Follow-up score of the intervention group was assessed 8 weeks after the intervention. Analyses was carried out on an intention-to-treat basis using SPSS .

Results: Both intervention and non intervention groups displayed statistically significant improvements on the SNAP IV score. The improvement of the intervention group was superior to clinical care alone group.

Conclusions: Adjunctive parental training given in clinic setting in brief format improves the effectiveness of regular clinic treatment of children with the diagnosis of ADHD

0250.Gamaethige, T.C.L.

The impact of schizophrenia on principal caregivers in a Teaching Hospital Psychiatry Clinic.

MD Psychiatry – 2008   **D 3516**

Facilities available in community care for patients with schizophrenia in Sri Lanka are limited. Majority of the patients with a diagnosis of schizophrenia are living with their family. Considering the severity of the disturbances of thought emotions, perceptions and behavior of patients with schizophrenia as well as their inability to function in the society i others, it is obvious that the care givers face difficulty in coping with the burden associated in management of these patients.

Colombo South Teaching Hospital provides services to a large number of patients with mental illnesses mainly living i Colombo district. Among the patients attending the follow-up clinics, only few are accompanied by their care givers. Mo: of them attend on their own, when their condition is stable.

Care givers were mainly Sinhalese, Buddhists representing the general distribution of the population in the area and two third of the care givers were females. It was noticed that the majority of the care givers were patients 'parents (39%) and 94% of care givers represents parents, family members or the spouse. Only 5% represent paid care givers.

Care givers burden was assessed by using Burden Assessment Schedule which was developed in India, a country with similar socio cultural background to Sri Lanka. It measures the care giver's burden in several important domains.

According to the results of this study 57% of the care givers perceived that there was disruption of family and other relationships due to the presence of a chronically ill patient with them. Furthermore, 47 % of them experienced they were unable to hold or take up a regular job due to severity of the symptoms such as disrupting and unpredictable behaviors o the patients. In this study, 46 % of the care givers have reported feeling distress in the context of feeling exhaustion and depressed in the presence of patients with them. Only one third of the care givers perceived that their good caring practice was not appreciated and not acknowledged by others.

Only 29 % of the sample represented spouses as the care givers. Among them, only 29 % reported that there was a significant impact on their relationship due to chronic illness of their spouses.

Care givers burden that were assessed by using monthly income, time spent with the patient, provision of psychological support by family members as well as the relatives and provision of temporary care by relatives represented the significant impact on care givers burden.

Care givers of patients with schizophrenia received financial support and temporary care facilities mainly from their family members. Overall, care givers received very minimum financial support and only family members have provided a reasonable amount of financial support for them. However they received psychological support from psychiatric clinics, friends and relatives. Practical support was given mainly from the psychiatric clinics.

These results describes that there is minimum support in all aspects from the governmental organizations and nongovernmental organizations The care givers of patients with schizophrenia, mainly the family members play a major part in managing the patients with schizophrenia and lack of available community based management services and lack of financial resources have significant negative impact on them.

0251.Jegan, Y.

Comparison of anthropometric measures of obesity in patients with schizophrenia attending annual review clinic in the tertiary psychiatric hospital in Singapore and correlation with the functional status and symptom severity- A descriptive study.
MD Psychiatry – 2013   **D3011**
Abstract

Introduction: The use of antipsychotic medication in the treatment of schizophrenia is linked to obesity and metabolic syndrome. The link between metabolic syndrome and obesity related anthropometric measures and the use of atypical antipsychotics had been studied extensively. However comparative studies of typical and atypical antipsychotic therapy and their association with above variables are generally limited especially in Asia.

Aims: This study was conducted to compare body mass index (BMI) and waist circumference (WC) between three patient groups; those who received typical, atypical and the combination of both antipsychotic agents. In addition the correlation between

these anthropometric variables and the Global Assessment Scale (GAS) and Clinical Global Impression Scale - Severity of illness (CGI-S) was also assessed.

Methodology: A cross sectional retrospective study was conducted at the Institute of Mental Health, Singapore, using the medical records of patients who attended their annual review clinic during the period from 1/4/2010 to 31/7/2011. 1000 patients were selected by systematic sampling. A standardized data collection form was used to record information. Demographic information, medical history, anthropometric indices such as height, weight, BMI and WC, blood pressure, GAS score and CGI-S score were obtained from annual review clinic records. Details of antipsychotics and other psychotropic medications were captured from the hospital electronic pharmacological data base, iPharm. Descriptive statistics, Pearson correlation test and linear regression model with multiple regressions were used for statistical analysis of data.

Results: There was no significant association between the type of antipsychotics used alone or in combination, with BMI and WC. Neither BMI nor WC was significantly correlated with GAS or CGI-S scores.

Conclusions: This study found that there was no significant differences in body mass index and waist circumference in patients with schizophrenia with regard to the type of antipsychotic medications (typical/atypical) taken either alone or in combination. This highlights the importance of metabolic screening regardless of the type of antipsychotics taken. Moreover no significant correlations were found between body mass index and waist circumference and Global Assessment Scale and Clinical Global Impression-Severity of Illness scores.

0252. Jayaratne, W.C.S.

Depression among patients with rheumatoid arthritis attending rheumatology clinic at Colombo South Teaching Hospital.

MD Psychiatry – 2014   **D 3517**

 Abstract

 Background : Rheumatoid arthritis is a common chronic inflammatory disease, which mostly follows a painful, progressively disabling course, and individuals with rheumatoid arthritis suffer more psychological distress than healthy individuals. Psychiatric syndromes have significant implicationsfor patients with rheumatoid arthritis. There is substantial uncertainty regarding the prevalence of

depression and the objective of this study is to determine the prevalence of depression among patients with rheumatoid arthritis attending the Rheumatology Clinic of the Colombo South Teaching Hospital.

Method : This is a cross-sectional study of patients who had been diagnosed with rheumatoid arthritis, attending the Rheumatology Review Clinic of the Colombo South Teaching Hospital from Jul) 2006 to November 2006. The study population comprised 204 consecutive patients having Rheumatoid Arthritis. The depressive symptoms were assessed using the Hospital Anxiety and Depression Scale, and the research version of the International Classification of Diseases.

Results : Eighty seven percent of the sample was female of which 81% was married. Of the respondents, 74.5% had been having the illness for over 5 years. Only 4 (2%) patients had been previously referred for psychiatric treatment. The percentage of persons experiencing a degree of depression was 53 according to the Hospital Anxiety and Depression Scale. .The prevalence of depression among the respondents was 32.8% according to International Classification of Diseases 10 criteria. According to the latter tool, out of 67 depressed patients 85.1% experienced mild depression, 13.4% moderate depression, and 1.5% severe depression. The percentage of those married among the depressed patients was 82.1 and 83.6% were suffering from severe disability.

Conclusion : The prevalence of depression was found to be as high as 32.8% compared to the international figure of 13 -20% with the male patients being more affected than females. But however, only 4% patients had been referred for psychiatric opinion. Thus, it is crucial that we place more emphasis on the detection and treatment of depression in RA to improve function and quality of life. Also these two scales only provide an indication of possible depression and anxiety, and thus the actual estimates of prevalence may vary.

0253.Jayasekara, H.A.B.P.R.

Assessment of adult attention deficit hyperactivity disorder (ADHD) and correlates among male service users of the turning point substance abuse treatment program , Mid-atlantic Wellness Institute, Bermuda – descriptive study.

MD Psychiatry – 2013   **D 3518**

Abstract

Introduction: Adult Attention Deficit Hyperactivity Disorder (ADHD) is postulated to have association with substance use disorders. Studies are available for prevalence individually and together. However comparative studies of strength of association between Adult Attention deficit hyperactivity Disorder vs. severity of substance use disorder and treatment adherence are found neither in Sri Lanka nor in Bermuda.

Aims: This study was conducted to assess the prevalence of Adult Attention Deficit Hyperactivity Disorder among adult males attending Turning Point Treatment Program in Mid Atlantic Wellness Institute ,Bermuda for substance use disorder. Determination of strength of association between adult ADHD and severity of substance use and assess if the poly substance use and severity of substance use can be used to predict the adult ADHD were other aims of this study. Furthermore the correlation between Adult ADHD presence and adherence to treatment was analyzed to evaluate the treatment options and challenges. Adult Wender Utah Rating Scale (WURS), Alcohol Dependency Scale (ADS), Drug Abuse Screening Test (DAST), past records and structured clinical interviews were used to obtain data.

Methodology: A prospective, cross sectional study was conducted at the Mid Atlantic Wellness Institute of Mental Health Turning Point Treatment Program, Bermuda employing the structured interview, self assessment scales and medical records of patients who are registered and active with all services on 1/3/2013 and followed up during the period from l/3/2013 to 30/9/2013. 171 patients were included as study sample after exclusion from a total population of 214 .

A standardized data collection form was used to record information. Demographic information, Alcohol dependency Scale score and Drug Abuse Screening Test score were obtained from structured interview and clinic records. Adult Wender Utah rating scale score was obtained by self administered questionnaire. Details of treatment

adherence were captured from the hospital electronic data base for substance use program, SMART. Descriptive statistics, Pearson correlation test and linear regression model with multiple regressions were used for statistical analysis of data.

Results : Adult ADHD was significantly more prevalent among the substance use treatment programme participants (46.2%). There was a statistically significant association for Adult ADHD with alcohol and other substance use severity ,at the 0.05 level. In regression analysis model, Adult Wender Utah rating scale Score versus Drug Abuse Screening Test Score and multiple substance use showed a statistically significant predictability with number of drugs and Score of DAST. There is a significant association for all three modalities of treatment counselling, doctor and group appointments absence, verses Adult ADHD. Counselling appointment and group appointment absenteeism has strong statistically significant correlation while correlation between . counselling-doctor and doctor-group appointments absence, has fairly significant correlation.

Conclusions: Findings indicated that ADHD is prevalent among substance users, who are at increased risk for higher severity of substance use and multiple substance use. ADHD also appears to play an important role in poor treatment adherence, indicating that targeted ADHD screening and treatment may help to improve real-world outcomes for individuals with substance use disorders.

0254. Jayasundera, S.B.

A study of the prevalence of depression among patients attending epilepsy clinic – Teaching Hospital Kandy

 MD Psychiatry   - 2014   D 3523

Background- The high prevalence rates of depression and self harm behaviors among patients with epilepsy had been shown by many previous studies. The previous studies al indicated increased level of disability among patients with co-morbid depression and epilepsy. There were no documented studies done in Sri Lanka to explore the prevalence rat of depression and self harm behaviors among patients with epilepsy. Therefore we decided study the prevalence rates of depression and self harm behaviors in patients with epilepsy Sri- Lanka.

Method- A cross sectional descriptive study was done. The data was collected during t period of April 2012 to November 2013. The data were collected from the patients attending epilepsy clinic, Teaching Hospital Kandy. Data for the control sample were collected from the individuals accompanying patients to the outpatient clinics in Teaching Hospital Kane Systematic sampling method was used to select subjects in both study and control samples. The socio demographic data were collected by an interviewer administered questionnaire. Screening for depression was done by using self administered questionnaire (Peradeniya Depression Scale-PDS). The individuals who scored 10 or more in PDS were consider positive for depression and examined by the principal investigator using Structured Clinical Interview for Depression - I (SCID-I) for the conformation of depression.

Results - The study sample consisted of three hundred and two subjects (n=302). There were hundred and sixty five (165) male participants and hundred and thirty seven (13 female participants. The mean age of the sample was 38.5 (95% CL 37.03-39.97) years w a range from 18 to 71 years. The sample had standard deviation of 13.03 years. The control sample consisted of two hundred and seventy nine (279) subjects. One hundred and nine eight (198) age and sex matched couples were yielded for comparisons. The prevalence r< of depression among epileptic patients was found to be 25.8%. There was no statistica

The age and sex matched case and control samples indicated prevalence rates of depression as 27.5% and 15.7% respectively with statistically significant difference. The prevalence rate of history of self harm behaviours among matched case and control samples were found to be 9.6% and 8.1% respectively. There was no statistically significant difference between the prevalence rates. There was a significant positive association between frequency of seizures and prevalence rate of depression. There was a significant negative association between prevalence rate of depression and level of education among female participants in both case and control groups.

The severity of depression had a statistically significant positive correlation with self rated interferences with household activities and self rated interferences with recreational activities. There was no statistically significant correction detected between seizure frequency and the indicators of household and social functioning among depressed patients.

Conclusion - The prevalence of depression among patients with epilepsy attending epilepsy clinic Teaching Hospital Kandy was 25.8%. The patient population had a significantly high prevalence rate of depression when compared with age and sex matched control sample. The prevalence rate of deliberate self harm (DSH) among patients with epilepsy was 10.9%. There was no significant difference between prevalence rates of DSH between patients with epilepsy and the control sample.

0255.Nallahewa, R.N.

Study of prevalence of postnatal depression in mothers attending Medical Officers of Health Clinics in Rathnapura District of Sri Lanka.
MD Psychiatry – 2014   **D 3520**

 Summary

 Introduction : Childbirth is an event which is warmly welcomed by the family. However, for some mothers, it causes psychological change and challenge as she experiences worries about role transition, health related anxieties and fear about inability to cope.[1] Majority of mothers adjust to new situation successfully with the support of the family while minority would develop mental health problems like postnatal depression.[1,2]

 The occurrence of postnatal depression/psychosis can be detrimental to the mother, her marital relationship, and her children and can have long term adverse effects if untreated.[11, 19] Mother's ongoing depression can affect the attachment of the mother with the child which can later contribute to child's emotional, behavioural and interpersonal problems.[19]

Because of these serious consequences, early diagnosis and treatment intervention of postpartum mental illnesses are imperative for the health and well-being of mother and child.

1.1 Postpartum Psychiatric Disorders

Psychiatric disorders following childbirth had been known to exist since the time of Hippocrates. Its importance with regard to the wellbeing of the mother, child and the family has only recently been taken into consideration by the authorities. Traditionally psychiatric disorders specific to childbirth have been divided into three

Categories, 1, 2, 19

1. Postnatal blues
2. Postnatal depression
3. Puerperalpsychosis

1.1.1. Postnatal blues

Being the most common observed puerperal mood disturbance, postnatal blues affects about 50-80% of women and is also known as Adjustment reaction with depressed mood or maternity blues. This is a mild and self limiting condition with onset typically in the first postnatal week (though generally not in the first couple of days) resolving within 1-2 weeks. The common symptoms include labile mood, tearfulness, insomnia, fatigue and irritability.

Preparation in antenatal classes, reassurance and good support from professionals and family would help the mother to face this situation successfully. However severe blues may progress to postnatal depression.

1.1.2 Puerperal psychosis

Puerperal psychosis has been known to occur 1-2 per 1000 postpartum mothers, typically; the presentation is one of rapid fluctuation of mood (mixed manic and depressive picture), perplexity, confusion and markedly altered behaviour, less commonly non affective and schizophrenic presentations. Ideas of self harm may be driven by delusion of guilt, self-worthlessness or hopelessness and in severe cases it can lead to suicidal behaviour. About 10-15% will have recurrent episodes in subsequent pregnancies.[4,5]

Most cases need hospital admission for the management of the condition

1.1.3.Postnataldepression

Postnatal depression is the most common psychological disturbance occurring in postnatal period. Its prevalence is about 10-15% of the population of new mothers in the first year following childbirth with a peak occurrence at around six weeks. The symptoms of depression in the postnatal period do not differ greatly from those at other times. They present with depressed mood, crying spells, poor sleep and appetite, feeling of inadequacy and inability to cope with baby and sometimes obsessional fear of

harming the child. Risk assessments of these mothers are very important as true infanticide thoughts and suicidal thoughts can occur during this period. Management depends on the risk assessment and may need hospitalization, medication, psychotherapy and support.

1.2 Prevalence of postnatal depression

Postnatal depression has prevalence of 10-15% among postnatal mothers.Meta analysis of 59 common studies by O'Hara & Swain in 1996 reported the pooled prevalence is 13% in the first 6 weeks." In a study done in Florence Italy the prevalence of depression after partus was found to be 15.9. A study in Qatar shows the prevalence of 17.6 among postpartum mothers.

A study conducted in Goa India showed prevalence of 23% in mothers who were 6-8 weeks postpartum.

Asian countries differ considerably in terms of philosophical traditions, religious practices, cultural life and general attitudes toward physical and psychological problems. As the world's largest and most populous continent, Asia encompasses members of the Arab world in Western Asia to Eastern capitalist economics, such as Japan and Korea. A recent review which examined research conducted in 17 Asian countries revealed that the prevalence of postnatal depression in Asian countries

ranged from 3.5% to 63.3%, having Malaysia and Pakistan the lowest and highest prevalence respectively.

Sri Lankan studies with regard to this subject are sparse. One study conducted by the Rajarata University has found that the prevalence of postnatal depression in Sri Lanka was around 27%.

1.3 Correlates of postnatal depression

Childbirth, in addition to being a stressful life event, there are other determinants which will contribute to postnatal depression. These are genetic factors, life stressors, and social support. Early childhood experience known to influence the ways an adult react

to stressful events.Emotional reaction following childbirth is an indication of disturbances in mother's own relationship with her own parents.

There will be high risk of having postnatal depression if the patient or her mother had previous puerperal illness or if family history of mood disorder presents.Biological explanation is that altered hormone level in hypothalamo-pitiutary-gonadalaxis.Obstetrics factors contributing to postnatal depression would be conflicts about the pregnancy, parity, obstetrics complications and mode of delivery.In the context of developing countries, low family income, marital violence has poorly been investigated and addressed. History of exposure to violence has shown tobe associated with depression.

1.4. Justification

Early identification and treatment of postnatal depression is very important as it can affect the wellbeing of the infant, mother and the family. Unidentified postnatal depression may lead to serious consequences like suicides and infanticides. In Sri Lanka, antenatal and postnatal cares have been looked after mainly by primary health care workers at Medical Officers of Health Offices around the country. However, only few studies conducted to know the exact prevalence of postnatal depression in the country.

It is important to know its prevalence in the Rathnapura district which covers remote rural areas in the Sabaragamuwa Province of Sri Lanka.

0256. **Rodrigo, M.D.A.**

Validation of the beck depression inventory 11 in a sample of Sinhalese speaking population in Sri Lanka.

MD Psychiatry – 2014   **D 3314**

Abstract

Depression is an important public health issue in Sri Lanka, yet it is often missed or misdiagnosed, hence the importance of valid and reliable diagnostic instruments for depression.

We developed the Sinhalese version of the BDI-II and examined its psychometric properties and evaluated the cut off score. The linguistic equivalence was verified by a

back-translation method. The final translation was administered to randomly selected 956 adults who live in Ragama and Ja-Ela MOH areas. The mean age of the study population was 31.3 years and there were more females (56.2%). Participants completed the Sinhalese version of BDIII and were independently assessed on the same day or next day for depression. One hundred and eight participants (11.2%) were depressed. A high level of internal consistency, reliability (Cronbach's as0.93) and item homogeneity was confirmed. Exploratory factor analysis showed a two-factor structure (cognitive-affective and somatic), which was similar to the original model by Whisman et al. using a student sample. Criterion validity was satisfactory. A receiver operating characteristics curve was utilised to determine the cut-off scores for our population revealing 16 as a suitable value. We conclude that the Sinhalese version of the BDI-II is psychometrically robust and can be used to assess depressive symptoms in Sri Lanka.

0257. Wickrama, P.

Evaluation of mental illness- Psychosis coverage and suicide coverage in Sinhalese newspapers over two points (1986 and 2011) in time.

MD Psychiatry – 2013   **D 3315**

Abstract

Background: Stigma erodes confidence that mental disorders are valid, treatable health conditions. Psychosis is a major mental illness that is highly vulnerable to stigma. It is a well- researched fact that adverse reporting of suicide in media lead to copycat suicide. Many governments and non-government organizations has published guidelines for journalists to assist them in reporting on mental illness and suicide. There is a big vacuum in studies regarding Suicide and Psychosis reporting in Sinhalese Media, especially Newspapers.

Methodology: A cross sectional study was done among newspaper articles on Psychosis and Suicide from two major daily Singhalese newspapers published in the period November/ December 1986 and 2011. Papers were scanned manually for the terms Suicide and terms denoting Psychosis.

Articles on completed suicide were analysed to find whether they abide with published guidelines on suicide reporting.

Articles directly related to Psychosis were coded by principal investigator under six main themes. Articles were assessed by two independent assessors regarding the positivity of two key massages.

Results: There was a significant reduction in reporting of completed suicide in 2011. 12% articles carried photographs and all of which appeared in 2011 .Trend to glorify the act in reporting were more in 2011. No difference was seen in relation to other indicators over the time. Majority of articles discussed the methods in detail, highlighted the method in headline, gave a simple cause for the act and depicted suicide as an appropriate way to resolve problems. Less than 10% articles carried details of a suicide note or appeared in front page. Very few articles discussed about prevention and involvement of mental illness. No articles discussed about help available or considered the impact on the family from the incident or from the report.

In 81 articles, term related to Psychosis was used to describe another person or an event. Most of these terms were pejorative and commonly appeared in fiction. Most of the descriptive terms denote the meaning irrationality or dangerousness.

There were 99 articles directly relating to Psychosis, out of which only 9 were medical news reports. About 70% articles discussed the theme dangerousness. About 40% articles discussed about causation mostly looking at a social aetiology. Over 70% articles discussed about treatment and mostly about Angoda / Mulleriyawa hospitals.Thetheme where there was a difference between times was regarding advocacy aspects with a marked reduction in 2011. Very few articles discussed about prevention or about an exact diagnosis. 15% articles carried the massage that Mental illness is treatable while 56% articles were negative for the massage that people with mental illness can live a worthwhile life.

Conclusion and Recommendation: Reporting on suicide and psychosis is quite negative in Sinhalese Newspapers and there were no improvement noticed over the last 25 years. Mental health professionals should liaise with media personnel and take effective measures,in order to remedy this deficiency assertively.

Reproductive Health

0258.Ashraff, F.S.

Knowledge and attitudes towards breastfeeding among antenatal mothers; "Is antenatal health education on breastfeeding adequate"

Postgraduate Diploma in Reproductive Health – 2011   D 3301

Summary

Summary

1.1 Background

Breastfeeding is widely recognized to be the optimal way to nourish and nurture infants. Even with the addition of complementary foods in the second half of the first year, breastfeeding continues to be of nutritional, immunological and psychological significance well into the second year of life and beyond.

The Innocenti Declaration on Protection, Promotion and Support of Breastfeeding (WHO. 1990) recognized that breastfeeding is a unique process with manifold advantages. In order to achieve global goals for optimal maternal and child health nutrition, the Baby-Friendly Hospital Initiative (BFHI) was launched in 1991 by the World Health

Organization (WHO) and United Nations Children's Fund (UNICEF) to ensure that all maternity facilities become centers for breastfeeding support.

The single most cost effective intervention to reduce infant mortality in developing countries would be the promotion of exclusive breastfeeding. The estimated reduction of infant mortality by promoting exclusive reastfeeding is 13%. Non-exclusive breastfeeding rather than exclusive breastfeeding can increase the risk of dying due to diarrhea and pneumonia among 0-5 months infants by more than two-fold Breastfeeding is almost universally practices among the postnatal mothers in Sri Lanka. However, the mothers' knowledge about and attitudes towards breastfeeding and related conditions are not always consistent with healthy practices. Given the well-established antenatal care structure in the state sector hospitals and a literacy rate of over 90%, Sri Lanka should be having very good results regarding breastfeeding and related practices. The antenatal decision of wanting to breastfeed may not reflect the actual prevalence of breastfeeding. Even if a mother was to breastfeed, the commitment of whether it was partial or exclusive and the length of breastfeeding is not clearly understood. It is very important to understand mothers' beliefs and attitudes for appropriate health education of other interventions on breastfeeding.This study is undertaken to assess the knowledge and attitudes towards breastfeeding among mothers attending

antenatal clinics. While assessing the level of knowledge and the type of attitude towards breastfeeding, it is also expected to evaluate the adequacy of breastfeeding education at antenatal clinics.

1.2. Justification

The advantages of exclusive breastfeeding have been well documented to include a clean, available food supply, excellent bioavailability of nutrients, low cost, enhanced immunity with protection against viral, bacterial and allergic disease as well as psychological and developmental benefits to both mother and child. However, despite generally undisputed advantages, some mothers start breastfeeding too late. In some other instances, althoughstarted early, mothers breastfeed for only a short period of time. There are many factors that affect how women feed their infants and the length of time they breastfeed. Without having a clear and detailed understanding regarding these factors, it would be difficult to formulate a robust plan of action to improve the breastfeeding practices of the mothers.

1.3.Objective

To assess the diversity of knowledge and attitude towards breastfeeding among pregnant mothers and the effect of health education provided on breastfeeding during antenatal period.

1.4.Method

This is a descriptive cross-sectional study using a structured, self-administered questionnaire to interview pregnant mothers attending antenatal clinics. The questionnaire was pre-tested among a pilot group of 10 mothers and it was made available in both Sinhala and Tamil.

The study was conducted in the Colombo North Teaching Hospital, Ragama during February to March 2011. A sample of 200 pregnant mothers attending the antenatal clinics of Colombo North Teaching Hospital were selected for the study. The inclusion criteria were mothers who consented for the study and mothers who could read and write Sinhala and/or Tamil and there were no exclusion criteria.

A pre-tested pre-coded self-administered questionnaire was used for data collection. Data entry and analysis was done using a database designed using MS Excel. Data was interpreted using measures of frequency such as prevalence, incidence, rates and proportions.

1.5 Ethical considerations

Ethical clearance was obtained from the Ethical Clearance Committee, Faculty of Medicine, University of Kelaniya. Administrative approval was obtained from the Director of the Colombo North Teaching Hospital. All mothers who were included in the study were explained of the nature and objectives of the study and their proper informed written consent was obtained.

0259. Champa Nandanie, B.A
Study of success rate of IUI treatment with clomophine at Castle Street Hospital for Women.

Postgraduate Diploma in Reproductive Health – 2008   D 3285

The success rate of Intra Uterine Insemination (IUI) combined ovulation induction with Clomiphine Citrate (IUI/CC) in the treatment of subfertility was investigated in the present study.

This was an retrospective study which was carried out at Subfertility Clinic at Castle Street Hospital for Women (Teaching), Colombo -08 during the period of three months from January to March 2008. Data was collected from 179 couples who had undergone 357 IUI cycles during this period using processed semen samples.

Here prognostic factors for success rate of IUI with Clomiphine treatment was also investigated. These included the female age, duration of subfertility, underlined gynecological problems , number of pre ovulatory follicles, number of treatment cycles attempt, sperm count, and sperm motility. The higher pregnancy rate was observed in women <35 year of age with infertility duration < 3 years.

Another influence factor observed was the sperm count - higher sperm count was indicative of increase success rate. However, there was little difference in pregnancy rate between sperm motility in our study. There was low pregnancy rate with one follicle while higher pregnancy rate was observed with multiple follicles.

Most of the patients who had positive pregnancy were from first attempt of IUI treatment.

Underline gynecological pathology also influenced the success rate. In this study we observed an overall success rate of 6% per IUI cycle.appropriate health education of other interventions on breastfeeding. (check)

0260. Dissanayake,D.M.U.K.

Relationship between birth weights and maternal and fetal factors.
Postgraduate Diploma in Reproductive Health – 2006   D 3281
Summary

Introduction : Fetal growth is depended on adequate transfer of nutrients and oxygen across The placenta. This in itself is dependent on appropriate maternal nutrition and placental ferpusion.regulation of the growth fetus and its placenta begins before pregnancy. Early in the pregnant mother gets the rate of growth on the fetus on trajectory.

Each baby has its own optimal growth potential which is to be a degree, predictable from physiological characteristics known at the beginning of pregnancy. The principles known factors are maternal weight and height, parity, race, or ethnic group and the baby's sex. maternal age is also a factor, but the variation is mostly accounted for by parity. On the

paternal characteristics, height is associated with birth weight, but to a lesser extent than any of the maternal variation. birth weight is an important indicator of fetal development as well as eventual outcome for the baby. There are many well established document of birth weight for a given gestational age. The known factors may be divided into physiological and genetic (fetal sex) and those which are pathological and environmental and combine factors (social class) but most important determinant Of birth weight is gestational age at delivery.

Physiological variation in normal birth weight in any heterogeneous maternity population can be considerable[1].race and ethnicity is complex and controversial sociological issues which are difficult to measure accurately. There are marked variations in contraceptive pattern, general health, perception of illness and diseases, child birth, child hearing policies, dietary habits and across to health care services. They may be important impact on health.

Parity is one of the factor influences birth weight of baby. Parity is closely associated with maternal age and, to certain extent with social classes.

Small woman will give birth to small babies. Birth weight of the child has also been reported. To correlated well with birth weight of its mother. There are Average birth weight in countries like Sri Lanka, where the average birth weight Of adult female is between 43-47kg is less than that in western hemisphere.

Maternal weight is an important determinant of birth weight of the infant. This Factor has been generally acknowledged by Obstricion, the relation between the Weight of the mother and fetus. The birth weight is only adversely affected when the mother's nutritional state is very low.

Mother's height is also one of the variable influencing weights of the baby. Mother's height is an indicator of her nutritional state, in the growing phase of her Life. But paternal height has a small correlation with bw.

In developed countries the average birth weight is about 3500g, at the end of the pregnancy, lasting an average of 40weeks. An average normal pregnancy baby gain about 25g per day before birth.

WHO definition for low birth weight of less than 2500g and for very low birth weights of less than 1500g have limited usefulness for current clinical practice, because they do not take gestational age into accunt.

The average birth weight and birth weight centile charts of western population are not applicable to Srilanken women. As their stature, socioeconomic background varies when applying European growth charts to Srilanken babies. The percentage

of SGA will be higher. However there is no collection of population data for Srilanken relating birth weight for gestational age atdelivery, sex of the baby, mother"s race, parity and booking visit wt Therefore acquisition for this data would enable to developed customized growth chart for Srilanken babies' .that would have wide implication of clinical practice.

0261. Dodampahala, R.M.G.S.K.

Maternal and fetal effects and outcome of pregnancy induced hypertension at a tertiary care setting in Sri Lanka.

Postgraduate Diploma in Reproductive Health – 2007   D 3302

Abstract not avilable

0262.Gunaratnam, H.R.

Knowledge and attitudes of women who attend to the ante natal clinic in maternity unit 5 & 6 Castle Street Hospital for Women, regarding mode of deliveries.

Postgraduate Diploma in Reproductive Health – 2012   D 3291

Abstract

Increasing rate of caesarian section (C/S) is an issue of concern among public health officials and medical community globally. It has caused many social, cultural and financial problems throughout the countries in world. Various non obstetric causes seem to influence on the rising rate. Aim of this study is to describe the knowledge and attitude regarding the mode of delivery and factors associated with them among women attending ANC in maternity unit 5&6 of CSHW, so will help to find out the strategies to limit the problem.

This study has been done in the antenatal clinic (ANC) of unit 5&6 in CSHW, which is a leading maternity hospital where all the community and social class attends to, as a descriptive cross sectional study. According to the inclusion exclusion criteria random sampling was done to satisfy the required sample size 427.

All the mothers paying first visit to the ANC was provided with a self administered questionnaire, and those who faced difficulty were helped by researcher himself.

Overall knowledge about modes of delivery was very low (85.7%). Knowledge was high among mothers aged above35 years, with experience of miscarriage and working mothers.

knowledge of mothers seem not affected by the education level, parity, number of living children, age at marriage and past history of C/S. 100% of the mothers had positive attitude for V/D. More than 90% mothers are positive regarding: V/D is less painful, pleasurable to see the child immediately and give strong bond among mother and child. They are less positive about choosing V/D in fear of anesthesia. Majority of our mothers show negative attitude towards C/S. Mothers level of education and number of living children show inverse effect on the attitude while husbands level of education, occupation of the mother and past experience of C/S show direct effect on attitude on C/S. 80.7% mothers preferred V/D and their main source of information is health centre.

Key words : Knowledge, Attitude, Mode of delivery, Caesarian section, Vaginal delivery.

0263.Hettiarachchi, P.G.A.

Study of the knowledge of complications of their pregnancy among adolescent pregnant mothers in Ambalangoda , Balapitiya and Karandenjiya MOH divisions.
Postgraduate Diploma in Reproductive Health – 2009   D3297
Abstract

The problem of adolescent pregnancy is a vital issue both developed and developing countries. Assessment of the knowledge about complications of the pregnancy among adolescent pregnant mothers helps to evolve appropriate interventions.

A descriptive cross sectional study was carried out in Ambalangoda, Balapitiya and Karandeniya MOH areas to assess the knowledge of the complications of their pregnancy among adolescent pregnancy mothers, whom were receiving care during 1 of December 2008 in, 28th February 2009. The study population consisted of 113 pregnant mother's age between 10-19 years and all were included into the study. A self-administered questionnaire was used to collect relevant data.

Twenty percent (20%) of adolescent mothers are between 14-17 years . 80 % was age between 17-19 years. All of them were unemployed. Mean age at menarche was 12.67 and mean age at marriage was 16.96. Only 3.5% studied up to Advance level and 10 %

is living together. One 17% were married to adolescents boys. 13.27 % of partners studied up to Advance level and 52 % was unskilled laboures . Most of them legally married and live with one of their parent's home (86%) unplanned pregnancy on more common (55 %) among them. Knowledge about pregnancy complication were good. Over 95 % knew about caesarean section but knew about post partum psychosis. Knowledge about other complications was around 80%. Most of their source of knowledge was area PHM. More than half of mother BMI are below 19.

Signification association can be seen between education level and knowledge of miscarriage, PHI, IUGR and Birth Asphyxia. Knowledge about PIH, LSCS, and post partum psychosis is signification associated. Age at marriage is significantly associated with age at menarche.

0264.Jayarradan, T.

To study the knowledge, attitude, and practice regarding folic acid intake among the pregnant women attending antenatal clinic General Hospital , Vavuniya.
Postgraduate Diploma in Reproductive Health – 2010   D 3276

Abstract

A cross sectional descriptive study was conducted to study the knowledge, attitude and practice of folic acid tablet (supplementation) intake among pregnant mothers attending general hospital Vavuniya. Total 250 mothers were, with the response rate of **100%.**

Objective : The Objective is to study the knowledge attitude and practice regarding folic acid intake among pregnant women attending antenatal clinic at general hospital Vavuniya.

Methods: A convenience sample was used to select 250 pregnant mothers at their second trimester, and onwards. A study population date were collected by a interviewer administrated questionnaire of obtain information about the study. Statistical analysis was carried out using spss, version 16. Simple univariate analysis of data was under taken.

Results : The average age of the study group is $26.954^{+}/\_ 5.5354$. About 187/2500 (74.8%) of mothers heard of FA and 194/250 (77.6%) of mothers knew that the benefits

of FA in pregnancy. Although majority of mothers using FA (92.8%) in current pregnancy But only very low percentage (7.2%) of mother using before conception.

Conclusion : The knowledge of correct timing of FA intake was present only in 24.6% and only 7.2% had taken FA before conception. The attitude towards FA is Excellent. The challenges to the medical profession is to improve their correct knowledge and their correct practice regarding the timing of FA intake.

Keywords :- **Folic acid, Neural Tube Defects ,Knowledge Attitude Practise**

0265.Jayasuriya, R.K.

An analysis of characteristics of referrals to the antenatal clinic – professorial unit, De Soysa Hospital for women.

Postgraduate Diploma in Reproductive Helth – 2008   D 3295

Abstract

This study was carried out in the De Soysa Maternity Hospital for women. A total of 196 antenatal mothers participated in the study. Data of 193 participants were available for analysis. The mean age of the study sample was 28.34 years.

The mean age at marriage was 24.34 years. It increases with the level of education of the respondents. Majority of the respondents were unemployed at the time of interview.

Although the DMH is a territory care hospital all the mothers who attended it's clinic were accepted. There was a significant number of self referral mothers.

Majority of the referrals done by the MOH and most of the referrals had deficiencies suchas not mentioning the reason for referral, referring clinic, and not educating properly why they were referred . Some referrals could have been managed at local clinics as there were no identified risk factors.

In Sri Lanka up to now there are no nationally accepted guidelines as to how the pregnant mothers should be referred to the territory care ante natal clinics from local clinics.

This may be the reason for the poor quality of the referrals made by health care personal.

Implementation of a proper referral system with the participants of experts in obstrictrics at national level will alleviate the deficiencies of the present system.

Lack of literature and previous studies was a limitation to the study.

Replication of this study in a much larger representative community sample would provide more valid information.

0266. Kandegedara, P.G.P.P.

Pattern of folic acid use among mothers in an antenatal clinic in North Ragama.

Postgraduate Diploma in Reproductive Health – 2009   D 3292

Abstract

The information gathered from previous studies has shown that a significant proportion of the population would be having low serum levels of folic acid[7]. Especially in pregnancy there should be supplementation folic acid. This would also indicate need for the evaluation of the compliance of mothers during the critical time i.e. 3 months before conception and during the first 3 months of pregnancy.General objective of this study was to describe the initiation and compliance of folic acid supplementation among a population of pregnant mothers and their association with socio-economic status and knowledge regarding folic acid. The study was a retrospective descriptive study and was carried out at the ante natal clinics of north Colombo teaching hospital Ragama. Mothers attending the clinic during a period of 3 months were directly 2interviewed and data was recorded using an interviewer administered questionnaire by a medical officer who was aware of the terms used in it. 182 (63.4% of all) started it at the booking visit. Among the mothers who had primary education only 15.7% have taken folic acid before conception and of mothers who had secondary education 64.9% have taken it before conception while in the group that had tertiary education 66.7% of them have taken it before conception. This difference is statistically significant (p<001). The mean income of the mothers who have taken it before conception is Rs.20,492.31 (SDI 8,536.91) while the mean income of the mothers who have taken it after conception is Rs. 17,569.50 (SDI 7,488.93) which is statistically significant (P<01). Among mothers who knew that it prevents miscarriages 66.7% have taken it before conception while only 13.8% of the mothers who didn't know this information took it before conception. (P<001). 27.9% of the mothers who knew that it prevents birth defects/NTDs has taken it before conception while 13.3% of the mothers from the group who didn't know it (P<01). 27.9% of the mothers who knew that it prevents birth defects/NTDs has taken it before conception while 13.3% of the mothers from the group who didn't know it (P<01). 80% of the mothers who gain knowledge from news papers took it before conception. 76.5% of the mothers who were educated by the family doctor taken folic acid prior to conception.58.3% of the mothers who informed by a friend or a relative took it before and 57.1% of the group that got the information from TV or Radio propaganda have taken it before conception. Comparing to above percentages only 7.5%

of the mothers which is the higher number of the study population who were educated by the midwife have taken it prior to conception. (P<001).

0267.Kariyawasam, P.A.S.C.

Pattern of utilization of cervical cancer screening facilities and factors affecting utilization among women attending out patient department of Base Hospital Homagama.

Postgraduate Diploma in Reproductive Health – 2012   D 3289

Abstract

Background : Cervical cancer is a common cancer among women in the world as well as in Sri Lanka. The study aimed to assess the pattern of utilization of cervical cancer screening facilities and factors affecting utilization of the facilities among women attending outpatient department of Base Hospital Homagama.**Method :** A descriptive cross sectional study was carried out among 303 women aged 35-40 years attending OPD, BH Homagama. A convenient sample of eligible women was recruited. Interviewer administered questionnaire was used to collect data. **Results:** Mean age of the study population was 34.5years and 68.3% of the women were housewives and 92.4% had education of OL or more. The utilization of cervical screening facility by the study population was 39.6%. The education level of the participants (p=0.004), knowledge on cervical cancer (p=0.017) and knowledge on Pap test (p=0.001) of the study population showed significant association with utilization of the facility for cervical screening. Age, occupation, monthly family income of the study group did not show any association. The common reasons for not utilizing the cervical screening facility were not getting message from the PHM and lack of time.

Conclusion : Cervical screening coverage is improving but not adequate in the screening programme point of view. Level of education and knowledge on cervical cancer and Pap test were significantly associated with cervical screening where as age, occupation, income of the family did not show any association. As measures to improve the utilization of cervical screening facility, well planned interventions to improve knowledge on cervical cancer and strengthening of the well women clinic service are suggested.

Keywords = **cervical cancer, cervical screening, Pap test, facilities.**

0268. Keerthi, K.P.

The effectiveness of clomiphine citrate in the induction of ovulation of anovulatory infertility.

Postgraduate Diploma in Reproductive Health – 2009   **D 3284**

Abstract

Infertility is a global health issue, causing great distress to many couples. Clomiphene citrate is an orally- administered, non-steroidal agent which may induce ovulation in anovulatory women. Main purpose of this study to assess the effectiveness of clomiphene citrate in the induction of ovulation of anovulatory infertility

This is a prospective observational study. All patients attending to subfertility clinic, Colombo South Teaching Hospital, for ovulation induction treatment during the period of October 2008 to March 2009 were assesed. Those women who were having anovulatory infertility were confirmed by clinically and biochemically (low mid luteal phase progesterone level). Those women who had hyper stimulation with prior treatment with clomiphene citrate were excluded. Informed consent was obtained from all participants.

Initial clomiphene citrate doses were 50mg daily for 05days starting on cycle day 02. In the case of an absent response doses were increased to 100 and 150mg daily in subsequent cycles. Ovulatory response were detected from

mid lutel phase progesterone level, serial mid cycle tollicular transvaginal scanning findings.

From women with anovulatory infertility 78.33% of them responded effectively to clomiphene citrate induction. Most of them (59.57%) ovulated with lOOmg of clomiphene citrate. 23.40% ovulated with 50mg and 17.02% ovulated with 150mg of clomiphene citrate induction. 21.67% were not responded or resistant to clomiphene citrate induction.

0269.Kumara, E.K.A.J.P.

A retrospective study on the knowledge, attitude and practices about weaning difficulties among teenage mothers in Opanayake MOH area.

Postgraduate Diploma in Reproductive Health – 2008   D 3294

Abstract not available

0270.Kumarasinghe , S.

Knowledge on family planning methods and their application on daily family life among the antenatal mothers in the free trade zone Katunayaka.

Postgraduate Diploma in Reproductive Health – 2013   D 3282

Abstract

The study was carried out in Katunayaka MOH area in Gampaha district. Descriptive cross sectional study is carried out, and 427 ANC mothers were recruited for the study. Data was collected using a pretested self administrated structured questionnaire .Data was analysed using the statistical package for the social science 16(SPSS16).Data were analysed using chi- square test and P value <0.05 were considered for significance. Ethical clearance was taken and permission was obtained from hierarchy. Analysis of data from this study gives a good insight of knowledge regarding family planning methods and their day today application. It shows how, Socio-demographic, socio-economic, and identification of associating factors, affect among the pregnant mothers in FTZ Katunayaka.

According to the study majority were Sinhalese, Buddhists. Most of the mothers who attend to the clinic are machine operators .When considering their educational level, most of the mothers are educated. Their monthly family income is less. Teenage marriages were less , therefore teenage pregnancy rate was law (4%). Majority were young primigravidae therefore they have further fertility wishes. Majority had used some kind of contraceptive methods before this pregnancy, and their knowledge regarding modern family planning methods were significant. Majority had gained that knowledge from PHM and MOH .

It was revealed that most of the mothers who work in factories are just after O/L. This indicates the necessity of further health education. Some of the working pregnant

mothers have not at least met the area PHM once during their pregnancy. It is recommended the system to allow the PHM to work on Sundays and public holidays to meet the mothers, those who have not met during her routing home visit. Entrepreneurs should be advised regarding the important of continuous health education to their employees. It is important to have mandatory health education sessions to all new comers before they start working in the factories by qualified doctors. It is recommended to open Family Planning Clinics on every working day during working hours for them to obtain prompt service. Recruitment of qualified nurses are recommended for the factories and strengthen the bond between family planning clinic and the workers. It is important , to implement a programme to distribute family planning material directly to the workers via factory nurse.

0271.Kumarasinghe, S.P.

A study on reliability of CTG on fetal outcome at birth.
Postgraduate Diploma in Reproductive Health - 2006-2007   D 3286
Abstract not available

0272.Liyanaarachchi, L.M.S.K.

A study on evaluation of blood reservation and use for caesarean sections in a Tertiary Maternity Unit in Colombo.
Postgraduate Diploma in reproductive Health – 2012   D 3274

Abstract

This study is designed to evaluate the tendency of blood transfusion among the women who are undergoing caesarean section. I selected my general objective as an Evaluation of blood reservation and use for caesarean section in a tertiary maternity unit in Colombo and specific objective is, to analyze the cross-match transfusion ratio for emergency and elective caesarean sections.

This is a prospective descriptive study which will be conducted from December 1st 2011 to February 28th 2012 at the Castle Street Hospital in Colombo. Data related to women in antenatal, intra partum and postnatal events will be regarded and compared between women receiving blood transfusion during caesarean section and women not receiving blood transfusions.

Data are collected from cross-match register, issuing register, blood request form in the blood bank and bed head tickets from relevant wards.

The Castle Street Hospital in Colombo usually performs more than 350 caesarean sections per month (including elective and emergency). Therefore data can be gathered from more than 1000 caesarean sections for this study over three months duration.

Required sample size is determined by using the following formula:

$$N = z^2p(l-p) \ d^2$$

Data will be checked for accuracy, coded and entered in a database. Data analysis will be conducted using SPSS software.

Ethical clearance from the ethical review committees of post graduate institute of medicine Ethical review committee of University of Kelaniya and Ethical review committee of Castle Street Hospital have been granted

Administrative approval from the Director of the Castle Street Hospital, the Director of the National Blood Transfusion Services and consultants of relevant units has been granted.

An evaluation of blood reservation and use for caesarean section in tertiary maternity units of Colombo should therefore assist in formulating the most rational blood transfusion policy.

0273.Madurapperuma, M.A.R.L.

Possible factors for defaulting of family planning methods following nine month after child birth in medical officer of health area Dompe.

Postgraduate Diploma in Reproductive Health – 2012   D 3303

The study was carried out in Dompe MOH area in the Gampaha district. Dompe MOH area is situated in the Western province and it is approximately 174 sq.km.in area and the estimated population for the year 2011 wasl55119.(16) .It is one of the 16 MOH area in the Gampaha district. It is bounded by Kalane River in the South, Biyagama MOH area in the West, Mahara MOH area in the North, and the Attanagalla MOH area in the North East.

The reference population of the study consisted of mothers who are engaged and residing in Dompe MOH area. They are married women aged 15-49 years living with

their family. Married women were used as the entry point; analysis will be based on mother's variables and other relates variables. The main suppliers of modern family planning methods is public sector MOH Clinics and hospitals, Privet sector participation was not considered for this study.

The age of all the population participate in this study varied between 15 years to 49 years. There mean age was 28.5 years. It was reviled that the majority of them had educated up to G.C.E (O/L). (66.3%) This study is the first on this topic to collect longitudinal data in MOH area Dompe, where little is known about contraceptive discontinuation. Demographic and Health Surveys (DHSs) and Reproductive Health Surveys (RHSs) have not collected recent data for calculating discontinuation rates for MOH area Dompe. Modern contraceptive use is relatively high in this area (56 per cent of all married women aged 15-49 use a modern method). The reversible methods of interest in this study, injectable is the most common modern method used (63.5per cent), followed by, the IUD (17.4per cent),condom 16.9per cent and implant 2.2%.As this study group consist of post partum mothers OCP was not an option for first six month.(in DHS OCP rate was 14%). Total discontinuation rate was 38.8%. Discontinuation rate was highest for DMPA (54.8%), IUCD 29%, and CONDOM 14% and lowest for IMPLANT. Major factors effect for discontinuation rate was parity, level of education, contraceptive knowledge, family type, contraceptive provider, husband motivation, selected method at six week post partum, reason for selection, and number of side effect.

0274.Mahinda, K.H.

Study on knowledge & practices on family planning methods among married couples in reproductive age group who have completed their families in MOH area Kelaniya.

Postgraduate Diploma in Reproductive Health – 2007   D 3298

Abstract

The present study was carried out to asses knowledge & practices on family planning methods among married couples in reproductive age group who have completed their families in MOH area Kelaniya.

Among four hundred & twenty 15 - 49 age group female who have completed their families by using the interviewer administered questionnaire .

99% of the study population heard about the family planning . Out of the family planning methods DMPA was in most common family planning method. Among these 95% heard about the oral pills & injectable contraceptives of modern methods.

Among the population who heard about family planning methods 55% knew about the coitus interruption & calendar methods & knowledge about mucous method & body temperature method were very poor .

Awareness on IUCD & Condoms increased with level of education . Oral pills & DMPA does not related to the level of education .

88.1% of the population in the study , their family planning needed for spacing where as 67.1% of the total population said family planning needed after completing the family .

Regarding the duration of the usage of family planning methods, 41.9 % believe family planning methods should be use till 50 years of age of the female and 13.6 % are not aware of the duration of the use.

64.5% of the families had completed their families due to economic reasons & 19.3 % had completed their because they don't have any one to look after the baby among the temporary family planning , DMPA is the most commonly used method while among the permanent methods female sterilization is the most common.

Calendar method was very common natural family planning method and usage of mucous method & body temperature method was very poor.

For all family planning methods , best source of information were from PHM .

Most common side effects they experienced during family planning usage was absent menstruation (48.8) & irregular periods (35.4).

56.5 % respondents were not using family planning methods due to fear of side effects .

0275.Mohamed Faiz, M.S.

A study on the psychological aspects of the high risk pregnant mothers who are awaiting for the ultra sound scan at the De Zoysa maternity Hospital for women Colombo.

Postgraduate Diploma in Reproductive Health – 2007   D 3278

Abstract

Psychological aspects of the pregnant women often not addressed appropriately, due to the inadequate resources. High risk mothers are more vulnerable than the minimum risk mothers with regard to the psychological aspects. When these high risk mothers come to

the USS examination many questions and expectations would be there in their mind such as; Is my growing fetus normal?, Are there any fetal abnormalities?, Is the **USS** examination harmful to me or to my fetus?, What is the sex of my baby? Is **USS** examination findings reliable and accurate? , Who is the sononographer? Etc. Therefore the main aim of the study is to **assess the psychological aspects of the high risk mothers waiting at the ANC-USS.with the following Specific objectives.**

1. Expectations from the USS results with regard to reliability& accuracy.
2. Attitudes on determining sex of the baby
3. Preference on the sonographer.
4. Attitudes on knowing any fetal abnormalities.
5. **Study design:** Descriptive cross sectional study:
6. **Study setting:** High risk ANC **-USS** at De Soyza Maternity Hospital for women, Colombo.

Subjects and Methods: Antenatal Mothers who had at least one risk factor; came for the high risk ANC-USS examination during the periods of 3 months from December2007 to February 2008. Data were collected using an interviewer administered semi structured questionnaire by the principal investigator. Subjects were encouraged to express their genuine views on the questions. Data were analyzed by SPSS .13 statistical software package. Some calculation were made using Epi-Info 2000.

Results: Total number of sample was 101, between the age of 16 and 42 years with the **mean** 31+/- 6.2, median of 32 years.46.5% had DM, 28.7% had hypertensive disorders, 10% had recurrent miscarriages, rest of them had thyroid diseases, epilepsy or twins or elderly, and some of them had multiple risk factors.

87% said USS is reliable, 2% have said it's not reliable at all, 11% has no idea about the reliability.94% of the mothers liked the sex determination at USS examination. 7% did not like,64% of the mothers preferred that their USS has to be done by a VOG, 35% have said any medical officer can do their USS examination,

98% of the high risk mothers liked to know the fetal abnormalities if any, detected at their USS examination. This is statistically significant.

Emotional status of the mother while waiting for USS examination. 56% were very happy, 39% were neither happy nor unhappy,6% were unhappy due to some reason.

In conclusion: 94% liked to know the sex of the baby antenataly therefore if thesonographer is very confident he or she must disclose it to the mother.98% of them willing to know the fetal abnormalities if detected therefore, it should bediscussed with mother in detail and psychological supports or counseling should beprovided to cope up the situation.

Although 56% of them happy with USS examination, 6% are unhappy. Therefore prior to the examination brief counseling is useful.

When an abnormality is detected on USS the parents should have ready access to skilled counselors who are able to provide them with lull information, options and support in order to allow them to make an informed choice.

0276. Rathnayake, R.M.S.L.

Factors related to teenage pregencies in the Rathnapura District.

Postgraduate Diploma in Reproductive Health – 2009　　　　D 3293

Summary

Teenage is under age girl in between 13-19 yrs. They don't have legal authority to become pregnant and the upper limit of the age depends on the country, region ethnicity and religion. They are the kids who want security from the parents and not from some one else, also not to have kids.

The highest teenage pregnancy rate is among sub Saharan African countries and is about 143 per thousand pregnancies. The lowest teenage pregnancy rate is in South Korea and Singapore which is 2.9 per thousand pregnancies. It clearly denotes that teenage pregnancies common in under developed countries and where the socioeconomic state and education poor among the population.

In Sri Lanka it is about 10% of whole pregnancies and it also varies within the country. In Ratnapura district it is about 8.5%.

Researchers have demonstrated that thirteen million are born to women under twenty years annually and 90% of them are in developing countries. In Niger 87% women get

married and 53% given birth to a child before the age of eighteen years. The reasons for this are the higher rates of poverty, low education level, domestic violence and family background, sexual abuse and the use of drugs and alcohol among the teenagers.

In addition feeling of pressure to have sex, lack of contraceptive use, embarrassment or fear to seek contraceptives also contribute to increase teenage pregnancies in the world.

The immaturity of the teenage mother may lead to medical socioeconomic and physiological problems of the mother baby and the family. The mental stress of the mother causes nutritional problems in the mother and the new born.

Although the teenagers are trying to get solution for the sexual and socioeconomic problems with early marriage, finally they end up with miserable life than earlier. The increase number of abortions among teenagers clearly describe that pregnancy is not planned.

Justification

Sri Lanka is a developing country which was governed by foreigners for a long time. After getting independence in 1948 it was ruled by so many Prime Ministers and Presidents. Although it is a developing country which is poor in economy the education and health was superior. But due to numerous causes Teenage pregnancies are emerging as a deficit of health.

Ratnapura District is the main city of Sabaragamuwa Province in which economy depends on mainly Gem Industry, tea and Rubber cultivation. The garments factories are also contribute a considerable proportion for the economy. Although there are few peoples who are millionaires the majority are poor in the area. The level of education is not satisfactory in rural areas. Because of this poor socioeconomic condition and low level of education a considerable proportion leave the schools before entering the advanced level classes. Most of the fathers of families used to take alcohol and it affects the family environment. Because of these reasons teenage girls seek assurance either by falling on marriage or by getting a job in a private sectors like garment factories.

In addition there is considerable estate Tamil population who usually get marry in early stages. The criminal abortions are markedly high due to the increase prevalence of teenage pregnancy in the area. Although our other health indicators show better results in comparison to many other under developed countries and in spite of availability of

reproductive health and family planning knowledge, the rate of teenage pregnancies is increasing.

Therefore it will be a help to promote the health conditions of the area and implement the measures to reduce the teenage pregnancy if the reasons are known. In addition it is to estimate the level of the knowledge converted to the community regarding the reproductive health by the health care workers.

Ratnapura District is specially selected because the investigator is familiar with the area.

Objectives

General Objective.
To determine the factors related to teenage pregnancy in Ratnapura District.

Specific Objectives.

1. Identify the socio demographic characteristics among the teenage Mothers in Ratnapura District.

2. To determine the reproductive health knowledge among the teenage pregnant mothers in the study.

3. To find out availability of reproductive health information in the prevention of teenage pregnancies.

0277.Pandithasekera, S.P.

Descriptive study on knowledge of the puerperium in obstetric patients attending General Hospital Ampara.

Postgraduate Diploma in Reproductive Health – 2009   D 3300

Abstract

Introduction: The Puerperium is wrought with many perils that endanger the lives of both the mother and the neonate. The social background ethnicity, cultural beliefs,

traditions, customs, input and advice from loved (and health professionals play a major role as to how the mother adjusts and during this period. Some of these beliefs and practices may be a valuable contribution to a safe postpartum period while some may be detrimental to mother and the newborn.

Objective: It is the purpose of this study to identify the level of knowledge the Obstetric patients have about the postpartum period as well as to identify good as well as the harmful practices so that appropriate measures car recommended to improve care.

Design, venue and duration: A descriptive study over two months conducted in General Hospital Ampara.

Method: Data collection was with an interviewer administered structured questionnaire. All women attending the antenatal clinics and all receiving inward treatment were included in this study. Data was collected on knowledge and practices on personal hygiene, food, breast feeding, sexual activity contraception, postpartum complications and resumption of routine work. E analysis was done with SPSS.

Results: 220 women participated in this study. The average age of of women were 28.4 years. The majority of patients (66.3%) were educated u] A/L's and while 27.7% had studied up to the O/L's. 2.3% are graduates. 78. were housewives.65% were in their first pregnancy. All thought breast feed is essential and was better than any other form of feeding. However 3. thought formula milk may be added to Breast Feeding. Few women thought t food and liquids such as tea, egg, sugar, 'sookiri', meat, 'Rathakalkaya', r could be given as well. 71.8% thought the first bath can take place within first 24 hours. Bath with water and soap was preferred by 70% while 3' thought that herbal brew was needed. The majority thought that the episiotomy needed special attention. All except 3.1% thought that food may be taken within the first 24 hours. Food taboos included mainly oily foods (64.1%) and spicy foods (58.1%) while Eggs, meat and fish were also considered taboo by some. 58.1% thought that sexual activity should be avoided for more than 3 months. 83.1% thought contraception was necessary while the majority (50%) preferred Depot preparations. Except Post Partum Heamorrhage, very few knew of other postpartum complications.

Conclusion: The knowledge of the pueperium varied immensely and incorrect practices were common. It is recommended that more educational programmes are conducted targeting these areas of deficit.

0278.Pathirana, V.P.S.D.

Risk sexual behaviours and knowledge on STI/ AIDS among transport workers in selected areas in Western province.

Postgraduate Diploma in Reproductive Health – 2012   D 3273

Abstract

Self-administered survey was carried out with 200 transport workers from Hanwella, Pugoda and Dompe areas to assess the knowledge, attitudes and risk behaviours in relation to HIV and AIDS.

Number of participants who were aware that there is transmission by using unsterilized needles and syringes was the highest (82%). Number of participants who were aware that there is transmission through a person infected with HIV but having no symptoms was the lowest (40%). Comprehensive knowledge on transmission was only 35%.

Number of participants who were aware that there is no transmission by sharing cups, plates and meals with a person infected with HIV was the highest (75%). Only 16.5% of participants understand that there is a no high risk of getting HIV infection by sharing razors. Comprehensive knowledge on non-transmission was 13.5%.which is remarkably very low. Comprehensive desirable attitudes was 6% which very much lower.26.5% participants ever had non-marital sexual relationships, out of which, sex with regular female partner was the highest (79%).Only 41.5% of participants had used condoms for each and every non marital sexual acts.

Only 53% of participant knew that there are Government STD clinics but only 30% knew that anybody can visit those without any referral.

Further it needs more and more awareness programmes for the transport workers so as to other target groups to make them aware about transmission and non-transmission methods and preventive methods so that their desirable attitudes can be improved for a better tomorrow.

0279. Perera, M.D.M.S.

A cross sectional descriptive study of the characteristics of sub fertile couple in Dehiwala MOH area.

Postgraduate Diploma in Reproductive Health - 2012   D 3275

Abstract

Introduction - sub fertility is increasing and becoming an issue at individual, clinic and population health level.

Objective - The aim of the study is to analyze the characteristics of sub fertile couples In MOH area Dehiwala.

Design and Setting - Community based cross sectional descriptive study was conducted in MOH area Dehiwala in the district of Colombo during 1st March to 30th April 2013

Method - Study was conducted in the 12 areas in MOH clinics in Dehiwala. The principal investigator got the assistance from the Medical Officer of health (MOH) Additional Medical Officers of Health (AMOH) and the Public Health Midwives (PHMM) in each area. Pretested interviewer administered structured questionnaire was used to collect data and statistical analysis performed by using the package Statistical Package of Social Services" (SPSS) version 15.0. Data has been collected by the interviewer administered

structured questionnaire in social demographic characteristics primary sub fertility secondary sub fertility, their ethnicity, religion their education level, occupation, previous medical illnesses, surgeries done and their income. Primary infertility is taken as been defined by the World Health Organization (WHO) a woman who never conceived without using contraception and been exposed to pregnancy for a period of 12 months. Secondary infertility is taken in women not on contraceptives who have previously conceived but is subsequently unable to do so although been exposed to pregnancy. Study population is 191,138 in MOH area Dehiwala in the District of Colombo.

Results- Of the sub fertile couples mean age of women was 33 percent in over 35 Year sage group. Of the sub fertile couples the mean age of the husband is 36 years, Of the men 32 percent are between 36 to 40 years and 76 percent of wives are Sinhalese, 15 percent wives are Muslims, 7 percent sub fertile wives are Tamils. According to religion of sub fertile percent Islam, 54 percent are Hindus, According to education 33 percent husbands have passed A/Levels. 33 percent had salary > Rs.25.000 per month,

57 percent wanted investigation in government sector and 32 percent wanted investigations in private sector. Of the sub fertile couples 18 percent are secondary sub fertile and 81 percent are primary sub fertile. Of the couples 66 percent earned < Rs. 25,000 and 33 percent earned > Rs. 25,000 a month. Mean age for being married duration of sub fertile women was 7 years. Out of the men 14 percent had a history of Mumps in childhood. Of the sub fertile couples 19 percent couples discontinued treatment. Reason given for discontinuation are 3 percent due to economic reasons and 5 percent sort treatment with traditional medicines.

Conclusion: Sub-fertility is a significant health problem in the study area. There are more couples suffering from primary sub fertility than secondary sub fertility. This issue poses a significant economic impact on their family. Divers causes of female sub- fertility are in keeping with the usual proportions. But incidence of mumps is found to be high among the male infertility. Limited health care facilities and encouraged the couples to go to the privet sector. Majority of the couples left the treatment when it comes the level of IUI and above.

Recommendation: Basic treatment facilities should be available at all hospitals in the government sector and facilities for the IUI and Above should be make it available to the teaching hospitals . Couples who could afford IVF can be directed to places (private sector) institutions that have these facilities. Consideration should be given to the prevention of mumps.

0280. **Perera, P.A.D.J.C.**

Knowledge about taking folic acid among antenatal mothers who were attending to antenatal clinic at Castle Street Hospital for women – Colombo 08.

Postgraduate Diploma in Reproductive Health – 2008   D 3288

Abstract

The objective of this study were to determine the knowledge about taking folic acid among the antenatal mother, who were attending to Antenatal clinic of C.S.H.W (ward 07). Two hundred subjects were selected for this study by multistage sampling technique. These mothers were interviewed by using an interviewer administered questionnaire.

The overall prevalence of folic acid at the time of interview was 98%, 100% of mothers were taking folic acid at the POA of 3/12, 42% of mothers were taking folic acid before conception. 93% mother had received the information on folic acid from the staff of the

ANC clinic or MOH . 94.5% had got the information from the midwife. Only 14% of the mothers knew that the folic acid should have taken at least 3/12 months before conception.

Mothers who were having a higher level of education who had more living children had a better knowledge of folic acid. But mother's age and employment state had A significant association with knowledge on folic acid.

The mother who were having higher family income and higher level of education showed positive attitude towards taking folic acid.

0281.Pushpakumara, P.G.J.

The efficiency of diabetic screening program during pregnancy in a population of pregnant mothers : A rethrospective descriptive study.

Postgraduate Diploma in Reproductive Health - 2009   D 3299

Background: Diabetes in pregnancy is associated with risk to the worn; and to the developing foetus. Screening is important to detect higher number cases to prevent complications in the mother and the baby. Shortcomings in the process of screening could be happened in many ways. This study was conducted to assess the accuracy of implementation of gestational diabetes screening in a tertiary care setting. In this study aimed at assessing the proportion of mothers having undergone proper clinical assessment with regard to GDM, the proportion of mothers having undergone the first line screening test for GDM, and the degree of accuracy in interpretation of first line screening tests and the OGTT.

Methods : This study was carried out as a retrospective descriptive study, The study population included all mothers who delivered at the professorial obstetrics unit, Teaching Hospital Ragama,406 mothers were recruited for the study over a period of two months. Those mothers who were known diabetics were excluded from the study. An interviewer administered questionnaire was prepare after identifying the variables related to the objectives. Those mothers were clinically evaluated and their BHTs, Antenatal records and investigation reports were checked to find out whether they have undergone clinical risk assessment with regard to GDM and they have undergone first line screening tests for GDM. The questionnaire was filled with this information by a doctor after taking informed written consent. A computer database was created on this questionnaire for easy, precise and cost effective data collection. Data was entered using Epidata and analysed with SPSS.

Results : According to the study results, a satisfactory proportion of mothers (75.1%) with risk factors had been identified where 127 mothers were correctly identified out of 169 mothers who had risk factors. In this study high proportion of mothers (97.5%) had undergone first line screening for GDM where, 396 mothershad been screened from 406 mothers. The one and only screening test had been used was PPBS. In this study, the mean POA at which the screening test had been done was higher (16.87 weeks) with a standard deviation of 7.61. A higher proportion of mothers (59%) had undergone the first line screening in the second trimester compared to a smaller proportion (36.9%) in the first trimester. Out of the four mothers who had abnormal PPBS in the first line screening, two mothers had been offered the confirmatory test (OGTT) and no action had been taken for other two. The first line screening test had only been repeated in smaller proportion (61.4%) of Mothers (n=243). The mean period of amenorrhoea at which the first line screening test had been repeated also higher (32.68 weeks) with a standard deviation of 7.07.Out of Seven Mothers who had abnormal PPBS after repeated first line screening, three women (42.9%) have had their PPBS repeated, while two mothers (28.6%) had been offered OGTT, One woman had been offered BSS and no action had been taken in only one subject. OGTT has been used as the confirmatory test only in 50% of cases after initial screening test had been positive and only in 28.57% of cases after the repeated first line screening test has been positive. Out of 31 Mothers, who had been offered OGTT, sixteen mothers (51.61%) had GDM according to the WHO criteria. Out of this, Ten mothers (62.5%) had been correctly diagnosed as GDM in the antenatal period where as six (37.5%) were misdiagnosed as non diabetic.

Conclusion : Though the risk factors have been identified in a large proportion of mothers OGTT has not been offered to them. The first line screening test has been done towards latter part of first trimester and in second trimester in majority of subjects thus missing the crucial period of organogenesis. A repeat second to third trimester screening has not been done in a significant number mothers. OGTT has not been done in all mothers where it has been indicated and the interpretation of OGTT according to WHO criterion was not satisfactory. This study highlights the need for a strict protocol on screening for diabetes in pregnancy.

Keywords; Gestational diabetes Mellitus, Screening, OGTT, PPBS

0282.Silva, L.C.N.

The knowledge and attitude of married fertile women up to 45 years of age towards the intrauterine contraceptive device as a long term and an emergency post coital contraceptive methods, in the MOH area Kaduwela.

Postgraduate Diploma in Reproductive Health – 2007   D 3277

Abstract

Inspite of the effectiveness of modern contraception unwanted pregnancy occur in large number and many women seek termination and affected by immediate and long term complications following induced abortion. Emergency contraception reduce the million of abortions in developed countries.

This study attempted to asses the knowledge, attitude and use on intra uterine devise (IUD) for long term and emergency contraception among married female belong to the reproductive age group in MOH area Kaduwela.

The study sample comprised of 150 women in reproductive age group.

I The most popular family planning method among married women in this area is intramuscular medroxy progesterone injection. Significantly quite a number of mothers undergone B.L. LRT operation. Overall 11.33% did not use any family planning method.

Only 6% (N =150) had heard about emergency contraception with IUD. The correct time of using IUD for E.C. was identified by 2.66% of women.

I The main source of information on IUD was from doctors and public health workers. 75.33% had awareness on IUD as a long term family planning method. But 55.33% had negative attitude on it.

Based on the study finding recommendations were made to improve knowledge and positive attitude on emergency and long term contraception with IUD.

0283.Uwais, M.

Adolescent school girls' knowledge on some aspects of reproductive health in Kinniya MOH area- Trincomalee.

Postgraduate Diploma in Reproductive Health – 2008   D 3280

Abstract

This is a descriptive cross-sectional study design, with the objective of describing the knowledge of school adolescent girls with regards to some aspects of reproductive health. The study conducted in schools of Kinniya MOH area of Trincomalee district, eastern province and the sample was constituted by 360 female adolescent students, within the age group 14-19 years. A systematic random sampling method was used for the selection of study population. For the collection of data a structured self-administered questionnaire with closed ended multiple choice questions was used. Based on the data obtained the investigator draws the following conclusions and recommendations: About two third of the respondents had very good or excellent, one third had about good and a very few of them had poor or fare knowledge on reproductive health. This advancement in knowledge regarding reproductive health would have been attributed to involvements and interventions by multiple organization both government and UN agencies and non-government organizations after Tsunami 2004 December. Further new educational system would have also contributed to some extent in this regard. However, a need to conduct a comparative study using stratified random sampling technique is recommended in future to gain more reliable information on adolescents' knowledge in reproductive health aspects in Sri Lanka and to conduct regular reproductive health and life skill development programmes not only to adolescents, but also to parents and teaches to create a supportive environments for adolescents within their family, schools and community.

0284.Wijesinghe, P.L.A.

The awareness, attitudes and practice of contraceptive methods among eligible women in public health midwife area of Borella South – D3 Borella MOH area.

Postgraduate Diploma in Reproductive Health – 2013   D 3287

The Evaluation of family planning method is very important in the society of which ever population group. The main objective to describe factors effecting the awareness of contraceptive methods, attitudes and practices of population with mixed ethnicity , middle and low income group. It helps to resolve many family problems.

Descriptive cross sectional study was carried out in Public health midwife area of Borella D3 in Borella MOH area during six weeks (From 18th of February 2013 to 30th of March 2013).Study population consist of 844 eligible families ,according to statistical calculation 420 selected with cluster sampling. Interviewer administered questionnaire used to collect data.

The data collected was statistically analyzed by using SPSS software package and t-test applied to selected variables.

According to results of study population shows there is significance of socio-demographic factors with awareness of traditional methods, temporary methods, permanent methods and emergency contraceptive methods.

The current practice of any family planning method was 71.5 percent with commonest method accounted to family planning injections (27.6 percent) which was better than national figures. The source of information regarding contraceptive methods mainly from community health care workers.

Social stigma and negative attitudes among eligible women cause lesser use of modern family planning methods.

Family planning promoting programs and information delivery system in preventive health care setup should be more intensified in such manner to know about different family planning methods where the client will have a choice to select more suitable method.

Replication of the study in much larger representative population will be more informative and would be applicable to the whole country.

0285. Wijesooriya, C.P.

Assess knowledge and attitude on selected reproductive health pathologies and screening of those among 15 – 49 year age group of women in MOH area Biyagama. Postgraduate Diploma in reproductive Health – 2007   D 3283
Abstract

Recent disease trends all over the world show that there is an increase in gynecological malignancies and HIV/AIDS due to high prevalence of risk factors and risky behaviors.

Aim of the present study was to assess knowledge and attitude on selected reproductive health pathologies and screening of those among 15 to 49 year group of women in MOH area Biyagama. Those selected reproductive health pathologies were HIV/AIDS, cervical cancer and screening, ovarian cancer and endometrial cancer. Assessing about present level of knowledge and attitudes on those pathologies is very important to develop interventions for prevention and early detection.

A sample of 824 of 15-49 year age group females were selected using cluster sampling method excluding these already had those diseases. Study instrument used was a interviewer administered questionnaire. Study group consisted of mainly Sinhalese (91.7%).8% consisted of Muslims. Only 0.2% was Tamil.

When considering knowledge on HIV/AIDS higher proportion had good level of knowledge. (57.2%). Further 35.2% had satisfactory level of knowledge on HIV/AIDS. Only 7.6% had poor level of knowledge. With age there was a significant difference of level of knowledge on HIV/AIDS. With advancing age there seemed to be increased level of knowledge with regard to HIV/AIDS. Further with educational level also there was a significant deference in level of knowledge on HIV/AIDS.

Knowledge on cervical cancer was at very low level. Only 2.1% had good level of knowledge, where as 83.7% had poor knowledge on cervical cancer. 14.2% had level on pap smear test was also similar. 83% study group had poor level of knowledge where as only 1.8% had good level of knowledge on pap smear. 15.2% had satisfactory level of knowledge on pap smear test. The statistical analysis using 34 year and below group and above 34 year age group showed a significant difference in the level of knowledge on pap smear test with regard to age.Out of the study group majority 85.9% had poor level of knowledge on endometrial and ovarian cancer where as only 2.6% had good level of knowledge . When chi-square test was applied taking < 34 year and above 34 year groups with regard to the level of knowledge about endometrial and ovarian cancers, there was a statistically significant difference.

In conclusion study population had good level of knowledge on HIV/AIDS. But knowledge levels on cervical cancer, endometrial cancer and pap smear test were low. Hence it is recommended to implement intervention to increase knowledge on those malignancies and availability of screening on cervical cancer. Furthermore programs targeting risk factor control of these conditions and HIV/AIDS should be implemented.

Even though knowledge on HTV/AIDS was good, on going programmes should be conducted to keep that level. This is very important in prevention of HIV/AIDS.

0286. Wijeweera, S.P.N.J.

Importance of the assessment of knowledge and attitudes on HIV/AIDS of midwifery staff.

Postgraduate Diploma in Reproductive Health – 2011   D 3279

Summary

1.1 Background

In 1981, outbreaks of a form of pneumonia (*Pneumocystis carinii* pneumonia) and a type of cancer (Kaposi Sarcoma) in homosexual men were reported from several cities in the United States of America. These extremely rare conditions had previously been linked to immune deficiency. Investigations had revealed that the immune system of these men had been severely compromised and this finding led to the first definition of the complex of cancers and infectious conditions which was subsequently known as Acquired Immunodeficiency Syndrome (AIDS).

Sri Lankan continues to have very low HIV prevalence. United Nations Programme on HIV/AIDS (UNAIDS) estimates that about 3,000 Sri Lankans were living with HIV at the end of 2009, yielding a prevalence of less than 0.1% among 15 - 49 year-olds. Survey data observes that even among individuals considered at higher risk of infection on the basis of their occupation, behaviours and practices, HIV prevalence is below 1%. The main mode of transmission of HIV in Sri Lanka is unprotected sex between men and women (82.8%). Men who have sex with men account for 11.2% of the transmission while mother to child transmission is 5.4%. Transmission through blood and blood products is 0.4% (World Bank, 2010).

As of March 2010, 1223 HIV positive persons have been reported in the country out of which 208 have died. Three hundred and fifty three cases were reported in 2009. Among them 122 were males. Based on cumulative HIV cases of 1196 as of December 2009, sixty percent of reported HIV cases are males, and more than half are from Colombo. Under reporting of cases is mainly due to low knowledge about how HIV is spread, and barriers to seeking services due to stigma and discrimination. The ratio of HIV-positive men to women in Sri Lanka is 1.8 to 1. The proportion of women infected with HIV has been rising, from 21 percent (1987-1991) to 42 percent (2007), in part because of

increased testing of women over the last few years. The estimated number of children needing treatment in 2009 was 25. In Sri Lanka, antiretroviral treatment (ART) is provided mainly by the public sector. Currently, approximately 200 patients are on treatment (World Bank, 2010).

In 1992, the Government of Sri Lanka initiated HIV prevention and control efforts through the National STD and AIDS Control Program (NSACP) of the Ministry of Health under the Director General of Health Services. In addition, the National Blood Transfusion Services and the National Programme for Tuberculosis and Chest Diseases strengthened their responses to reduce transmission and prevent further spread of HIV. The NSACP in collaboration with the Provinces undertook HIV prevention activities and provides care and treatment to people living with HIV. The NSACP improved STD services by refurbishing STD clinics, providing equipment, and facilitating HIV prevention work conducted through contracted NGOs and through the Government Provincial and District Health authorities to reach vulnerable groups. The NSACP also engaged several line

Ministries works on advocacy, improving HIV prevention awareness and knowledge of facilities available and encouraging condom use amongst the armed services. The National AIDS Committee recommended that more focus should be given to targeted nterventions for the identified most at risk populations. The female sex workers and their clients, men who have sex with men, injecting drug users are identified as the most at risk populations in the country based on epidemiological evidence and regional experiences. Thus the main aim of the National strategic Plan is to increase the coverage and quality of targeted interventions for the most at risk populations and increase the coverage and quality of treatment, care and support (World Bank, 2010).

In their annual update on HIV/AIDS in Sri Lanka, the World Bank (2010) has identified, among other things, high level of stigma associated with patients living with HIV/AIDS and low level of knowledge about transmission of HIV as risk factors and vulnerabilities. Even though the female sex workers and their clients, men who have sex with men and injecting drug users are identified as the most at risk populations in the country, healthcare providers are also a high risk group. The healthcare providers come into the equation on two accounts. On the one hand, they themselves are at risk of contracting HIV is proper precautionary measures, which may result due to lack of knowledge. On the other hand, if they look at the patients with HIV infection with

prejudice, the patients will not receive optimal care. Childbirth is a significant event in HIV because it not only is a mode of transmission but also a high risk event that put healthcare providers at risk of **exposure. The Government has undertaken several training sessions for healthcare** providers on HIV/AIDs to remove the stigma and also to better equip them with precautionary measures.

This study will look at the level of knowledge of midwifery staff on HIV/AIDS and their attitudes towards patients with HIV/AIDS. It is believed that the findings will be useful in formulating future training programmes.

1.2 Justification

There is no research or any published documents available on the level of knowledge and attitude of midwives regarding HIV/AIDS. Without such information, the policy decisions would not be successful. The findings of this study will fill this gap in knowledge.

1.3 Objectives

1. To describe the demographic characteristics of the study sample

2. To assess the knowledge of midwifery staff on basic HIV pathophysiology, transmission, investigations, treatment and preventive methods in mother-to-child transmission

3. To describe the attitude of the midwifery staff towards HIV positive mothers

Methodology

A cross-sectional descriptive study was undertaken at the Colombo North Teaching Hospital at Ragama and Nursing Training School at Kadana. Midwives attached to all three maternity unit Colombo North Teaching Hospital and student who have more than three years of training period and had or presently attach to maternity training were invited to participate in the study. The study was conducted throughout the month March 2011, so there was sufficient time duration to carry out the study without disturbing their duties.

There is no data regarding a recent study on the subject. For date collection a pre-test structured interviewer administered questionnaires was used. The questionnaire included question to cover basic demographic date such as age, sex, education level, knowledge on HIV/AIDS and attitudes towards HIV positive patients. It recorded knowledge on clinical features, high risk populations, infectivity, mother-to-child transmission, investigation, need for HIV testing, occupational exposure and prevention of transmissions.

The date was entered to a date base and analyzed using the MS Excel.

Ethical Considerations

Written consent to participate in the survey was obtained from the midwifery staff and midwifery trainees. They were informed that they can withdraw from study at any time when they are having light duty days, for example non-admission days.

Ethical approval to conduct the study was obtained from the ethical review committee of the Faculty of Medicine, University of Kelaniya and administrative approval was obtained from the Consultant Obstetricians of the relevant wards and the Director of the Nursing Training School.

The data will be kept strictly confidential by the investigators and each participant will be identified by only by a number allocated at the beginning of the study. The data will be used only for research purpose.

0287. Wimalananda, S.V.A.G.

A study of religious activities in relation to feto-maternal outcome, in Teaching Hospital, Anuradhapura.

Postgraduate Diploma in Reproductive Health – 2011   D 3296

Abstract

Objective: To understand the association with feto-maternal outcomes of pregnant mothers, with religious activities.

Methods: A descriptive and cross-sectional study was conducted from December 2011 to January 2012 in Teaching Hospital, Anuradhapura in women of 15 - 45 years who had got admitted in two post natal wards. The study instrument was an interviewer administered questionnaire and relevant data were also collected from the BHT, Ante-natal clinic records and other medical records.

Results: A total of 384 women were interviewed. Majority of the study group was engaged in daily worship or pray and it has affected the birth weight of the baby in a positive way. Mothers who read religious books very frequently (daily or weekly) and those who worship daily had higher percentage of average birth weight babies. Higher APGAR scores at 1st minute and 5 minute were seen among mothers who meditate. Almost all the babies were term deliveries in mothers who meditate. There was a slight increase in percentage of those who worship/pray daily than of those who did not, to express that they did not face any difficulties during delivery. There was no significant difference in maternal weight gain observed between two groups. Meditation does not have an influence on maternal weight gain, MOD and antenatal complications.

Conclusions and recommendations: During pregnancy, women are bound to their religion than the other days of their lives expecting that the unborn baby and the mother would get the benefit. Irrespective of the religion everyone believes that a religion makes a major role during pregnancy for a better outcome. But yet no successful researches have been done worldwide or locally to prove or deny it. In this study it has been found that there is some association with fetal outcomes with religious activities such as birth weight, APGAR scores and term delivery.

Therefore more useful and detailed studies have to be conducted in order to link religion to the modem obstetrics.

Keywords; feto maternal outcome, religion, antenatal complications, birth weight

0288.Wijesundra, D.S.

Knowledge and attitudes on caesarian section among pregnant mothers of Dehiwala MOH Area.
Postgraduate Diploma in Reproductive Health – 2012   D 3290
Abstract
Objective: With the access to modern obstetric facilities, Caesarian Section (CS) rates are rising over the world and it may be a major public health problem in the future. There is a popular belief that mothers' preference is a cause for this increase but there should be evidence to show whether these mothers are aware of pros and cons undergoing CS. Therefore this study was conducted to determine the level of knowledge and attitudes about CS among pregnant mothers.

Methods: A descriptive cross sectional study carried out in MOH area Dehiwala with the participation of 426 pregnant mothers attending to the antenatal clinics. Data was collected using an interviewer administered questionnaire. Data analysis was done using Epi-Data and SPSS software packages.

Results: Of the total 426 mothers participated in this study 96.2% were aware about CS as a mode of child birth and from them 84.1% of mothers preferred Normal vaginal delivery. Only 15.9% of mothers preferred CS. The majority of mothers (54.0%) were found to have a moderate level of knowledge while 41.8% of mothers had a low level of knowledge. The majority of mothers (59.3%) had obtained their knowledge about CS from unreliable sources. The study also revealed that there is a statistically significant association between mode of delivery and place of delivery as well as between availability of an insurance coverage and place of delivery.

Conclusion: According to the results of the study there is a need to provide better knowledge to pregnant mothers about indications, advantages and disadvantages of CS which will enable them to participate in decision making.

Keywords:Caesarian Section, Knowledge, Attitudes

Venerology

0289.Perera, H.D.

Knowledge and attitudes on mother to child transmission and prevention of STI and HIV infection and ttitudes towards VDRL and HIV testing among newly registered antenatal mothers in MOH area Ragama.

MD Venereology – 2008   **D 3529**

Abstract

Introduction: The HIV epidemic is spreading throughout in South East Asia. Sri Lanka remains a low prevalence country with estimated sero-prevalence of HIV rate of 0.02% in antenatal mothers. However up to end of 2008 a cumulative number of 31 children got infected from mother to child transmission. Mother to child transmission of HIV can be effectively prevented if mothers' HIV status is known early. Therefore, studying knowledge and attitudes towards mother to child transmission and prevention of STI and HIV and attitudes towards VDRL and HIV testing among newly registered

antenatal mothers is important to strengthen the existing standard of package of care for antenatal mothers and implement HIV testing among antenatal mothers in future.

Objectives: To study the knowledge and attitudes towards mother to child transmission and prevention of HIV and STI and attitudes towards VDRL and HIV testing among newly registered antenatal mothers in MOH area Ragama.

Methods: Cross sectional study was carried out by using interviewer administered questionnaire on 400 antenatal mothers. Data was analyzed by using the statistical package SPSS version 16.

Results: The mean age of mothers was 27.7 (SD= 4.9) years and range was 15-44 years. Largest proportion (38.0%) of pregnant mothers was within 25-29 year age group. Teenage pregnancy rate was 3.5%. Thirty six percent of the mothers had studied up to grade 6-10. Only 33% have completed their ordinary level. Twenty six percent had passed GCE (A/L). Majority, 65.2% have lived in Ragama MOH area for over 5 years. Majority were Sinhalese and Buddhists. Except one, all mothers were married and living with their husbands. Majority (86%) were unemployed. Only, 46% had family income between Rs l0, 000 and Rs20, 000. Forty percent were in their first pregnancy.

Of the antenatal mothers 98% and 72% have ever heard of about HIV and sexually transmitted infection respectively. Their main source of information on HIV and STIs was television.

Newspapers were mentioned by 48% and 52% of mothers on HIV and STIs respectively. Majority (85.9%) knew that unprotected sex is a method of HIV transmission. More than 75% had correct knowledge on methods that do not carry the risks of transmission of HIV. Ninety six percent antenatal mothers had knowledge about having sex with one faithful partner can help to reduce HIV transmission. Ninety four percent knew that having multiple partners can transmit HIV virus. Seventy one percent had knowledge on changing partners can transmit the virus. Total knowledge on sexual behavior was good. Fifty six percent of antenatal mothers knew that women with HIV can get pregnant. Majority (61.3%) believed HIV infected mother does not look healthy. Only 12.6% mothers had knowledge on the prevention of mother to child transmission of HIV.

Of the 288 mothers who had ever heard about STIs, 61.5% were not able to name any of the symptoms of STIs. Only38% of mothers had good knowledge on individual STIs and symptoms. However, 87% knew regarding mother to child transmission of STIs. Fifty percent knew that MTCT of sexually transmitted infections could be prevented.

Majority (51.4%) prefers to seek testing from government hospitals for sexually transmitted infections whereas Sexually transmitted disease clinic is preferred by 19.4%.Forty nine percent prefers to seek testing from government hospitals for HIV infections. Sexually transmitted disease clinic is preferred by 12.8% mothers.

Conclusions: Majority (90.5%) had knowledge on HIV but only 3.5% knew that MTCT of HIV. Knowledge on HIV and STI was poor .This was more obvious towards MTCT of HIV. Attitude towards antenatal VDRL and HIV testing was not satisfactory with only half of them having positive attitude. Television appears to be the best source of information on HIV and STIs. Health care providers as a source of information on HIV and STIs were identified by a small proportion of antenatal mothers. In this population, private sector VDRL testing appears to be more common.

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Family planning methods (D3282,D3303,D3298,D3287) 0270,0273,0274,0284

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