



DEPARTMENT OF HEALTH SERVICES CENTRAL PROVINCE



"Research in to Practice"



Tuesday 27th December 2016
at Auditorium of RHTC Kadugannawa

Department of Health Services Central Province

3rd Research Symposium ***“Research in to Practice”***

Tuesday 27th December 2016

At Regional Health Training Center – Kadugannawa

ABSTRACT BOOK

THIRD RESEARCH SYMPOSIUM DEPARTMENT OF HEALTH SERVICES CENTRAL PROVINCE

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Message from the Provincial Director of Health Services



Modern developing world definitely requires exploring new knowledge as the foundation for development in every sector. Considering “Research and Development”, there is no development without research as the focus on evidence based interventions is the rational way of introducing new concepts. Knowledge is being changed everyday with

We believe as the truth today might be disproved tomorrow. New technology is sooner being outdated with exploring new knowledge. Our country is way behind the other parts of the world in exploring new knowledge in scientific grounds as our interest on research is very poor compared to the people in other countries. We are applying other’s new knowledge to improve the services in our country, but this is not suitable always as the sources of knowledge or research methods are not generalizable to every setting in the world. Hence, our own research is a vital entity in improving healthcare delivery in Sri Lanka.

The central provincial health department has put the initiatives in promoting health researches by encouraging the researchers among the health care staff, with its first research symposium in 2013. There were new researchers who started doing research with the growing interest and involved with the second research symposium in 2015, further I believe that third research symposium will make a big contribution to the new knowledge. The implications of these findings will be reflecting in preparing the future strategic plans for the health sector development.

I extend my sincere gratitude to the unit heads and the staff of the planning, preventive health, and curative care units of the provincial health department for organizing this event and congratulate them for their achievement with talents, good attitudes and dedication. While appreciating the excellent efforts I wish the most success in the research symposium 2016.

Dr. Shanthi Samarasinghe
Provincial Director of Health Services
Central Province

Researches related to the Preventive Health Services

01.

FOOD CONSUMPTION PATTERN OF ADOLESCENTS IN AN URBAN SETTING IN SRI LANKA

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Background and Objective:

Fruits and vegetables are important components of a healthy diet. Accumulating evidence suggests that they could help to prevent major diseases such as Cardio Vascular Diseases and certain cancers, principally of the digestive system. This descriptive cross sectional study was conducted in order to describe the food consumption pattern of adolescents in an urban setting of Sri Lanka.

Methodology:

The study population consisted of 4000 students of 14 to 15 year old adolescents studying in public schools in an urban area. The study was conducted in year 2006. The food consumption pattern was assessed in the form of a 20 item Food Frequency Questionnaire (FFQ). A modified FFQ that was validated for Sri Lanka was used to assess

consumption of selected dietary constituents. Vegetables, Fruits, Whole grain products, Dairy products, Whole egg and egg products, Red and processed meat, commercially baked foods, Deep fried foods, Sugar-sweetened beverages and refined sugars were included as main food domains in the questionnaire.

Results:

The percentage of students who consumed inadequate amount of fruits was 44.9% among males and 42.1% among females. The percentage of consumption of other high dietary fiber foods such as vegetable and whole grain foods were less than 15% among both male and females.

The consumption pattern of milk and dairy products among both male and female students was less than 2%. The percentage of students who consumed red and processed meats, commercially baked foods and sugar sweetened beverages were higher among male subjects, than female subjects and the differences were statistically significant.

The percentage of students who consumed inadequate amounts of fruits and vegetables was higher among the overweight category than the normal and underweight categories though not statistically significant.

Conclusions:

Consumption of fruits was low while consumption of deep-fried foods, commercially baked foods and sugar sweetened beverages was higher among students. Consumption pattern of high fiber diets and energy dense food did not show a clear association with overweight status among adolescents in the present study.

Keywords Unhealthy dietary habits, Overweight

02.

PSYCHOLOGICAL DISTRESS AMONG ADOLESCENTS OF 14 TO 15 YEARS IN AN URBAN SETTING IN SRI LANKA.

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Background and objectives:

Psychological factors can influence physical functions which results in various physical disorders. These disorders are termed psychosomatic or psycho physiological disorders, such as cardiovascular disorders, (Hypertension, Ischemic heart disease) peptic ulcers, asthma, obesity, headaches and cancers. This descriptive cross sectional study was performed in order to determine the prevalence of psychological distress and its relationship with other factors among adolescents in an urban setting of Sri Lanka.

Methodology:

The study population consisted of 4000 students of 14 to 15 year old adolescents studying in public schools in an urban area. The study was conducted in year 2006. The Strength and Difficulties Questionnaire (SDQ) was administered to assess the level of psychological distress

among the study population. The SDQ is a brief behavioral screening validated self-administered questionnaire for children and adolescents.

Results:

According to the total SDQ symptom score, the majority of the students (90.5%) did not have psychological distress and they were normal. There were 7.1% of students with borderline total difficulty score symptoms and 2.4% were with abnormal total difficulty score symptoms, having psychological distresses.

Overall psychological distress among male students (12.5%) (95% CI: 11.0-14.2) was higher than female students (7.1%) (95% CI: 6.1-8.3). The difference of psychological distress among male and female students was statistically significant ($p < 0.001$).

The borderline (10.3%) and abnormal (3.2%) total SDQ symptom score was highest among students whose fathers were non skilled labourers and currently unemployed.

The borderline and abnormal total SDQ symptom scores were highest among students whose mothers had no formal school education. The percentages were 14.0% and 11.6% respectively. The borderline total SDQ symptom score was lowest (3.3%) among students whose mothers were educated up to university or higher level.

Conclusions:

The overall psychological distress was significantly higher among male students than female students. Psychological distress was low among physically active students. It was higher among the students whose fathers were non skilled laborers or currently unemployed and whose mothers had no formal education. The socioeconomic status of parents was found to be an important determinant of psychological distress among adolescents.

Keywords: psychological distress, alcohol consumption, physical activity, socioeconomic status.

03.

EFFECTIVENESS OF INTERVENTIONAL METHODS IN REDUCING PESTICIDE OVEREXPOSURE IN VEGITABLE CULTIVATORS IN THE CENTRAL PROVINCE OF SRI LANKA

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Background and Objectives:

We investigated the effectiveness of interventional methods used during pesticide spraying by assessing ventilatory functions and respiratory symptoms in vegetable cultivators in the central province of Sri Lanka

Methodology:

77 farmers (male) were provided with protective gear to use during of spraying of pesticides. The control group (76 male farmers) did not use protective gear. A questionnaire was administered to obtain data regarding respiratory symptoms such as cough, wheezing, breathlessness and phlegm. Respiratory functions (FVC, FEV₁, FEV₁/FVC, PEFR, MEF50%) were measured using a portable spirometer.

Results:

The average ventilatory functions of the interventional and control group respectively were; FVC value of 3.74 and 3.80 L,

FEV₁ value of 3.27 and 3.20L, FEV₁/FVC values of 88.02% and 85.67%, PEF values of 8.58 and 7.31 L/s and MEF50% values of 4.62 and 2.05L/s. There was no significant difference between the two groups. The percentage of wheezing and phlegm among the interventional and control group was 15.58% and 18.42%, 29.87% and 38.15% respectively.

Conclusions:

There is a trend showing that respiratory functions and symptoms improve with the use of protective gear during pesticide spraying. Though this study showed it was not significant, a long term study might show that there is a significant improvement in the ventilatory functions with the use of protective gear during spraying of pesticides.

Key words: Interventional methods, pesticide spraying, ventilatory functions, respiratory symptoms

04.

USAGE OF LONG LASTING INSECTICIDE TREATED BED NETS (LLIN) FOR MALARIA VECTOR CONTROL: A CROSS SECTIONAL STUDY IN THE KANDY DISTRICT

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Background and Objectives:

Distribution of long lasting insecticide treated bed nets (LLIN) is one of the major strategies used for malaria vector control in the elimination phase of malaria in Sri Lanka. However, following correct instructions in the use of these nets by the users is a key factor for the success of this intervention. In the Kandy district, 49 500 bed nets were distributed from 2011 in MOH areas, namely, Hasalaka, Ududumbara, Madamahanuwara, Kundasale, Manikhinna, Akurana, Poojapitiya, Galagedara, Hataraliyadda, Gampola and Waththegama. This study was carried out to determine the usage pattern of LLIN by the beneficiaries in the Kandy district.

Methodology:

986 households in 25 five localities in four Medical Officer of Health (MOH) areas, namely, MOH Hataraliyadda, Hasalaka, Poojapitiya and Ududumbara in the Kandy District were randomly selected. One adult responsible member from each household was interviewed by a trained Public Health Field Officer with the use of an interviewer administrated

questionnaire. In addition to the interview, a physical examination was made to make sure the LLIN was hung in the bed room/s.

Results:

1023 LLINs were distributed for 986 households by the Regional Malaria Office in Kandy. Of the 986 households, 93% (N=949) were using LLINs. 50.1% households used LLIN during the past three days of the survey. 56% (N= 534) of the LLINs were washed during the last two years, however, only 29.5% (N=280) were washed once in 3 - 6 months. 80% of the LLINs were washed away from a well, lake or a river. During washing of the LLIN, 41 % of the nets were washed using baby soap while 59% (N=315) of the LLINs were washed using laundry soap or detergent powder. After washing, 43% (N=305) of the LLINs were drying in the direct sunlight and only 13 % (N=67) were drying at horizontal position. It was observed that only 24% (N=127) of the LLINs were hung at a place where there is no direct sunlight during day time. 92% (N=490) of households informed that mosquito density became decreased after using LLIN.

Conclusions:

This study shows that the usage of the LLINs is high. However, the majority of households not followed the instructions given by the Anti Malaria Campaign for the pattern of washing, drying, use of mild soap for washing and the frequency of washing. Follow up visits and community awareness programmes are recommended in order to improve the correct use of LLINs for maximum correct usage those by the beneficiaries.

05.

DETERMINATION OF CONTRIBUTORY FACTORS FOR TEENAGE MARRIAGES AND ITS OUTCOMES IN LAGGALA, WILGAMUWA, AND AMBANGANGAKORALE MEDICAL OFFICER OF HEALTH AREAS

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Background and Objectives:

Teenage marriages were increasing in rural communities of Laggala, Wilgamuwa and Ambangangakorale Medical Officer of Health areas in Matale district. This study aimed to find out the factors that are contributing to teenage marriages, namely knowledge, attitude, skills, belief, socio economic status and its outcomes in rural communities.

Methodology:

The researchers adopted the qualitative research design. The target population was teenage women under twenty years, their parents and local leaders in the community. A purposive sample of married teenage women in fourteen focus groups was interviewed and five key informants were used in data collection.

Results:

Findings revealed that the factors contributing to teenage marriages in rural communities were socio-economic background, peer influence, poor sex education, and non-use of contraceptives, traditional roles, stigma, low self-esteem and education. Most of the girls were married by having love affairs and relationship. Furthermore most mothers of the respondents were also got married into their teens and girls from poor families were more involved in teen marriages. The problem was further aggravated by insecurity prevailed in the family due to absence of the parents. The study identified several negative consequences such as drop out from education, unemployment, poverty, early motherhood, single parent family, suicidal attempt, maternal mortality, abortion, low birth weight, poor nutrition of the mother and child, gender base violence and mental health problems were few to name.

Conclusions:

The study recommended the improvement of reproductive health knowledge, retention of teenagers in education, life skill education, providing family planning services, inception of counselling centers, and introduction of self-employment with the participation of other agencies.

Keywords: Teenagers, Pregnancies, Rural Community, Contraceptives, Reproductive

06.

TREATMENT SEEKING PATTERN AND LABORATORY DIAGNOSIS OF IMPORTED MALARIA CASES IN THE KANDY AND NUWARA-ELIYA DISTRICTS IN THE CENTRAL PROVINCE OF SRI LANKA

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Background and Objectives:

Sri Lanka is free of indigenous transmission of malaria since October 2012. However, the country remains highly receptive and vulnerable for malaria as the principal vector of malaria, *Anopheles culicifacies* is prevalent in the country and introduction of parasite carriers to the country through the migrates to and from malarious countries. Hence, early diagnosis and administration of appropriate treatment is of utmost importance for the prevention of reintroduction of malaria in the country. The objective of this study was to identify the migratory and treatment seeking behavior and laboratory diagnosis of imported malaria cases in the Kandy and Nuwara – Eliya districts

Methodology:

All imported malaria case investigation reports from 2012 – 2016 in the Kandy and NuwaraEliya districts were studied to

identify the migrant populations, treatment seeking behavior and laboratory diagnosis of the malaria cases.

Results:

From 2012 – 2016, 16 imported malaria cases were reported from 11 MOH areas, namely, Akurana, Gampola, Medadumbara, Menikhinna, Pathadumbara, Ambagamuwa, Hanguranketha, Nawatispane and Walapane MOH area and Kandy and Nuwara- Eliya Municipal Council areas. These patients contracted the disease in Guinea (02), India (10), Liberia (01), Malaysia (01), Serra Leon (01) and Tanzania (01). *P. vivax* (8), *P. falciparum*(5), *P. ovale* (01), *P. knowlesi* (01) and mixed (01) of *P. vivax* and *P. falciparum* infections were found among the malaria cases.

Of the malaria cases, there were 15 Sri Lankans and 01 Indian. 06 Sinhalese, 09 Muslims and 01 Hindi. All malaria patients were adults (21 – 63 years) with the majority (81%) of males. Occupations of the cases were engineers (2), business persons (7), skilled laborers (2), members of forces (2) and unemployed (3). Reasons for visit to malicious countries were business (31.3%), accompanied patients for medical treatment (18.7%), visits (18.7%), UN missions (12.5%), employment (12.5%) and training (6.3%). Duration of stay in the malicious country/s varied from a few days to 01 year or more (< 01 month 62.5%, < 01 year 18.5% and >01 year 19.0%).

The majority (68.75%) of cases made their first visit to a private sector health facility while 31.25% to the government sector hospitals for seeking care. 43.8% of the patients were detected by the government hospitals, 50.0 % at the private hospitals/ laboratories and 6.2% by the Regional Office of the Anti-Malaria Campaign in Kandy when tracing contacts. Only 13.3%

of cases were diagnosed and treated appropriately on the first visit to a medical facility. A cumulative 40.0%, 80% and 100% were diagnosed and treated appropriately by the second, third and fourth visit to a medical facility respectively.

Interval between onset of fever and diagnosis of malaria varied from 2 - 27 days and only 25% of cases were diagnosed at 2 days, 25% at 7 days, and 31.0% <2 weeks of fever. The rest were diagnosed >2 weeks of fever.

Conclusions:

Imported malaria patients use both public and private sectors for treatment. There is a big delay in the detection of cases. Identifying the reasons for this delay would help to further strengthening of the malaria surveillance, both by public and private sectors.

07.

COST FOR DENGUE TREATMENT IN DOLUWA MOH AREA IN KANDY DISTRICT

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Background and Objectives:

Dengue fever (DF) is an infectious tropical disease caused by the dengue virus. As there is no commercially available vaccine, prevention is sought by reducing the habitat thus resulting a decrease in the number of mosquitoes and limiting exposure to bites. According to the WHO report approximately 2.5 billion people, two fifths of the world's population is now at risk of dengue and estimates that there may be 50 million cases of dengue infection worldwide every year. The disease is now endemic in more than 100 countries. The cases of dengue related diseases have dramatically increased in Sri Lanka over the last few decades. Reasons such as uncontrolled urbanization, rapid population movement, inadequate water, bad waste management as well as unsustainable vector control programs have already been identified. The goal of this study is to investigate the trend of dengue cases in Sri Lanka and measure the cost of prevention of dengue fever in Doluwa MOH area in Kandy district.

Methodology:

Measuring the cost of treatment on the dengue patients in Doluwa MOH area is examined by collecting secondary data from past 6 years from MOH office Doluwa. The total cost for treatment is calculated by direct and indirect cost. Direct cost is based on the expenditure done on treating the patient whereas the indirect cost is based on the loss of working days. “Cost of

illness approach” is used to find the cost of prevention of DF as well as cost of treatment on patients.

Results:

It was estimated the cost of dengue treatment for the patients who suffered from dengue in Doluwa MOH area. In year 2012 the cost for treat dengue patients in Doluwa MOH area was 325034 LKR. This remains the lowest cost reported between, 2011-2016. The highest cost for dengue treatment was in 2011 which cost up to 797377 LKR.

Conclusions:

The cost of treatment is increasing. This situation shows the important of regular removal of possible mosquito breeding sites from the environment. It is also important to seek medical attention in the event of fever by day three of the illness and make awareness program in high risk areas in the country.

08.

THE BODY COMPOSITION OF SECONDARY SCHOOL CHILDREN IN SRI LANKA: A STUDY TO DEVELOP A MORPHOLOGICAL FITNESS REFERENCE VALUES

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Background and Objectives:

In recent years, the interest in physical fitness assessment in school children has increased in other countries, but in Sri Lanka it is still very low. There is a dearth of reference values of physical fitness including BMI for secondary school children in Sri Lanka.

The objectives of this study were to contribute to the available knowledge concerning the assessment body composition (Body Mass Index), identifying sex and age-related norms of body mass index of the secondary school children in Sri Lanka and to compare BMI values of Sri Lankan children with the values of other countries.

Methodology:

A quantitative approach was used in this study. Physical fitness assessments were implemented to measure BMI of 1229 students (638 boys and 591 girls) which was randomly selected sample in the Kandy District. All the data were computed and analyzed to formulate test norms as percentile values, stratified by chronological age groups separately for boys and girls. All the calculations were performed using SPSS vs. 17 for windows.

Results:

The significant observation is that the BMI percentiles of P5, P10, P90 and P95 of the age groups 11, 12 and 13 of boys are greater than those of the age group 14 years. Reasons may be due to changes occurred in adolescent period. Except this unusual pattern, it is revealed that BMI percentiles of the boys and girls gradually increase according to the age from 11 years age to 17 years. According to the data the lowest P5 of boys BMI is approximately 13 and the highest P5 is near 17.4. Furthermore, lowest P95 of boys BMI is approximately 18 and the highest P95 is approximately 22.6. Furthermore, the lowest P5 of girls BMI is approximately 14 and the highest P5 is approximately 17. Furthermore, lowest P95 of girls BMI was found for year 18 range and the highest P95 found in 22.9 range.

Conclusions:

It can be observed that although the BMI levels of Sri Lankan children (both boys and girls) are not in the range of ‘Needs Improvement-Health Risk (NI-HR)’ but in the range of ‘Needs improvement’. They are in the margin of very lean level according to the USA norms. However, we cannot say BMI level of Sri Lanka boys and girls are not in a satisfactory level compared to USA standards. Because, these figures are normative base values. These norms are identical for some specific population.

09.

EVALUATION OF COMMUNICABLE DISEASE SURVEILLANCE PERFORMANCES OF DGH NAWALAPITIYA DURING YEAR 2015.

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Background and Objectives:

Disease Surveillance is the continuous collection, analysis, interpretation, and dissemination of systematically collected data regarding a health-related event for use in public health action to reduce morbidity and mortality and to improve health. It is one of the major public health strategies in prevention and control of communicable diseases.

It monitors trends in the burden of a disease (or other health-related event) in relation to time, place, person, including the detection of epidemics (outbreaks) and pandemics. Surveillance anticipates the changes in disease trends and guiding timely appropriate measures for prevention and control of Communicable diseases.

DGH Nawalapitiya is one of the two major Secondary Health Care institutions comes under Central Provincial health department. Its catering population is about 400,000 and 45% of Nuwaraeliya district population drains to Nawalapitiya.

Being a pioneer health care institution in the country, it performs on disease surveillance in order to process actions with regard to disease prevention and control. The objective of this

study was to evaluate Communicable Disease surveillance performance of DGH Nawalapitiya during year 2015.

Methodology:

Evaluation was carried out using quantitative and qualitative methods. Dengue fever, Dengue haemorrhagic fever, Leptospirosis, Food poisoning, Tuberculosis, Typhus fever, Enteric fever and all Vaccine Preventable Diseases were included in the study.

Notification data was extracted from the Institutional Notification Register and Diagnosed cases were obtained from the Indoor Morbidity and Mortality Register (IMMR).

Notification registers of the relevant units were cross checked with the Institutional notification register and it was analysed descriptively.

Completeness and Timeliness of the notifications were analyzed of a sample BHTs of diagnosed Dengue patients.

Results:

Average rate of Dengue notification was 148% and this could be due to the notification on suspect.

Notification of the Tuberculosis was very poor and it was 34.48% and all units under notified Tuberculosis.

Typhus fever was one of the common infections among the catering population of the hospital but the notification rate was 64.8%.

Cross checking of the Institutional notification register with Unit / Ward notification registers showed that the some units were using formats which are not standard.

Assessment of timeliness showed that the notification time varies from 24 hours to 08 days among the selected sample. 33% of BHTs of the selected sample didn't have proper diagnosis clearly mentioned at the front page of the BHT.

Conclusions:

Dengue notification system is highly reinforced and a much attention is paid through the web based Dengue notification system (DENSIS).

Tuberculosis notification was found to be very poor (34.48%).The country prevalence of TB is increasing and the prevalence of TB is higher among Estate sector population. Therefore it is vital to improve Tuberculosis notification in order to take actions for a serious health threat.

Making available of standard Notification registers, capacity building programmes for House Officers and other relevant Health Care Workers, Disease Notification Review meetings, improving communication between hospital Infection Control Nursing officer and Liaison Nursing officers and establishing an efficient information flow process with regard to notification could be recommended to improve the existing situation.

10.

SERVICE AVAILABILITY AND PARENTAL EXPERIENCE IN OUT PATIENTS CLINICS FOR CHILD AND ADOLESCENT MENTAL HEALTH PROBLEMS IN GOVERNMENT HOSPITALS IN KANDY DISTRICT

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Background and Objectives:

Child and adolescent mental health illnesses are an emerging problem in Sri Lanka, with a demand for improved service availability and quality of care provided. The objective of this study was to determine the service availability and parents' experience at outpatient clinics for child and adolescent mental health illnesses in government hospitals of Kandy district.

Methodology:

A descriptive cross-sectional study was conducted in five hospitals having outpatient clinics for child and adolescent mental health illnesses in Kandy district.

Component I assessed services available, using a check list.

Component II assessed parents' experience (n=423): timeliness, confidentiality, communication, information and participation, relationship with health personnel, service availability, using an interviewer administrated questionnaire with a rating scale.

Results:

Out of the five hospitals assessed, availability of space in waiting area, consultation rooms and therapy rooms was adequate in three clinics (60%). None provided clean drinking water for clients or had the basic equipment, guidelines and protocols.

All clinics had good collaborations with social services but only two collaborated with Education Department and the juvenile legal system. Only 40% of clinics had trained staff.

Out of the 414 parents interviewed, 70% were mothers of whom 36.2% were between 35-44 years of age. Majority of parents (66.9%) did not have a choice for the appointment time, 65.7% of doctors could not be contacted out of appointment time. Of the parents >50% reported better experience in confidentiality, communication with the doctor and the therapist. Relationship with the doctor was good for >50% but 98.6% were unhappy because cultural and religious views were not considered. Of the parents >90% ranked the overall experience at the clinic as good to 'large'/'very large' extent.

Conclusions:

Although the parents experience was ranked good it was found that service availability was inadequate. Child and adolescent mental health services need to be improved to cater to the rising demand.

Key words: Service availability, Child and adolescent mental health, Parents experience.

11.

**PRE-PREGNANCY PREPAREDNESS AMONG
PREGNANT WOMEN IN SELECTED MEDICAL
OFFICER OF HEALTH AREAS OF KANDY
DISTRICT OF SRI LANKA AND CARE GIVEN TO
THEM ACCORDING TO THE NATIONAL
PRECONCEPTION HEALTH CARE PACKAGE**

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Background and Objectives:

It is highlighted that pre-pregnancy health care interventions should be strengthen to accomplish further reduction of maternal and infant mortality rates of Sri Lanka. National Pre-pregnancy health care package was launched to implement that strategy. The objective of this study was to describe the Pre-Pregnancy preparedness among Primiparouse women of Yatinuwara, Warallagama and Udunuwara Medical Officer of Health areas of Kandy district of Sri Lanka and the care given to them according to the National Pre Conception Health care package.

Methodology:

A descriptive cross sectional study was conducted in randomly selected 15 antenatal clinics in mentioned areas recruiting 218 Primiparouse women below 32 weeks of gestation. A consensually validated pre tested interviewer administered structured questionnaire was used. A univariate analysis was done initially and a bivariate analysis was done later on identified variables to compare the socio demographic factors of receivers of care and non-receivers.

Results:

Proportion of 0.037(95% CI 0.012-0.062) had received the pre-pregnancy care. Proportion of 0.06 (95% CI 0.029-0.091) had received the care by National preconception care package. There were no statistical significant differences in socio demographic factors between receivers of care and non-receivers according to the national package at probability value of 0.05 level.

Conclusions:

Pre-pregnancy preparedness among women in mentioned areas and service coverage by health care package were very low. A detail evaluation of the Preconception care package is required.

Keywords: Pre-pregnancy care, Preconception health care, Pre-Pregnancy preparedness

12.

**SERO-PREVALENCE OF LEPTOSPIROSIS AND
HANTAVIRUS INFECTION AMONG ADULT
POPULATION OF UKUWELA MOH AREA,
MATALE DISTRICT, SRI LANKA**

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Background and Objectives:

Leptospirosis and Hantavirus infections are zoonotic diseases with worldwide public health importance. Both diseases have similar clinical presentations and epidemiological features. In Sri Lanka, leptospirosis is an endemic disease whilst Hantavirus infection has been reported in several occasions among humans.

Current study focuses to describe the sero-epidemiology of the said diseases in a selected geographical area in Sri Lanka.

Methodology:

The study was conducted in February 2016. 381 participants from the Ukuwela MOH (Medical Officer Health) area were voluntarily engaged and obtained consent to detect the presence of immunoglobulin G (IgG) against *Leptospiraspp* and Hantavirus by ELISA method. Simultaneously, demographic data were collected via a structured questionnaire.

Results:

Majority of the participants were female and most of them were housewives. Furthermore, 68.8% were from rural areas of the Ukuwela MOH area and 71.7% were below monthly income of LKR20, 000/-. Additionally, 78% of participants have been indicated that they have noticed rat infestation, either in their houses or working places. Sero-analysis revealed that 35.7%, 19.4% and 8.4% participants possessed anti-hantavirus antibodies, anti-leptospira antibodies and antibodies for both diseases respectively. There was no significant difference in antibody prevalence according to gender, occupation, age category or presence/absence of rodent infestation in their

premises. Furthermore, 99% of participants stated that they haven't undergone any episode of leptospirosis or like-illness but (19.6%) of them possessed anti-leptospira antibodies and (35.7%) anti-hantavirus antibodies among them.

Conclusions:

Current study showed higher exposure to *Leptospira* and Hantavirus among the residents of Ukuwela MOH area.

13.

KNOWLEDGE AND ATTITUDES TOWARDS NON COMMUNICABLE DISEASES (NCDS) AND HEALTHY LIFESTYLE CLINICS (HLC) AMONG TARGET GROUP (AGE 35-65) IN THE MENIKHINNA MOH AREA OF THE CENTRAL PROVINCE OF SRI LANKA.

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Background and Objectives:

NCDs are common and increasing, accounting for 82% deaths globally. NCDs often need lengthy and expensive treatment but most are preventable. NCDs account for 71% of mortality rate in Sri Lanka. National policy and strategic framework for prevention and control has been formulated by the Ministry of Health. NCD unit of the Health Ministry has established Healthy Lifestyle Centers (HLC) in every MOH area throughout the

country in 2011 for screening of people between 35-65 ages. Our goal is to control and reduce NCDs by 2% annually. The objective of this study was to identify the knowledge and Attitudes towards NCDs and HLC among target group members and to identify the barriers attending HLC.

Methodology:

Series of focus group discussions conducted with Health workers, Community leaders, Clients of HLC and target group not attending HLC. Ethical clearance obtained from Faculty of Medicine, Peradeniya. Data analyzed qualitatively.

Results:

Clients reluctant to attend HLC as they feel healthy, Services and facilities at HLC not satisfactory , more waiting time , busy with day- to day activities , not worth attending, no motivation , fear of invasive investigations, fear of finding a disease, Fear of social stigma, feeling private sector is better. Suggestions participation were repeated community awareness programs, motivate health staff and community leaders to educate clients, education of health staff for proper conduction of HLCs, proper public relationship appointment system HLCs on Saturdays and Sundays for working people , on the spot screening , no outside investigation and cutting down of waiting time.

Conclusions:

Majority of participant have a fairly good awareness about NCDs and their complications. Pure attitudes among health workers and community are the major obstacles to attend HLCs community awareness, motivation, health sector facilities and services at HLCs lack of staff training proper guidelines and evaluation system should be improved to achieve targets.

Researches related to the Curative Health Services

01.

EXPLORATIVE STUDY OF QUALITY OF LIFE WITH HYPERTENSIVE PATIENTS

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Background and Objectives:

Understood as a personal opinion or perception of the extent to which happiness and satisfaction have been achieved, as well as a sense of a personal, Subjective view that has also been considered to be closely related to certain biological, economics, psychological and social factors.

In congruence with the world Health Organization's definition of health, health-related quality of life refers to the overall conditions of the quality of life of ill or healthy individuals in accordance with the limitation in physical and social activities.

The Measurement of health of health related quality of life is thus a Subjective assessment of one's own well-being – a perception of the degree of contentment with and capability to perform and control different facets of one's life.

The objective of this study was to explore the prevalence and domains of health related quality of life among patients with hypertension, and to examine the relationship between life stressors and health related quality of life among patients with hypertension.

Methodology:

Non –experimental descriptive correlational study was done and the patients were randomly recruited from primary medical care unit – Ukuwela. Permission was obtained and informed consent was overseen by medical officer in-charged. Pearson's correlation coefficient was applied to determine the level significance.

Results and Discussion

Results of the study revealed that;

- Average number of participants experience high emotional wellbeing.
- Average number of participants experienced low general health.
- When physical functioning increases quality of life increases.
- When general health increases the qualities of life increases.
- When role limitation due to physical health increases quality of life decreases.
- When role limitation due to emotional problems increases quality of life decreases.

- When emotional wellbeing is high quality of life increases.
- When social functioning increases quality of life increases
- When bodily pain decreases quality of life increases.
- When energy increases quality of life increases

Conclusion

Study shows that individuals with hypertension have disturbance in their role obligation due to the effects of medical problems – hypertension. These dysfunction culminate to disturb the psychological state, which reduces the value of quality of life.

02.

INVESTIGATION AND DESCRIPTIVE STUDY OF INJURED PATIENTS WHO GOT ADMITTED TO HOSPITAL DUE TO CONFLICT, AS A RESULT OF CRIMINAL BEHAVIOR

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Background and Objectives:

Acute non communicable disease (Accidents) are major burden in Sri Lanka. Descriptive, Scientifically base investigation must do as a need assessment for changing polices as whole country and recommendation and implementation. it's certainly helps improve quality safety care of health institution, as well as modified judicial administrative system of Sri Lanka, Specially crime prevention activities of Sri Lanka police and other legal institution.

Methodology:

Retrospective descriptive study carried out, Sample(n=3664) within 72 months duration, patients admitted with injuries to hospital. Then medical legal examination form (MLEF) police ticket issued by Sri Lanka police. Details of medical legal forms such as age, gender, ethnicity, type of injure weapon used. Category of hurt kind of injury trends and pattern seasonal variation, were, most number of incident taken palace, consider as variables

Results:

Quantities analysis Gender : Male 60.05% Female 33.95% Ethnicity : Buddhist 43.37%, Tamil 45.17%, Islam 7.51%, Christians 3.96% Age : age 10yrs- 39yrs, - 39.87% (younger active age). Type of injury: abrasion 27%, confusion 19.9%, laceration 17.39%. Weapon type (used): blunt 54.09%, Sharpe 37.25%, Non 8.7% Category of heart: Non grievous 50.68%, grievous 33.54%. non 11% Kind of injury : Assault (road traffic Accident 25% and assault, Trends and patterns seasonal relatively more cases (13.4) reported in (April) less cases are reported in September (9.2) (most number of incident taken place- area) most crime taken place – Katabula division)

Conclusions:

Time series decomposing plot for cases examination. It is clear that there is **down ward trends** in the cases of examined. It's reduced in 0.07 cases per month.

Key words: Non communicable disease, judicial administrative system, Medical Legal Examination Form

03.

THE IMPACT OF AN INTERVENTION TO IMPROVE PATIENT SATISFACTION IN A DISTRICT- GENERAL HOSPITAL

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Background and Objectives:

Patient satisfaction in hospital care is an important indicator of quality care and financial success of healthcare institutions. Attempts to measure patient satisfaction and experience in public hospitals aim to capture whether services are of an acceptable standard, and encourage efforts to improve quality and support greater consumer participation in health care. The objective of the present study was to assess the impact of an intervention to improve patient satisfaction in a district- general hospital.

Methodology:

A quasi experimental study was carried out targeting hospital staff and patients for a period of six months. Multiple interventional activities included improvement of staff communication skills, reorientation of clinics to reduce waiting

time of clients attending to clinics and outpatient department, strengthening health education sessions to patients. A conveniently selected 400 clinic and OPD adult patients were introduced a self-administered 18 item validated patient satisfaction questionnaire before and after the intervention. The questionnaire had statements in a five point Likert scale format, with responses ranging from strongly disagree to strongly agree with a middle neutral. The scoring system used was assigning a score of 0-4 for each statement in which a score of zero was assigned to strongly disagree and a score of four for strongly agree with other responses for positively worded items, and a reverse scoring system for negatively worded items. Scores were summed to obtain a total score for patient satisfaction towards their care. The total score ranged from 0 – 64.

Results:

Response rate was 90% for the pretest and 93.6% for the post test. Mean age was 40.9 years in the pretest group and 41.0 years in the post test group. The total scores of the questionnaire for the pre and post intervention groups were tested separately for normality of distribution using one sample Kolmogorov-Smirnov test and were <0.05 in each. Therefore, Mann-Whitney U test was used to calculate the median difference between the

two groups. A significantly ($p<0.05$) higher post value (mean 31.9, SD 4.7) was observed compared to pretest values (mean 31.2, SD 5.2).

Conclusions:

Multiple interventions targeting patients and staff were effective in improving the patient satisfaction in hospitals.

Key words: hospital, patient satisfaction, intervention

04.

KANDY DISTRICT HOSPITAL WASTEWATER TREATMENT

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Background and Introduction:

Hospital wastes consist of both organic and inorganic substances and hazardous due to the presence of high amount of pathological waste, radioactive waste, heavy metals, pharmaceuticals, microbiological pathogens and other chemicals. Final discharge of the major hospitals in Kandy district in Sri Lanka goes to Mahaweli River. Thus there is a high risk of human health impacts due the consumption of river water. The research study aims to evaluate the conditions and quality of wastewater treatment effluent of the selected hospitals in Kandy district in Sri Lanka.

Methodology:

Wastewater samples of both influent and effluent from five different hospital treatment plants were collected monthly over a period of 4 months and they were tested for quality parameters: pH, temperature, electrical conductivity, total

suspended solids (TSS) , biological oxygen demand (BOD₅), chemical oxygen demand (COD), fecal coliform (FC), Total Coliform (TC) and Pharmaceuticals (Paracetamol).

Results:

The results for the parameters of effluents revealed that hospital wastewater quality for most of the above parameters exceeds the allowable limits of Sri Lankan wastewater discharge standards. The maximum recorded values for TSS, BOD₅, COD, FC and TC for the effluents were 305 mg L⁻¹, 181 mg L⁻¹, 620 mg L⁻¹, 380000per 100ml and 1200000per 100ml respectively. Apart from that considerable amount of paracetamol content was detected in wastewater effluents from treatment plants.

Conclusions:

From the results, calculated performance for four of the five hospitals was not up to the standards.

05.

CHALLENGES IN IMPROVING DATA SYSTEMS OF ROAD TRAFFIC INJURIES IN SRI LANKA

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Background and objectives:

Road traffic injuries (RTI) are increasing in low and middle income countries, as twice the risk as the developed countries. This study aims to 1) review national RTI data sources in Sri Lanka, for their strengths and weaknesses and to identify gaps, that if addressed could help improve RTI data systems in Sri Lanka; and 2) summarize the published studies on RTI in Sri Lanka to make recommendations on RTI programs, policies, and research.

Methodology:

A comprehensive review of published articles and gray literature was done together with an analysis of existing data sources. Electronic searches were performed (updated as December 2015) using Pubmed and Google database using specific key words related to RTI. Only studies that included data pertaining to Sri Lanka were selected. Full text articles were then reviewed using the same inclusion criteria, and references from included articles were scanned to find additional relevant articles.

Results:

RTI rate and the RTI death rate in 2010 was 130.0 and 13.2 per 100,000 population respectively in Sri Lanka. There is a 19% increase in RTI rate from 2006 to 2010 in Sri Lanka. The main RTI data sources in Sri Lanka are Sri Lanka traffic police, National death registration system, National transport board and Ministry of Health indoor morbidity and mortality reports. Each existing data system has its own strengths and weaknesses. There are gaps in the existing data systems including limited coverage, underreporting, overlapping, lack of injury surveillance system and even lack of data pertaining to financial burden, risk factors and disability. Despite some studies with limited population locally, overall country statistics or interventions have not been fully assessed.

Conclusions:

Limited availability of important reliable data on RTI in Sri Lanka is an issue. Standardization of data systems with intersystem connections covering the country is recommended in order to be comparable internationally.

Keywords: road traffic injuries, Sri Lanka, injury epidemiology, injury data

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“Imagination is the highest form of Research”

- Albert Einstein

“If we knew what we were doing it would not be called research, would it”

- Albert Einstein

“Research is to see what everybody else has seen and to think what nobody else has thought”

- Albert Szent Gyorgyi

“Research is Formalized curiosity. It is poking and prying with a purpose “

- Zora Neale Hurston

*“It is important to get results from experiment, but the **most important** is the process in getting that results”*

- Dr Nik Ahmad Nizam

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