Faculty of Medicine, University of Jaffna

**Proceedings
of
Undergraduate
Research Symposium - 2018**

Abstracts of Research Papers

*07 August 2018
Jaffna,
Sri Lanka.*

Proceedings of Undergraduate Research Symposium 2018

Message by the Vice chancellor of University of Jaffna

I am so much delighted to send this forward message to this important symposium which takes place in the University. This first Undergraduate Research Symposium is organized by the Faculty of Medicine, University of Jaffna as part of the 40th year anniversary celebrations. The academic staff members of the faculty guide the students in research activities in addition to their routine teaching learning activities. Research activities contribute to the larger body of knowledge and train the students in continuous search. I believe presentations of this symposium will address some of the vital health issues of the region and the nation on the one hand and provide motivation for in depth research in the identified areas on the other. I congratulate the organizing committee of the symposium.I further believe, this symposium will also contribute to improve the international standard of the University of Jaffna. I wish all the very best and good luck to the participants, particularly the students to have a valuable and memorable experience.

Prof. R. Vigneswaran
Vice-Chancellor
University of Jaffna

Message from the Dean

It is with great pleasure I am sending this brief message to the proceedings of first Undergraduate Research Symposium 2018. Firstly, I congratulate for the celebration of the 40th Anniversary of the Faculty of Medicine in partnership with the Alumni, Faculty of Medicine and Jaffna Medical Faculty Overseas Alumni (JMFOA). The Research symposium is one of the important events of the 40th Anniversary of the Faculty of Medicine which provides Medical and Allied Health Sciences undergraduate students an opportunity to showcase their research findings and discuss their relevance and validity with their colleagues as well as with other relevant stakeholders who make use of these findings towards regional and national development purposes.

I would like to congratulate the staff and the research students for disseminating and sharing their research findings with academics as well as stakeholders. I would like to take this opportunity to thank the Vice Chancellor and the 40th Anniversary Organizing Committees of the Faculty of Medicine and the Sub-Committee to the Undergraduate Research Symposium for their efforts to make this event as successful.

Dr.S.Raviraj MBBS (Jaf), MS(SL),
Dean,
Faculty of Medicine,
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S. Sasrubi[1], S. Balakumar[2], V. Arasaratnam[2]

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Thanuja T[1], Rushan R[1], Shivaram S[1], Suvethini L[1], Kandeepan K[2], Balakumar S[2] and Arasaratnam V[2]

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**Evaluation of knowledge, attitude and practicere garding
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Mithuran E[1], Upendran N[1], Sivarajah N[2], Ambalavanar V[3]

Abstracts of Oral Presentations

Biochemical and clinical correlates of microalbuminuria among type 2 diabetes mellitus patients attending the Diabetic Centre, Teaching Hospital Jaffna

Subunca R[1],Senthuran S[1], Kumaran S[2], Aravinthan M[3],Coonghe PAD[2]

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Background: Diabetes Mellitus (DM) is an emerging threat to public health. DM affects quality of life and leads to premature death. Microalbumiuria (MA) being an early predictor of vascular complication is an ideal marker to identify DM complications. This study aimed to identify the biochemical and clinical correlates of MA amongpatients diagnosed with type 2 DM attending the Diabetic Centre, Teaching Hospital Jaffna.

Methods: A descriptive cross-sectional study was conducted on a systematic random sample of 408 type 2 DM patients from November 2017 to January 2018 at Diabetic Centre, Teaching Hospital Jaffna. An interviewer administered questionnaire was used to collect data. Details of clinical and biochemical parameters, co-morbidities and complications were obtained from the last available laboratory reports and medical records. Albumin creatinine ratio (ACR) measured by immunoturbidimetric assay method on a random spot sample of urine was extracted from laboratory reports. Data were entered and analyzed using the Statistical Package for the Social Science (SPSS) version 21. P value was considered significant at ≤ 0.05.

Results: The study sample comprised 137 males and 271 females with a mean age of the 59.8 years (SD 10.6). The prevalence of MA and overt nephropathy were 26.5% (n$\leq$108, 95%CI 22.2%-30.8%) and 11.5% (n$\leq$47, 95%CI 8.4%-14.6%) respectively. Age($p\leq0.031$), triglyceride level ($p\leq0.012$) and duration of DM ($p<0.0001$) was significantly positively correlated with ACR. Abnormal fasting plasma glucose ($p\leq0.028$), greaterduration of DM ($p\leq0.003$), greaterwaist circumference ($p\leq0.047$), presence of hypertension ($p\leq0.015$), ischemic heart disease ($p\leq0.008$), retinopathy ($p\leq0.002$) and nephropathy ($p<0.0001$) were significantly associated with the presence of MA. Gender, BMI, HbA1c and abnormal blood pressure had no significant association.

Conclusion: The overall prevalence of MA in type 2 DM patients attending the Diabetic Centre, Teaching Hospital Jaffna was 26.5%. The biochemical and clinical correlates identified in this study merit further researcher to guide health promotion efforts in Sri Lanka.

Keywords: Microalbuminuria, diabetes mellitus, correlates, Jaffna

Influence of socio-demographic factors and institutional infrastructure facilities on satisfaction of pregnant mothers attending ante-natal clinics in the Nallur MOH area

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Background: Complications of pregnancy and childbirth are the leading causes of morbidity and mortality among women in the reproductive age in developing countries.Studies have estimated that good ante-natal care alone can reduce maternal mortality by 20% given good quality and regular attendance.This study aimed to assess the influence of socio-demographic factors of pregnant mothers and institutional infrastructure facilities on satisfaction of pregnant mothers regarding provided care in antenatal clinics.

Methods: Institutional based descriptive cross-sectional study was conducted in Nallur MOH area from August, 2016 to May, 2018. All ante-natal clinics in Nallur MOH area were selected and a complete enumeration method was used because of limited number of participants. SPSS for windows (version 21) was used for statistical analysis. The association between independent variables and dependent was measured using chi square test and p values below 0.05 was used to declare statistical association.

Results: Two hundred twenty-four participants responded to the questionnaire making 85.17% response rate. Majority were (71%) between age 27-37, most (72.3%) of the mothers were Hindus. More than half (51.8%) of pregnant mothers has sat for A/L and majority (71.4%) of them were house wives. More than half (67.4%) of the pregnant mothers had a family income >30,000/≤. Overall satisfaction for care provided was 51.8%. Mothers were satisfied with state of the clinic environment & attitude of the staff (98.7%), adequacy & condition of the seats available (50.9%), waiting time (54.5%), hygiene practices (53.6%), and support provided by the staff (53.6%). Pregnant mothers were not satisfied with adequacy of toilet facilities (58%), availability of trained staff (51.8%) and condition of medical equipment and drug handling (74.6%).

Conclusion: The overall maternal ANC service satisfaction in this study is found to be suboptimal. This study suggests that several aspects in the provision of ANC services can be implied as areas of possible improvement includes recruiting more staff trained staff, condition of medical equipment and toilet facilities.

Keywords: Pregnancy, satisfaction, infrastructure, Jaffna, Primary health care

A study of inhaler technique and associated factors among asthma patients attending medical clinic Teaching Hospital Jaffna

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Background: Asthma affects a large number of patients in Sri Lanka. Asthma can be controlled with adequate medication. However, correct inhaler-specific technique is needed for good asthma control. Inhaler technique is influenced by various factors. This study aims to assess inhaler technique and associated factors related to inaccurate inhaleruse among asthma patients attending medical clinics in Jaffna Teaching Hospital.

Methods: This descriptive cross-sectional study involved 233 physician diagnosed asthmatics (minimum 3 months after diagnosis) attending medical clinics at Teaching Hospital Jaffna. Patients were asked to demonstrate inhaler technique while an inhaler-administration checklist was used to assess each patient's inhaler technique. Information on demographics, type of inhaler, history of asthma symptoms and history of technique education were obtained. Data was analyzed using standard statistical methods.Ethical clearance was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna.

Results: A total of 233 asthma patients participated in the study. Sixty percent (n≤139) were females. Among the total sample, 81.1% used metered dose inhalers (MDI) and 15.9% patients used dry powder inhalers (DPI). For MDI, 22.8% (43/189) completed all required steps while 51.4% (19/37) did so for DPI ($P < 0.05$). "Hand mouth coordination,""hold breath for 10-20 seconds" and "waits 20-30 second before repeating the procedure"were thesteps found to be mainly difficult by MDI users, and "exhale deeply, away from the mouthpiece," and "hold breath for 10 seconds" were the two major errors in using DPI inhalers. Patients with higher educational qualifications (above A/L) ($P < 0.05$) were more likely to use MDI inhalers properly.

Conclusion: Asthma patients on inhalation medications should have routine assessment oftheir inhaler techniqueat every visit. Attention needs to be given to the steps identified above and corrected if found to be poor.

Keywords: asthma, metered dose inhaler, dry powder inhaler, inhaler-administration checklist, inhaler technique

A Descriptive Study on the Relationship Between Selected Physiological parameters andVisceral Adiposity Index Among Non-Diabetic hypertensive PatientsAttending Medical Clinics, Teaching Hospital, Jaffna

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Background: Visceral adiposity is a form of fat deposition in the abdominal viscera, omentum and internal organs. It doesn't include the subcutaneous fat. Visceral adiposity index plays a key role in diagnosing some of the major diseases regarding metabolic syndrome including hypertension.The effect of selected physiological parameters on Visceral Adiposity Index (VAI) was studied among non-diabetic hypertensive adult patients.

Methodology: It was a descriptive cross sectional study on non-diabetic hypertensive adult patients attending Medical Clinics, Teaching Hospital Jaffna.The study was carried out among the patients betweenthe ages of 18 and 80 and they were selected by random sampling method. The selected physiological parameters such as body weight, height and waist and hip circumferences of all the subjects were measured. The skeletal muscle mass (kg) and fat mass (kg) were measured using Bio Impedance analyzer. The Body Mass Index (BMI), Waist Hip ratio (W/H ratio) and Visceral Adiposity Index (VAI) were calculated.Ethical Review Committee (Faculty of Medicine, University of Jaffna) approval was obtained. Statistical analysis was carried out with SPSS (version 21.0).

Results: Of the 55 non-diabetic patients (age between 30 and 80 years), 43.6% (n≤24) were males. Mean BMI of males and females were 24.5 (±4.11) & 26.1 (±4.98) kg m^{-2} respectively. Mean W/H Ratio and Fat mass of males and females were 0.9 (±0.06) & 0.9 (±0.07) and 17.7 (±6.82) & 25.1 (±9.28) kg respectively. Mean VAI values of males and females were 1.8 (±0.99) and 2.7 (±1.46) kg^{-1}m^3 respectively.Among the participants, 66% of males 93.5% of females had high W/H ratio; 33.3% of males and 35.5% of females had high fat mass content. Among the males & females 37.5 & 51.6% were obese, 29.1 & 19.4% were overweight respectively.VAI was high (>1) in 78.18% (n≤43) of the study population [58.3% (n≤14) of males and 93.54% (n≤29) of females].When the Hypertensive patients were grouped based on the age in 10 year interval, it was observed that, there were females in the age group of 31 -40 years had the highest BMI [36.3 (±)5.0 kg m^{-2}] and second highest VAI [3.67 (±1.72) kg^{-1}m^3]. Such odds were not observed among the males. In females the highest BMI, W/H Ratio, fat mass and VAI were seen in the age group of 31-40 years and the lowest values in the age group of 41-50 years. There was no such significant observation in males.Highest number of obese males (5 nos.) and females (9 nos.) were of the same age group (51– 60 years). Highest W/H Ratio was observed among

those belong to the age group of 31– 40 years (males 0.95 and females 0.97) and the same age group females showed highest fat mass (44.45 kg) while among the males highest fat mass (21.7 kg) was observed in the age group of 51– 60 years and highest VAI was observed among those of 41 – 50 years.

Among the females (71 – 80 years) those who had the second highest BMI (27.85 kgm^{-2}), W/H ratio (0.945) and fat mass (26.6 kg) showed highest VAI (5.34 kg^{-1}m^{3}) with lowest skeletal muscle mass (17.7kg). Males of 51-60 years had highest BMI (36.5 kgm^{-2}), W/H ratio (0.965) and fat mass (44.95 kg) with the second lowest VAI (1.42 kg^{-1}m^{3}). Among the males highest BMI [27.44($\pm$5.17) kg m^{-2}], VAI [2.24 ($\pm$0.44) kg^{-1}m^{3}], levels were observed among those of 51-60 and 41– 50 years age group respectively. Among the males lowest BMI [22.56 ($\pm$2.4) kg m^{-2}], VAI [1.39 ($\pm$0.0) kg^{-1}m^{3}], levels were observed among those of 71-80 and 31-40 years age group respectively.While classifying the subjects as normal, overweight and obese individuals based on BMI, highest values for mean W/H Ratio, fat mass, skeletal muscle mass and VAI were observed in obese males and females. Fat mass levels increased with increase in BMI values. Increase in BMI (Pearson correlation $\leq$ 0.256, p$\leq$0.059), increase in fat mass (Pearson correlation $\leq$ 0.314, p$\leq$0.019) and increase in W/H ratio (Pearson correlation $\leq$ 0.228, p$\leq$0.094) increase VAI independently.

Conclusion: Females had higher VAI than males. Females showed a direct correlation between VAI and BMI, W/H ratio and fat mass. Similar correlation was not observed among males.

Key Words: Visceral Adiposity Index, Hypertension, Waist hip ratio, Body mass index, fat mass

Prevalence and severity of dysmenorrhoea and associated menstrual characteristics among A/L students in girls' schools of the Jaffna Education Division

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Introduction: Dysmenorrhoea refers to crampy pelvic pain beginning shortly before or at the onset of menstruation, and lasting 1-3 days. It can occur before the onset or throughout menstruation. There is wide variation in the prevalence of dysmenorrhoea across the world with reports ranging between 28% and 71.7%. In the Western Province of Sri Lanka, prevalence has been estimated to be 84% among A/L students. Little is known about the prevalence and severity of dysmenorrhoea among adolescents in northern Sri Lanka. Objective: Todetermine the prevalence and assess the severity of dysmenorrhoea and associated menstrual characteristics among A/L school girls in Jaffna Education Division.

Methodology: A descriptive cross-sectional study was carried out among 230 A/L students between 18-19 years of age attending girls' schools in Jaffna. Details of menstrual characteristics were collected by a self-administered questionnaire. Students who reported pain during menstruation with abdominal/lower back pain lasting at least two days during a menstrual period for at least six months were considered positive for dysmenorrhoea. Menstrual severity was assessed using the Visual Analog Scale (VAS) and graded by a Multidimensional Scoring System (MSS). The influence of menstrual characteristics on the presence of dysmenorrhoea was assessed using the Chi Square test.

Results: Although 81.7% (n≤187) of students reported pain during menstruation on direct questioning, and >90% indicated they experienced menstrualpain on VAS, the prevalence of dysmenorrhoeabased on the study criteria was 18.3% (n≤42). Among thelatter, 50% (n≤21) had mild dysmenorrhoea, while 33.3% (n≤14) and 16.7% (n≤7) had moderate and severe dysmenorrhoea. Presence of clots (p≤0.003), using>3 pads/day (p≤0.001), and positive family history of pain during menstruation (p≤0.006) were significantly associated with the presence of dysmenorrhoea.

Conclusion: As has been found in the Western Province, pain during menstruation is common among A/L students in Jaffna. However, the prevalence of clinically significant dysmenorrhoea is much lower, suggesting that pain during menstruation may not impact the day-to-day functioning of a majority of A/L students. Larger-scale population-based studies are needed to identify risk factors associated withdysmenorrhoea in Sri Lanka to guide early detection and management.

Key words: dysmenorrhoea, prevalence, severity, adolescents, Jaffna

Psychological status of institutionalized elders in Elders' Home Kaithady, Jaffna

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Background: The proportion of elders in the general population is rising. As there is an increasing psychological risk with advanced age, the number of psychologically affected elders is also rising. The objective of this study was to assess the prevalence and factors influencing cognitive impairment, depression, anxiety, stress and perceived satisfaction among elders residing in Elders'Home Kaithady, Jaffna.

Methods: This study was a descriptive cross-sectional institutional based study at Elders'HomeKaithady carried out betweenNovember 2017 andMarch 2018. An interviewer-administered questionnaire was used to collect data. The Montreal Cognitive Assessment tool (MoCA) was used to assess objective cognitive decline, and DASS 21 was used to assess depression, anxiety and stress.SPSS 23 was used to analyze data. Ethical approval was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna.

Results: The response rate was 91.3% with 47.9% (n≤80) and 52.1% (n≤87) of the sample being males and females respectively. The mean age was 70.3 years with over half (55.7%) being below 70 years of age.More than 75% had not studied beyond the primary level. About half (49.1%, n≤82) reported being married; 13 elders (7.8%) were divorced, 4 elders (2.4%) were seperated and 13 elders (7.8%) were widowed. Assessment of psychological status revealed that 6 elders (3.6%) had severe depression and 4 (2.4%) had extremely severe depression. Fifteen elders (9.0%) had severe anxiety and 15 (9.0%) had extremely severe anxiety. Sixteen elders (9.6%) had moderate stress, and one (0.6%) had severe stress with none having extremely severe stress. Twelve elders (43.1%) had mild cognitive impairment, 88 elders (52.7%) had moderate cognitive impairment. Only about half of the sample (50.3%, n≤84) were satisfied with the facilities available at the home and its environment. Level of life perceived satisfaction with satisfied level greater than (50.3%)unsatisfied level(1.2%).Severe depression was greater amongelders below 60 years of age (4%) than those above 60 years(3.5%). Anxiety was greater among elders below 60 years (12%) than those above 60 years (8.%). Stress levels did not not significantly differe by age.

Conclusions: Depression, anxiety, and stress are fairly prevalent and a large proportion of institutionalized elders have cognitive impairment. About half of the sample reported being unsatisfied with the facilities available to them at Elders' Home Kaithady. Urgent steps need to be taken to improve the quality of life of institutionalized elders in Jaffna.

Key words: Institutionalized elders, depression, anxiety, stress, cognitive impairment, satisfaction.

Participation in sports activities and influence of perceived barriers on participation in sports activities among 1st year students in Jaffna campus of University of Jaffna

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Background: Participation in sports activities among the 1st year students of University of Jaffna students is being inadequate throughout the last decade according to the statistics. There is a steep decline in participation from School to University. The literatures suggests several factors that influence in decline. In this study main limiting factor for the decline in participation were perceived and studied.

Methods: Among 1st year studentsof University of Jaffna a total of 336 were selected randomly from all faculties and units in Jaffna district. Their participation in sports in University level and school level were assessed using the questionnaire. The academic work load of each student was calculated according to Sri Lanka Qualification Framework. The association between sports participation and academic workload was analysed using Chi-square.

Results: The participation of 1st year students in University level sports activities was 17% of total population. And the most participants were from Faculty of Management (40.4%) and least was from Siddha medicine unit (0%). Considering the academic work load Faculty of medicine had highest value (64.3%) in High work load category and Fine Arts unit had the least value. There was no statistically significant correlation between Academic work load and Sports participation.

Conclusion: Participation in sports activity was poor among 1st year students of University of Jaffna. Though there is vast deviation in academic workload among faculties and each individual student, there no association between sports participation and academic work load of a students. It suggests that academic workload is not the main limiting factor for sports participation and other factors should be studied in future.

Knowledge and attitude of Jaffna University undergraduates towards Human Immunodeficiency Virus(HIV) infection

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Background: The Human Immunodeficiency Virus (HIV) is a critically infectious sexually transmitted virus. In 2015, the total number of HIV patients was 2308 with 235 new HIV cases reported to the National STD/AIDS Control Programme that same year.At present, adolescents and youth are considered vulnerable to HIV infection. Empowering youth with knowledge is considered an effective method of HIV prevention. This study aimed to assess the knowledge and attitude of Jaffna University undergraduates towards HIV infection.

Methods: This is a cross-sectional descriptive study carried out among undergraduates of Jaffna University. The estimated sample size was 427. Aself-administered questionnaire, adapted from the WHO Behavioural Surveillance Survey (BSS), was used to assess the level of knowledge and attitude towardsHIV infection. SPSS was used to analyze the data.

Results:427 students participated in the study, giving a response rate of 100%. Sixty-eight (15.9%) students scored 5 out of 9 regarding symptoms of HIV. One hundred and thirty-nine (32.6%) students scored 4 out of 7 regarding spreading of HIV. One hundred and thirty-six (31.9%) students score 2 out of 4 regarding prevention of HIV.The association between knowledge level and sociodemographic factors (faculty, religion, ethnicity, gender)was significant (p<0.05). The association between attitude and sociodemographic factorswas not significant.

Keywords:HIV, undergraduates, Jaffna, knowledge, attitude

Knowledge and attitude of Jaffna University undergraduates towards Human Immunodeficiency Virus(HIV) infection

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Background: It has been observed that the academic performance of G.C.E O/L students in Jaffnadistrictis on the decline. Though academic performance is multifactorial, one of the factors influencing performance is the learning styles of students.Three of the most common learning styles are visual, auditory and kinesthetic (VAK) by which students gain information. In Sri Lanka, academic performance may be considered one of the main tangible learning outcomes and is measured by examinations in schools.This study aimed to describe the pattern of learning styles and assess its influence on academic performance among Grade 11 students of Jaffna Educational Zone.

Methods:A total of 701 students from 29 classes of schools in the Jaffna Educational Zone participated in this study. The questionnaire, developed from the VAK Learning Style Brain Box and VAK Learning Style Inventory, was used to assess the learning style of students. The marks obtained by students at three term examinations for six compulsory subjects (mathematics, science, English, Tamil, religion, history) in the previous year (Grade 10) wereused to assess academic performance. One-way ANOVA and t-test were used to assess the relationship between learning styles and academic performance.

Results: Majority of learners wereunimodal (85.2%) and among them the majority were kinesthetic learners (57.1%),followed by visual learners (14.4%), and auditory learners (13.7%). The mean marks scored for the six compulsory subjects rangedbetween 48 to 68.Kinesthetic learners obtained the highest mean marks for all compulsory subjects except English.There was no statistically significant relationship between learning styles and academic performance (p≤0.201).

Conclusion: There may be a mismatch between the traditional auditory teaching strategy and the preferred learning style of students. Learning styles of students need to considered in curriculum

 Keywords: Learning style, academic performance, adolescents, Jaffna

Study on psychological, socio-demographic and economic factors among the patients with common gynecological malignancies, attending the oncology clinic at Teaching Hospital Jaffna and Thellipalai Trail Cancer Hospital

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Background: Cancer is a major health problem in Sri Lanka as well as worldwide. Incidence of common gynecologic cancer is increasing and mortality is also significant in Sri Lanka. There are limited studies and information about the supportive care facilities, common perceived psychological factors and association with socio-demographic and economic issues which are affecting them and type of assistances need in coping with those factors and accessibility of supportive care services of gynecological cancer survivors. The objective of this study is to assess the selected psychological, socio-demographic, economical factors and the influence of socio economic factors on perceived psychological problems among the patients with common Gynecological malignancies, attending the oncology clinic of Teaching Hospital Jaffna and Thellipalai Trail Cancer Hospital.

Methods: Cross sectional descriptive institutional based study was conducted among 103 gynecologic cancer survivors attending the oncology clinic of Teaching Hospital Jaffna and Thellipalai Trail Cancer Hospital during November 2017 to March 2018. Interviewer administered questionnaire was used to collect the data. HAD scale was used to assess the depression and anxiety.

Results: In this study population 55 (53.4%) women were having cervical cancer, 31 (30.1% women with ovarian cancer, endometrial cancer patients were 15 (14.6%) and only two (1.9%) of them having vulval cancer. Their age groups ranged from minimum of 22 years and Maximum of 78 years. Mean age of that population was 55.9 years with the standard deviation of 12.208. Highest numbers of patient were in 51-65 age range and that was 49 (47.6%) Among them 57 (55.3%) patients were assessed to have anxiety and 63(61.8%) patients among them. When cross tabulation was done between different socio demographic and economic factors of the cancer survivors with anxiety and depression, the following factors were found out to be significant with associated P value less than 0.05: Civil status of cancer patients, duration from diagnosis, educational qualification.

Conclusion; This present study revealed that the gynecological cancer patients' most of the psychosocial and economic factors were under addressed and poorly met due to the various reasons. The prevalence of anxiety and depression amongst cancer patients was high showing that importance should be given to screening and counseling cancer patients for anxiety and depression, to help them cope with cancer as a disease and its impact on their mental wellbeing and outcome of the treatment.

Key words: Gynecological malignancies, psychological, Jaffna, Thellipalai

Knowledge and attitude of pap smear testing and associated socio demographic factors among women between ages of 21 to 65 years attending the OPD at Divisional Hospital, Kondavil

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Background: Cervical cancer is the fourth most common cancer worldwide and one third of cervical cancer burden is to be found in India, Nepal, Bangladesh and Sri Lanka. It is the second largest cause of female cancer death in Sri Lanka. Human Papilloma virus is the major etiological agent of cervical cancer. Cervical cancer can be prevented by early detection and human papilloma virus vaccination. In Sri Lanka even though prevention services are available, most of the cancer cases are reported at a late stage.

Methodology: This was a descriptive cross sectional study to assess knowledge and attitude of Pap smear testing and associated socio demographic factors among 248 women between ages of 21 to 65 years attending the OPD at Divisional Hospital, Kondavil. Interviewer administered questionnaire was used and collected data was analysed by SPSS package.

Results: Majority of the participantswas age $\leq$>35 years 169 (64.1%) and ever married women were 214(86.3%). All most all were Hindu 237(95.6%) and majority were housewife 180(72.6%). Among the total participants 178 (62.6%) were studied up to O/L. We found that only 44 (17.7%) women ever had heard about Pap smear test and only 60(24.2%) aware about cervical cancer. Among the women who had heard about Cervical cancer answered correctly as sexual intercourse 18 (30%), multiple sexual partners 43(71.7%) and smoking 15(25%) are the risk factors for cervical cancer. All those who knew about cervical cancer answered as early detectionis good for treatment outcome. Attitude was assessed among the 44 participants who knew about Pap smear test,42 (95.5%) showed positive attitude to the question "Screening helps in prevention of carcinoma of the cervix" and 33 (65%) believed that screening causes no harm. Majority of them 33(77.3%) had answered positively as if screening is free and causes no harm they will screen.The study found that knowledge (p$\leq$0.046)of Pap smear test were significantly associated with age.There were no significant correlation between knowledge and other sociodemographic factors such as educational level, parity and duration of marriage.

Conclusions: There is a poor knowledge about Pap smear test and cervical cancer among the study population. But the participants who had awareness on Pap smear test showed positive attitude towards the test.

Keywords: Pap smear, knowledge, women, Jaffna

A descriptive study on the relationship between visceral Adiposity index and lipid Profile & CRP levels among non-diabetic h ypertensive patients attending medical clinics, Teaching Hospital, Jaffna

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Background: Due to the changes in lifestyle, prevalence of non-communicable diseases is also increasing. One among them is the metabolic syndrome, due to excessive calorie intake and sedentary lifestyle, leading increased fat storage. Consumption of high fat diet with increased LDL and lack of exercise increases the fat accumulation, named as Visceral Adiposity. To measure the risk of developing these disorders Visceral Adiposity Index (VAI) is one of the best indicators. The aim of the study was to determine association of Visceral Adiposity Index (VAI) with selected biochemical parameters among non-diabetic hypertensive patients.

Methodology: This is a 12 days descriptive cross sectional study. A total of 55 non-diabetic hypertensive patients were selected among the patients who attended the Medical Clinics, Teaching Hospital, Jaffna. The height, weight and fat mass were measured using standard methods and the Body Mass Index (BMI) and VAI were calculated. Blood samples were collected and the serum LDL, HDL, Total Cholesterol, triacylglycerol and C - reactive protein (CRP) levels were estimated and were correlated with VAI. Ethical clearance had obtained from Ethical Review Committee, Faculty of Medicine, and University of Jaffna. These collections of data were analyzed using SPSS software.

Results: Of the 55 non-diabetic patients (age between 30 and 80 years), 56.4% (n$\leq$41) were females.Mean BMI of males and females were 24.5 ($\pm$4.11) & 26.1 ($\pm$4.98) kg m^{-2} respectively. Mean VAI values of males and females were 1.8 ($\pm$0.99) and 2.7 ($\pm$1.46) kg^{-1}m^3 respectively. Mean LDL, HDL, Total cholesterol, Triglycerides and CRP levels of male and females were 88.72($\pm$32.1) &106.13($\pm$34.4), mg/dl; 46.55 ($\pm$8.4)& 53.24 ($\pm$10.9) mg/dl; 156.93 ($\pm$37.9) &183.50 ($\pm$37.3) mg/dl; 139.95 ($\pm$76.3) &152.41($\pm$67.8) mg/dl and 1.56 ($\pm$0.76) mg/dl and 1.68 ($\pm$0.81) mg/dl respectively.

When the Hypertensive patients were grouped based on the age in 10 year interval, it was observed that, there were females in the age group of 31 -40 years had the highest BMI [36.3 ($\pm$)5.0 kg m^{-2}] and second highest VAI [3.67 ($\pm$1.72) kg^{-1}m^3]. Such odds were not observed among the males.The females (71-80 years) who had the highest VAI values [5.34 ($\pm$0.38) kg^{-1}m^3] also had highest LDL [138.75($\pm$40.05)

mg/dl)], Total cholesterol [235.0 (±20.0) mg/dl)] triacylglycerol [293.9 (±20.3) mg/dl)] and CRP [3.53 (±0) mg/dl)] levels, while having lowest HDL [46.0(±0.8) mg/dl)] level.The females (41-50 years) who had the lowest VAI values [1.25(±0.54) $kg^{-1}m^3$] also had lowest LDL [82.5(±27.63) mg/dl)], Total cholesterol [168.7. (±33.19) mg/dl)] triacylglycerol [88.1 (±11.69) mg/dl)] and CRP [1.25 (±0.54) mg/dl)] levels, while having highest HDL [65.83 (±16.45) mg/dl)] level.Among the males highest BMI [27.44(±5.17) kg m^{-2}], VAI [2.24 (±0.44) $kg^{-1}m^3$], LDL [148.4 (±0) mg/dl], HDL [51.8 (±0) mg/dl], Total Cholesterol [225 (±0.0)mg/dl], Triacylglycerol [168.98 (±80.33)mg/dl] and CRP levels [2.26 (±0.54) mg / dl] levels were observed among those of 51-60; 41– 50, 31-40; 31-40; 31-40; 71-80 and 41 –50 years age group respectively. Among the males lowest BMI [22.56 (±2.4) kg m^{-2}], VAI [1.39 (±0.0) $kg^{-1}m^3$], LDL [76.17(±11.76) mg/dl], HDL [41.43 (±5.81) mg/dl], Total Cholesterol [141.47 (±19.70)mg/dl], Triacylglycerol [114.94 (±46.19)mg/dl] and CRP levels [1.22 (±0.40) mg / dl] levels were observed among those of 71-80; 31-40; 51 – 60, 41-50; 51-60; 51-60 and 51 –60 years age group respectively.Males who had the highest VAI values [2.24 (±0.44) $kg^{-1}m^3$] had the highest CRP [2.26 (±0.54) mg /dl] level. The males who had lowest VAI value [31 – 40 years; 1.39 (±0.0) $kg^{-1}m^3$] had the highest [148.4 (±0) mg/dl], HDL [51.8 (±0) mg/dl], Total Cholesterol [225 (±0.0)mg/dl] levels.

Among the males & females 12.5 & 25.8% were obese, 54.17 & 45.16% were overweight respectively. Mean VAI values [males 2.39 (±1.15) and females 3.23 (±1.84) $kg^{-1}m^3$] were the highest among the obese subjects. With increase in VAI the plasma triacylglycerol levels [obese subjects males 170.17 (±72.85) and females 177.05 (±80.45)mg/dl; overweight subjects males 131.33 (±56.67) and females 145.39 (±64.65)mg/dl and normal BMI males 107.76(±45.49) and females 141.47 (±48.32) mg/dl]was increased. Among both males and females of obese, overweight and those with normal BMI the LDL to HDL ratios ranged from 2.2 to 1.83.

Conclusion

Among the females, there were two class 2 obese patients belonging to 31 – 40 years. When the patients were classified based on the age, there were direct correlation between VAI and LDL/ HDL ratio; triacylglycerol (Pearson correlation ≤ 0.904; p≤0.00), total cholesterol (Pearson correlation ≤ 0.502; p≤0.00) and CRP (Pearson correlation ≤ 0.790; p≤0.00) levels. When the patients were classified as obese, overweight and with normal BMIthere were direct correlation between VAI and fat mass, LDL/ HDL ratio; triacylglycerol, total cholesterol and CRP levels.

Keywords
Visceral Adiposity Index, Body mass index, cholesterol, triacylglycerol, C - reactive protein.

The relationship between sources of stress and perceived level of stress among first year medical students of the Faculty of Medicine, University of Jaffna

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Background: Medical students face many stressors during their lengthy undergraduate medical programme. Stress has become a major problem among medical students compared to their non-medical peers.The objective of this study was to assess the relationship between sources of stress and perceived level of stress among first year medical students of Faculty of Medicine, University of Jaffna.

Methods: This was aninstitutional-based cross sectional study offirst year medical students ofJaffna Medical Faculty. A pretested self-administered questionnaire was used for data collection.A modified version of the medical students' stressor questionnaire (MSSQ) and the Perceived Stress Scale (PSS-10) were used to assess sources of stress and perceived level of stress, respectively.Responses to PSS-10 were marked out of 40 and a total mark (0-13 low stress, 14-26 moderate stress, 27-40 high stress) was obtained for each student.A total score was obtained according to responses under each stressor category. Analysis was done using Pearson correlation.

Results: 106 students participated in the study with a response rate of 78%. The mean age of the participants was 22 years. The mean PSS score was 19.44 (SD±4.658). A large majority of participants (91.4%)were identified to have a moderate level of perceived stress.A statistically significant relationship was identified between perceived level of stress and academic related stressors ($r \leq 0.355$, $p<0.001$), interpersonal and intrapersonal related stressors ($r \leq 0.267$, $p <0.05$),and group activity related stressors ($r \leq 0.243$, $p <0.05$).

Conclusion: Most medical students at the Jaffna Medical Faculty experience a moderate level of perceived stress. Academic related stressors, interpersonal and intra personal related stressors,and group activity related stressors are positively correlated with stress level. Strengthening existing stress-relieving strategies and integrating new strategies to the curriculum would be a good start to addressing the sources of stress among medical students.

Key words: Medical students, perceived stress level, stressors.

Association of playing mobile game with academic performance of students of selected faculties of the University of Jaffna

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Background: Playing games in mobile has become a habit among the university students due to rising usage ofmobile devices. Availability of preinstalled and freely downloadable facilities increase chances of playing mobile game among the university students.

Objective: To measure the association of playing mobile game with academic performance of students of selected faculties of the University of Jaffna.

Methodology: An institutional based descriptive cross sectional study was carried out in selected faculties of the University of Jaffna. A total of 426 undergraduate final year students of Faculty of Science (N$\leq$71), Faculty of Arts (N$\leq$249) and Faculty of Management Studies and Commerce (N$\leq$106) were selected by proportionate stratified random sampling method and Self-administered questionnaires were used to collect data. Survey data were analyzed using Statistical Package for Social Sciences (SPSS) using chi-squared test for association. Academic performance of students were assessed by Grade Point Average (GPA) score of previous end of semester examination reported by students.

Results: Among 426 students 387 students responded with overall response rate of 90.8%. Mean age of the study population was 24years (SD$\pm$0.666). Out of the 387 students 67.2% (260) were mobile phone game players.Assignment submission on time was significantly associated (Chi$\leq$12.221, df$\leq$1, P<0.001) with mobile game playing. Among the students 66.4% (257) passed and 33.6% (130) failed in previous end semester examination. Mobile game playing was significantly associated (Chi$\leq$26.981, df$\leq$1, P<0.001) with academic performance of students. Majority of the students (84.6%) who failed in previous end of semester examination were mobile game players. Within non-mobile game players only 15.7% (20) of students failed but percentage of failure was 42.3% (110) among the mobile game players.

Conclusion: Increasing mobile game playing was significantly associated with delayed assignment submission and lower academic performance. Students should be advised to spend less time on playing mobile game so that they can submit their assignment on time and spend more time in academic activities. We would recommend further studies to be conducted to find out factors that could motivate the students to spend more time on academic work rather than playing mobile phone games.

Keywords: academic performance, mobile game playing, university students.

The incidence of Injuries and knowledge, attitude and practice of basic first aid measures among undergraduate students of Faculty of Engineering and Faculty of Agriculture, University of Jaffna

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Background: Injuries are a leading cause of death, hospitalization and disability throughout the world and is a major public health problem in the South East Asia Region including Sri Lanka. Thousands of people are dying each year in situations where first aid could have made the difference. Therefore, every citizen shares the responsibility of having basic first aid knowledge and practices. The objective was to assess the incidence of injuries and knowledge, attitudes and practices on first aid among undergraduate students of Faculty of Agriculture and Faculty of Engineering, University of Jaffna.

Methodology: This cross-sectional study was conducted among 412 University students (-). Data collection was done using a self-administered questionnaire. Overall knowledge was graded as good, moderate and poor based on the score which is obtained from MCQs. Separate sections for attitude and practice were included to the questionnaire to assess the attitude and practice towards first aid and described according to the results.

Results:A total of 412 students were interviewed. Among them, 128 (31.1%) students had faced at least one injury during the previous one-year duration. The students scored the questions with mean value of 4, so 249 (60.4%) had poor knowledge, 136 (33.0%) had moderate knowledge and 27 (6.6%) had good knowledge on basic first aid. Only100(24.3%) students had previous exposure to formal first aid training and their first aid knowledge was better than the others. Overall attitude towards first aid was satisfactory in both faculties. Out of the study population 121 (29.4%) faced situations where they had provided first and 161 (39.1%) faced situations where they were unable to provide first aid. Among the participants 365 (88.6%) wished to have a training on basic first aid.

Conclusion: Undergraduate students of Faculty of Agriculture and Faculty of Engineering, University of Jaffna, did not have adequate knowledge and to practice on basic first aid measures. The attitude of participantstowards the first aid was satisfactory in both faculties. Even though students who had previous formal first aid training had better knowledge, they are lacking skills as a first aid provider. Practical based first aid training programs should be introduced in the university curriculum.

Knowledge on cervical carcinoma and associated screening practices among female teachers of Nallur Education Division

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Background: Cancer of the cervix is the second most common cancer among women worldwide. Cervical cancer is curable if detected in the precancerous stage because effective treatment is possible atthis stage. Screening is most important to detect cancers at an early stage. Identifying the level of knowledge on cervical carcinoma and its influence on screening practices is thus important to guide efforts to promote use of cervical cancer screening services.This study aimed to assess knowledge on cervical carcinoma and its influence on screening practices among female school teachers in NallurEducational Division.

Methodology: A descriptive cross-sectional study was conducted among 465 female school teachers in the NallurEducational Divisionfrom November 2017 to January 2018. A self-administered questionnaire was used to collect data. SPSS (v.21) was used to analyze the data.

Results: Among 465 participants, the majority of female teachers had average total knowledge on aetiology (49.2%), risk factors (63.9%), screening(77%) and prevention (50.5%). A statistically significant association was identified between total knowledge on cervical carcinoma and knowledge on risk factors and participation in screening. A significant association was not found between knowledge on etiology of cervical carcinoma, knowledge on screening and knowledge on prevention, andparticipation in screening. A statistically significant association was identified between knowledge on prevention and non-participation in screening. A significant association was not found between total knowledge, knowledge on etiology, knowledge on risk factors and knowledge on screening andnon-participation in screening.

Conclusion:Total knowledge on cervical carcinoma wassignificantly associated with participation in screening programmes. Raising awareness about cervical carcinoma and screening services may promote greater participation in cervical cancer screening.

Keywords: Cervical cancer, personal factors, teachers, Jaffna

Pattern, known associated factors, and influence of socio-demographic factors on subfertility among couples attending gynaecology clinics at Teaching Hospital Jaffna.

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Background: Subfertility is a major issue all over the world and has become a common issue in Sri Lanka too. The aim of this study was to determine the pattern, prevalence of risk factors and influence of sociodemographic factors on subfertility.

Methodology: An institution-based descriptive study of sub fertility was conducted among 56 couples with a diagnosis of subfertility attending gynaecology clinics at Teaching Hospital Jaffna between November 2017 and January 2018. Consecutive sampling was used. Data were collected with an interviewer-administered questionnaire and data extraction form, and analysed using descriptive statistics (proportions, percentages) and the Chi Square test of independence.

Results: Fifty-six subfertile couples participated in the study. Among them, 62.5% presented with primary subfertility, and 37.5% presented with secondary subfertility. Over half of the couples (52%) had a coital frequency of <5 times/week, and 48% reported a coital frequency of <5 times/weekon fertile days of the menstrual cycle.A little over a quarter of females (28.6%) were >35 years of age. Twenty-five percent of females and males were obese. The majority of participants had no known medical illness, although 48% of females had a gynecological condition, and 3.6%of males had erection/ejaculation problems.A quarter of females and 15% of males had a family history of subfertility.Nearly 20% of males were smokers, approximately 30% consumed alcohol, and nearly 40% had a history of exposure to excessive heat.More than 75% of female and males had not reached A/Ls with very few graduates in the sample.About two-thirds of couples had a family income of less than Rs. 37,000. There was no significant influence of sociodemographic factors on the risk factors or pattern of subfertility.

Conclusion: The results reveal ahigh proportion of primary subfertility than secondary subfertility, a fairly high prevalence of gynaecological conditions and obesity, with a large proportion of subfertile males consuming alcohol. Therefore public health efforts should target early identification and treatment of gynaecological conditions, obesity reduction and substance abuse prevention.

Keywords: Subfertility, risk-factors, Jaffna, Gynaecology

Influence of lifestyle factors on the prevalence of overweight and obesity among A/Lstudents in the Nallur Educational Division

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Background: The incidence of obesity is rising across the world. In Sri Lanka, about 1.2 million adults and0.4 million school children are overweight. This study aimed to determine the prevalence of overweight/obesity and associated lifestyle factors among Advanced Level (A/L) students in Nallur Educational Division.

Methodology: A school-based descriptive cross-sectional study was conducted among A/L students in the Nallur Educational Division. Details relevant to age, sex, food habits, and physical activity were obtained through a self-administered questionnaire. Height and weight were measured using standard anthropometric methods. SPSS was used to analyze the data.

Results:713 students participated in the study. Of them, 373 (52.2%) were male and 341 (47.8%) were female. The majority of students (89.8%, n≤640) were 18 years of age, while 50(7%) were 17years of age and 23 (3.2%) were 19 years of age. Twenty nine (4.1%) students were underweight, 612(85.8%) were normal in weight and 72(10.1%) students were overweight or obese. Thirty eight (5.3%) students had an insufficient level of physical activity, while 671 students (94.1%)and 4 students (0.6%) had a moderate and vigorous level of physical activity, respectively. A significant proportion of students who were overweight and obese consumed restaurant foods (27%)and/or 321g or >321g of carbohydrate (12%) daily. A large proportion of them consumed short eats on at least 3 days of the week (44.1%) and never consumed green leaves (33.4%).

Conclusion: Prevalence of overweight and obesity among A/L students in Nallur Educational Division is 10.1%.Overweight and obesity is associated with insufficient physical activity, consuming foods from restaurants, high intake of carbohydrate, consuming short eats and avoiding green leaves. The relevant authorities should focus primary and primordial preventive efforts on promoting healthy eating among adolescents.

Key words: Overweight and obesity, lifestyle, physical activity, healthy eating, adolescents

Effect of type 2 diabetic mellitus duration on blood glucose, serum creatinine and urinary microalbumin: a cross section study on patients attending Diabetic Centre, Teaching Hospital, Jaffna

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Background: Diabetes mellitus affects the quality and longevity oflife. The complications of diabetes are influenced not only by chronic hyperglycemia but also by the duration of disease. The objective of this study was to evaluate effect Type 2 Diabetic mellitus duration on the alteration of fasting plasma glucose (FPG), Serum Creatinine and Urinary Microalbumin levels.

Methods:A total of 98 diabetic patients diagnosed as type 2 diabetics attending the Diabetic Centre, Teaching Hospital Jaffna were included. Patients with known evidence of chronic kidney disease were excluded. FPG (Glucose Oxidase method), serum and urine creatinine (Jaffe Alkaline Picric Acid method) and random urine albumin (Immunoturbidimetry method) were estimated. Simple linear regression was performed.

Results: The mean duration of diabetes was 9.28 ($\pm$7.20) years. The mean duration of diabetes mellitus was not significantly differed between males (9.76 years) and females (8.97 years) ($p \leq 0.596$). The mean FPG, serum creatinine, urine albumin, urine creatinine, urine albumin to creatinine ratio and duration of diabetes were 136.17 ($\pm$53.92) mg/dL, 1.25 ($\pm$0.64) mg/dL, 18.9 ($\pm$16.2) mg/L, 1.21 ($\pm$0.80) g/L, 17.11 ($\pm$14.16) mg/g creatinine and 9.28 ($\pm$7.20) years respectively. The highest number of patients [39 (39.8%)] were in the in the initial stage (0-5 years)of type 2 diabetic. With the increase in the duration of diabetes mellitus, fasting plasma glucose level ($r \leq 0.25$), serum creatinine ($r \leq 0.1$), random urine albumin ($r \leq 0.35$) and urine albumin to creatinine ratio ($r \leq 0.43$) increased. Further with the increase in the duration of Type 2 diabetes mellitus the patients had macroalbuminuria rather than normoalbuminuria and microalbuminuria.

Keywords: Creatinine, Duration, diabetes mellitus type 2, Microalbuminuria, Fasting Plasma Glucose.

Symptoms of digital eye strainand reduced visual acuity among A/L students in Jaffna Educational Division

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Background: Visual impairment has become a global challenge especially in developing countries due to the changing patterns of visual input associated with the use of modern educational media and tools, urbanization, and sedentary life style. This studywasdesignedto determine the prevalence of symptoms ofdigital eye strain and reduced visual acuity among Advanced Level(A/L) students in the Jaffna Educational Division, northern Sri Lanka.

Methods: A descriptive cross-sectional study was carried out among A/L students in Jaffna Educational Division. Single stage cluster sampling was used. A self-administered questionnaire was used to assess symptoms of digital eye strain and the Snellen chart was used to measure visual acuity. Data were analyzed using SPSS (Statistical Package for Social Sciences) version 21. Percentages and proportions were used to describe the data.

Results: 700 A/L students participated in the study. Symptoms of digital eye strainassociated with watching television were:headache 28.3%,burning sensation of eyes 13.9%, blurred vision 14.3% and straining to see small fonts 5.3%. Symptoms associated with computer usage were: headache 6.3%,burning sensation of eyes 4.6%, blurred vision 3.6%, and straining to see small fonts 2.0%.Symptoms associated with laptop use were: headache 9.9%,burning sensation of eyes 9.6%, blurred vision 4.7%, and straining to see small fonts 2.3%. Symptoms associated with mobile phones were: headache 18.9%,burning sensation of eyes 19.7%, blurred vision 12.4% and straining to see small fonts 9.1%. Lastly, symptoms associated with tablet use were: headache 4.6%,burning sensation of eyes 4.0%, blurred vision 1.3% and straining to see small fonts 3.4%.The prevalence of reduced visual acuity (<6/6) was 19.6%.

Conclusion: The findings suggest that symptoms of digital eye strain and reduced visual acuityare substantial among A/L students. Extensive studies are needed to confirm these findings.

Key words: adolescents, symptoms of digital eye strain, reduced visual acuity, digital devices

Prevalence of self-reported postpartum morbidities and associated demographic, socio economic and pregnancy related factors among mothers in Jaffna MOH area

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Background: Postpartum morbidity is an important issue in public health asit leads to maternal mortality and disability. This study aimed to estimate the prevalence of postpartum morbidities and associated demographic, socio economic and pregnancy related factors among mothers in Jaffna MOH area.

Methods: A community based cross-sectional survey was conducted among 197 mothers who delivered between 8th of October and 8th of December 2018 in Jaffna MOH area. Data was collected from mothers in the seventh week of the postpartum period. Self reported morbidity, demographic characteristics, social-economic status and pregnancy related factors were studied. Collected data were analyzed and processed with the help of SPSS 23.

Results: The age range of the participants was from 17 to 46 years and the mean age was 29.96 ± 5.37 years and the median age was 30 years. In the sample, 96.4 % ($n \leq 190$) of mothers were Sri Lankan Tamils. All mothers were married; among them 63.5 % ($n \leq 125$) of mothers lived in nuclear families and 36.5 % ($n \leq 72$) of mothers were in extended families. The prevalence of postpartum morbidity was 11.7% ($n \leq 23$). The most frequently reported postpartum morbidity was urinary symptoms (4.6%, $n \leq 9$) followed by pain in the caesarean site (3.6%, $n \leq 7$) and difficulty in defecation (3.6%, $n \leq 7$). These postpartum morbidities were higher mothers who had caesarean section (20.3%, $n \leq 15$), primi mothers (15.4%, $n \leq 10$), mothers who had antenatal complications (15.3%, $n \leq 11$), mothers with low income (13.3%, $n \leq 14$) and mothers living in nuclear family (12.8%, $n \leq 16$), than others.

Conclusion: Demographic, socio economic and pregnancy related factors were not significantly associated with postpartum morbidity. To reduce the prevalence of postpartum morbidity further, irrespective of demographical, socio economical background and pregnancy related factors, every mother should be provided comprehensive postpartum care.

Keywords: Postpartum, morbidity, factors, Jaffna

Study on knowledge and attitude towards newborn baby care among antenatal mothers in Jaffna Municipal area

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Background: Neonatal baby care contributes towards controlling neonatal disease and death. It is essential for expectant mothers to have good knowledge and positive attitudes towards newborn care. Such knowledge and attitudes can critically enhance neonatal health. This study aimed to assess knowledge and attitudes towards new born baby care among antenatal mothers in the Jaffna Municipal Area in northern Sri Lanka.

Methods: A descriptive cross-sectional study was carried out in antenatal clinics of Jaffna Municipal Area among 210 pregnant mothers. Data were collected using an interviewer-administered questionnaire. Data were analyzed using SPSS v.23 computer software. The knowledge score was calculated. The median knowledge score (31) was considered the cutoff. Those who obtained 31 or above were categorized to have adequate knowledge and those who got below 31 were categorized to have inadequate knowledge.

Results: 43.3% of the sample had adequate knowledge and 58.6% had adequate attitude. Adequate knowledge on maintaining hygiene of baby, assessing baby's health condition, maintaining a safe environment for baby, infection control of baby and breast feeding were 66.2%, 59%, 81.4%, 20.5% and 79%, respectively. Three-fourths of mothers who had studied up to Grade 5 and 65.2% of mothers who had studied from Grade 6 to GCE O/L had inadequate knowledge. The relationship between age and knowledge was statistically significant ($p < 0.05$); mothers aged 38 to 42 years showed 100% inadequate knowledge. The relationship between parity and knowledge was statistically significant ($p < 0.05$); 67% of primi mothers had inadequate knowledge.

Conclusion: Knowledge on infection control of baby among antenatal mothers is inadequate. We need to improve mothers' attendance to antenatal classes, and give proper instruction to midwives in order to address the areas in which mothers have inadequate knowledge and attitudes.

Keywords: Newborn care, antenatal care, knowledge, attitudes, Jaffna

Knowledge of primary school teachers on prevention of dental caries among primary school students, and their influence on practice in the Nallur Educational Division, Jaffna.

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Background: Dental caries is one of the common oral health problem in children and it is preventable. Teachers are also suitable person to give awareness as children spend the morning time with their school teachers. Hence, this study was undertaken to assess the knowledge, attitude and practice of school teachers towards prevention of dental caries.This study aimed to assess the knowledge and attitude of primary school teachers on prevention of dental caries among primary school students and their influence on practice in the Nallur Educational Division, Jaffna.

Methods: This was school based descriptive cross-sectional study conducted among 251 primary class teachers from 35 schools, in Nallur Educational Division. A self-administered questionnaire was used to assess knowledge, attitude, and practice of primary school teachers on prevention of dental caries. All data collected was entered in SPSS version 23.0.

Results: In this study only half no. of teachers.(49.8%)were aware that bacteria cause dental caries. Nearly 25% of teachers knew the circular brushing technique and only 3.9% of teachers knew that children must change their tooth brush after bristles are damaged. Over all knowledge of teachers is poor in prevention of dental caries. Among teachers 95.1% of them have a practice of monitoring the food pattern of their students. Instructions on brushing technique to students have been given by 92.7% of primary school teachers. Nearly 64% of teachers have checked the oral cavity of students. Only 87.8% of teachers attended an oral health education session held by the school dental therapist.

Conclusion: The knowledge regarding etiology of dental caries and brushing among primary school teachers were unsatisfactory. Only half of the participant teachers had good practice towards prevention of dental caries. Oral health education and training must be given to all primary school teachers and supervised tooth brushing programme in primary schools should be established.

Keywords: Knowledge, Dental caries, primary schools, Jaffna, Teachers

The pattern of acute coronary syndrome and the association of known risk factors among post- acute coronary syndrome patients of 20 years or older attending the Cardiology Clinic, Teaching Hospital Jaffna

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Introduction: Acute coronary syndromes(ACS) refersto myocardial ischemia or infarction resulting from unstable arthrematous plaque or endothelial disruption associated transient or permanent thrombotic occlusion of the coronary vascular tree. ACS includes unstable angina (UA), ST elevation myocardial infarction (STEMI) and non ST elevation myocardial infarction (NSTEMI).This study aimed to assess the pattern of acute coronary syndrome and associated risk factors among post-ACS patients of 20 years or older attending the Cardiology Clinic, Teaching Hospital Jaffna.

Methods: A descriptive cross-sectional hospital-based study was carried out among post-ACS patients at the Cardiology Clinic, Teaching Hospital Jaffna. An interviewer administered questionnaire adapted from the World health Organization STEPS instrument was used to record age, sex, dietary pattern, physical activity, smoking habit, alcohol consumption, presence of hypertension(HT), diabetes mellitus (DM) and/orhyperlipidemia and family history of ischemic heart disease (IHD) **.**The presence of HT, DM, and hyperlipidemia was confirmed from clinical records. Perceived stress, weight and height were measured.

Results: 427 post-ACS patients participated in the study. The mean age was 63 years with the majority being male 312(73.1%).In the sample,317 (74.2%) had STEMI, 61 (14.3%) NSTEMI and 49 (11.5%) UA.HT was the most prevalent risk factor (72.8%) followed by hyperlipidemia(70.7%) and DM(51.1%). Over half (56.7%) had a family history of IHD. Less than 5% reported current smoking and alcohol consumption. Levels of overweight/obesity were high at 47.3% (overweight 42.6%, obesity 4.7%).Dietary pattern showed that 40.7%,54.3%and 34.7% consumed high levels of salt, sugar and fatty food. Physical activity levels were low with only 24.1% and 8% reporting moderate and vigorous activity. Stress levels were relatively high with 45.7% reporting moderate stress and 0.2% high stress. The pattern of ACS was nor significantly associated with risk factors except hyperlipidemia (P≤0.023) and BMI (P≤0.013).

Conclusion: Most patients had STEMI followed by NSTEMI and UA. The majority were middle aged men. HT and hyperlipidemia were the major ACS risk factors identified. Prevention efforts should focus on reducing unhealthy dietary practices, physical inactivity and stress levels.

Key words: Acute Coronary Syndrome, risk factors, Jaffna

Abstracts of Poster Presentations

Pattern of upper gastro intestinal cancer and its associated factors among upper gastrointestinal cancer patients admitted to Teaching Hospital Jaffna and Trail Cancer Hospital Thellipalai

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Background: Prevalence of upper gastrointestinal (GI) cancers has shown an increasing pattern during the last decade. Based on data from the Statistical Unit of the Jaffna Teaching Hospital, upper GI malignancies account for a fifth of total cancer admissions. Their insidious nature of onset combined with delayed consultation driven by ignorance of symptoms, make upper GI malignancies, especially that of stomach and oesophagus, some of the most lethal cancers. The combined inadequacy of cancer prevention methods, public education, and access to cancer treatment results in a high mortality rate.

Methods: A cross sectional institutional based descriptive study was conducted among 225 patients diagnosed with an upper GI malignancy from oncology clinics, the oncology ward and surgical wards of Teaching Hospital Jaffna and Trail Cancer Hospital Thellipalai. An interviewer-administered questionnaire was used to collect data. Chi Squared test was used to assess the relationship between pattern of upper GI cancer and its associated risk factors.

Results: Among 104 participants, the majority were within the age range of 40 to 80 years (94%), especially in the sixth decade of life, with a male predominance (58%). Most had completed their primary education (41%). Sixty percent worked and of them around 90% were manual workers; farmers accounted for a significant proportion (38%) followed by labourers (16%). Almost three quarters of the study population were from Jaffna.
Oesophageal cancer was the most common cancer (70%), predominantly the squamous cell variant (94.5%), followed by cancers of the stomach and pancreas. The pattern of upper GI cancer was based on oesophageal and non-oesophageal type. Age above 54 years, consumption of alcohol and consumption of alcohol more than 14 units per week, chewing of betel quid were significantly associated with the development of upper GI cancer. Male sex, manual work, especially farming and manual labour, and gastro-oesophageal reflux diseases (GORD) were positively associated with oesophageal cancer, although the relationship was not statistically significant.

Conclusion: Further investigation may elucidate the need for public awareness programmes and screening facilities. Such timely intervention for people with the above risk factors would lead to early diagnosis and better prognosis of upper GI cancers.

Key words: Upper gastrointestinal cancer, risk factors, Jaffna

A study of asthma control among patients attending medical clinic, Teaching Hospital Jaffna

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Background: Asthma affects a large number of patients in Sri Lanka. Even though asthma can be well-controlled with adequate medication, various factors influence the level of asthma control among patients. This study aimed to estimate the level of asthma control among patients attending medical clinics in Teaching Hospital Jaffna.

Methods: This was a descriptive cross sectional study. Patients aged ≥18 years, having a documented diagnosis of asthma for >3 months and attending medical clinics at Teaching Hospital Jaffna participated in the study. Systematic random sampling was used to select participants. Asthma control status was assessed using the Asthma Control Test (ACT) and classified as well-controlled (ACT score ≥ 20), partially-controlled (ACT score 15 to 19) and poorly-controlled (ACT < 15). Data was analyzed using SPSS 21.

Results: A total of 233 asthma participated in the study. Asthma was well-controlled in 42.5%, partially-controlled in 40.8% and poorly-controlled in 16.7% of the sample. Half of the population had no interference in daily activities by asthmatic attacks during the 4 weeks prior to data collection, while a very small proportion (1.3%) reported they were affected by asthma all the time. Only 2.1% of participants had more than one episode of shortness of breath per day during the 4 weeks prior to data collection while 45.1% had such episodes once or twice a week. Nearly half of the population did not have sleep disturbances in the 4 weeks prior to data collection. One third of the population had used a rescue inhaler once or fewer times per week, and equal proportions (23%) had used a rescue inhaler 1-2 times per day and 2-3 times per week during the 4 weeks prior to data collection. More than 70% of the sample rated their level of asthma control as moderately-controlled to well-controlled.

Conclusion: This indicates that asthma is often not well-controlled among asthma patients. Identifying risk factors and managing them is essential to achieving good control.

Keywords: Asthma control, asthma control test (ACT), Jaffna

Knowledge and attitude towards personal professional development and the influence of selected factors on personal professional development among the medical students at University of Jaffna

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Background: Considering the lifelong continuous learning, a personal and professional development stream (PPDS) was introduced in the medical curriculum of the Faculty of Medicine, University of Jaffna since 2012. There are little studies available regarding the knowledge and attitude towards PPDS among medical students. Hence, this study was designed to describe the knowledge and attitude on personal professional development (PPD) and the influence of selected factors on PPD among medical students.

Methods: This study was an institutional based descriptive study conducted among students of faculty of medicine, university of Jaffna. Data were collected using self-administered questionnaire after obtaining written consent. The questionnaire consists of a) knowledge, attitude towards PPD and b) influence of family and childhood opportunities on PPD. Data were analyzed using the statistical software SPSS version 21.

Results: Among the students 468, 13.5% obtained low grade while 80.1% and 6.4% of the students obtained average and good grade on knowledge of personal and professional development and 25.9% of student had right attitude whereas 74.1% of students had reduced attitude towards personal professional development. Students studied in private schools and those studied in urban area had more points in knowledge and have showed right attitude more than the others. This finding is supported by literature where public and private school participants significantly differed on self-esteem, with private school participants reporting high levels of self-esteem (M $\leq$ 30.36) and public school participants (M $\leq$ 26.92) reporting moderate levels of self-esteem.

Conclusion: Majority of the students obtained average knowledge and showed low attitude towards personal professional development and the child-hood opportunities influenced the most.

Students' motivation to study and its association with psychological needs support among students of University of Jaffna

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Background: Very little is known about the factors that facilitate or constrain deep involvement in learning among undergraduates in Sri Lanka. There have been no studies on student motivation or the influence of psychological needs support on students' motivation to study at the University of Jaffna. The aim of our study was to describe the level of student motivation and psychological needs support, and to assess the association between motivation level(intrinsic motivation, extrinsic motivation) and psychological needs support(autonomy, competence and relatedness support) among students of the University of Jaffna.

Methods: A descriptive cross section study was conducted among 471 students of University of Jaffna. A self-administered questionnaire was used to collect data from January to March 2018.The level of motivation was assessed using the Academic Motivational Scale(AMS).The items used to assess psychological needs support were adapted from the Learning Climate Questionnaire. Multistage stratified proportionate simple random sampling was used.

Results: The students of Jaffna University are fairly motivated to study both intrinsically($M \leq 3.8601; SD \leq 0.66194$) and extrinsically($M \leq 3.9704; SD \leq 0.63014$), and feel supported in terms of autonomy, competence and relatedness. Intrinsic motivation was significantly correlated positively with competence support ($r \leq 0.549; p < 0.0001$), autonomy support ($r \leq 0.448; p < 0.0001$), and relatedness support ($r \leq 0.504; p < 0.0001$).Extrinsic motivation significantly correlated positively with competence support ($r \leq 0.554; p < 0.0001$), autonomy support ($r \leq 0.421; p < 0.0001$), and relatedness support ($r \leq 0.448; p < 0.0001$).

Conclusion: The results support self-determination theory (Ryan &Deci, 2000) which postulates that autonomy, relatedness and competence support are important drivers of student motivation.
Key words – Motivation, University of Jaffna, psychological needs support

The progression of chronic kidney disease (CKD) and the influence of selected factors on CKD progression among patients following the Nephrology Clinic, Teaching Hospital Jaffna

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Background: CKD is a universal health problem. The treatment for end-stage kidney disease is prohibitively costly. No studies have been performed to assess progression of the disease in patients with CKD in Sri Lanka. This study aimed to assess the progression of CKD and the influence of knowledge and selected socio-economic and lifestyle factors on the progression of CKD among patients following the Nephrology Clinic in the Jaffna Teaching Hospital.

Methodology: This study was a descriptive cross-sectional institutional based study carried out at the Nephrology Clinic of Jaffna Teaching Hospital for a nine-month period. Hundred and thirty adult patients with document-diagnosed CKD stage 3 to stage 5 who were following the Nephrology Clinic for at least one year were included in this study.

Results: Mean age of the participants was 50.56 years. The majority of participants were male (65.4%). Most had studied up to less than O/L (43.8%). A large majority were non-sedentary workers (82.3%). Mean family income was Rs. 21,500. Only 14.6% participants were smokers or ex-smokers. Mean BMI of the participants was 23.77 kg/m^2. The majority of participants (73 %) had increased or accelerated GFR decline per year with a mean GFR decline of 9.30ml/1.73m^2/year. The mean knowledge score was 66.97. Majority of the participants (60%) with overall poor knowledge had accelerated GFR decline ($P < 0.001$). When each aspect of knowledge was considered, basic knowledge, causes, risk factors for progression of CKD and functions of the kidney had a statistically significant association with progression of CKD. Among lifestyle factors, only BMI and smoking had a statistically significant correlation with CKD progression.

Conclusion: Even though overall knowledge about the disease among CKD patients was fairly good, the progression rate of CKD was not satisfactory. Studies to estimate the progression rate of CKD in the Sri Lankan population and the impact of behavioral changes in the progression of the CKD should be carried out in future.

Keywords: Chronic kidney disease, Jaffna, disease progression, knowledge

Client satisfaction in "NatpuNilayam," Teaching Hospital Jaffna and its association with client and service related factors

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Background: "Natpu-Nilayam" (NN) is a hospital-based service, serving mostly women in need. It provides 'Be-Friendly'(BF) services, counselling, social and legal support, and rehabilitation services. The NN centre at the Teaching Hospital Jaffna commenced service provision in 2013, but service satisfaction has not been assessed. This study aimed to assess client satisfaction and associated client- and service-related factors at the NN of Teaching Hospital Jaffna.

Methodology: An institution-based descriptive cross-sectional study of service satisfaction was carried out among clients of NN at Teaching Hospital Jaffna between November 2017 and February 2018. Consecutive sampling was used. Details relevant to client- and service-related factors were collected through an interviewer-administered questionnaire. Client satisfaction was assessed using a Likert-scale. Data were analyzed using descriptive statistics (percentages and proportions) with SPSS (v.23).

Results: 100 clients participated in the study. All were Sri Lankan Tamil, with women making up a large majority of the sample (91%). All participants were above 18 years of age with 52% and 30% between the ages of 18-30 and 31- 40 years, respectively. Eighty one per cent reported an education level of grade 6 to 11, and. 87% had a house hold income of less than Rs. 20, 000.About three-fourths (74%) were married; the rest were either never married or widows. Most women were manual workers with many depending on their husbands' income. Seventy-nine per cent of the sample had been referred to NN by doctors, while 16% were referred by counsellors. Of the total sample, 60% used the BF service only, while 13% used BF and counseling services, and 15% used BF and legal services. Overall satisfaction among clients was high with 98% reporting 'good' satisfaction, and the remainder reporting 'excellent' satisfaction.

Conclusion: The NN centre primarily served young, Sri Lankan Tamil women from an underprivileged backgrounds. A large majority of participants reported high levels of satisfaction, suggesting that the services provided by "Natpu-Nilayam" may be of high quality. However, this result should be interpreted with caution as the study was carried out at the center in close proximity to service providers.

Key words: Gender-based violence, be-friendly services, client satisfaction, Jaffna

Patterns of learning styles and academic performance among grade 11 students of Jaffna Educational Zone

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Background: It has been observed that the academic performance of G.C.E O/L students in Jaffna district is on the decline. Though academic performance is multifactorial, one of the factors influencing performance is the learning styles of students. Three of the most common learning styles are visual, auditory and kinesthetic (VAK) by which students gain information. In Sri Lanka, academic performance is considered as the main tangible learning outcome and is measured by examinations in schools. This study aimed to describe the pattern of learning styles and academic performance among Grade 11 students of Jaffna Education Zone.

Methods: A total of 701 students from 29 classes of schools in the Jaffna Zone participated in this study. The VAK questionnaire was used to assess the learning styles of Grade 11 students. The marks obtained by students at three term examinations for six compulsory subjects (mathematics, science, English, Tamil, religion, history) in the previous year (Grade 10) were used to assess academic performance.

Results: Majority of learners were unimodal (85.2%) and among them the majority were kinesthetic learners (57.1%),followed by visual learners (14.4%), and auditory learners (13.7%).The mean values of the six compulsory subjects were between 48 to 68 with highest mean marks scored for religion, followed by Tamil, history, mathematics, science and English.

Conclusion: There is a mismatch between the traditional auditory teaching strategy used in schools and the preferred learning style of students in Jaffna Zone. Considering the preferred learning style of students in curriculum development may improve academic performance.

Keywords: Learning style, academic performance, adolescents, Jaffna

Breast-feeding knowledge, attitude, behaviour and influencing factors among female staff of banks in the Jaffna Municipal area

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Background: The rate of exclusive breast-feeding is lower in Jaffna compared with the national rate (82%), partly due to lack of knowledge among the mothers. Attitudes towards breast-feeding also influence breast-feeding behaviour. This study aimed to assess breast-feeding knowledge, attitude, behaviour and influencing factors among female staff of banks in the Jaffna Municipal Area.

Methods: This was a descriptive cross sectional study. Data were collected using a self-administered questionnaire. Details relevant to socio-demographic and banking factors and breast-feeding knowledge, attitude and behaviour were collected and analyzed using SPSS.

Results: A total of 197 bank staff participated in the study. The majority had moderate breast-feedingknowledge (50.8%), neutral attitudes (68%) and good behaviour(59.9%). By contrast, 19.8%, 18.8% and 40.1% had poor breast-feeding knowledge, attitude and behavior, respectively. Breast-feedingknowledge was significantly associated with age ($p \leq 0.003$), salary ($p \leq 0.001$) and family support ($p \leq 0.002$).Although income was not significantly associated with breast-feeding attitude and behavior, there was a significant association between family support and behavior ($p < 0.001$).Notably, only 79.7% gave or planned to give colostrum, 22.3% did not follow exclusive breast-feeding for 6 months, and 29.4% and 30.5 % had avoided breast-feeding due to institutional and household work, respectively.

Conclusion: Female bank staff seem to have average knowledge, neutral attitudes, and good behavior related to breast-feeding. While family support is a major determinant of good breast-feeding behaviour, a substantial proportion of female bank staff neglect breast-feeding owing to their busy work schedules, suggesting this could be an area for health promotion efforts.

Key words: Knowledge, attitude, behaviour, breast-feeding, Jaffna

The prevalence, risk factors of football related injuries among the Vadamaradchi football league players and the treatment facilities available for them

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Background: Football is one of the game that gives a lot of stress to physical and mental health of players. Because of these and other extrinsic factors the football players are often injured. So this research is based on assessing the prevalence and risk factors of football related injuries among club players of Vadamaradchi football league. The objective of the study was to assess the prevalence, risk factors of football related injuries among the Vadamaradchi football league players and the treatment facilities available for them.

Methods: A descriptive cross sectional study was done during the period of August 2016 to May 2018. As the total population is around 600, all the players of Vadamaradchi football league were recruited and with the 15% non-respondent 510 samples were included. Data collection was done by using self-administered questionnaire. The competitive state anxiety inventory - 2 questionnaire which was translated in Tamil was used to measure the psychological factors influencing the injury.

Results: The prevalence of acute injuries was high (69.8%) among the players of Vadamaradchi football league players during the past 6 months and the prevalence of chronic injury was 29.6%. The level of competitive state anxiety among the players was moderate among the majority of the players (above 80%). Among the risk factors, most of the factors showed no significant association with acute injuries. Somatic state anxiety, self-confidence, previous injury, some aspects of proper practices and the playing positions showed significant association with injuries. Most of the factors showed as same the results of some previous studies. The facilities are not adequate to the players.

Conclusion: Further studies are required to analyze the risks for the high prevalence of injury in a large scale.

Life skills competency levels and associated socio-demographic factors among G.C.E O/L students in the Sandilipay Education Division.

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Background: Lack of life skills among adolescents is a barrier to dealing effectively with the demands and challenges of everyday life. The objective of this study was to assess selected life skills competencies and the influence of socio-demographic factors on these competencies among G.C.E O/L students in the Sandilipay Education Division.

Methodology: This was a descriptive cross-sectional study carried out between August 2016 and May 2018 among G.C.E. O/L students attending schools of the Sandilipay Educational Division. Random cluster sampling was used. A self-administered questionnaire was used to collect data, which were subsequently analyzed by SPSS. Ethics approval was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna.

Results: Seven hundred and fifty students participated in the study. Life skills competency levels were satisfactory (mean67.63,SD ≤9.542).Students obtained the highest mean for empathy and the lowest for coping with stress. Life skills competency levels among females (68.19%) were higher than among males, and higher among Hindu students (68.04%) than Christians (65.32%). Father's education level was significantly associated with life skill competency levels, but mother's education level was not.

Conclusion: Overall life skills competency levels were quite satisfactory but the competency level for coping with stress was very low. Strategies to cope with stress need to be integrated into the secondary school curriculum and effective counseling programs initiated for students having difficulties coping with stress.

Key words: Life skills competency, secondary school students, socio-demographic factors

Satisfaction with hostel facilities, its associated factors and the influence of satisfactionon academic performance among students in selected hostels of University of Jaffna

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Background:A significant number of outstation students are accommodated in university hostels. As the psychosocial health of students have a great impact on their academic performance, it is likely that satisfaction with hostel facilities may also influence academic performance. This study aimed to assess satisfaction with hostel facilities and its influence on academic performance in students residing in selected hostels of the University of Jaffna.

Methods: A descriptive cross sectional study was conducted from July 2016 to May 2018 in selected hostels of University of Jaffna. The study population comprised final year students who lived in selected university hostels situated in the Jaffna district who had their Grade Point Average (GPA) for the previous academic term during which time they stayed in a university hostel. A self-administered questionnaire was used to collect data.

Results: Two hundred and eight students participated in the study; 62 students (29.8%) were male and 146(70.2%) were female. The majority of students were Hindus (50%). The highest proportion of students (33.7%) were studying in the arts stream, while the lowest (12%)belonged to the Allied Health Sciences Unit. About the same percentage of students (38%) received Mahapola and bursary as financial aid. Over half among males (54.4%) and females (54.3%) were satisfied with hostel facilities. The satisfaction level of students were more or less equal by faculty, except in the arts stream where the proportion satisfied was lower (47.1%). The proportion of students who reported satisfaction (50%) and dissatisfaction (50%) were observed to be same in all religious groups. This study showed that 62.9% and 54.8% of females were satisfied and dissatisfied with the study environment, respectively (p≤0.02). In this study, 31.3% of students obtained a GPA below 2.7 while 18.8% obtained a GPA between 2.7 and 3.0. Among students who obtained a GPA less than 2.7, 80% were females and 20% were males. By contrast, among those who obtained a GPA of more than 3.0, 68.9% were female.

Conclusion: A substantial proportion of student hostel residents reported dissatisfaction with existing hostel facilities. These findings suggest that the university administration needs to take action to improve hostel facilities for undergraduate students.

Key words: Satisfaction, hostel facilities, academic performance

Socio-demographic and work-related conditions of field public health midwives in Jaffna district and their association with postnatal domiciliary visits

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Background: Midwifery includes care of women during pregnancy, labour, and the postpartum period, as well as care of the newborn. The field public health midwife (PHM) is the closest health care provider that the community confronts in Sri Lanka. Any woman who needs the service of a field PHM can reach her. Post-natal domiciliary visits (PNDV) are a critical element of midwifery because they enable early identification of danger signs in the mother and the new born. This study aimed to describe socio-demographic and work-related conditions of field PHMs and their association with the percentage of PNDV carried out by field PHMs in the Jaffna District.

Methodology: A descriptive cross-sectional study was carried out among all field PHMs in the Jaffna District. Details relevant to socio-demographic and work-related conditions were collected using a pre-tested self-administered questionnaire. A data extraction form was used to collect data relevant to PNDV in 2017 from the Monthly Statement Report (MSR). Data were analyzed by using SPSS (v.23). Proportions and percentages were used to describe the data and the t-test was used to assess the association between socio-demographic and work-related conditions and PNDV.

Results: Hundred and fifty field PHMs participated in the study giving a response rate of 96.7%. The average PNDV percentage within the first 5 days of delivery was 81.81%, within 10 days was 75.30%, within 21 days was 76.33%, and within 42 days was 82.28%. PNDV within the first 5 days was significantly associated with spousal working hours ($p \leq 0.011$) and planning of field work ($p \leq 0.005$). PNDV within the first 10 days was significantly associated with distance from the PHM's residence to the work area/s ($p \leq 0.005$).

Conclusion: Spousal working hours, planning of field work and distance from the PHM's residence were associated with PNDV, suggesting that time may be a critical factor. While developing time management skills of field PHMs may help to improve the quality of post-natal care, these findings may also relate to the vacant field PHM cadre positions in the Jaffna District.

Key words: Public health midwives, post-natal domiciliary visits, work-related factors

Prevalence of substance abuse and associated factors on substance abuse among G.C.E Advanced Level students in the Nallur Educational Division

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Background: Substance use and abuse is a critical problem among school students in most of the countries including Sri Lanka. In recent past, an increasing trend in substance use and abuse was observed in the Jaffna district. With this background this study was designed to find out the prevalence of substance abuse and the influence of personal and environmental factors on increasing substance abuse among the G.C.E A/L students in the Nallur educational division.

Methods: This is a descriptive cross sectional school base study conducted among GCE A/L students in selected schools in the Nallur Educational division. Seven hundred and seventy students were selected by cluster sampling method to participate in the study. Data were collected using a self-administered questionnaire, after obtaining informed written consent. Data were analyzed using SPSS version 2.1.

Results: Among the 770 students, 60.6% were males and 39.4% were females and 35.2% were at the age of 18 years and 64.8% were 19 years old. Among the 770 students 9.6% having the habit of using substances. Students with inadequate knowledge (12.5%) are using substances more than that of the students with adequate knowledge (3.6%). Sleep disturbances (14.4%), getting frequent irritation (13.4%), love failures (22.8%), late night study (6.4%) were the identified factors on substance usage. Further, using substances for prestige (22.7%) or pleasure (75.0%) or curiosity (40.9%) or decrease shyness (27.0%) had significant influence on substance usage. Moreover, caretakers, mother's occupation had the influence on substance usage. Social medias contributed the most (whatsapp≤ 15%, viber ≤ 12.9%, face book≤ 15%) in the usage of substances. Further, substance usage by friends (20.2%), induced by friends (31.8%) and usage of substances in cultural events (19.8%) significantly lead to the substance habit.

Conclusion: Substance usage among the G.C.E A/L students in the Nallur educational division was identified. Personal, environmental, family related factors influence the above. Therefore, an immediate intervention is inevitable.

Pattern of urolithiasis among patients with urolithiasis at Teaching Hospital Jaffna

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Background: Urolithiasis or calculus formation in the urinary collecting system affects 1 to 15 percent of the population globally. Urolithiasis can be described based on the size of stones, the location of the stone, recurrence and clinical presentation. Despite accounting for a large number of admissions to Teaching Hospital Jaffna, little is known about the pattern of urolithiasis in Jaffna. This study aimed to describe the pattern of urolithiasis among patients with urolithiasis admitted to Teaching Hospital Jaffna.

Methodology: An institution-based cross-sectional study was carried out among patients admitted with urolithiasis between November 2017and January 2018 to the surgical wards of Teaching Hospital Jaffna. Data were collected using an interviewer-administered questionnaire, data extraction form and standard anthropometric measurements. Data were analyzed using descriptive statistics (percentages and proportions) with the help of SPSS (v.23).

Results:116 patients with urolithiasis participated in the study. The renal calyceal system (24.1%) was the most common site of stones followed by the renal pelvis (19%). For ureteric stones, the lower ureter (18.1%) was most common, followed by upper (17.2%) and middle ureter (18.1). Bladder stones accounted for9.5%. Stones were more or less equally distributed between right and left side. Among the total 116 patients, only 60 patients had undergone either ultrasonography or computed tomography. The size of the stones was measured in this group. Among them, over 80 per cent had stones measuring >5 mm in size with 18.1%, 13.8% and 12.9% having stones of 5-10, 10-20, and >20mm, respectively. Of the total sample, 92.2% presented with pain, 48.3% dysuria, 31.9% frank haematuria, and 33.6% a recurrence of urolithiasis.

Conclusion: The pattern of urolithiasis in patients admitted to Teaching Hospital Jaffna is comparable to those from studies carried out in other tropical regions with similar rates of recurrence. Considering the prevailing hot climate and agriculture-based economy in northern Sri Lanka, our findings suggest that population-based studies of urolithiasis may be needed to guide prevention efforts.

Key words:urolithiasis, patterns, recurrence, Jaffna

Self-administration of antibiotics and factors influencing on it among the patients with respiratory symptoms attending primary care hospitals in Nallur

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Background: Antimicrobials are agents which kill or inhibit the growth of microorganisms. Antimicrobial resistance is not a new issue. It is a longstanding and critical issue. One of the important causes of antimicrobial resistance is irrational use of antibiotics. The aim of the study is to assess the pattern of self-administration of antibiotics and factors influencing its use among patients with respiratory symptoms attending primary care hospitals in Nallur.

Methodology: An institutional based descriptive cross-sectional study was carried out among patients with respiratory symptoms attending primary care hospitals in Nallur. The study assessed 360 participants with respiratory symptoms attending the primary care hospitals in Nallur. Interviewer administered questionnaires were used to collect data and analyzed with the help of statistical package for social studies (SPSS, version 21). Chi-square test was done for analysis.

Results: Out of the 360 participants, 17(4.7%) self-administered antibiotics; 184 (51.1%) were females; 161 (44.7%) were below 30 years. Median age was 35 with the age range of one to 85 years. Most of the participants 104 (28.9%) had education from grade 6 to grade 10; according to the social status, more were employed, 136 (37.8%). Mostly the participant's family income was between Rs. 15000 to Rs.45000, 219(60.8%), The median of the monthly family income was Rs.20000. In the socio economic factors such as educational level ($p \leq 0.0001$), monthly family income ($p \leq 0.002$), and occupation ($p \leq 0.0001$) showed significant association with self-administration of antibiotics. Of the 17 participants self-administered antibiotics, 15 (88.2%) knew the name of the antibiotics. Most used antibiotic was Amoxicillin (73.3%). Those self-administered antibiotics mostly obtained it from pharmacist (52.9%). Based on the ability to access the health care services such as practicability of out-patient visiting time, mode of transport and distance were concerned. Practicability of out-patient visiting time showed significant correlation with self-administration of antibiotics ($p \leq 0.0001$).

Conclusion: Practice of self-administration of antibiotics was less in the current study compared to the previous studies in Jaffna (54%) and Colombo (29%). High educational level high family income, government employed, ability to access the health care service and practicability of OPD time influence on the self-administration of antibiotics

Key words: Self-administration of antibiotics, Primary health care, Antibiotic resistance, Socio economic factors.

Pattern of consumption of fast food and sugar sweetened beverages and the association of personal behavioural, familial factors and knowledge on health issues in the consumption of them among A/L students in Jaffna Education Division.

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Background Fast food and sugar sweetened beverages consumption has been increasing among thehigh class students of our country.The past decade was shown an increased rate. Consumption of fast food during the school age affects the future health status of the students. Our study focuses on the fast food consumption pattern and the factors influencing it, among advanced level students in Jaffna education division

Methods:A descriptive cross sectional institutional based study was conducted among G.C.E A/L students in Jaffna Educational division (N≤649). The study was conducted from August 2016 to May 2018 in 13 schools in Jaffna education division.Self-administered questionnaire was given to the students.The questionnaire had questions regarding fast food and sugar sweetened beverage consumption pattern, personal behaviors, familial factors affecting fast food consumption and the knowledge regarding the health issues caused by the fast food and sugar sweetened beverages affecting their consumption.

Results:the study comprised 333 males and 316 females. Most of the students(86.3%) (N≤560) who participated in the study visited the fast food restaurants at least once a week. Most of the students(61.8%) (N≤401) are taking fast foods as short eats. More than 40% of students use school canteen to consume fast foods and sugar sweetened beverages. Familial factors and the knowledge about the health issues caused by fast foods and sugar sweetened beverages doesn't affect the consumption. Little more than half of the students (51.5%) had good knowledge regarding the health issues caused by the fast foods and sugar sweetened beverages. Males skip more main meals due to the consumption of fast foods. (40.5%).

Conclusions: Consumption of fast foods and sugar sweetened beverages is on the increase.Their consumption is mainly affected by the personal behavioural patterns but when considering the association between the familial factors and knowledge, there is no significant influencein the fast food consumption inour study population.

Key words: fast food, sugar sweetened beverage, pattern of consumption, knowledge, A/L students, Jaffna

Study on sociopsycological factors associated with diagnostic delay among pulmonary tuberculosis patients attending chest clinic pannai

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Background: Tuberculosis (TB) is a major global problem which carries high mortality rate without proper treatment and can be cured completely with timely diagnosis and treatment. Delay in diagnosis of TB worsens the disease, causes spread of infection in the community, increases patient expenditure, and is associated with higher risk of mortality. Delayed diagnosis may be one of the reason why TB incidence has not declined substantially. Identifying the factors which cause diagnostic delay can help to take steps to deal with those factors and to get rid of them.

Methods: This study was carried out among the patients attending chest clinic at Pannai Jaffna who were registered in District tuberculosis registry. Data collection was done using an interviewer administered questionnaire. Questionnaire was designed to cover relevant data under the patient delay and diagnostic delay in Health care provider delay. The data under Socio psychological characteristics were believes of patients on pulmonary TB, first visited health care provider, lack of awareness about TB. Ethical clearance was obtained before data collection. Written permission was obtained from the director and Respiratory physician, Teaching hospital Jaffna and consent from the recruited patients. Collected data was processed and analyzed with the help of SPSS 23.

Results: Total number of patients participated in this study was 97. The mean diagnostic delay was 23.47 ± 9.73 days. Diagnosis of pulmonary tuberculosis was delayed in 57 (58.8%) patients. Initial treatment seeking place and repeated visiting to a same health care level were found to be significantly associated with diagnostic delay. There was a significant relationship between socio-psychological characteristics and clinical and health related factors of patient with the delay in diagnosis of pulmonary tuberculosis. This could be due to the lack of health education on Tuberculosis in the society.

Conclusion: There should be an organized structure by the government at zonal levels and through schools for proper health education to general public and patients regarding the disease.

Side effects following chemotherapy and associated comorbidities and socio demographic factors among cancer patients at Thellipalai Trail Cancer Hospital

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Background: Side effects following chemotherapy impact patient well being and quality of life. This study aimed to determine the prevalence and assess the common side effects of chemotherapy and the influence of co-morbidities and socio-demographic factors on side effects in cancer patients at Thellipalai Trail Cancer Hospital in northern Sri Lanka.

Methodology: A descriptive cross-sectional hospital-based study was conducted at Thellipalai Trail Cancer Hospital between November 2017 and January 2018 among inpatients and outpatients visiting the clinic who had undergone at least one cycle of chemotherapy in the past year. Data were analyzed using SPSS version 23.

Results: A total of 219 patients participated in the study; 38.8% (n≤85) and 61.2% (n≤134) were male and female respectively. The majority (86.3%) of participants were educated below GCE O/L, and 64.3% had a family income between Rs. 20, 000 and 50, 000. The prevalence of co-morbidities was 37.9% with hypertension, diabetic mellitus and bronchial asthma most common. About one fourth of participants (25.6%) were diagnosed with breast cancer. Cisplatin was the most frequent (33.3%) drug used among chemotherapy agents. The hemoglobin levels in patients were low in a large majority of the sample (83.1%). Hair loss was the most prevalent side effect, which manifested in the early phase. Women had higher rates of dysuria (early: 19.4%, late: 21.4%) than men (p≤0.03).

Conclusion: Hair loss was the most common side effect in cancer patients undergoing chemotherapy. All side effects were the same for men and women except dysuria in the late phase.

Knowledge, attitudes, and practice related to patients' rights among patients admitted to surgical wards of Teaching Hospital Jaffna and associated socio-demographic factors

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Background: Respecting and protecting patients' rights is an essential part of providing good healthcare. It is one of the fundamental rights of all human beings without distinction as to race, colour, and religion. This study was designed to assess the knowledge, attitude, and practice related to patients' rights and the influence of socio-demographic factors on patients' rights among patients admitted to surgical wards at Teaching Hospital Jaffna.

Methods: Across-sectional descriptive study was conducted among 200 patients. Systematic sampling was used to select the sample. Details relevant to patients' socio-demographic factors and information regarding patients' rights were obtained by using an interviewer-administered questionnaire. Data were analyzed and processed using SPSS.

Results: The mean age of the participants was 47.23 ± 18.047 years. Of the participants, 56% were males and 44% were females. Only 15.5% of patients had good knowledge on patients' rights with 61.5% and 23% having moderate and poor knowledge, respectively. In terms of attitudes and practice, respondents feared being victimized if they complained when healthcare workers did not respect their privacy and dignity. A third of participants stated that doctors had not explained their diagnosis, treatment modality, risks associated with the disease and treatment, prognosis, and appropriate alternatives. While a majority of respondents with secondary (67.2%) and tertiary (64.3%) education levels had moderate knowledge on patients' rights, about half of the respondents who had never been to school orhad primary education had a poor knowledge of patients' rights. Apart from education level ($P<0.001$), gender ($P \leq 0.059$), age ($P < 0.001$), occupation ($P < 0.001$) and family income ($P < 0.001$) were significantly associated with knowledge of patients' rights.

Conclusion: The government should implement national awareness campaigns and programmes to make the public aware about patients' rights, and implement mechanisms to ensure that healthcare providers respect the rights of patients.

Key words: Patients' rights, Teaching Hospital Jaffna

Prevalence of common risk factors and their influence on recurrence among patients with urolithiasis at Teaching Hospital Jaffna

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Background: Urolithiasis or calculus formation in the urinary collecting system affects 1 to 15 percent of the population globally. It is a multi-factorial disorder influenced by socio-demographic factors (age and sex, educational level, occupation, economic status and living environment), lifestyle factors (diet, smoking habit, alcohol consumption and fluid intake), and the presence of co-morbidities (obesity, diabetes mellitus, hypertension, dyslipidaemia and chronic urinary tract infection) and drug and family history. This study aimed to determine the prevalence of common risk factors and assess their influence on recurrence among patients with urolithiasis at Teaching Hospital Jaffna.

Methodology: An institution-based cross-sectional study was carried out among patients admitted with urolithiasis between November 2017 and January 2018 to the surgical wards of Teaching Hospital Jaffna. Consecutive sampling was used. Data were collected using an interviewer-administered questionnaire, data extraction form and standard anthropometric measurements. Urine colour was assessed using a dehydration chart. Data were analyzed using SPSS (v.23). Percentages and proportions were used to describe risk factors and the influence of risk factors on recurrence was assessed using the Chi Square test.

Results:116 patients with urolithiasis participated in the study. Of the total sample, 69.8% were in the 20-60 years age group with a male predominance (72.4 %). Smokers and alcohol consumers accounted for 29.3% and 25.8% patients with urolithiasis. Most participants (56%) reported having a fluid intake of 1-2L per day with 4.3% having <1L per day. Over half (53.4%) reported passing pale yellow coloured urine. With respect to co-morbidities, 19.8% had diabetes mellitus, 18.1% hypertension, 17.2% dyslipidaemia and 19.8% had a positive family history of urolithiasis. Recurrence was found to be significantly associated with smoking ($p \leq 0.001$), fluid intake ($p \leq 0.02$) and colour of urine ($p \leq 0.019$).

Conclusion: Urolithiasis was most common among men in the productive age group. A large proportion of urolithiasis patients reported a relatively low fluid intake. Recurrence was significantly associated with smoking, fluid intake and colour of urine. Modifiable risk factors such as smoking habit and fluid intake may be targeted for preventive efforts in Jaffna.

Key words: Urolithiasis, risk factors, recurrence, Jaffna

The influence of sociodemographic factors on perceived level of stress among first year medical students of Faculty of Medicine, University of Jaffna

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Background: Medical students are known to experience high levels of stress compared with their non-medical peers. Various socio-demographic factors are known to be associated with experiences of stress. A deeper understanding of those factors may facilitate efforts to improve well being and learning among medical students. The objective of this study was to determine the influence of socio-demographic factors on perceived stress level among first year medical students of the Faculty of Medicine, University of Jaffna.

Methods: This was an institutional-based cross sectional study of first year medical students of Jaffna Medical Faculty. A pretested self-administered questionnaire was used for data collection. The Perceived Stress Scale (PSS-10) was used to assess perceived level of stress, and relevant socio-demographic data were obtained through the questionnaire. Responses to PSS-10 were marked out of 40 and a total mark (0-13 low stress, 14-26 moderate stress, 27-40 high stress) was obtained for each student. Analysis was done using chi square test.

Results: 106 students participated in the study with a response rate of 78%.. The mean score of PSS was 19.44 (SD±4.658). A large majority of participants (91.4%) were identified to have moderate level of perceived stress. A statistically significant relationship was identified between perceived level of stress and A/L medium of instruction ($p<0.05$) as well as financial support for education ($p<0.05$). No statistically significant differences in stress level were found based on sex, age, first language, monthly family income, present accommodation, monthly expenditure and transport medium to the faculty.

Conclusion: Most medical students at the Jaffna Medical Faculty experience a moderate level of perceived stress. Perceived stress level has a statistically significant relationship with the A/L medium of instruction and financial support for education. Strengthening the English curriculum for first year medical students would be a good approach to addressing students' language issues. The authorities should consider providing student loans, scholarships or grants to needy students.

Key words: Medical students, socio-demogaphic factors, perceived stress level

The prevalence of back pain and associated socio-demographic and work related factors among licensed tailors in the Jaffna Municipal Council Area

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Background: Our study population comprises all tailors working in 48 licensed tailor shops located in Jaffna Municipal Council Area . In that back pain is one of the common problems among the tailors. This study aimed to determine the prevalence of back pain and associated socio-demographic and work related factors among licensed tailors in the Jaffna Municipal Council Area.

Methodology: This descriptive study was conducted to determine the prevalence of back pain and associated socio-demographic and work related factors among licensed tailors in the Jaffna Municipal Council Area .Among 48 licensed tailor shops we included all the population as sample size is 150 (60 females and 90 males), interview-administered questionnaire was given

Results: Prevalence of back pain was 72.7% .There was significant between the age group ,working years, working hours and back pain but not significant between sex and back pain as prevalence among males(60%) were higher than females(40%) , As $P \leq 0.008$, there is a significant correlation between age group. Within the pattern, most common area is low back (38.0%) 2nd common area is both neck and chest (17.3%). When looking the severity, most of them are having moderate (45.3%) . Among work related factors, as the working years increased, prevalence of back pain is also increased. As less than 5 years 43.13%, 6-10years 86.53%, 11-20years 89.4% , >20 years 88.8% are having back pain. And there is significant correlation between working years and back pain ($P \leq 0.000$). There is a significant association between back pain and working hours (the P value is 0.007). There is significant association between mental tiredness ($P \leq 0.000$) and physical tiredness ($P \leq 0.003$) in relation to back pain.

Conclusion: As the study implies the prevalence of back pain is high in tailors' population. Among them males are high. Most of the tailors, in those who are having back pain, have a moderate lower back pain related to their age. Therefore we may come to conclude that among tailors. Therefore promotion of health education regarding back pain and reduce the working hours and stress management to tailors will help to improve the occurrence of back pain.

Keywords: Tailors, Jaffna Municipal Council, Back pain, Health Education

Prevalence of microalbuminuria and associated socio demographic and disease- related risk factors among type 2 diabetic mellitus patients attending the Diabetic Centre, Teaching Hospital Jaffna.

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Background: Diabetes Mellitus (DM) is an emerging threat to public health. DM affects quality of life and leads to premature death. Microalbumiuria (MA) being an early predictor of vascular complication is an ideal marker to identify DM complications. This study aimed to determine the prevalence and risk factors of MA in type 2 DM.

Methods: A descriptive cross-sectional study was conducted on a systematic random sample of 408 type 2 DM patients from November 2017 to January 2018 at the Diabetic Centre, Teaching Hospital Jaffna. An interviewer-administrated questionnaire was used to collectsocio-demographic details and clinical characteristics of the participants. Albumin creatinine ratio (ACR) measured by immunoturbidimetric assay method on a random spot sample of urine was extracted from laboratory reports. Data were entered and analyzed using Statistical Package for the Social Science (SPSS) version 21. P value was considered as significant at ≤ 0.05.

Results and Discussion: The study comprised 137 males and 271 females with a mean age of the 59.8 years (SD ±10.6). The prevalence of MA and overt nephropathy were 26.5% ($n \leq 108$, 95%CI 22.2%-30.8%) and 11.5% ($n \leq 47$, 95%CI 8.4%-14.6%), respectively. Among the study population, 46.6% had DM for less than 5 years. Based on BMI, many patients were over-weight (39.2%) and 26.7% were obese. The mean waist circumferencewas 93.36±9.5cm. None of the females smokedand 14.6% of males smoked. Age ($p \leq 0.031$), triglycerides level ($p \leq 0.012$) and duration of DM ($p < 0.0001$) were significantly associated positively with ACR. Waist circumference ($p \leq 0.047$) had a significant association with the presence of MA. Gender, level of education, body mass indexand the habit of smoking had no significant association.

Conclusion: The overall prevalence of MA in type 2 DM patients attending DC, THJ is 26.5%.

Keywords: Microalbuminuria, Diabetic, riskfactors, Jaffna

Levels of engagement in physical activity, barriers, and associated socio-demographic factors among Jaffna University undergraduates

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Background: Prevalence of physical inactivity among young undergraduate students is very high. There are several studies that have been done on the assessment of physical activity among undergraduates in foreign countries. However, studies on physical activity patterns in Sri Lankan university students are lacking. There exists no data about physical activity among undergraduates in Jaffna.

Methodology: This is a descriptive cross sectional study. It was conducted in the Jaffna campus of the University of Jaffna. Data was collected from January to March 2017. The study was carried out on 2nd year students in all the faculties in the Jaffna campus of the University of Jaffna. 386 students participated in the study. Data were collecting using a self-administered questionnaire. Data were analysed using SPSS version 23. Ethical clearance was obtained from the Ethics Review Committee of the Faculty of Medicine, University of Jaffna.

Results: All participants were in the age group of 20-25 years, 45.6% (n≤176) of them were males and 54.4% (n≤210) were females with the majority representing the Faculty of Arts 29.5% (n≤114). 61.7% of the participants recorded a high physical activity level, 31.3% with a moderate physical activity level and 7% with a low physical activity level. Among the socio-demographic factors studied, sex (p≤0.008), ethnic background (p≤0.0001) and sector(p≤0.009) were significantly associated with physical activity level. A majority of participants reported that fatigue (62%), lack of free time (62.2 %,), reluctance to exercise in public (52.8%), lack of peer group(50.8%), and lack of exercise facilities(58%.), were barriers to physical activity.

Conclusion: Majority of the participants had high physical activity level with some socio-demographic economic factors, particularly sex, sector and ethnicity, influencing physical activity levels. However, significant barriers prevented physical activity among participants. Action needs to be taken to address these barriers to improve the physical and mental health of university undergraduates.

Awareness of overweight and obesity among Grade 10 students in the Nallur Education Division

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Background: Changing lifestyle is increasing the risk for overweight and obesity leading to a high incidence of non-communicable diseases among adults. Neither obesity nor non communicable diseases are born overnight; they are influenced by various factors, starting from the early decades of life. Attending to issues related to obesity in children will undoubtedly have positive effects on preventing obesity among adults. The objective of this study was to assessknowledge and attitude towards overweight and obesity among Grade 10 students in the Nallur Education Division.

Methods:A cross-sectional descriptive study was carried out among Tamil-speaking Grade 10 students registered for the year 2017 at schools in the Nallur Educational Division. Stratified cluster sampling was used to select the sample. A pre-tested self-administered questionnaire was used to collect data relevant to knowledge, attitudes and sociodemographic variables.

Results:800 students participated in the study. Of the total sample, 85.5% scored over 50% on knowledge while only 30.1% had favourableattitudes towards obesity and overweight.Knowledge about childhood obesity was significantly associated with socio demographic factors whereas attitude was not. Female students had significantly more knowledge than male students.

Conclusion: Although a substantial proportion of students had satisfactory knowledge on overweigh and obesity, the proportion who had favorable attitudes towards obesity and overweight was not satisfactory. The present study suggests that knowledge on overweight and obesity may be associated with sociodemographic factors but does not highlight a similar association with attitude.

Keywords: Overweight, obesity, adolescents, Jaffna.

Knowledge, attitude, practice about dengue and associating socio-demographic factor among the advanced level school students in Jaffna Educational Division

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Background: Dengue is regarded as one of the most important vector-borne viral communicable disease that in recent decades have become an important global public health issue. Dengue can be fatal but can be preventable. Human habits and activities strongly associated with the epidemiology and ecology of dengue infections. This study aims to assess the Knowledge, attitudes and practices and associated socio demographic factors among the advanced level school students in Jaffna educational zone.

Methods: This study was an Institutional based descriptive cross sectional study. Data was collected using a pre-tested interviewer administered questionnaire to assess the knowledge, attitudes and practices and associated socio demographic factors of 822 advanced level first and second year students from Jaffna educational division.

Results: When Overall knowledge regarding dengue fever and transmission is considered 61.7% had good knowledge, 36.6% had adequate knowledge. Our study revealed that most of the students (88.2%) accepted that dengue as a viral disease and most students (90%) were aware that disease is transmitted by mosquito. When Overall knowledge regarding signs and symptoms of dengue fever is considered 53.5% had good knowledge, 38.8% had adequate knowledge. Media especially television (92.7%) and family and friends (93.6%) being the most quoted source of information. When Overall knowledge regarding the complications of dengue fever is considered 29.9% had good knowledge, 49% had adequate knowledge. Based on the scoring system only 44.6% students had good overall Knowledge. Furthermore, most of the students had good attitude (92.3%) and good practices towards dengue (92.3%).

Conclusion: It is essential to give more information regarding dengue to the students. Some miss perceptions and wrong practices were still prevailing among the school students related to the time of bite, transmission and management. This will badly reflect on the community.

Keywords: Dengue, Knowledge, Jaffna, Adolescents

Prevalence of reduced visual acuity and its association with usage of digital devices among A/L students in the Jaffna Educational Division

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Background: Visual impairment has become a global challenge especially in developing countries due to the changing patterns of visual input associated with the use of modern educational media and tools, urbanization, and sedentary life style. The present study was undertaken to determine the prevalence of reduced visual acuity and its association with the usage of digital devices among Advanced Level (A/L) students in Jaffna Educational Division, northern Sri Lanka.

Methods: A descriptive cross-sectional study was carried out among A/L students in Jaffna Educational Division. Single-stage cluster sampling was used for data collection. A self-administered questionnaire was used to assess digital eye strain and the Snellen chart was used to measure visual acuity. Data were analyzed using SPSS (Statistical Package for Social Sciences) v.21. Percentages and proportions were used to describe the data. Chi-square test was applied to assess the influence of digital eye strain on visual acuity. P value <0.05 was considered significant.

Results: The prevalence of reduced visual acuity (<6/6) was detected to be 19.6%. Reduced visual acuity was more prevalent among males (21.6%) than females (17.0%).With respect to daily usage of digital devices, 34.4% watched television,6.0% used a computer, and 47.9% used a laptop for more than 2 hours continuously. Among mobile device users, 36.6% participants used a mobile phone and7.4% participants used a tablet for more than 2 hours continuously. When considering weekly usage, 20.4% watched television, 6.9% used a computer, 7.0% used a laptop,18.6% used a mobile phone, and 5.9% used a tablet only on weekdays. Meanwhile, 43.9% watched television, 17.0% used a computer, 22.9% used a laptop, 19.7% used a mobile device, and 7.4% used a tablet on weekends. A substantial proportion used digital devices throughout the week with television use at 29.1%, computer useat 4.6%, laptop use at 33.1%, and tablet use at 6.9% throughout the week. There was a significant association between reduced visual acuity and digital eye strain (p<0.001).

Conclusion: About a fifth of the A/L student population were found to have reduced visual acuity, which was associated with digital eye strain. As the Snellen chart is a screening test with questionable validity and reliability, these findings merit further study. Meanwhile, parents should be made aware of the possible public health consequences of digital eye strain.

Key words: adolescents, reduced visual acuity, digital devices

Prevalence of Dyspeptic symptoms and association of life style, dietary &other risk factors among medical students of Faculty of Medicine, University of Jaffna.

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Background: Medical student's high level of stress may have an influence on dyspeptic symptoms. The interactions and confounding between these possible causes can vary according to diatery patterns, genetic factors, life style, environment and other factors. Prevention of these factors has positive effects on improving the quality of their life by avoiding dyspeptic symptoms. Objectives: To determine the prevalence of Dyspeptic symptoms and association of life style factors, dietary factors & other risk factors on dyspeptic symptoms among medical students of Faculty of Medicine, University of Jaffna.

Methodology: This descriptive cross sectional Institutional based study was conducted from among 463 students. Data collection was done from 20.11.207 to 22.01.2018 using a self-administered questionnaire. The questionnaire was completed with set of questions regarding information about upper abdominal symptoms, risk factors for dyspepsia.

Results:. It consists of male 210 (45.4%) and 253(54.6%) were female. Among them 151(32.6%) had dyspeptic symptoms. Among them were 86(40.1%) male and 65(25.7%) were female. Students who were staying outside the home (Hostel-32.7% and boarding room-32.1%) tent to get dyspeptic symptoms than the students staying at home (18.3%, P-.23). Association between residence and dyspeptic symptoms was significant. Among the dietary factors skipping meals (57.5%,p-.001), different varieties of fruits and vegetable consumption per week(22.4%, p-.001), regularly eating snacks(55.1%,p-.001), pre prepared meals(63.8%,p-.001), processed meats(61.3%,p-.001) and carbonated beverages(53.6%,p-.001) were significantly associates with dyspepsia in this research. No statistically significant association was observed for choose low-fat products when available(30.9%,p-.374), choose baked, steamed or grilled options when available(30.1%, p-.238), main meal based on starchy food(32.2%,p-.577), drinking plenty of fluids at regular intervals during the working day(31.0%,p-462) and regularly consuming caffeine containing beverages(31.5%,p-259). Among the life style factors history of smoking (68.4%,p-.001), alcohol consumption(71.4%,p-.001), physical activity(42.7%,p-.024), sleeping pattern(p-.006), listening to music for relive the stress(30.55,p-.001) and meditating for relieve stress(44.3%,p-.037) were significantly associates with dyspectic symptoms. No statistically significant association was observed for writing poem stories (p-.177),drawings (p-.826) and hobbies (p-.398) for relieve stress with dyspectic symptoms. Association of dyspectic symptoms and usage of NSAIDs was identified as not significant (p-.074).

Conclusion: Students must focus on good dietary habits, life style modifications such as adequate physical activity, adequate sleep, avoiding smoking or alcohol and well adaptation to different environment to prevent from dyspeptic symptoms.

Key words: Dyspeptic symptoms, Prevalence, lifestyle, dietary habits

Prevalence of disease related factors among diabetic foot ulcer patients in surgical wards, Teaching Hospital,Jaffna.

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Background: Diabetes mellitus is a metabolic disorder which is characterized by multiple long term complications that affect almost every system in the body. Foot ulcers are one of the main complications of diabetes mellitus. It is associated with several factors such as duration of diabetes, co morbidities, neuropathy and peripheral vasculopathy. This study aimed to describe the prevalence of disease related factors on diabetic foot ulcer patients in all general surgical wards of Teaching Hospital, Jaffna.

Methodology: Descriptive cross sectional hospital based study was carried out among 188 diabetic foot ulcer patients who were admitted to all general surgical wards of Teaching Hospital, Jaffna from November 2017 to January 2018. Data collection instruments were interview administered questionnaire and data extraction form. Data were analyzed with statistical package for social sciences (SPSS) version 21 table and diagrams were used for data presentation. The results were plotted graphically and as tabulations.

Results: Among 188 patients, 68 (36.2%) patients have diabetic mellitus for more than 15 years, 44 (23.4%) patients have for 11-15 years, 32 (17%) patients have for 6-10 years and 44 (23.4%) patients have for less than 5 years. In this study 142 (75.5%) patients had poor control, 45 (23.9%) patients had moderate control and 1 (5%) patients had good control. The mean BMI was 23.2 kg/m^2. Majority of the patients 131 (69.7%) used oral anti diabetic drugs, 52 (27.7%) patients used insulin and 5 (2.7%) patients used diet control only. Around 105 (55.9%) patients didn't have hypertension and 115 (61.2%) patients didn't have dyslipidemia. Among 188 patients, 151 (80.3%) patients didn't have any deformity and others had one of nail in rolling, hammer toe, charcot foot and plantar warts. Among 148 (78.7%) patients didn't have muscle wasting 87 (46.3%) patients had absence of vibration on their medial malleolus and few had top of tibia and big toe. Sixty (31.9%) patients had no pain sensation, 137 (72.9%) patients had normal ankle reflex and 131 (69.7%) patients had peripheral pulse.

Conclusion: In this study duration of diabetes, uncontrolled diabetes mellitus on admission, type of treatment for diabetes, and BMI were identified as major risk factors. Vasculopathy and peripheral neuropathy also were significant

Keywords: Diabetic foot, ulcer, surgery, Jaffna, Hospital

Socio-demographic factors and practices influencing the oral health of undergraduate students in University of Jaffna

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Background: Oral health practices among university students have significant implication not only for the students themselves, but also for the future generation. The findings of the study helped to understand the current practices among university students regarding oral health and hopefully lead to better health education and health promotion programmes. The aim of this study is to assess the factors and practices influencing the oral health of students in all faculties and units of the University of Jaffna.

Methods: This was the institutional based cross sectional descriptive study on university students. Study population was students of University of Jaffna during our research period. Multistage stratified sampling technique was used to select a representative sampling. The participants were selected in proportion to the different population in the faculties. Data was collected from the participants by using self- administrated questionnaire. It was prepared, under the guidance of our supervisors to achieve our objectives.

Results: The total of 867 questionnaires were distributed from December, 2017 to, January 2018 and the total number of valid returned questionnaires were 826, giving the overall response rate of 95.27%. Most of the students (95.76%) had the habit of brushing teeth at least once in a day. Toothpaste (85%) and tooth brush (87%) were used for cleaning teeth. Most of Students (88.74%) also had the habits related to gum care.

Conclusion: Oral health practices significantly related with age, sex, monthly family income, district, ethnicity and faculty.

Key words: oral health practices, students, Jaffna

Quality of drinking water available to students of schools in the Thenmaradchi Education Zone and factors associated with quality of water

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Background: Ground water pollution is a major problem in the Jaffna peninsula. Regular surveillance of drinking water quality is not carried out by local government or public health authorities. No studies of thequality of drinking water in Thenmaradchi region have been carried out previously. The aim of this study was to assess the quality of drinking water available to students of schools in the Thenmaradchi Education Zone, Jaffna, and factors associated with it. Methods: This was an institutional-based descriptive cross-sectional study. Thirty schools from the Thenmaradchi Education Zone were selected by stratified random sampling. Laboratory tests were conducted to assess the quality of drinking water; selected physical, chemical and biological parameters were assessed according to the 'Sri Lankan Standards for Potable Water – SLS 614:2013.'A checklist and an interviewer-administered questionnaire were used for the assessment of water source and storage.

Results: Water source assessed were of the following types: 18 (60%) dug wells, 11 (37%) tube wells and one (3%) rain water harvesting system. Of the dug wells, 14 were unprotected and four were semi-protected. When considering physical parameters, water available in 87% of the schools studied can be recommended for drinking purposes. When considering chemical parameters, water available in only 13% of the schools studies can be recommended for drinking purposes. When considering bacteriological parameters, water available in 15% of the schools studied could be recommended for drinking purposes.

Conclusion: On the whole, most schools in the Thenmaradchi Division need to improve the quality of water and maintenance of water source and water storage in order to supply quality water for students.

Keywords: Drinking water, quality, Schools, Jaffna, Thenmaradchchci

Socio-demographic, physiological and lifestyle risk factors of hemorrhoids among patients with haemorrhoids at Teaching Hospital Jaffna

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Background: Haemorrhoids are a common surgical condition requiring frequent hospital admission. In Jaffna, the number of hemorrhoid-related hospital admissions shows an overall increase in recent years. This study was undertaken to determine the prevalence of sociodemographic, physiological and lifestyle risk factors of hemorrhoids among patients with haemorrhoids at Teaching Hospital Jaffna.

Methods: This was an institutional-based descriptive cross-sectional study carried out among patients diagnosed with haemorrhoids at Teaching hospital Jaffna. Data were collected from between November 2017 and March 2018 by using an interviewer-administered questionnaire. Descriptive statistics (percentages and proportions) were used to determine the prevalence of risk factors.

Results: 142 patients participated in the study. Sixty-two per cent were male and 38% were female, with the most common age groups affected 45-64 years (48.6%) and 15-44 years (39.4%). Age groups below 15 years (1.4%) and above 65 years (10.6%) comprised a small proportion of the sample. In terms of occupation, 40.8% were sedentary workers who sat for prolonged periods, while. 47.9% stood for more than 6hours continuously. A large proportion of patients (62.7%) were of lower socioeconomic status (monthly income below Rs. 30,000). Approximately 4% of the participants were pregnant women. Although most participants reported a high level of physical activity(69.7%), many were overweight (64%) and obese (16%). Notably, a third of participants (33.1%) consumed alcohol, while 22.5% smoked.

Conclusion: Being male, middle-aged, overweight/obese, engaging in sedentary work and being of lower socioeconomic status were associated with haemorrhoids. These risk factors need to be considered in the prevention of haemorrhoids in northern Sri Lanka.

Key words: Hemorrhoids, risk factors, Jaffna

Satisfaction of pregnant mothers on institutional infrastructure facilities in primary health care centers in Nallur MOH area, Jaffna

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Background: Satisfaction of public is one of the core outcome measures for health care. Evidence has suggested that care, which is less than satisfactory to the patients, is also less effective, because dissatisfaction is associated with noncompliance with treatment instructions, delay in seeking further care and poor understanding and retention of medical information.

Methods: Maternal perception of the quality of antenatal care was measured through a standard questionnaire to collect information on three domains namely institutional infrastructure facilities, attitude of the staff towards patient, status of medical equipment and drug handling . The study was designed to assess some aspects of expressed maternal (pregnant women) satisfaction on care provided at 14 primary health care centers in Nallur MOH area, Jaffna The study covered a sample of 224 pregnant women attending for antenatal care. Each individual in the sample was interviewed using a specific questionnaire form. Institutional infrastructure facilities in the public health care institutions were assessed to their influence on the satisfaction of pregnant mothers.

Results: Among 224 pregnant mothers 51.8% were satisfied regarding overall quality of antenatal care. Majority of pregnant mothers were satisfied regarding attitude of staff(98.7%) and state of environment (90.2%). Least satisfying factors were condition of medical equipment and drug handling(74.6%) and adequacy of toilet facilities(58.0%).Regarding other infrastructure facilities of the antenatal clinic, results showed that almost half of the mothers were satisfied with adequacy and condition of the seats available, waiting time, hygiene practices, and support provided by the staff.

Conclusion: Improvement of the toilets and facilities, recruitment of adequate health staff and enhance the condition of medical equipment and drug handling would increase the perceived quality of care among this population. Further research with a greater sample size is recommended to broaden the in-depth understanding of the determinants of satisfaction with care provided in antenatal clinics.

Assess the nutritional status and influencing socio economic, demographic factors, duration of Chronic Kidney Disease and length of time on dialysis in Chronic Kidney Disease patients who are undergoing hemodialysis at hemodialysis unit in Teaching Hospital Jaffna.

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Background: Malnutrition is a prevalent complication in patients on maintenance hemodialysis. Malnutrition is associated with increased morbidity and mortality. The Malnutrition Inflammation Score (MIS) is a quantitative tool that is based on the original Subjective Global Assessment Scale (SGA) and it is recommended by the NKF KDOQI to assess the nutritional status in hemodialysis patients.

Methods: In this descriptive cross sectional study, 152 hemodialysis patients participated. Our estimated sample size was 427.However only 154 patients were underwent hemodialysis at data collection period. Therefore the data was collected from all the patients available during the data collection period.All the patients were interviewed and the MIS of the patients was recorded. Malnutrition-Inflammation Score (MIS) has 10 components, 7 components from the SGA and3 additional non-SGA component namely, body mass index(BMI), serum albumin, and total iron-binding capacity (TIBC), each of which has four levels of severity, from 0 (normal) to 3 (very severe). These scores were compared with socio-economic, demographic factors, dialysis related factors and laboratory measurements. Chi-square test, independent sample t-test, one- way ANOVA test and Pearson correlation coefficient test were used to analyze the data.

Results: In this study,45.4% patients had normal nutritional status 52% had mild to moderate and 2.6% had severe malnutrition. Mean MIS was 9.4 ± 4.8. Among the socio-economic demographic factors there was statistically significant relationship between educational level and nutritional status ($P \leq 0.039$).Among the hemodialysis (HD) patients, duration of CKD ($P \leq 0.003$), length of time on dialysis ($P \leq 0.01$), dialysis count ($P \leq 0.009$), serum Albumin ($P \leq 0.0001$), TIBC level ($P \leq 0.01$) and BMI ($P \leq 0.016$) had significant correlation with nutritional status.

Conclusion: In this study,more than 50 percent of patients (52%) on hemodialysis were at risk of mild to moderate malnutrition and least number of patients (2.6%) were at risk of severe malnutrition. Correlation between MIS and educational level, CKD duration, dialysis period, dialysis count, serum Albumin, TIBC and BMI was significant.

Keywords:CKD, Hemodialysis, Malnutrition, Malnutrition Inflammation Score (MIS)

Prevalence andtypes of Osteoarthritis (OA) and associated socio-demographic and co-morbid factors among OA patients attending the Rheumatology Clinic Teaching Hospital, Jaffna

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Background: Osteoarthritis (OA) is not only a common disease of the aged population, but is also one of the leading causes of disability-causing chronic medical condition. The aetiology of OA is believed to be multi factorial; associated socio-demographic factors and co-morbid factors have been identified. OA is one of the causes of hospitalisation due to various problems with musculoskeletal system and connective tissue. The incidence of OA has been gradually increasing for the last few years. The purpose of this study was to determine the prevalence and types of OA and associated socio-demographic and co-morbid factors among OA patients attending the Rheumatology clinic Teaching Hospital Jaffna.

Methods: Our study design was an institution based descriptive cross-sectional study. The study was carried out at the Rheumatology Clinic of Teaching Hospital Jaffna. Data were collected using an interviewer administered questionnaire. Collected data were analysed by using Statistical package for social sciences (SPSS) 21st Version. Ethical clearance was obtained from the Ethical Review Committee, Faculty of Medicine, University of Jaffna.

Results: The mean age of the participants was 43.79 years with the range of 21-67 years.Among the 158 of OA patients 81% had knee OA, 10.8% hip OA, 8.9% wrist OA, and 3.8% finger OA. Statistically significant relationship was identified between knee OA and religion (Hinduism 89.2%, p≤0.027) and Underlying inflammatory arthritis (16.4%, p≤0.017). None of the OA patients were working in upstairs. Among knee OA patients, 96.8% were female and 3.2 % were male. Ninety two point two percentages were Hindus 8.2% Christiansand 1.3% Muslims. Eighty eight point six percentages (88.6%) were unemployed and 11.4% employed. Eighty four point seven percentages (84.4%) had squatting type toilets and 15.6%had commodes. Thirty five point one percentage (35.1%) of knee OA patients were standing for less than 2hours, 44.5% for 2-5 hours12.5 % for 5-8 hours7.9% were standing for more than 8'hours.

Key words: OA patients, types of OA, socio-demographic factors, co-morbid factors

Prevalence of smoking and alcohol use and its associated socio demographic factors among fishermen in the Passaiyoor area

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Background: Fishermen are a vulnerable group of people who suffer both mentally and physically which trigger them to seek temporary solution by using alcohol and smoking. This study aimed to assess the prevalence of smoking and alcohol use and its association with socio-demographic factors among fishermen in Passaiyoor Area.

Methods: This descriptive cross sectional study was carried out by using simple random sampling technique to select 336 fishermen in the Passaiyoor area, Jaffna. Interviewer administered questionnaire was used as study instrument to collect data between November 2017 to January 2018. Association between variables of interest were assessed using chi-square test and t-test.

Results: The prevalence of consumption of alcohol and smoking were 43.5% and 34.8% respectively. There was positive association between alcohol and age group and ownership of boat; but none with marital status, educational level, family structure, job and monthly net labour income. Prevalence of smoking has positive correlation with age group and marital status but none with educational level, family structure, job, ownership of boat and monthly net labour income.

Conclusion: According to this study prevalence of smoking and alcohol were high among fishermen. Smoking and alcohol are modifiable factor of non- communicable disease(NCD). By doing effective intervention to decrease the prevalence, prevalence of NCD can be decreased.

Keywords: Fishermen, Alcohol, smoking, Jaffna

Parenting styles and their influence on behavioural problems of children aged between 10 to 14 years in the Nallur DS division

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Background: Little is known about the influence of parenting styles in behavioural problems of children in Sri Lanka. This is the first research study conducted in Sri Lanka. The objective of the study is to assess the parenting styles and to assess influence of parenting styles on the behavioural problems of children aged between 10 to 14 years in the Nallur Divisional Secretariat.

Method: A community based descriptive cross-sectional study was conducted on 730 mothers of children aged between 10 to 14children.The cluster sampling technique was used to determine actual total population size of the study. As follow the interview object were collected from 14 clusters. Two interviewer administered questionnaires were used (Strengths and Difficulties Questionnaire, parenting styles and dimensions questionnaire to assess the parenting styles and behavioural problems of children respectively).

Results: This study shows that there was a statistically significant association between parenting styles and behavioural problems. Most of the mothers had authoritative parenting styles. Authoritarian level of mothers had positive weak level of significant correlation with emotional problems, conduct problems, hyperactivity, peer problems and negative weak level with prosocial scale. Authoritative level of mothers had negative weak level of significant correlation with conduct problems and hyperactivity scale. The permissive level of mothers had positive weak level of significant correlation with emotional problems, conduct problems, hyperactivity scale, peer problems and negative weak level with prosocial scale in children. Also, parent should be ready to change their style of parenting for the sake of mental health development of their children.

Conclusion: Same as in other parts of world, authoritative parenting styles were followed by most of the parent here. Our results strengthen the view that children's behavioural problems such as emotional problems, conduct problems, peer problems, hyperactivity scale and prosocial scale are influenced by all three parenting styles.

Keywords: Parenting style, behavior, adolescent, Jaffna

Attitude of primary school teachers on prevention of dental caries among primary school students and their influence on practice in the Nallur Educational Division, Jaffna.

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Background: Dental caries is one of the common oral health problem in children and it is preventable. Teachers are suitable person to give awareness as children spend more time with their school teachers. Although knowledge, attitude and practice of oral health problems of school children among primary school teachers have been assessed in many parts of world, including in South Asian countries, no studies related to this have been done in Sri Lanka. Hence, this study was undertaken to assess the knowledge, attitude and practice of school teachers towards prevention of dental caries. This study aimed to assess the knowledge and attitude of primary school teachers on prevention of dental caries among primary school students and their influence on practice in the Nallur Educational Division, Jaffna.

Methods: This was school based descriptive cross-sectional study conducted among 251 primary class teachers from 35 schools, in Nallur Educational Division. A self-administered questionnaire was used to assess knowledge, attitude, and practice of primary school teachers on prevention of dental caries. All data collected was entered in SPSS version 23.0 and data analysis was done. Descriptive statistics were used, graphs and tables were generated, and the Chi Square test was used to determine the influence of knowledge and attitude on practice of primary school teachers in preventing dental caries.

Results: In this study 97 %, teachers agreed that teachers can play a role in dental caries prevention.. Around 83% of teachers agreed that teachers should check their students' oral cavities. And 98% of them agreed oral health education should be included in the school curriculum. Eighty-four percentage teachers agreed that all teachers must have training in oral health education. Around 96% of teachers agreed that teachers should give oral health education to their students.Among teachers 95.1% of them have a practice of monitoring the food pattern of their students. Instructions on brushing technique to students has been given by 92.7% of primary school teachers. About 64% of teachers have checked the oral cavity of students in their class. And 87.8% of teachers attended an oral health education session held by the school dental therapist.

Conclusion: The attitude of teachers on prevention of dental caries was unsatisfactory. Half of the participated teachers had good practice towards prevention of dental caries. Therefore, oral health education and training must be given to teachers on a regular basis and further studies must be done to assess the awareness level on prevention of dental caries.

Keywords: Attitude, Dental caries, primary schools, Jaffna, Teachers

Level of practice, knowledge and influencing factors on preconception care among newly married women in Jaffna MOH division

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Background: Preconception care is an essential component of reproductive health which focuses on the conditions and risks that could affect a woman if she becomes pregnant. The present study aims in determining the level of practice, knowledge and influencing factors on preconception care among newly married women in Jaffna MOH division.

Methods: This was a community based descriptive cross sectional study. The tool used was apretested structured questionnaire with 4 sections covering the components of the objective.

Results: This study included a total number of 194 subjects, the mean ($\pm$ SD) age at marriage is 24.7$\pm$3.7 years among 109(56.2%) has been registered as eligible couples within one month of marriage. Educational level, monthly income and employment showed the significant association with knowledge on preconception care (p value< 0.05).Only six (3.1%) had participated in the preconception programme conducted by the Jaffna MOH. The reason of 188 subjects (96.9%) for not participating in the preconception care programme was that they were not aware about the programme. The vast majority 188(96.9%) has consumed preconception folic acid. All of study population 194 (100%) had received preconception rubella vaccination. The median ($\pm$SD) mark of the knowledge assessment is10 $\pm$1.2. Accordingly 107 (55.2%) the study population have adequate knowledge about preconception care. Around half of the population preferred Midwives as their first choice to get advices regarding preconception care however; all population preferred more than one source.

Conclusion: The level of practice and knowledge on preconception care among newly married women in Jaffna MOH division are needed to be improved.

Keywords: Preconception care, Knowledge, folic acid, Rubella vaccination, Practice, Source of preconception care.

Influence of socio-demographic factors and habit of self-foot care on the diabetic foot ulcer among diabetic foot ulcer patients in all general surgical wards of Teaching Hospital Jaffna

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Background: Diabetic mellitus is a metabolic disorder which is characterized by multiple long term complications that affect almost every system in the body. Foot ulcers are one of the main complications of diabetes mellitus. It associated with several factors such as socio demographic factors, habitual factors and habit of self-foot care. The objective of this study was to describe the influence of selected socio-demographic factors, habitual factors and habit of self foot care on the diabetic foot ulcer among diabetic foot ulcer patients in all general surgical wards of the Teaching Hospital of Jaffna.

Methodology: Descriptive cross sectional Hospital based study was carried out among 188 diabetic foot ulcer patients who were admitted in all general surgical wards of the Teaching Hospital of Jaffna from November 2017 to January 2018. Diabetic foot ulcer patients with critically ill disease and who are unable to communicate were excluded in this study. Socio-demographic factors, habitual factors and self foot care practice were assessed by using interviewer administered questionnaires.

Results: Among 188 patients 59% were male. One hundred nineteen patients (63.3%) were in the range of 60-75 years old. In this study 53.3 % patients were studied less than grade 5, 42% was more than Rs. 15, 000 as total monthly income. In this study 78.7% was observed their sole in their usual practice. About eighty percentages washed their foot daily, but practice of dry well between the toes after washing the foot was 37.2%. Most of them (93.1%) didn't wear the special foot wear. Hundred and eight (57.4%) participants never drink alcohol. Eighty (42.6%) participants drank alcohol. Among the drinkers, around 80% drank alcohol more than 10 years. Hundred and one (53.7%) participants never smoke. Eighty seven (46.3%) participants smoked. Among 87 smokers 78.17% were smoked more than 10 years.

Conclusion: In this study age above 60 years, male sex, low level of education and poor self foot care practices and smoking and drinking alcohol more than 10 years were identified as risk factors on diabetic foot ulcer patients.

Keywords: Diabetic foot, risk-factors, surgery, Jaffna, Hospital

Knowledge on prevention of diabetic complication and its association with prevalence of complication and known risk factors among type 2 diabetes patients at Diabetic Centre, THJ.

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Background: As the prevalence of diabetes mellitus is increasing in developing countries, it is the time to learn and prevent the complications of the disease. The Objective of this study was to assess the knowledge on prevention of type 2 diabetic complications and its association of known risk factors on prevalence of type2 diabetic complication among patients attending to the diabetic clinic Centre, Teaching hospital, Jaffna.

Methods: A Hospital based cross sectional descriptive study was used to identify the samples. The tool used was pre- tested interviewer administered questionnaire which was contain components to cover all specific objectives. To describe the prevalence of known risk factors and complication frequency tables were used and expressed in a percentage.

Results: Out of the 300 type 2 diabetic patients, $2/3^{rd}$ of them were females. 41% having good knowledge in type 2 diabetic complication, 12% having macro vascular complications, 38.3% having retinopathy,43.1% having neuropathy. In the prevalence of known risk factors 43.3% are having overweight, 23% are having obesity, 15.7% are consuming alcohol, 19.7% are having habit of tobacco and betel chewing, 33.3% unhealthy dietary pattern, 65.7% are having hypertension, 72.3% dyslipidemia, 23.7% high physical activity, 50% are having moderate physical activity and 26.3% are having low physical activity. There is a significant association between knowledge on known risk factors and prevalence of neuropathy ($p \leq 0.003 < 0.05$). And also there is a significant association between knowledge on alcohol consumption and prevalence of alcohol consumption ($p \leq 0.043 < 0.05$). Surprisingly we could not get any significant association between knowledge on known risk factors and prevalence of risk factors (dyslipidemia- $p \leq 0.287 > 0.05$) and between knowledge on prevention of complication and prevalence of complication (neuropathy- $p \leq 0.945 > 0.05$) as well.

Conclusions: Further prospective follow up studies among Diabetic patients are required to establish causality for identification of risk factors and prevalent complication at all clinic levels

Association between mothers' nutrition related knowledge, attitudes, practices and the weight and height of 3-5 age children in Nallur MOH area

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Background: This study describes the association between nutrition related knowledge of mothers and the weight and height of 3-5 age children in Nallur MOH area. This is a cross sectional descriptive study. Although there are studies regarding child's nutritional assessment, there are no recent studies regarding the selected topic recently in Jaffna. The objective is to assess mothers' nutrition related knowledge towards the weight and the height of 3-5 aged children in Nallur MOH area.

Methodology: This study was carried out among 160 boys and 146 girls, and 306 mothers of these children in Nallur MOH area. Children's anthropometric measurements such as height and weight were measured. The interviewer administered questionnaire was given to the mothers to determine the knowledge, attitude, and practices related to the nutrition of their children. The questionnaire included 26 questions and Likert ranking scale was used to evaluate knowledge, attitude, and practices. In the questionnaire, 12 questions were regarding the nutrition related knowledge of mothers. Knowledge about breast-feeding, balanced diet, and dietary habits were included.

Results: There is no statistically significant association between mothers' nutrition related knowledge towards the weight of the child in any age category. There is also no significant association between mothers' nutrition related knowledge towards the height of the child in any age category.

Conclusion: This age group (3-5 years) needs good nutrition as they have fast growth. Poor nutrition related knowledge of mothers leads to the poor growth of the child in physical, mental and behavioral aspects. Since this is an important aspect of child health a more detailed study is needed.

Keywords: KAP, Nutrition, Nallur, Mothers, Jaffna

Practices of Pap smear testing and associated sociodemographic factors among women attending the OPD at Divisional Hospital, Kondavil

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Background: Cervical cancer is the fourth most common cancer worldwide and one third of cervical cancer burden is to be found in India, Nepal, Bangladesh and Sri Lanka. It is the second largest cause of female cancer death in Sri Lanka. Human Papilloma virus is a major etiological agent of cervical cancer. Cervical cancer can be prevented by early detection and human papilloma virus vaccination. In Sri Lanka even though prevention services are available, most of the cancer cases are reported at a late stage.

Methodology: This was a descriptive cross sectional study to assess practices of Pap smear testing and associated socio demographic factors among 248 women between ages of 21 to 65 years attending the OPD at Divisional Hospital, Kondavil. Interviewer administered questionnaire was used and collected data was analysed by SPSS package.

Results: Majority of the participants were of age $\lessgtr$35 years 169 (64.1%) and ever married women were 214(86.3%). All most all were Hindu 237(95.6%) and majority were housewife 180(72.6%). Among the total participants 178 (62.6%) had studied up to O/L. In this study among the ever married women only 15(7%) of the women had Pap smear test and none of them were aware about their results. All those who did Pap smear had it only once in their life time. Most of them 13(86.6%) screened at the age of 35 years in nearby Government Screening Program at Well women clinics. There were no significant correlations found between practices with the socio demographic factors such as educational level, duration of married, marital status and parity.

Conclusion: The Practice of Pap smear testing is poor among the population. It can be increased by providing health education and counselling on cervical cancer and Pap smear test.

Keywords: Pap smear, Jaffna, Women, socio-demographic

Adherence to national guidelines in the acute phase management of patients with ST- elevation myocardial infarction (STEMI) at Teaching Hospital Jaffna

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Background: Myocardial infarction (or damage to the heart muscle caused by obstruction of coronary arteries) may be classified into ST elevated myocardial infarction (STEMI) and non-STEMI. Early management by reperfusion with thrombolytic agents or thrombolytic intervention leads to better outcomes. To minimize treatment delays, professional bodies of physicians recommend minimum time intervals for pharmacological and non-pharmacological aspects of management. The time of admission is referred to as First Medical Contact (FMC). The time interval between FMC and reperfusion by thrombolytic agent is the Door to Needle (D2N) time, and by thrombolytic intervention is the Door to Balloon time (D2B). These should be 30 and 90 minutes respectively for a STEMI patient. Adherence to thenational guideline on STEMI management has not been assessed in Teaching Hospital Jaffna. Objective:To assess adherence to national guidelines in the acute phase management of patients with STEMI at Teaching Hospital Jaffna and the influence of selected patient sociodemographic factors on adherence.

Methodology: A hospital-based descriptive cross sectional study was carried out in the Emergency Unit and Coronary Care Unit of Teaching Hospital Jaffna between November 2017 and January 2018. Consecutive sampling was used. Data relevant to acute phase management of STEMI were collected from medical records. Data were analyzed using descriptive statistics (percentages, proportions) with SPSS (v.23).

Results: Fifty-three patients with STEMI participated in the study. Initial 12-lead ECG assessment was done in all patients within 10 minutes of FMC. There was no time delay in the diagnosis and interpretation of ECG. Blood was sent for serum cardiac biomarkers, full blood count, prothrombin time with INR, activated partial thromboplastin time, electrolytes, magnesium, blood urea nitrogen, creatinine, glucose, lipid profile, in all patients. ECG was monitored continuously in all patients for complications and stabilization of AMI/STEMI with other vital signs monitored. Oxygen 2L/min via nasal cannula for six hours, two intravenous access lines, sublingual GTN and morphine sulphate were given to all patients. Peri-procedural dual anti-platelet therapy was given. Emergency echocardiography or emergency angiography was not done in any of the patients. Median D2N & Total reperfusion delay of THJ are 22.58 & 100.89 minutes respectively(n≤53).As emergency fibrinolytic intervention was not done routinely, D2B was not measured. Instead, secondary percutaneous coronary intervention was done.

Conclusions : Most of processes in the management of patients with AMI/STEMI at THJ met the standards set by local and international guidelines on acute preventive measures. Though some processes did not meet the standards with the circumstances and, there is no system delay. Data entry log book and emergency management system(EMS) can be developed to improve the adherence thereby increase the quality outcomes of AMI/STEMI. Patients should be provided with health education to avoid patient delay.

Anatomical variation of the lateral cord of brachial plexus and the median nerve – a case report

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ABSTRACT

It is axiomatic that the knowledge of anatomical variations in the axilla will be of immense clinical implication. We present multiple variations found in the right axilla and flexor compartment of the brachium during routine dissection in a 50-year-old Sri Lankan male cadaver. The Median nerve(MN) was formed by fusion of three roots: one from the medial and two from the lateral cord of the brachial plexus. The slender first lateral root of the MN (1st LRMN) emerged at the level of terminal division of the medial cord. 1st LRMN crossed the third part of the axillary artery superficially to join the medial root of the MN and formed a common stem medial to the axillary artery. Lateral cord coursed down and divided into musculocutaneous nerve (MCN) and second lateral root of MN (2nd LRMN) just above the latissimusdorsi tendon in the axilla. 2nd LRMN had an oblique course over the axillary and upper part of brachial artery. 2nd LRMN joined the common stem and formed the MN proper medial to the brachial artery in the upper brachium.The MN proper coursed in the brachiummedial to the brachial artery up to the cubital fossa. MCNcontinued distally lateral to the axillary and brachial artery without piercing the coracobrachialis muscle. MCN gave off a branch to corocobrachialis muscle and passed between biceps and brachialis muscle. Even though such variation are mostly incidental findings, knowledge of such variations permits correct interpretation of clinical neurophysiology and allows to take precautions during interventional procedures.

Key words : Anatomical variation, Axillary artery, Lateral cord, Median nerve, Musculocutaneous nerve

Assessment of Iron Deficiency and Red Cell Indices of Anaemic Pregnant Women attended antenatal clinic, Teaching Hospital Jaffna

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Background: Maternal anaemia is a common problem in pregnancy, particularly in developing countries. Anaemia in pregnancy commonly causes the poor pregnancy outcome and can result in complications that threaten the life of both mother and foetus. The aim of this study was to assess the iron deficiency and Red Cell Indices among anemic pregnant mothers attended antenatal clinic, Teaching Hospital, Jaffna.

Methodology: In this descriptive cross-sectional study, a total of 33 anaemic mothers were recruited from Teaching Hospital Jaffna from January to February 2016.Blood Picture, serum ferritin and C - reactive protein (CRP) levels were measured.

Results: Mean (±SD) hemoglobin level of the mothers (n≤33) was 9.57(±1.02). Among mothers, 15(45.4%) and 18 (54.5%) had mild (Hb≤9-10.9g/dL) and moderate anemia (Hb≤7-8.9g/dL) respectively. Mean(±SD) values of PCV,MCV, MCH and MCHC were 31.1 (±2.17), 81.21(8.6), 25.37(±3.32) and (±SD) and 31.08(±1.63) respectively. MCV, MCH and MCHC were lower than the reference values among 87.9 (29), 66.7 (22) and 69.7% (23) mothers respectively while no mothers had higher values. Iron supplementation has been initiated to 78% (26) of the pregnant mothers before commencing the data collection. Among those who have had iron supplementation, 84% (22) of mothers have showed improvement in their Hb levels. Mean(±SD) serum ferritin and CRP was 7.61 (Normal reference >10ng/L) and 3.9 (Normal reference <10mg/L). CRP level was elevated among 4 mothers. Among the mothers, 64% (n≤21) had iron deficiency without elevated CRP. This study concluded that, more than 50% of the anemic mothers were having iron deficiency and no mothers were affected with macrocytic anaemia.

Keywords: Anaemia, Pregnancy, C- reactive protein

Relationship between anthropometric measurements and duty pattern of married Tamil nursing officers working at Teaching Hospital, Jaffna

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Background: Duty pattern of nursing officers may affect the life style, and may lead to abnormal changes in body weight, waist circumference (WC), Body Mass Index (BMI) and Waist to Height Ratio (WHtR). The aim of this study was to examine the influence of duty pattern on BMI, WC and WHtR of the married Tamil Nursing Officers.

Methods: An institutional based cross-sectional descriptive study was carried out at Teaching Hospital, Jaffna, Sri Lanka.

Results: Among the 322 Tamil Nursing Officers (as the Sinhala officers are less in number, they were not considered), 190 nos. were married and 129nos. (67.9%)were females. The numbers of males and females belong to the age groups of 20-30, 31-40, 51-60 years were 12 & 22;20& 43;18& 28; and 11&36 respectively.The mean body weight, BMI, WC and WHtRof males[69.1($\pm$11.7) kg, 24.1 ($\pm$3.6) kgm^{-2}, 89.0 ($\pm$9.9) cm & 0.5 ($\pm$0.1)] and females[62.8($\pm$12.0) kg, 24.3($\pm$4.0) kgm^{-2}, 87.5 ($\pm$10.7) cm and 0.5 ($\pm$0.1)] did not differ significantly. Males of 41-50 years had highest mean body weight (77.1$\pm$8.4 kg), BMI (26.6$\pm$2.8 kgm^{-2}) and WC (96.0$\pm$8.0 cm), while those of 31-40 and 41-50 years of age had highest WHtR 0.6 ($\pm$0.1). Among the females those who were of 31-40 years had highest body weight (67.2$\pm$1.3kg) and WHtR (0.6$\pm$0.1), while of 41-50 years had highest value of BMI (26.1$\pm$4.1 kgm^{-2}), WC (93.4$\pm$10.1cm) and WHtR (0.6$\pm$0.1). Of the males and females 86.9 (53 nos.) and 73.6% (95 nos.) had continuous shift duty. It was observed that the highest body weight (92.0kg), BMI (33.4 kgm^{-2}), WC (111.0cm) and WHtR (0.7) were obtained in a male of 31-40 years who does single duty. Among the females (31-40 years of age),who skipped night duty had highest body weight (74.1$\pm$1.9kg); while BMI (30.0$\pm$1.2kgm^{-2}), WC (101.7$\pm$0.5cm) and WHtR (0.7$\pm$0.1)were highest among those who were of 51-60 years.

Conclusion: The results indicate that the nursing officers those who perform continuous shift duty do not have abnormal anthropometric measurements while those who skip continuous shifts seems to behaving sedentary life style and have abnormal anthropometric measurements. This is different from majority of the previous work carried out in other countries.

Keywords: Body Mass Index, Waist Circumference, Nursing Officers, Waist to height ratio, Duty pattern

Comparison of paleo diets pormulated from foods available in Jaffna with modern diets on plasma glucose and serum insulin levels

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Background: The 'paleo diets' are based on the types of food presumed to have been eaten by early humans consisting chiefly of meat, fish, vegetables, and fruits excluding dairy or cereal products and processed food. If the entire survival of the mankind considered, Paleo diet has been evolved for about 80% of the existence of human being. The nutrient content of the Paleolithic diet had a ratio of carbohydrate: protein: fat as 45:34:21. This research was mainly conducted to compare the effects of two types of Paleo diets formulated from foods available in Jaffna with modern diet on plasma glucose and insulin levels.

Methodology: This was a laboratory based experimental study with Complete Randomized Design and it was conducted on 24 healthy adults. The selected 24 healthy adults were divided into four groups each consisting of 6 members to administer the different diets. Paleo Diet-1 was prepared from mutton (150g), sweet potato (150g), egg white (100g) and wood apple (100g) while Paleo diet-2 was prepared from fish (150g), sweet potato (150g), egg white (100g), cashew nut (25g) and wood apple (100g). Modern Diet-1 contained bread (150g) with 'sambol' (50g) and Modern Diet-2 contained bread (150g) with margarine (10g) and Milo drink (200ml). Blood samples were collected after fourteen hours of fasting and after the administration of the respective diets, in half an hour intervals for two hours and plasma glucose level and insulin level were measured by standard methods. Approval of Ethical Review Committee, Faculty of Medicine, University of Jaffna was obtained. The collected data were analysed using SPSS software.

Results and Discussions: Total calorific values of the Paleo diet- 1,Paleo diet- 2, Modern diet-1 and Modern diet-2 were 518.7, 503.0**,** 542.4and 536.2Kcal respectively. The mean BMI of the subjects was 22.1 ($\pm$1.1) kg/m^2 and those of the males and the females were 22.5 ($\pm$2.1) and 21.4 ($\pm$0.3) kg/m^2 respectively. The mean fasting plasma glucose and serum insulin levels of the subjects were 83.8 ($\pm$5.61) g/dl and 7.4($\pm$6.0)μIU/mlrespectively.The plasma glucose levels of those who have consumed Paleo Diet-1 [123.0 ($\pm$21.23) mg/dl] reached the highest value at 1h while those who had the Paleo Diet-2 reached at 0.5h [120.3 ($\pm$12.95) mg/dl]. On the other hand the plasma glucose levels of those who have consumed Modern Diet-1 [114.7 ($\pm$12.64) and 111.0 ($\pm$17.92) mg/dl] and Modern Diet-2 [97.73 ($\pm$6.1) and 96.2 ($\pm$14.46) mg/dl] had almost same levels of plasma glucose at 0.5 and 1.0h. When the Paleo Diet 1 and 2 were consumed the reduction of blood glucose levels from 1h to 2h were 19.36 and 34.20 mg/dl respectively while when Modern Diet 1 and 2 were consumed the reduction were from 1h to 2h were 6.66 and 4.2 mg/dl respectively. The serum insulin levels of those who have consumed Paleo Diet-1 [73.3 ($\pm$20.81)μIU/ml] reached the highest value at 1h while those who had the Paleo

Diet-2 reached at 0.5h [100.1 (±41.86)µIU/ml] and remained the same at 1h [100.8 (±29.72)µIU/ml]. On the other hand the serum insulin levels of those who have consumed Modern Diet-1 [144.4 (±56.32)µIU/ml] and Modern Diet-2 [170.7 (±51.37)µIU/ml] had highest serum insulin levels at 1.0h. When the Paleo Diet 1 and 2 were consumed the reduction of plasma levels from 1 to 2h were 54.3 and 71.7µIU/ml respectively while when Modern Diet 1 and 2 were consumed the reduction of plasma glucose levels from 1 to 2h were 89.5 and 94.7 µIU/ml respectively. The area under the curve for serum insulin for Modern diet -2 was the highest [258.8(±22.6)] followed with Modern diet -1(210.5 ±59.3), Paleo diet -2 (137.2 ±48.3) and Paleo diet -1 [92.2 (±12.4)].

Conclusion: The Subjects who consumed the Paleo Diets 1 and 2 ended up with normal blood glucose levels less than 95mg/dl thanthose who consumed the Modern Diets -1 and 2 (above 100 mg/dl) at 2h. Those who consumedPaleo Dietshad less area under the curves for insulin than those who consumed Modern Diets - 1 and 2. Major difference between the Paleo - and Modern Diets formulated for this research were the protein contents and method of cooking. Therefore the study emphasises the importance of including the proteins to the diets as well as the inclusion of the crude carbohydrates rather than the refined carbohydrates (which were in the bread).

Keywords: Pale diet, Modern Diet, Area under the curve,

Glucose and insulin levels in healthy males after consuming breakfast containing different composition of macronutrient with equal energy

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Background: The main objective of this research is to determine the patterns of glucose levels and insulin levels after consuming diets containing 500kcal of energy with the different macronutrient compositions. The diet containing 55% of Carbohydrate, 15% of Protein and 30% of Fat (Diet Type– 2) was considered as the control diet and the other diets with varying amounts of carbohydrate, protein and fat will be considered as the test diets.

Methodology: This was a laboratory based experimental study design where complete randomized design (CRD) was used. In this study, 6 healthy normal males (no.6) and 4 different compositions of breakfast were used. Blood samples were collected after 12 hours of fasting. The subjects consumed the breakfast of different composition with 500 kcal. Blood samples were collected at fasting as well as with half an hour interval for 2 hours after the consumption of breakfast. Blood samples were analysed for plasma glucose and insulin levels by standard methods. Approval of Ethical Review Committee, Faculty of Medicine, University of Jaffna was obtained. The collected data were analysed using SPSS software.

Results: This study was carried out to compare the changes in plasma glucose and serum insulin levels in normal healthy individuals after consuming the different diets [Diet Type- 1 (509kcal), Diet Type- 3 (502kcal) and Diet Type- 4 (526kcal)]. Diet Type – 2 (507kcal) was considered as control because it contained the macronutrients of a balanced diet. Diets Type 1, 2, 3, and 4 contained the carbohydrates: Proteins: Fats in the ratios of 40: 35: 25; 55: 15: 30; 70: 20: 10 and 55: 30: 15. All the subjects were males *and the mean BMI and fasting plasma glucose levels were 21.51(±2.5)kg/m²and 80.9 (±7.4) mg/dl.* With all the four different types of diets, highest plasma glucose levels were obtained at 0.5h [Diet Type -1 109.7 (± 22.7); Diet Type -2 124.8 (±13.8); Diet Type -3 116.7 (± 8.08) and Diet Type -4 79.3, mg/dl]. The second highest area under the curve for insulin was obtained with Diet Type-2 (143.5), which contained second highest amount of carbohydrates (55%). Among the different types of diets, the Diet Type-3 (70%) contained the highest amount of carbohydrate followed with Diets Type-2 and -4 (55%). The area under the curve for glucose and plasma glucose level at 0.5h were highest for Diet Type-2 (219.4 and 124.8±13.8 mg/dl) followed with Diet Type-4(205.2 and 121.3±7.8 mg/dl). But the area under the curve for insulin and insulin level were highest (210.4 and 141.6±44.9µIU/ml) for the diet with highest amount of carbohydrate (Diet Type-3, 70% carbohydrate). The area under curve for glucose of diet types 1 and 2 were significant(p≤0.01). The area under curve for insulin of diet types 3 and 4were significant (p≤0.023). The results indicated that the amount of carbohydrate in a diet alone does not determine the area under the curves for glucose and insulin, andplasma glucose level.

Diet Type-1 contained highest amount of protein (35%) followed with Diet Type-4 (30%). Area under the curve for insulin for the Diet Type-1 was second highest (137.3) with the area under the curve for glucose (198.3) and the least plasma glucose level at 0.5h [109.0 (±22.7) mg/dl]. Among the Diets Type-2 and-4, which contained equal amounts of carbohydrates (55%), Diet Type-2 contained half the amount of proteins as of Diet Type -4. The results indicated that carbohydrates have more influence area under the curve glucose and plasma glucose levels than proteins. Further the results indicated that not only the carbohydrates but also proteins increase the insulin secretion.

Diet Type-2 contained the highest amount of fat (30%) followed with Diet Type 1 and the least amount of fat was in Diet Type-3. With the Diet Type-2, the area under the curve for glucose (219.4) and 0.5h plasma glucose level (124.8±13.8mg/dl) values are the highest. Diet Type-4 contained half the amount of fat (15%) than Diet Type-2. But the plasma glucose level or area under the curve for glucose and area under the curve for insulin did not show any correlation with dietary fat contents.

Least area under the curve for glucose (198.3) and plasma glucose level (109.7±22.7 mg/dl)at 0.5h was observed for the Diet Type - 1 which contained 40% of carbohydrates, 35% of protein and 25% of fats but with a second highest (137.6) area under the curve for insulin.

Conclusion: Even though the calculated amounts of carbohydrates, proteins and fats show a wide variation in macronutrient contents, no direct correlation with the three major nutrients and the area under the curves for insulin and glucose were observed, but there is indication of increased insulin secretion and delayed returning to blood glucose level with increased carbohydrate content in the diets..

Key words: Glucose, Insulin, Composition, Carbohydrate, Protein, Fat, area under the curve

Evaluation of knowledge, attitude and practicere garding sexual health among students in National College of Education, Jaffna

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Background: Increasing number of teenage pregnancies with complications and sexual abuses in Jaffna district among both school and out of school adolescents. Objective of this study was to assess the knowledge, attitude, practice regarding sexual health and the influence of socio demographic factors on it, among students in National College of Education, Jaffna

Methodology: Institute based descriptive cross-sectional study has been used among 347 samples (males≤83, females≤264). Anonymous self-administered questionnaire has been used.

Results: Among the total sample 14.4% of students (males≤32.5%, females≤8.7%) got good grading and 12.7% of students (males≤4.8%, females≤15.2%) got poor grade regarding sexual health knowledge. So that males have better knowledge about sexuality than females ($p < 0.001$). Those who studied biology in A/L have better knowledge than others. The main source of sexual health knowledge (correct or incorrect) is through friends (57.3%) and by self-search (21.9%), teacher (17%), parents (3.7%). Three-fourth of them reported they were not taught about sexual heath in schools. And 19.9% (males≤37.3%, females≤14.4%) of total sample have a good genital hygiene maintenance but 15% (males≤8.4%, females≤17.1%) have poor genital hygiene maintenance practices. The quality of genital hygiene maintenance improves with knowledge regarding sexual health. In this study group 20 %(males≤75.9%, females≤2.7%) are masturbating. Seven students had hetero sexual and two had bisexual relationships. Five of them experienced vaginal penetration and three had anal intercourse. But none used any contraceptive device at all.

Conclusion: knowledge regarding sexual health is poor among the population and due to the poor knowledge they have poor genital hygiene maintenance practices. Sexual health education should be given to everyone at home and also in school. Some of them experience premarital intercourse without any contraceptive devices in this case they should also be aware about STI. Clear information regarding contraceptive devices should also be given.

Keywords: Teenage pregnancy, Sexual abuse, Adolescent, Contraceptive methods, Sexually transmitted disease

Incidence of sharp injury among doctors at Teaching hospital Jaffna in two months period, previous exposure, associated factors and their awareness of consequence and immediate management

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Background: Sharp injuries are important occupational hazards for doctor as they form an important mechanism for transmission of blood borne pathogens. The purpose of this study was **to** assess the incidence of sharp injuries among doctors at Teaching hospital, Jaffna in two months period, previous exposure, associated factors and their awareness of consequences and immediate management.

Methods: The study design was an institution based descriptive cross sectional study, among the doctors working at Teaching hospital, Jaffna during the research period from January 2018 to March 2018. The calculated sample size was 240. Simple random sampling method was used. Data were collected by using self-administered questionnaire. Data were collected in two visits. In the first visit, study detail was informed to the participants and their general details, details about previous exposures and knowledge were taken. Second visit was done after two months from first visit, details of injuries that took place during that two months period were taken.

Results: Among the doctors who participated in research 6.5% (N≤217) had experienced sharp injury during the two months of study period. Injuries were almost equal among male (5.7%) and female (7.2%). Most of the injuries took place in obstetrics and gynecology ward (42.8%).Most of the injuries took place during suturing (35.7%)and one fifth of sharp injuries happened during assisting or performing surgery. More than half of the injuries were caused by suturing needle (57.1%). More than half (57.9%) of the injuries occurred during the routine days and nearly one-third (35.7%) happened on the admission day. More than half of the participants (59.9%) had experienced sharp injuries in their carrier. Awareness about consequences of sharp injuries and immediate management were good among 57.6%, 77% of participants respectively.

Conclusion: Sharp injuries are common in doctors who are working in Teaching Hospital, Jaffna. Even though more than half of doctors have good knowledge about sharp injuries, it remains inadequate. Hospital should have policies to prevent sharp injuries, surveillance for occupational risks and must enhance training for doctors to reduce the occupational hazards.

Keywords: Sharp injury, doctors Jaffna, Knowledge