



**Proceedings of the
2nd Undergraduate Research Symposium
2019**

12th & 13th December 2019

**Faculty of Medicine
University of Jaffna
Sri Lanka**

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University of Jaffna
Kokuvil, Jaffna
Sri Lanka**

Message from the Competent Authority

I am very pleased to give my message to this ‘Undergraduate Researcher Symposium 2019’ organized by the Faculty of Medicine, University of Jaffna.

The vision of our university is ‘To be a leading centre of excellence in teaching, learning, research and scholarship’. To accomplish this vision, the academic staff of this faculty has been giving a great contribution to enhance the research output of the undergraduates in this university.

I see Undergraduate Researcher Symposium as a great attempt of involving students in research and sharing the vast research experience of the academic staff with students. By engaging in research projects, undergraduate students are able to develop their critical thinking skills which are essential to become a professional.

Endeavors such as ‘Undergraduate Researcher Symposium’ contribute towards providing students with valuable opportunities to present their research findings in a scientific forum and disseminate the new knowledge uncovered. I greatly appreciate the students for their enthusiasm in making their oral presentations. I congratulate the dean and organizers for giving this opportunity to students and my heartiest greetings for a successful symposium.

Emeritus Prof. K. Kandasamy,
Competent Authority,
University of Jaffna

Message from the Dean, Faculty of Medicine

It is with great pleasure I am sending this brief message to the proceeding of the second Undergraduate Research Symposium 2019. I appreciate the efforts of the students to make a fruitful and successful undergraduate research symposium of Faculty of Medicine, University of Jaffna. The research symposium is one of the important event in our academic calendar of the Faculty of Medicine which provides Medical and Allied Health Sciences undergraduate students an opportunity to submit their research findings and discuss the 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 take this opportunity to thank the Competent Authority and the Sub-Committee responsible for organizing the Undergraduate Research Symposium of the Faculty of Medicine for their efforts to make this event a success. These research submissions will definitely upgrade our community to upgraded health standard.

Dr.S.Raviraj, MBBS (Jaf.), MS(SL),
Dean,
Faculty of Medicine,
University of Jaffna

2nd Undergraduate Research Symposium 2019
Faculty of Medicine
University of Jaffna

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The committee acknowledge the following research assistants for their support

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Day 1 - 12th December 2019				Time : 1 pm – 4.00 pm
Inauguration		At Hoover Auditorium		From 1 pm to 2.10 pm
	Session 1	Session 2	Session 3	
Venue	Lecture Hall 1	Lecture Hall 2	Conference Hall	
Time	2.30 pm – 4.00 pm	2.30 pm – 4.00 pm	2.30 pm – 4.00 pm	
Area of Research	NCD & miscellaneous (Excluding DM)	Public health & miscellaneous	Undergraduate teaching & miscellaneous	
OP ID	OP 1 to OP6	OP 7 to OP 12	OP 13 to OP 16	
Day 2 - 13th December 2019				Time : 1.00 pm – 4.00 pm
Venue	Lecture Hall 1	Lecture Hall 2	Conference Hall	
	Session 4	Session 5	Session 6	
Time	1.00 pm –2.30 pm	1.00 pm –2.00 pm	1.00 pm –2.00 pm	
Area of Research	Diabetes	Surgery	Reproductive health 1	
OP ID	OP 17 to OP 21	OP 22 to OP 26	OP 27 to OP 30	
	Session 7	Session 8	Session 9	
Time	2.30 pm –4.00 pm	2.00 pm –4.00 pm	2.00 pm – 4.00 pm	
Area of Research	Teaching and learning methods among secondary school students	Reproductive health 2	Psychosocial aspects	
OP ID	OP 31 to OP 35	OP 36 to OP 40	OP 41 to OP 47	

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Session 1:

OP1: Quality of life of hypothyroid patients attending the endocrine clinic at Teaching Hospital, Jaffna

Amarasinghe K M G¹, Perera W A N¹, Samanthi A D¹, Nachinarkinian C S², Aravinthan M³

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Teaching Hospital, Jaffna

Introduction: Hypothyroidism is a chronic endocrine disease which cannot be cured yet can be successfully controlled by medication. The objective of the current study was to assess the Quality of Life (QOL) of hypothyroid patients attending the Endocrine clinic at Jaffna Teaching Hospital.

Methodology: This descriptive cross sectional study was carried out among 320 hypothyroid patients attending the endocrinology Clinic at Teaching Hospital Jaffna from June 2018 to March 2019. An interviewer administered questionnaire was used for data collection. The questionnaire included Thyroid Patient Related Outcome (ThyPRO QOL) questionnaire and a separate set of questions to assess socio-demographic factors. Analysis was done by independent t test and ANOVA test.

Results: All the study participants were only “a little affected” by hypothyroidism according to ThyPRO QOL scale. This study identified that there is a statistically significant association between the patients’ QOL and socio demographic factors such as, gender, age, employment status, education level and thyroxin dosage. There was no statistical significant association between QOL and last TSH level.

Conclusion: The Quality of Life of hypothyroid patients attending the Endocrine Clinic at Jaffna Teaching Hospital is slightly affected by hypothyroidism despite the treatment they are on.

Key words: Quality of Life; Hypothyroidism; ThyPRO QOL

OP2: Influence of socio-demographic factors on knowledge and practices related to glaucoma and its correlates among glaucoma patients attending eye clinic, Teaching Hospital Jaffna

Safa F¹, Nuzha HM¹, Safwa FS¹, Coonghe PAD², Suganthan N³, Chandhrakumar STS⁴

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Department of Medicine, Faculty of Medicine, University of Jaffna

4 Teaching hospital Jaffna

Introduction: Glaucoma is the second leading cause of blindness next to cataract in the world.

Methodology: This descriptive cross sectional study was carried out among 410 glaucoma patients attending Eye clinic, Teaching Hospital Jaffna using systematic sampling technique on 15th November 2018 to 28th January 2019 using interviewer administered questionnaire. The research proposal was submitted to ethical review committee of Faculty of Medicine university of Jaffna, and the ethical clearance was obtained. Data was analysed with the help of SPSS.

Results: Of the study participants, 43.1% (n=177), 43.7% (n=179) and 13.2% (n=54) respectively had poor, average and good knowledge on glaucoma. Total 30 marks were given to estimate the level of knowledge and 0-12 out of 30 is considered as poor knowledge, 13-18 out of 30 considered as average knowledge and 19-30 marks considered as good knowledge. The scores were ensured by an ophthalmologist, a community physician and a physician. There were no statistically significant association with knowledge and factors such as age (p=0.7), sex (p=0.2), ethnicity (p=0.2) and religion (p=0.1). But there was a statistically significant association with knowledge and educational status (p=0.002). The practice of Glaucoma consists of type of treatment (oral, topical eye drops and surgery etc.), compliance to the medication, missed clinics and reason for missed clinics. There was a statistically significant association with practice and age (p=0.003), but there were no statistically significant association with sex (p=0.3), educational status (p=0.3) and ethnicity (p=0.5) and practice.

Conclusion: In this study, average and good knowledge participants had a regular clinic follow up comparing to poor knowledge participants, and the difference was found to be statistically significant.

Key words: Glaucoma; Knowledge; Practice; Eye Clinic

OP3: Psychological impact, coping pattern and related factors among parents of children with autism attending Mathavam, Jaffna

Mythili T¹, Sobitha S¹, Thashika K¹, Coonghe P A D², Sivayaokan S³

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Department of Psychiatry, Faculty of Medicine, University of Jaffna

Introduction: Global median prevalence of Autism Spectrum Disorder (ASD) is 1 in 160 children. In Sri Lanka 1 in 93 children is affected by ASD indicating a high prevalence level of ASD. Parents of children with ASD experience greater levels of depression, anxiety and stress than the parents of normal children.

Objective: This study aimed to identify the influence of socio demographic factors on the prevalence of depression, anxiety and stress and the coping pattern of the parents with ASD children in Jaffna attending Mathavam, which is a centre for neuro-developmental disorders in Jaffna.

Methodology: This descriptive cross sectional study was carried out among 91 parents of ASD children who attended Mathavam. An interviewer administered questionnaire which contained socio demographic and economic details, DASS-21 (Depression, Anxiety and Stress Scale - 21) and brief COPE inventory scales were used for data collection. Ethical approval was obtained from Ethical Review Committee, Faculty of Medicine, University of Jaffna. The data analysis was performed with SPSS-21. Independent t- test was used for the analytical purpose.

Result: Mean age parents of children with ASD both sex of 39.1 years (SD- 6.6) reported to having clinically significant (Moderate to extremely severe) depression (48.8%), anxiety (60.1%) and stress (31.2%). Among the coping strategies, frequently involving in religious activities, acceptance, venting, instrumental support, emotional support, active coping and positive reframing and less frequent use of self-distraction, substance use, behavioral disengagement, humour and self- blame were observed in this study. There was significant difference between gender of the parents and prevalence of depression, anxiety and stress. Mothers experience more depression anxiety and stress than fathers. There was a significant difference between the psychological impacts (in terms of depression, anxiety and stress) and coping strategies which include self-distraction, active coping, denial, emotional support, instrumental support, venting, religious and self-blame.

Conclusion: This study result highlighted the importance of addressing the possible psychological impact among parents of ASD children and paying attention to the coping needs of these parents. This will enhance the wellbeing of both parents and their children.

OP4: Influence of socio-demographic factors and undergraduate medical education related to palliative care on the awareness of palliative care among medical students of University of Jaffna

Sachini W¹, Maheshika R E¹, Gunathilake M P¹, Sivarajah N², Surenthirakumaran R²,
Sivakanthan S²

1 Faculty of Medicine, University of Jaffna

2 Department of Community & Family Medicine, Faculty of Medicine, University of Jaffna

Introduction: Current healthcare education focuses mainly on cure as opposed to care. However, not all illnesses can be cured and under such situations palliative care plays an important role. Effective palliative care depends on experiences, attitudes, beliefs and knowledge of the healthcare professionals.

Methodology: An institutional based descriptive cross-sectional study was conducted on 528 medical students studying in third to fifth year at the Faculty of Medicine, University of Jaffna. A self-administered questionnaire was prepared to collect the data.

Results: The responding rate of the study population was 87% (459), of which 252 (54.9%) were females. Among the study population 14.2% had the family members in the medical field while 8.3% of the participants had their family members receiving palliative care. None of the participants which patients in the study needed palliative care. Nearly 70% of the students have completed Oncology, Community and Family Medicine appointments. Half the participants have visited palliative care organizations while 40% have attended palliative care seminars or workshops. Ethnic (P=0.001) and religious (P=0.004) differences amongst students had shown strong association with their palliative awareness when compared to their gender (P=0.061) and family type. Students who have visited palliative care organizations (P=0.002) and attended palliative care related education programs (P=0.001) had significant awareness on palliative care. Only 14% of participants were aware of the correct definition of palliative care. Only half the participants (52%) knew how to communicate the prognosis to the patients receiving palliative care.

Conclusion: The study revealed that undergraduate medical students lacked knowledge on palliative care. Students who had visited the palliative care centers and attended education programs had better palliative awareness than who had not attended. To conclude, students' knowledge of palliative care will be improved by incorporating this knowledge into the curriculum.

OP5: Cognitive function in CKD and its association with the socio demographic factors among the patients who attend to nephrology clinic in Teaching Hospital Jaffna

Farhath A I¹, Fathima R L¹, Mohamed I M¹, Coonghe P A D², Weerakkody R M³

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Teaching hospital Jaffna

Introduction : Chronic Kidney Disease (CKD) implies the progressive impairment of renal function which is long standing more than three months. CKD/CKDu by community screening Around 38000 patients were identified with procedure from 2008 to 2015 in Sri Lanka. with cognitive impairment, and affect CKD is associated the quality of life of the patient. MoCA (Montreal Cognitive Assessment) test is used to assess the cognitive function of the elderly population.

Methodology : In this descriptive cross sectional study , 208 CKD patients were enrolled from the Nephrology Clinic, Teaching Hospital Jaffna. All the patients were interviewed and their cognitive function was assessed by MoCA test. Their socio demographic details were gathered by interviewer administered questionnaire and the current stage of CKD was obtained from their clinical records. The association of cognitive functional status of the patients with the degree of renal impairment (i.e., stage of CKD) along with the socio demographic factors was analysed in this study. Pearson's Chi square test was used to analyse the data.

Results: There were 15.4% of mild, 19.7% of moderate and 64.9% of severe CKD patients were recruited in this study. Of them, 56.7% got below 23 points in MoCA test and rest of the patients got above 23. Males were 55.8%. The people who studied below O level were 41.3%. There was statistically significant association for the MoCA score with the stages of CKD (P=.001). And also, there were statistically significant associations for MoCA score with the stages of CKD for the age group of below 50 (P=.007), for the female gender (P=.007), for the married patients (P=.01) and for the patients who studied below O level.

Conclusion: This study showed that there was statistically significant association for the age group of below 50 (P= .007), the female gender (P= .007), the educational qualification of below O level (P=.002) and the unmarried (P= .01) with the cognitive function along with the stages of CKD. 4

OP6: Knowledge and practices related to diet and its correlates among the ischemic heart disease patients attending to cardiology clinic, Teaching Hospital Jaffna

Yanuthy U¹, Coonghe P A D², Guruparan M³, Kamalarupan L⁴

1 Faculty of Allied Health Sciences, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Teaching Hospital Jaffna

4 Department of Nursing, Faculty of Allied Health Sciences, University of Jaffna

Introduction - Ischemic Heart Disease (IHD) has been major cause of death worldwide and in Sri Lanka, first leading cause for hospital deaths. Un-healthy dietary pattern is one of the modifiable risk factor. Assessing knowledge and practices on diet is important to reduce further complication and deaths due to IHD.

Methodology - A descriptive cross sectional study was conducted in 414 patients with IHD. An Interviewer administered questionnaire was used to collect data from 1st May 2019 to 30th June 2019. Scoring system was used to assess the knowledge and individual practice results were presented as percentage. Data analysis was done by using SPSS25 and chi square test was performed to find out the relationship. Ethical approval was obtained from ERC, Faculty of Medicine, University of Jaffna.

Results: Among the 414 participants, age range was 36-86 years with mean age of 66.2 years. Most of them are male (70.3%), married (73.2%), Sri Lankan Tamil (98.6%), employed (56.3%), earn more than 10,000 (44.9%) and educational level grade 6-10 (31.95%). Only 28.3% had good knowledge regarding diet. Two third (67.6%) of the participants knew un-healthy dietary pattern can cause IHD. Knowledge has a significant relationship with Family history ($p=0.007$). Most of the participants use Coconut oil (27.3%). Twenty one percentage were not using oil. Female participants reduce oil in diet and increase vegetable intake than male, at the same time male were reduced salt in their diet.

Conclusion - More than half had average knowledge about diet (63.3%). Most of the participants were reduced salt, oil, sugar, milk and milk products in their diet. Most of the participants took vegetable and fruits on daily basis. Articles in their mother tongue in newspaper or books and awareness programs can be conducted to improve patients' knowledge on diet.

Key words – knowledge, practices, Diet, Ischemic Heart Disease, Jaffna

Session 2

OP7: Influence of work related and habitual factors on respiratory symptoms of traffic policemen working in police stations in the Jaffna district

Chinthana V¹, Dissanayaka S¹, Hettiarachchi M¹, Coonghe PA D², Athukorala P G³

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Ministry of Health, Sri Lanka

Introduction: According to the duty schedule of traffic policemen they are more prone to develop problems related to the respiratory system. When considering the day to day duties, they have been exposed to dust, smoke of vehicles and various organic and inorganic substances that will cause problems in respiratory system.

Methodology: A descriptive cross sectional study was conducted among 147 traffic policemen in Jaffna district police stations. Self-administered questionnaire was developed based on British Medical Council guidelines. Data were analyzed using SPSS. The Chi Square test and t-test were used to assess the association between selected factors and the presence of respiratory symptoms. Ethical clearance was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna

Results: Mean age of the study participants was 38 years (SD=8.094). In our study population, 16.3% had cough in the morning, 41.5% had phlegm and 27.9% had shortness of breath, but only 2.0% had chronic cough. More than 40% of them did not have any symptoms. Only 10% of the study participants worked for more than two years in Jaffna district. Among them 41(30%) were smokers. None of them used personal protective equipment during their working hours. Having morning cough and chronic phlegm were significantly high among those who worked in Jaffna for more than two years. Breathlessness and wheezing were significantly high among those who worked in Jaffna for less than two years. All the respiratory symptoms were significantly high among traffic policemen who were attached to police stations other than the Jaffna town police station.

Conclusion: Morning cough, phlegm, shortness of breath were the common respiratory symptoms among traffic policemen in Jaffna district. These symptoms were influenced by working duration, smoking habit and attached police station. Further studies need to be carried out to identify the real burden of the problems and its influencing factors.

Key words: Respiratory symptoms; Traffic policemen; work related; habitual factors; Jaffna

OP8: Association between media exposure and fast food consumption and its correlates among students of selected tertiary educational institutions in divisional secretariat, Jaffna

Thakshana S¹, Rasakesary R¹, Surenthirakumaran R², Aravinthan M³

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Teaching Hospital, Jaffna

Introduction: During the transitional period of adolescent to young adult, the introduction of fast food and increased consumption of fast food have serious impact on tendency to develop Non Communicable Diseases in their later life. Exposure to fast food related advertisements in various types of media draws the attention of young adults towards the fast food and increases their consumption immensely.

Methodology: In this descriptive cross sectional institutional based study, data were collected by self-administered questionnaire among 1152 participants from both state and private tertiary study institutions in Jaffna DS area. Students were selected through multistage stratified proportionate sampling technique. Analysis was done with the help of SPSS 21 computer software.

Results: Female participation (54.4%) was predominating from both state and private sectors. Mobile phones were the highly accessible media source in both sectors (n=1082, 93.92%). Comparatively more female students (62.8%) and more state university students (51.5%) access social Media, among which face book was predominating (71.9%). State university students (53.7%) were spending more time in media. Media exposure has significant association with fast food consumption ($p = 0.007$). Overall calorie intake of participants was high and among them males (mean = 7000kcal) consumed more calories than females (mean = 6611.4kcal). Of the fast food, majority (n=947, 82.7%) consumed rolls and pasta (n=216, 18.8%) was the lowest. In both sectors, the main reason for consuming fast food was as it is readily available (n=426, 37.0%) and consumed more at their educational institutions (50.9%). In both sectors, the main reason for consuming fast food was as it is readily available (n=426, 37.0%) and consumed more at their educational institutions (50.9%).

Conclusion:

Among the students high calorie containing fast-food consumption is high and it's influenced by media. Implementation of the healthy canteen policy and healthy food sales in shops should be encouraged.

Key word: NCD; Fast food

OP9: Influence of social media usage on sleeping quality among first year advanced level students in Thenmaradchy educational zone

Aravinthan S¹, Arulbavan S¹, Atchuthai S¹, Coonghe P A D², Sivathas S³

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Teaching hospital Jaffna

Introduction: Nowadays social media usage has been increasing among adolescents as increased internet facilities. Among adolescents, a very little is known about the potential association between usage of social media and sleeping quality of school students especially among secondary grade students: Nowadays due to increased social media usage, ~~fact of~~ increasing sleep problems in island wide among school students. Despite, worldwide researches were done, lack of findings in Jaffna.

Methodology: It was an institutional based, descriptive cross sectional study among 525 A/L students. Data were collected through self-administered questionnaire. We adopted “Sleep-quality questionnaire” Two tools were adapted, for to assess sleep quality “Sleep-quality questionnaire” and “Social Media Addiction Scale” for to assess Social media usage, “Social Media Addiction Scale”. Data were collected through self-administered questionnaire. Data were analysed using with chi squared test, ANOVA and *t*-test.

Results: Mean age of 17.02 years, 199 (37.9%) were males. Most were from Arts stream (301, 57.3%). Most of them (n=375, 71.4%) were having normal sleep quality 375 (71.4%) and only 7 (1.3%) were reported to have severe sleep problems. In social media usage, 197 (37.5%) agreed that they are eager to use. Mean of social media usage were 73.32 (range 0-150 points). Sleep quality mean value difference between male and female students was statistically not significant. Social media usage score had a negative correlation with quality of sleep and it was statistically significant (<0.05). The study stream and gender did not show statistically significance on the relationship between sleep quality and social media usage. Mean value of social media score of arts stream students those with poor quality of sleep (n=17) was 72.41 and good quality of sleep (n=284) was 72.22. So it showed negative correlation of sleep with social media usage. But difference between mean values wasn't significant among arts students.

Conclusion: Social media usage influence on sleep quality among this study population. Based on the outcome of this study, the major challenge for the poor sleep quality is social media usage.

Key words: Sleep quality; Social media usage; Sleep; Social media; Adolescents; Students

OP10: Knowledge and practice and the influence of socio demographic factors on infant and young child feeding among mothers of children aged 6-24 months who are attending paediatric clinics at Teaching Hospital, Jaffna

Nabrees A N¹, Irfan A C¹, Ihsan J¹, Kesavan R², Thirumagal S³

1 Faculty of Medicine, University of Jaffna

2 Ministry of Health, Sri Lanka.

3 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

Introduction: Nutrition is an important part of child's growth and development. Especially the first two years of life are considered to be the window of opportunity where we can improve the wellbeing of a child. Knowledge and practice of mothers on infant and young child feeding in this curtail time are very important for the child health, growth and development.

Methodology: Cross sectional descriptive institutional based study was conducted among 398 mothers of children between 6 and 24 months of age attending the paediatric clinics of Teaching Hospital, Jaffna. Validated Interviewer administered questionnaire was used to collect the data.

Results: In this study population both Knowledge and practice levels were mostly in moderate level. Mothers with poor knowledge level were 11.6%, and with the poor practice level was 15.1%. Mothers with good knowledge level were 18.3% and with good practice level were 19.8%. When cross tabulation was done between different socio demographic and economic factors of the mothers with knowledge and practice, the following factors were found out to be significant with associated P value less than 0.05: Monthly familial income, education qualification of the mother and job of the mother.

Conclusion: Overall, the mothers had moderate levels of knowledge and practice on IYCF. The family income played a major role on level of knowledge and practice of the mothers on IYCF. Mothers were aware of fluid replacement when the child had diarrhea. The prevalence of timely initiation of complementary feeding at 6 months was high. The concept, of introduction of complimentary feeding with commercially prepared foods was among one fourth of the mothers of study population.

OP11: Functional impairment, quality of life, and associated factors among adult schizophrenia patients attending the psychiatry clinic at Teaching Hospital Jaffna

Kajenthini K¹, Luckshi M¹, Sampratha M¹, Kumar R², Kesavan R³, Sivayogan S⁴

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Ministry of Health, Sri Lanka.

4 Department of Psychiatry, Faculty of Medicine, University of Jaffna

Introduction: Schizophrenia is a chronic mental disorder which causes functional impairment in patients and ultimately compromises quality of life. The aim of this study is to assess functional impairment (FI), quality of life (QOL) and associated factors among schizophrenic patients attending the Psychiatric Clinic at Teaching Hospital Jaffna.

Methodology: This descriptive cross-sectional study, was conducted with a convenience sample of 224 patients attending the psychiatric clinic in December 2018 and January 2019. Data were obtained by an interviewer-administered questionnaire and data extraction form. The questionnaire consisted of three sections: a) socio demographic and clinical details; b) World Health Organization (WHO) Disability Assessment Schedule 2.0 (12 items); and c) WHO QOL BREF. A data extraction form was used to collect relevant details from patient medical records. Data were analyzed by using t-test and ANOVA. Ethical clearance was taken from ethical review committee, faculty of Medicine, University of Jaffna.

Results: The sample (n=224) comprised mostly females (60.71%) with an age range of 18 to 72 years. Over half (53%) were married, the majority (70.5%) had studied at least up to O/L, and more than three-quarters (82%) reported a monthly income of < Rs. 30,000. Age of onset of schizophrenia was 21 to 40 years for most (63%) with 47% diagnosed within the last 10 years.

The mean score for overall FI was 22.16/100 (8.53), a higher score reflecting lesser impairment. There was a significant difference in 'getting around' by gender with females showing greater impairment (p=0.04). Patients with comorbidities showed greater impairment in the self-care domain (p=0.04).

The mean score for overall QOL was 50.15/100 (11.74), a higher score reflecting good quality of life. Social relationships differed significantly by marital status (p=0). Psychological health differed significantly by marital status (p=0.02) and environmental health differed significantly by education level (p=0.04) and monthly income (p=0.03). Married patients showed improvement in social relationships and psychological health. Schizophrenia patients with good monthly income and good educational status have improved environmental health. There was a negative correlation between FI and QOL (r=-0.485).

Conclusion: FI was low and QOL was high among participants. QOL was negatively correlated with FI. Social support for schizophrenia patients may be tailored according to need based on the specific domains of functional impairment and quality of life.

Keyword: Functional impairment; Quality of life; schizophrenia

OP12: Evaluation of antioxidant status of dengue patients admitted to Teaching Hospital, Jaffna

Aruniya R¹, Kumanan T², Arasaratnam V³

1 Faculty of Allied Health Sciences, University of Jaffna

2 Department of Medicine, Faculty of Medicine, University of Jaffna

3 Department of Biochemistry, Faculty of Medicine, University of Jaffna

Introduction: Dengue viral infection is a major health problem worldwide. Virus infections may stimulate the generation of reactive oxygen species (ROS) resulting in the disturbance of redox equilibrium that can lead to pathological changes.

Methodology: It was a laboratory based experimental study. Whole blood (3mL) and urine samples were obtained from the dengue patients admitted to Teaching Hospital, Jaffna, and serum was separated. The study period was from July 2018 to August 2019. Total antioxidant status (TAS) in serum and urine was measured by ferric reducing antioxidant power assay (FRAP) & malondealdehyde (MDA) in serum was measured by thiobarbituric acid reactive substances (TBARS) method. Platelet count of the patients was obtained from patient's Bed Head Ticket (BHT). Ethical clearance was obtained from Ethical Review Committee, Faculty of Medicine, University of Jaffna. The data was analysed by using Expand (SPSS) Version 21.

Results: Among the 22 patients, 12 were males. The age of the patients were from 16 to 65 years. The mean platelet count was $65.5 (\pm 15.89) \times 10^3/\text{mm}^3$. The mean TAS in serum was $966.5 (\pm 99.72) \mu\text{mol/L}$ and was lower than the reference range [$1392(\pm 158) \mu\text{mol/L}$]. Mean serum MDA level was $4.6 (\pm 0.5) \text{nmol/mL}$ and was higher than the reference range [$3.46(\pm 0.57) \text{nMol/mL}$]. Mean TAS value in urine was $6105.6 (\pm 23) \mu\text{mol/L}$ and was higher than the reference range [$176.5 (\pm 25.6) \mu\text{mol/L}$]. There was no significant correlation between TAS and platelet count ($r = 0.421, p > 0.05$). A significant negative correlation between MDA level and platelet count ($r = -0.502, p < 0.05$) was observed. There was no significant negative correlation between TAS in serum and urine ($r = -0.074, p > 0.05$) while there was significant negative correlation between TAS and MDA level in serum ($r = -0.610, p < 0.05$).

Conclusion: A fragile turbulence in antioxidant system among dengue patients and the oxidative stress may be involved in the pathogenesis.

Key words: Dengue; oxidative stress; antioxidants; platelet count; total antioxidant status

Session 3

OP13: Factors influencing the speciality choices among medical undergraduates University of Jaffna, Sri Lanka

Safran A S M¹, Imhan A H M¹, Mirsath M Y M¹, Murali V², Sivathas S³

1 Faculty of Medicine, University of Jaffna

2 Ministry of health, Sri Lanka

3 Teaching hospital Jaffna

Introduction: Medical career begins by encompassing a broad range of study, ultimately narrowing down to specialization and sub specialization. The objective of this research was to describe the speciality choices, influence of demographic, personal, social and career related factors and association between influencing factors and speciality choices among medical undergraduates of Faculty of Medicine, University of Jaffna.

Methodology: A descriptive cross-sectional institutional-based study was carried out among 427 medical undergraduates of the University of Jaffna from May-2018 to May- 2019. Proportionate stratified random sampling method was used. A total of 416 students participated. Data was collected using self- administered questionnaire. Data analysis was done using descriptive statistics and Chi square test. Ethical approval was obtained Ethical review committee, Faculty of medicine, University of Jaffna.

Results: The survey was distributed to 427 students. Completed questionnaires were returned by 416 participants (response rate 97.4%). Majority of the students selected paediatrics 37(13.3%), cardiology 35(12.6%), gynaecology and obstetrics 30(10.8%), general medicine 28(10.1%), general surgery 18(6.5%). Academic year was not significant association with choices of specialty ($p= 0.03$) of note, paediatrics was preferred by females ($p=0.001$) and general surgery was preferred by males ($p=0.009$). Personal interest in specialty scored the highest score (86), followed by way of dealing with patient (73) and career progression (72).

Conclusion: The preferred specialties were paediatrics, cardiology, gynaecology and obstetrics, general medicine and general surgery. Sex differences exist in selection of specialty. The most influential determining factors in our study are the personal interest in the specialty, way of dealing with patient and career progression. This study helps to understand the fact that choice of medical specialties is multi-dimensional and multi-factorial and if mal distribution of specialists requires a solution it must involve medical students, their parents/guardians, universities, the communities involved and the government.

Key words: specialty choices; medical undergraduates

OP14: Influence of socio-demographic factors on knowledge and practices on dietary supplements among Allied health sciences students in University of Jaffna

Aravinth T¹, Thuvaragan S², Coonghe PAD³

1 Faculty of Allied Health Sciences, University of Jaffna

2 Department of Pharmacy, Faculty of Allied Health Sciences, University of Jaffna

3 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

Introduction: Dietary supplements contain ingredients intended to supplement the diet which includes vitamins, minerals, herbals, amino acids and enzymes. The use of dietary supplements has expanded tremendously during the last decades. In general, consumers do not have enough knowledge about dietary supplements such as side effects, dosage, interactions with other drugs and food and their safe use in some special populations. So it is important for health care professionals to become more knowledgeable about all dietary supplements in order to guide the consumers in making correct choices. This study aimed to assess the influence of socio-demographic factors on knowledge and practices of dietary supplements among Allied Health Sciences students in Faculty of Medicine in University of Jaffna.

Methodology: An institutional based descriptive cross-sectional study was conducted among Allied Health Sciences students in University of Jaffna. Validated self-administered questionnaire was used to collect the data from the participants. Data was analyzed using SPSS version 23.

Results: The response rate was 95.2% (n=337). Majority (68.8% n=232) of participants were females. The mean age of participants was 23.73 (SD=1.32). Nearly half of the participants (50.5% n=170) were Sinhalese. Majority of participants (64.8% n=218) were residing with friends in rented house. The participants who scored below 70% of the total knowledge score was considered having poor knowledge. Majority of the participants (60.2% n=203) had poor level of knowledge on dietary supplements. Age (p=0.002), religion (p<0.001), ethnicity (p<0.001), year of study (p<0.001) and current living resident (p<0.001) were statistically significant on the knowledge level. The prevalence of dietary supplements usage was 29.4% (n=99). Most of them used vitamin C, multivitamin and iron preparations. The main reasons to take supplements were to maintain general health and well-being (61.6%) and to balance poor diet (33.3%). The internet was the most common source of information for dietary supplements. Age (p=0.013), religion (p=0.001), ethnicity (p<0.001), course of study (p=0.010), and current living resident were (p=0.013) statistically significant on the usage of dietary supplements.

Conclusion: Allied Health Sciences students have poor level of knowledge on dietary supplements. Since they are future health care professionals and can have a positive impact on the health of society, attention to be taken to improve their knowledge on dietary supplements during their study period.

Keywords: Knowledge; Practice, Dietary Supplements; Allied Health Sciences; Students.

OP 15: Knowledge and practice of paracetamol use and associated socio demographic and health service factors among caregivers of children 5 years of age and below in pediatric wards of Teaching Hospital, Jaffna

Shazna F¹, Farhana K¹, Shafana N¹, Kumar R², Nirubaa U³

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Department of Paediatrics, Faculty of Medicine, University of Jaffna

Introduction: Paracetamol is a commonly used over-the-counter drug for pyrexia and mild to moderate pain in all age groups. Young children are more prone to paracetamol poisoning as the dose needs to be calculated by body weight and administered at appropriate time intervals. This study aimed to assess the knowledge of paracetamol usage and associated socio-demographic and health service factors among caregivers of children 5 years of age old children and below admitted to pediatric wards of THJ.

Methodology: This is a descriptive cross sectional study carried out among caregivers of children aged five years and below admitted to the paediatric wards of THJ. Systematic sampling was used to select 427 caregivers. Data were collected through an interviewer-administered questionnaire in the ward setting. Collected data were analysed using SPSS v.21

Results: Fifty nine percent (n=252) have inadequate knowledge regarding paracetamol use. In terms of practice, 66% of caregivers reported administering paracetamol in proper time interval, 43.6% calculated the dose properly according to weight and 91.1% administered the appropriate formulation to children. There was no significant association between socio demographic factors. A significant association was found between PHM home visits and proper self-reported practice of care givers (p 0.035)

Conclusion: A substantial proportion of study participants had gaps in knowledge and practice related to paracetamol use. Despite knowledge levels being inadequate, the majority of caregivers reported proper practices. The field midwifery service was associated with health practices among caregivers of children.

Promote caregivers to access the health care facilities and avoid self-medication, especially for young children who are more susceptible to overdose.

Keywords: Paracetamol; PHM; weight; syrup

OP16: Attitudes, perceptions and influencing factors towards the role of clinical pharmacist in inward patient management among nurses at Teaching Hospital, Jaffna

Clinton N¹, Surenthirakumaran R², Thuvaragan S³

1 Faculty of Allied Health Sciences, University of Jaffna.

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Department of Pharmacy, Faculty of Allied Health Sciences, University of Jaffna.

Introduction: In many countries, clinical pharmacy services are accepted and implemented for the safe use of medications. Main function of clinical pharmacist is to identify and prevent drug related problems. Clinical pharmacy services in Sri Lanka are yet to be accepted. Attitudes of health care professionals including nurses are important determinant for implementations of clinical pharmacy services.

Methodology: This descriptive cross-sectional study was conducted among 278 nurses working at Teaching hospital, Jaffna. Using self-administered validated questionnaire. The questionnaire included details of socio-demographic factors, work-related factors, personal factors and questions regarding attitudes and perceptions. Data were analyzed using Statistical Package of Social Science (SPSS) version 23. Influences of socio demographic, work related and personal factors on attitudes and perceptions were analyzed using chi square test and fisher's exact test. For overall attitudes, more than 50% considered as positive attitudes and for individual roles it was 75% considered as good.

Results: Majority of the participants (79.9%, n=222) were females. Mean age was 31.2± 5.9. 84.2% of nurses of Teaching hospital, Jaffna had positive attitudes and perceptions on the role clinical pharmacist in inward patient management. But there was low acceptance was observed on the roles, providing healthcare education to nurses (25.9%, n=72), Advice nurses on incompatibilities in drug admixtures (63.3%, n=176), involvement in drug utilization review (61.9%, n=172) and develop individualized dosage regime (71.2%, n=198).

Among the socio demographic factors age, among the work-related factors, personal interest in nursing profession and among the personal factors, image of Clinical Pharmacist, need of drug information and methods used to search drug information's, were statistically significant on attitudes and perceptions on the role of Clinical Pharmacist in inward Patient management.

Conclusion: Attitudes and perceptions of nurses of Teaching Hospital, towards the role of clinical pharmacist in inward patient management were positive. It is a positive signal to introduce clinical pharmacy services at hospitals in Sri Lanka.

Key words: Attitudes; perceptions; role of Clinical Pharmacist; inward Patient management

Session 4

OP17: The influence of socio-economic and demographic factors on knowledge and prevalence of selected modifiable risk factors of diabetes mellitus and hypertension among employees of district secretariat, Jaffna

Dilushi D H A W¹, Chandima N D D M¹, Tharani S M M R¹, Nachinarkinian C S²,
PeranantharajahT³

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Teaching Hospital, Jaffna

Introduction: In Sri Lanka, deaths due to non-communicable diseases increases over the years. The objective of current study was to assess the influence of socio-economic and demographic factors on knowledge and prevalence of selected modifiable risk factors of diabetes mellitus and hypertension among employees of District Secretariat, Jaffna

Methodology: This was a descriptive cross-sectional study of 415 employees of District Secretariat, Jaffna from March 2018 to May 2019. Self-administered questionnaire was used for data collection and 358 (70%) participants responded. Part A and B were developed under supervision of supervisors and validated. Part C of the questionnaire was developed according to WHO STEPS Instrument for chronic disease risk factor surveillance. Analysis was done using frequency charts and chi-square test.

Results: Among employees, around 44% and 57% have average knowledge on diabetes and hypertension respectively. There was a significant association between age and knowledge on hypertension ($p= 0.014$). There were no significant associations observed for diabetes mellitus among age, gender, educational level and income on knowledge. Statistically significant risk factor prevalence was identified in physical activities; among the employees 51% of employees involve in moderate physical activities like walking, cycling, around 85% of employees were not involved in any form of sports activities.

Conclusion: Knowledge regarding diabetes mellitus and hypertension among employees is average according to the study. There is no significant association of knowledge with most of socio-economic and demographic factors. The most prevalent risk factor among employee is physical inactivity.

Key words: Non communicable disease; Knowledge; Risk factors

OP18: Knowledge of hypoglycemia and the influence of socio demographic and economic factors on it, among adult patients with type 2 DM attending diabetic center at Teaching Hospital Jaffna

Herath KG¹, Amarasingha AA¹, Dilshan BL¹, Surenthirakumaran R², Aravinthan M³

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Teaching hospital Jaffna

Introduction: Hypoglycemia is the one of the most important complications among diabetic patients. Episodes of hypoglycemia may lead to vascular events and also death in severe cases, in addition to other detrimental issues.

Methodology: This cross-sectional study was conducted from 1st of October 2018 to 30th December 2019 among 401 T2DM patients attending Diabetic Center at Teaching Hospital Jaffna. Data collection was done using an interviewer-administered questionnaire. Based on the score system to assess knowledge, the overall knowledge was graded, less than 40 marks as poor and more than or equal to 40 marks as satisfactory.

Results: Of 401 patients responded, the majority was females. Most of them followed Hinduism. Mean age of participants was 54 years. Among responded, 311 patients (77.6%) patients had poor knowledge regarding symptoms of hypoglycemia. 296 of them (73.8%) were poor in knowledge on precipitating factors of hypoglycemia. Half of them (n=182, 45.4%), had satisfactory knowledge on preventive measures of hypoglycemia. 285 (71.1%) participants had poor knowledge. Male patients (34.6%) showed better knowledge than the female patients (24.1%). and patients in age range of 70-89 had high percentage of satisfactory knowledge. There was no evidence for association of occupation, education level and income with overall knowledge on hypoglycemia. .

Conclusion: This study showed that the overall knowledge regarding hypoglycemia among T2DM patients was poor. Patients had better knowledge regarding preventing measures rather than symptoms and causes of hypoglycemia. Male patients showed better knowledge than female patients. Health staff and their future trainings should target on giving health education to patients regarding symptoms and causes as well as preventive measures of hypoglycemia.

Key words: Type 2 Diabetes Mellitus; Hypoglycemia; Precipitating factors; Preventive measures; Socio demographic factors

OP19: Influence of socio-economic and dietary factors on the quality of life of type 2 diabetic patients who attend diabetic center at Teaching Hospital Jaffna

Zafira F N¹, Thahira T H¹, Fathima N R¹, Surenthirakumaran R², Aravinthan M³

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Teaching Hospital, Jaffna

Introduction: Sri Lanka is seeing an increase in the cases of diabetes. According to recent statistics by the International Diabetes Federation (IDF), the prevalence of diabetes among adults in Sri Lanka in 2017 was 8.5%. There is a need to study the impact of this disease on the quality of life (QoL) of the patients

Methodology: This was a hospital based cross sectional descriptive study. The study was carried out on 382 type 2 diabetic patients who attended the Diabetic Center for routine clinic follow up at Teaching Hospital Jaffna. The interviewer administered questionnaire was used to collect the relevant data. The World Health Organization Quality Of Life (WHOQOL)-BREF questionnaire was used in this study.

Results: The mean total score of the QoL scale was 57.81. Domain-wise, 49.2% had good physical, 48.4% had good psychological, 52.2% had good social and 47.0% had good environmental QoL scores. Overall it was seen that 55.4% of patients had a poor quality of life and 44.6% of patients had a good quality of life. Among the socio-economic factors studied QoL was only significantly affected by monthly family income in this study. Among the dietary factors studied frequency of fast food, high sugar food consumption, salt intake and main meal were significantly related with QoL in this study.

Conclusions: Diabetes does impair the QoL of patients. Dietary factors influence the QoL of diabetic patients more than the socio-economic factors. QoL assessment should be routinely practiced in diabetic clinics.

Key words:Type 2 Diabetes Mellitus; Quality Of Life; Teaching Hospital Jaffna; Diabetic Centre

OP20: Factors affecting knowledge and practice regarding weight management through lifestyle modification among overweight and obese type 2 diabetes mellitus patients attending diabetic center at Teaching Hospital Jaffna

PowsigaU¹, Coonghe P A D², Aravinthan M³, Kamalarupan L⁴

1 Faculty of Allied Health Sciences, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Teaching Hospital, Jaffna

4 Department of Nursing, Faculty of Allied Health Sciences, University of Jaffna

Introduction: Energy intake in excess of requirement and physical inactivity resulting in overweight and obesity is a major driving force behind escalating type-2 diabetes epidemics worldwide. So the present study aimed to assess the knowledge and practices regarding weight management through lifestyle modification among overweight and obese type 2 Diabetes mellitus patients.

Methodology: This was a hospital based descriptive cross-sectional study carried out among 414 overweight or obese patients with type 2 diabetes mellitus. Data were collected by using an interview administered questionnaire. Data were analyzed by using SPSS version 22 and calculated as mean and percentages and presented in tables and diagrams. Chi-square and T-Test tests were used to identify variables.

Results: Among the participants age range was from 27-81 years mean age was 56.1. 28.3% were overweight and 71.7% were obese. Most of them are females (74.6%), Sri Lankan Tamil (98.8%), Hindus (73.4%), married (78.3%), nuclear family (72.5%) and unemployed (75.6%). Most of the participants (81.2%) had good knowledge and 18.8% had poor knowledge. Nearly four-fifths of the participants took (81.6%) rice and 82.6% of the participants took rice, wheat flour preparations every day. Nearly 76.1% participants were physically active. Among them 67.3% participants did not allocate specific time to do exercise. Nearly 23.9% were not physically active. Gender ($p < 0.001$), religion ($p = 0.018$), occupation ($p < 0.001$) and civil status ($p = 0.004$) had a significant relationship with specific time allocation to do exercise among the participants.

Conclusion: Most of the participants knew about dietary managements and only few patients knew about frequency and time duration regarding exercises. Most of the participants took starchy food items on daily basis. Only small numbers of participants allocated specific time to do exercise. Screening should be done to all the type 2 diabetes mellitus patients in clinical setting and categorize as overweight or obesity. According to their BMI health education should be done by health care professionals regarding amount and portion of food items, frequency and time duration for exercise and physical activity.

OP21: A study on prevalence of metabolic syndrome and associated factors among three wheeler drivers in Jaffna municipal council area

Kenushaanth S¹, Mayuraj T¹, Solomon J¹, Surenthirakumaran R², Balakumar S³, Kumanan T⁴

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Department of Biochemistry, Faculty of Medicine, University of Jaffna

4 Department of Medicine, Faculty of Medicine, University of Jaffna

Introduction: Diagnosis of metabolic syndrome (MS) provides an opportunity to prevent cardiovascular morbidity and mortality among the victims. Three-wheeler drivers are a one of the vulnerable groups owing to their life style and it is often undiagnosed among them.

Methodology: This was a descriptive cross sectional study among the three wheeler drivers in Jaffna Municipal Council area. 121 three wheeler drivers were selected using simple random sampling technique. Data analysis was done with the help of SPSS 21 computer software.

Results: Our participants were registered three wheeler drivers in the Jaffna Municipal Council area. Metabolic syndrome was diagnosed among 39.7% (n=48) of the participants. Central obesity was detected among 54.5% (n=66) of the participants. Majority of the participants had raised triglyceride levels (79.7%, n=94) and raised blood pressure (62.8%, n=76). Reduced HDL Cholesterol levels were observed among 11.2% (n=13). Raised fasting plasma glucose levels were observed among 22.3% (n=26). Majority of them smoked (66.1%, n=80), and consumed alcohol (72.7%, n=88). Nearly half of them were moderately active (49.6%, n=60). Majority of them (69.4%, n=84) had failed to engage in exercise due to lack of time especially work load. Family history of diabetes, hypertension and Ischemic Heart Disease were present among 37.2% (n=45), 37.2% (n=45) and 25.6% (n=31) respectively. Majority of them (68.6%, n=83) had never visited the nearby primary health care unit and had not attended a screening programme before (81.8%, n=99).

Conclusion: This study suggests that prevalence of metabolic syndrome and its components are high among three wheeler drivers. Health seeking behavior is noted to be low. Educational programmes should be established for promoting healthy lifestyle and also for early detection and appropriate interventions.

Keywords: Alcohol; Blood pressure; Cigarette; Diabetes; Exercise; Lipids; Obese; Screening programme

Session 5

OP22: Post-operative pain management and associated clinical and demographic factors among patients after elective surgery at Teaching Hospital, Jaffna

Arulini R¹, Suvethini L¹, Thanuja T¹, Janaki A², Kumar R³

1 Faculty of Medicine, University of Jaffna

2 Teaching Hospital Jaffna

3 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

Introduction: Post-operative pain management is an essential component of care in post-surgical patients. However, it is a relatively neglected area in Sri Lanka where acute post-operative pain is not adequately managed in ward settings.

Methodology: This was a hospital-based descriptive cross-sectional study. Data collection was conducted from October 2018 to January 2019 in the general surgical, orthopedic and gynaecological wards using an interviewer-administered questionnaire. Numeric Rating Scale was used to assess the severity of pain at 6 hours, 12 hours and 24-30 hours after surgery. Pain management details and demographic data were extracted from bed head tickets. Data were analyzed using statistical package for social sciences (SPSS 22). Independent t-test and one-way ANOVA were used to assess differences in pain scores by clinical and demographic factors.

Results: 382 post-operative patients participated in the study. Their ages ranged from 18 to 90 years with a mean age of 47.7 years \pm 7.7. The mean (\pm SD) pain scores at 6, 12 and 24-30 hours were 7.5 \pm 2.4, 5.6 \pm 1.9 and 3.6 \pm 1.9, respectively. Pain scores decreased over time with maximum pain at 6 hours and minimum at 24-30 hours in all categories of surgery. The multimodal analgesic combinations offered superior pain relief when compared to single drug therapy. Notably, however, 32 (8.4%) patients did not receive their prescribed dose of opioid analgesics. Overall, side effects reported were few. A significant difference in mean pain scores was observed by surgery type at 6, 12 and 24-30 hours ($p < 0.001$) with those undergoing major surgery reporting higher pain scores.

Conclusion: Post-operative pain management needs to improve at the Teaching Hospital Jaffna. This improvement can be achieved by offering multimodal analgesia and administering the prescribed dose of opioid analgesics. Our results suggest that patients may benefit from customized post-operative pain management by type of surgery.

Key words: post-operative pain management; analgesics; numeric rating scale; Sri Lanka

OP23: Type of injury and associated factors among the patients admitted with road traffic accidents to surgical casualty ward, Teaching Hospital, Jaffna

Ohasa B G¹, Priyankara K D T¹, Alagiyawanna M A M G¹, Kesavan R², Gobyschinger T³, Sharma T⁴

1 Faculty of Medicine, University of Jaffna

2 Ministry of Health, Jaffna

3 Teaching Hospital, Jaffna

4 Department of Surgery, Faculty of Medicine, University of Jaffna

Introduction: Road traffic accidents have been identified as one of the major causes of death and injury. This study aimed at describing the factors associated with the road traffic accidents. The factors were driver, passenger, pedestrian, vehicle factors, environmental factors and the type of the injuries.

Methodology: This study was carried out among 315 patients attending to surgical casualty ward, Teaching Hospital Jaffna using an interviewer administered questionnaire. Descriptive and inferential statistics were used to data analysis using SPSS version 21. Chi-square test was used to analyze the association between the variables.

Results: Males were the majority among the patients (n=253,80.3%). Majority (61.6%) of the patients were in the range of 19-38 years. Among the drivers (n=228, 20.6%) did not obey the road signs and 34.6% did not obey the road rules. Motor cycles (n=241,76.5%) were the commonest vehicle type. Majority of the patients were associated with abrasions and lacerations (77.8%, 29.2%) of the patients were with upper limb fractures and 32.7% were with lower limb fracture. 28.3% accidents occurred in evening while 26.7% and 24.1% happened in the afternoon and morning respectively. 60.3% accidents had been recorded in urban areas while 39.7% recorded in rural areas. Majority of the accidents were due to collision with other vehicle (42.5%). There was significant difference between the type of vehicle with the head injuries (p<0.05) as well as with upper limb fractures (p< 0.05). There were significant differences between the time of the accident and head injuries (p<0.05), lower limb fractures (p<0.05) and rib fractures (p<0.05).

Conclusion: Disobeying the rules was a major factor associated with road traffic accidents and the most of the injuries were due to motor cycles. Better education for drivers and effective law enforcement would be recommended.

OP24: Knowledge on breast cancer and practice among field public health midwives of Jaffna district and influence of associated socio-demographic and work-related factors

Nithursan S¹, Janujan S¹, Gowrishankar K¹, Kumar R², Chirishanthi R³

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Base Hospital, Tellipalai

Introduction: Breast cancer is the most common cancer affecting women in Sri Lanka accounting for 27% of all female malignancies in 2010. In the healthcare system, the field public health midwife (PHM) can play an important role in early identification and prevention. This study aimed to assess knowledge on breast cancer, self-reported practices and associated socio-demographic and work-related factors among field public health midwives of Jaffna District.

Methodology: A descriptive cross-sectional study was conducted using a self-administered questionnaire to assess the knowledge and self-reported practice related to breast cancer. Data were collected between 01st December 2018 to 31st of January 2019 at the Monthly Medical Officer of Health (MOH) Conferences. Data were analyzed using SPSS version 21. Mean, standard deviation, percentages and proportions were used to summarize the data. The Chi square test was used to analyze the association between socio demographic and work related factors and knowledge and self-reported practices.

Results: 149 PHMs participated giving a response rate of 94.3%. Overall, 18.1%, 61.1%, and 20.8% of PHMs recorded excellent, good, and average knowledge on breast cancer, respectively. PHMs from Tellipalai, Chavakacheri, Point Pedro and Kopay MOH areas recorded higher knowledge scores than others. Younger age ($p < 0.001$), higher educational qualifications ($p < 0.001$) and less work experience ($p = 0.002$) were associated with higher knowledge scores on breast cancer. Further, 91.9%, 83.2% and 79.9% reported performing clinical breast examination (CBE) at the clinic, having a separate place to perform CBE at the clinic, and performing CBE at home visits, respectively. All PHMs of Chavakacheri, Jaffna, Chankanai, Nallur, and Karainagar performed clinical breast examination (CBE) at their clinics, while the proportion was lower in other MOH areas. Performing CBE at the clinic was associated with having received in-service training on breast cancer ($p = 0.037$).

Conclusion: Overall the level of knowledge on breast cancer and self-reported practices among PHMs of Jaffna are at desirable levels. However, some MOH areas and categories of PHMs perform better than others. The results suggest that targeted in-service training for PHMs from remote MOH areas, catch up training for older cohorts of midwives and provision of basic infrastructure could improve knowledge and practices on breast cancer control and prevention among PHMs in the Jaffna District.

OP25: Pre-operative anxiety and associated socio-demographic and surgical factors among adult patients awaiting elective surgery at Teaching Hospital, Jaffna

Gunathilake N¹, Rasnayake R¹, Jayalath A¹, Kumar R², Sivayokan S³

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Department of Psychiatry, Faculty of Medicine, University of Jaffna

Introduction: Anxiety is described as a vague uneasy feeling the source of which is often nonspecific and unknown to the individual. The preoperative period is well known to be an anxiety provoking period. This study was aimed to assess the pre-operative anxiety levels and associated socio-demographic and surgical factors among adult patients awaiting elective surgery at Teaching Hospital, Jaffna.

Methodology: This descriptive cross-sectional study was carried out among adult pre-operative patients awaiting elective surgery at general surgical wards of Teaching Hospital Jaffna. Sampling technique was consecutive sampling. Data were collected by an interviewer-administered questionnaire comprising two sections: the first was for socio-demographic and surgical details, and the second was to assess pre-operative anxiety using the Amsterdam Preoperative Anxiety and Information Scale (APAIS). Data were entered into SPSS (v.23) and analyzed using descriptive statistics and Chi-square test. An APAIS score of ≥ 11 was considered as positive for anxiety. Ethical clearance was obtained from the Ethics Review Committee, Faculty of Medicine University of Jaffna.

Results: In total, 271 patients participated in the study. The mean anxiety score was 10.78. The prevalence of preoperative anxiety in the samples was 43.2%. The females and males with anxiety was 44.7% to 41.9%, respectively. Majority of the participants were ≤ 40 years (54.1%), those who had passed GCE A/L (61.4%) or had a higher educational qualification (54.5%) and those who were awaiting major surgery (51.4%) had anxiety. Age ($p=0.042$), education level ($p=0.001$) and type of surgery ($p=0.001$) showed a significant association with pre-operative anxiety. Notably, there was no significant association between the presence of anxiety and gender, prior apprising about the surgical procedure and previous surgical exposure.

Conclusion: The study findings suggest that a substantial proportion of patients experience pre-operative anxiety, while anxiety can be managed in the peri-operative period, based on the study findings, it would seem that interventions are especially needed for younger patients and those undergoing major surgery at Teaching Hospital Jaffna.

OP26: Knowledge, attitude and practice related to road traffic regulations among Jaffna University students and influence of socio-demographic and personal factors

Tharshiga S¹, Lenushaa L¹, Menaka A¹, Murali V², Kannathasan S³

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Department of Microbiology & Parasitology, Faculty of Medicine, University of Jaffna

Introduction: Road traffic accidents are the ninth leading cause of death and disability around the world. This study aimed to find out the knowledge, attitude, and practice of road traffic regulations and the influence of socio-demographic and personal factors on practice of road traffic regulations among Jaffna University students.

Methodology: This descriptive cross-sectional study, included all second year students who were studying in the Faculties of Medicine, Science, Arts, Management and Commerce of University of Jaffna in 2018. The sample size was 370. Proportionate stratified random sampling was used and the data was collected using self-administrated questionnaires. Data were analyzed using SPSS software with Chi-square test.

Results: 370 students participated in the study (response rate = 100%). Among them 61% (n=226) were female and 86% (n=318) of the participants were from the Tamil speaking community. Most (65%) of the participants were not having a valid driving license. Out of 370 participants, 35% (n=130) of the participants had good knowledge, 61% (n=224) had moderate knowledge on road traffic regulations. Majority of the participants (61%) had good attitude. Out of 123 riders, 48% (n=59) had responded with poor practice. Out of 247 pedestrians, 06 participants (2.4%) had responded with poor practice. Faculty, living place, monthly income, travel mode to university, vehicle ownership, valid license and road traffic accident experience were significantly associated with riders' practice ($P < 0.0001$). All riders of science faculty had poor practice whereas none of riders of the medical faculty had poor practice. Age, gender and mother tongue had no significant association ($P > 0.05$). Faculty ($P < 0.0001$), living place ($P < 0.0001$), monthly income ($P < 0.032$) were significantly associated with pedestrians' practice. Majority of the participants had not met with any road traffic accidents and among them more than a half had poor practice.

Conclusion: It was observed that most of the participants had adequate knowledge and positive attitude whereas most of the riders had poor practice. Steps need to be taken to improve the practice of riders especially from science faculty.

Key words: road traffic accidents; road traffic regulations; university students; Jaffna

Session 6

OP27: Influence of socio demographic, health and economic factors in the pattern of health seeking behaviour among secondary sub fertile mothers in NallurMOH area

Arunaa S¹, Rajalingam K¹, Sharmatha K¹, Coonghe P A D², Bavani G³

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Department of Obstetrics and Gynaecology, Faculty of Medicine, University of Jaffna

Introduction: Secondary subfertility is a less recognized entity in our community when compared to primary subfertility. Many socio demographic, health and economic factors are influencing the health seeking behaviour of the secondary sub fertile mothers.

Methodology: Seventy two secondary sub fertile mothers in the Nallur MOH area were included in this community based descriptive cross sectional study. Data were collected using interviewer administered questionnaire. The data were analysed with SPSS 21 and the statistical tests were used to analyse the association between variables using t-test, Chi squared test, Pearson correlation and fishers exact test. Differences at $p < 0.05$ were considered significant. Ethical approval obtained from ERC, university of Jaffna.

Results: Mean age of the study participants was 36.11 ± 6.7 years. Among 72 participants in the study, 22 participants (30.6%) had taken treatment for subfertility. Those who were on treatment, most of them (81.8%) sought allopathic treatment as their 1st choice of treatment. Main reason for withdrawal of the treatment is ignorance (59.1%). Seventy two percentage of the participants had waited for natural conception and 48% of the participants not sought treatment because of their ignorance. The type of the family influenced in treatment seeking behaviour. No significance association found between health seeking behaviour and age, literacy level of the mother, total monthly income, presence of child or their gender.

Conclusion: Most of the participants never took any treatment. Preferred treatment option was allopathic. Type of the family influenced in health seeking behaviour.

Key words: Secondary subfertility; Health seeking behaviour; Nallur.

OP28: Influence of knowledge and practice about menstrual hygiene on educational performance in grade 10 students from schools in Kopay educational division

Asna N F¹, Chandricca A¹, Majuri S¹, Coonghe P A D², Thirumagal S²

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

Introduction: Due to inadequate knowledge on menstruation and poor practices of menstrual hygiene of adolescent girls makes them more vulnerable to morbidities related to genitourinary tract which lead to poor educational performance.

Methodology: This descriptive cross sectional study was carried out among all the female students who attained menarche, studying in grade 10 in Kopay Educational Division. Data were collected using self-administered questionnaire and data extraction sheet. Based on the scores (maximum 100) knowledge was categorized as good, average and poor. Selected parts in practices were analyzed individually. Statistical significance was established with chi square test and Pearson's correlation test. Ethical clearance was obtained from ERC, Faculty of Medicine, Jaffna.

Result: Three hundred and fifty students participated in this study. The mean age of study participants was 15.1 years and mean age of menarche was 13.0 years. Mean score for knowledge about menstrual hygiene was 39.7. Knowledge of students was associated with average of two academic term marks (Pearson's $r=0.203$, $p<0.001$) and score for extracurricular activities (Pearson's $r=0.108$, $p=0.043$). Knowledge category on menstrual hygiene was associated with method of cleaning external genitalia (Fisher exact test, $p<0.001$). Changing absorbent during school hours was associated with school attendance ($p=0.026$) and average of two term marks ($p=0.001$) of participants.

Conclusion: Most of the study population (66.9%) had average knowledge on menstrual hygiene. Knowledge on menstrual hygiene together with selected individual practices during menstruation like frequency of changing absorbent after three days of menstruation and changing absorbent during school hour influence in educational performance of the study participants

Key words: Menstruation; Menstrual hygiene; Adolescence; Jaffna

OP29: Influence of socio-demographic factors on health seeking pattern and distribution of common known risk factors of subfertility in couples attending subfertility clinic of Base Hospital, Thellipalai

Mihika J¹, Kumudu R¹, Nuwan D G¹, Surenthirakumaran R², Sarawanabhawa N³

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, University of Jaffna

3 Base Hospital, Thellipalai

Introduction: Subfertility is a major issue all over the world with important psychological, economic, social and medical implications. This study aims to determine the socio-demographic factors affecting health seeking pattern, distribution of risk factors and the health seeking pattern of subfertility in couples attending subfertility clinic of Base Hospital, Thellipalai.

Methodology: This descriptive cross sectional study was conducted at subfertility clinic in Base Hospital, Thellipalai. The patients who were attending to the subfertility clinic were taken as study population. Data collection was done by using interviewer administrated questionnaire and data extraction form. Data were entered into SPSS and analyzed by using descriptive statistics and Chi square test.

Results: Total of 279 couples participated to this study. Among them, 82.1% (n=229) had primary subfertility. Majority of female participants (63.1%, n=176) were in between 20 to 35 years of age and mean age was 33.4 years (SD=5.8). 44.4% (n=124) of them were obese. Among female participants, 43.7% (n=122) got education up to ordinary level. Majority of couples (85.4%, n=239) were residents in Jaffna district. PCOS (11.5%, n=32) is the major gynecological condition associated with subfertility among female partners. Among male partners 41.9% (n=117) were identified as having andrological problems and 24.4% (n=68) of them had low sperm concentration while 39.1% (n=109) of them had reduced motility of sperms. Mean waiting time before come to the treatments was 3.9 years. Among the participants, 68.5% (n=191), went to government hospitals and 77.1% (n=215) of them had discussed their problem with consultant gynecologist first.

Conclusion: This study reveals that the primary subfertility is the major problem of these couples. Among them, male androgenic problems are the leading cause for subfertility. PCOS is the main problem among females and obesity may aggravate it. Majority of them waited for 1 to 5 years before come to the treatments.

Key words: Health seeking pattern; Risk factors; Socio demographic factors; Subfertility.

OP30: The influence of selected factors on the psychological response of miscarried mothers who were admitted to gynaecology wards, Teaching Hospital, Jaffna

Gowthamy Y¹Mathangi M¹Jerioldas VA¹Coonghe PAD², Bavani G³, Sivathas S⁴

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Department of Obstetrics & Gynaecology, Faculty of Medicine, University of Jaffna

4 Teaching hospital Jaffna

Introduction: Miscarriage is “the expulsion of an embryo or fetus before 28 weeks of gestation from its mother. The aetiological factors are classified into fetal factors, placental factors and maternal factors. The psychological reactions of miscarried mothers are at varying levels. It may lead to even psychiatric disorders and self-harm.

Methodology: This was a descriptive cross-sectional study, conducted in gynaecology wards, Teaching Hospital, Jaffna among 124 miscarried mothers through interviewer administrated questionnaires from October 2018 to February 2019. Psychological response was measured by Hospital Anxiety and Depression Scale (HADS). Data analysis was done by Chi-square test and Fisher’s exact test. The ethical clearance was obtained from ethical review committee.

Results: Mean age of the study population was 30 years. Based on HADS, 20.2% of the mothers had abnormal state of depression while 24.2% of mothers had abnormal state of anxiety. Mothers who had high knowledge regarding risk factors of miscarriage had high abnormal psychological response (Depression-27.5%, Anxiety-27.4%). Among the mothers high level of depression and anxiety were observed due to obstetric factors such as in mothers with children who are alive from previous pregnancy (Depression-21.1%), did not have children (Anxiety-24.5%), experienced previous miscarriage (Depression-36.4%, Anxiety-31.8%) and planned pregnancy (Depression - 22.9%, Anxiety -25%). Among the study population, high level of depression and anxiety were observed among the mothers who were aged >35-years (Depression- 26.1%, Anxiety-26.1%), had the monthly income >50,000 LKR (Depression-27.3%, Anxiety-45.4%), with good educational level (Depression-21.4%), mothers with poor educational level (Anxiety-28.6%), housewives (Depression-20.8%), working mothers (Anxiety-28.6%) and mothers other than Hindus (Depression-31.6%, Anxiety-36.8%).

Conclusion: Some myths regarding risk factors of miscarriage were observed among majority of mothers (>50%). When knowledge increased both depression and anxiety increased.

Key words: Miscarriage; depression; anxiety; risk factors; socio-demographic factors; obstetric factors.

Session 7

OP31: Level of implementation and influencing factors of positive classroom management practices among secondary teachers in Kopay educational division

Vasanthan JA, Kogulan S¹, Visvaan N¹, Surenthirakumran R² Sathiyakumar³

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

Department of Education, Faculty of Arts, University of Jaffna

Introduction: The classroom environment influences much in moulding the attitude, behaviour and knowledge. Traditionally, corporal punishment and psychological aggression were used to control classroom. But, it leads to detrimental physical and psychosocial impacts on the child. The perception of teachers about various influencing factors needs to be analysed to improve the practice.

Methodology: This descriptive cross sectional study was carried out to determine the level of implementation and influencing factors of positive classroom management practices among secondary teachers from October to December 2018 by using self-administered questionnaire. Data were analyzed and processed with the help of Statistical Package for the Social Sciences (SPSS 21). Descriptive statistics were used to determine existing status of implementation and the significance of influencing factors was analysed using chi-square.

Results: The distribution of implementation level in positive classroom management among these 353 secondary teachers were low, moderate and high levels were 22.9 %, 53.8% and 23.2% respectively. Being a male teacher, school category of 1AB, age category of more than 40 years, experience of more than 20 years were associated with low level implementation. Being highly satisfied about the support availability from supervising staffs and co-workers, being satisfied about the teaching learning materials, counselling services, library facilities and sports equipment were significantly associated with high level of implementation. In teacher related factors, having adequate experience, time, job satisfaction, training and skills regarding classroom management and student counselling, working in collaboration with others were associated with high level implementation. Inadequate efforts and training were associated with lower level of implementation. In curriculum related factors, suitability of curriculum to fulfil teachers and student's expectations, adequacy of time allocation was associated with higher level implementation. In school related factors, having a conducive classroom environment, adequate support from school administration and freedom to utilize school resources were associated with higher level implementation.

Conclusion: Teacher's personal factors, influence of the curriculum design and school related factors play a role in enabling better positive classroom practices. The variation of attitude and perception of teachers has a tremendous impact on the efficiency of implementation. So, adequate training on positive classroom management despite the availability of limited resources will lead to improvement. Though majority of teaching are trying to implement positive classroom strategies, there are limitations due to inadequacy of support and resources. In order to reach higher level implementation, these limitations have to be resolved and a favourable environment has to be created.

OP32: Selection of G.C.E A/L streams and factors influencing on it among grade 12 students in the Nallur Educational Division

Luxman P¹, Saraniya S¹, Sopitha S¹, Murali V², Nithlavarnan A³

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Department of Education, Faculty of Arts, University of Jaffna

Introduction: This study is to assess the influencing factors in selecting A/L level streams among grade 12 students of 1AB and 1C schools in Nallur Education Division.

Methodology: This descriptive cross-sectional study was carried out among 409 students selected using proportionate stratified random sampling method. Self-administered questionnaire was used. Data analysis was performed by using IBM SPSS Statistics-version 21 software.

Results: Most of students (94.6%) were studying their preferred streams. Of the parents of students who have selected biological or physical sciences, nearly two third had higher educational qualifications (64% and 62% respectively). Students whose parents with occupation under category of professionals had ambition like doctors Mother 26%, father- 29.1%, and engineers Mother-28.6%, father-27.9%. Students with parents studied up to 1-8 had the ambition of teacher mother-50%, father- 47.6%). Most of the students who were studying in 1AB schools had the ambition of doctor 21%, or engineer 22.4%. But the most of Students in 1C School wanted to become as teacher 62.8%. There were no significance found between the school type and students studying in favourite stream ($p=0.880$), knowledge regarding circular and school type ($p=0.493$) and school type and reason for rejection of selected stream ($p=0.447$).

Conclusion: Personal factors such as gender, ambition, favourite stream and freedom, family factors such as parents educational qualification, job and family income and school and tuition related factors such as school type (1AB,1C), principal, teachers and peers were influencing on G.C.E (A/L) stream selection.

OP33: Prevalence and the factors associated with the absenteeism among grade nine and ten school students of Jaffna Educational Division

Dineskumar T¹, Jasothakrishna S¹, Keerthigan M¹, Kesavan R², Kailasapathy I³

1 Faculty of Medicine, University of Jaffna

2 Ministry of Health, Jaffna

3 University of Jaffna

Introduction: Absenteeism is a common problem among school children. This study aimed to assess the prevalence and the factors associated with the absenteeism among grade nine and ten school students of Jaffna Educational Division.

Methodology: This is descriptive cross sectional study. Stratified random sampling technique was used. Study period was from November 2018 to January 2019. Self-administered questionnaires were used to collect the data and the collected data were entered on SPSS 21 and analyzed by using chi square test. Absenteeism was calculated as the total number of days absent from the total number of available school days with a cut-off at 20% (Siriwardhana *et al.* 2013).

Results: Among the 351 participants, 93 (26.5%) (95% confidence interval was 22% to 31%) students were found to be absentees. There was a significant absenteeism in males (64.5 %) where the total male participants are 48% and females are 52%. Medical reasons were major reported cause (66.0%) for absenteeism. The poverty (38.7%) and spending time to help their parents (among the absentees there were 36.60% helping their parents during school time) were an important factor related to absenteeism. Being not happy of the school environment (11.8%) and feeling that the private tuition was interesting than school education (58.8%) were also reasons cited for absenteeism.

Conclusion: Prevalence of absenteeism was 26.5%. Most of the absentees agreed that the family poverty affected their education. Among the absentees majority of the students agreed that private tuition was interesting than school education. Reasons for more male absentees, effect of poverty on the education, more interest of private tuition than school should be further investigated and school environment should be made with more happiness.

OP34: Private tuition attendance, reasons for participation and associated factors among A/L science stream students in Jaffna Education Division

Shivaram S¹, Kawsica S¹, Sharmilan C¹, Kumar R², Kailasapathi I³

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 University of Jaffna

Introduction: Private tuition refers to a system of private tutoring that runs parallel to the formal system of education. It is known to play a major role in education in Sri Lanka, but remains an understudied area. This study was aimed to assess levels of private tuition attendance, reasons for participation, and associated socio demographic and education-related factors among A/L Science stream students in the Jaffna Educational Division.

Methodology: This descriptive cross-sectional study was carried out among 540 Science Stream students of 2018/2019 and 2019/2020 GCE A/L batches (except repeaters) in all seven 1AB schools in Jaffna Educational Division. Data were collected by self-administered questionnaire from all students of 2018/2019 and 2019/2020 GCE A/L batches following the science stream in the seven 1AB schools, during school hours. Data were entered and analyzed in SPSS. Private tuition attendance and reasons for attendance were summarized using percentages and proportions. A composite score of 10 was calculated to obtain the level of tuition attendance (moderate[1-2], high[3-5] and very high[more than 5]). The association between socio-demographic, family and education-related factors and private tuition attendance was measured with the Chi Square test. Ethical clearance was obtained from the Ethical Review Committee, Faculty of Medicine, University of Jaffna.

Results: Private tuition attendance was 98.5% with 40%, 23% and 37% of moderate, high and very high levels of attendance respectively. The most commonly cited reason for private tuition attendance was to improve GCE A/L performance (94.7 %). The availability of model exams at tuition classes (90.2%), additional exercises given at tuition classes (89.4%), tuition teachers explaining without getting annoyed (72.2%), and tuition teachers adding humor to teaching (71.7%) were other common reasons. Parental pressures (20%), desire to mix with opposite sex (18.5%), and the influence of friends (31%), siblings (27.1%) and boy/girlfriends (11.7%) were less common reasons. Educational status of father ($p=0.001$) and mother ($p<0.001$), total family income ($p<0.001$), GCE A/L batch ($p=0.001$), with whom the student lives ($p=0.001$) and mode of transport to private tuition ($p<0.001$) were significantly associated with private tuition attendance.

Conclusion: Private tuition has become an emerging challenge in the field of education, motivated chiefly by a desire to perform well at the GCE A/L Examination. The social and health consequences of high levels of private tuition attendance need to be studied in Jaffna.

OP35: Association of physical activity, obesity, socio-economic and demographic factors on the competency of life skills among grade ten students in Jaffna Educational Zone

Ghobika R¹, Relankey M¹, Vethuja J¹, Surenthirakumaran R², Sathiadas M G³

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Department of Paediatrics, Faculty of Medicine, University of Jaffna

Introduction: Life skills are the abilities that enable an individual to meet the day to day demands and challenges effectively and efficiently.

Methodology: This descriptive cross sectional study was carried out among 748 Grade 10 students attending schools in Jaffna Educational Zone from May 2018 to June 2019 using stratified cluster sampling technique Ethical clearance was obtained. Self-administrated questionnaire was used for data collection. Data were analysed using SPSS.

Results: Among the 748 participants, 52.8% (n=395) were females. Most of the participants were Hindus (84.5%). Around 45% of the Participants' parents had an educational qualification above ordinary level. Mean scoring of all the ten life skills were above 60%. Considering the ten life skills, participants got highest mean scoring for empathy (75.2%). Based on the total scoring of the ten life skills, the level of life skills among females (37.5%) was higher than males (30.3%). Level of life skills was higher in participants following Hinduism (36.7%) than those following Christianity. Among the participants more than 75% of them are studying in type I AB School. Among the participants 77.7% were less active and more than 50% of them were less active in all the components of physical activity. In this study, 4.4% of the participants are obese (females - 5.8% and males - 2.8%).

Conclusion: It was observed that the level of life skills of the studied population is quite satisfactory and the pattern of physical activity is unsatisfactory. Significant association of sex, religion, educational qualification of parents and types of schools were observed with the level of life skills. However, there were no such association of physical activity and childhood obesity with the level of life skills. It would be much beneficial if life skill based education is practised effectively in schools.

Key words: Life skills; Physical activity; obesity; Socio-economic and demographic factors

Session 8

OP36: Knowledge and practice on gestational nutrition and associated factors among third trimester pregnant women attending antenatal clinics at Teaching Hospital Jaffna

Daliya M K F¹, Jathursiya P¹, Pabiththira S¹, Mathanraj C J², Sritharan A³

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Teaching Hospital, Jaffna

Introduction: Pregnancy is a physiological process which needs alteration in nutrient intake. Lack of knowledge and poor dietary practices are the major issues in all over the world which badly impact on pregnancy outcome and health of women.

Methodology: This descriptive cross sectional study was carried out among 394 third trimester pregnant women attending antenatal clinics in Teaching Hospital Jaffna using interviewer administered questionnaire. Questionnaire included socio demographic data, and to assess knowledge and practice on gestational nutrition. Analysis was done using SPSS.

Results: Among 402 pregnant women approached, 98% (n=394) was participated in the study. Majority of the women (n=233, 59.1%) have poor idea about gestational nutrition. The knowledge is significantly associated with age of the women (p=0.015), educational status (p=0.001), monthly income of the family (p=0.001) and birth weight of the last child (p=0.017). Of the pregnant women, half of them (n=199, 50.5%) follow poor practice, and the rest follow good practice. Monthly income shows significant association with practice (p=0.017). Knowledge has significant association with practice (p=0.036).

Conclusion: Population has lack of knowledge and poor dietary practices. It is important to improve knowledge and practices of pregnant women on gestational nutrition.

Keyword: Antenatal clinics; Gestational nutrition

OP37: Maternal and antenatal care factors influencing the pattern of caesarean section among mothers undergoing caesarean section at Teaching Hospital, Jaffna

Hassan M H M S¹, Thackshidhan U¹, Paheeran M¹, Coonghe P A D², Bavani G³

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Department of Obstetrics and Gynaecology, Faculty of Medicine, University of Jaffna

Introduction: Caesarean section rates are increasing globally as well as in Sri Lanka. There is a gradually increasing trend in caesarean section is noticed in recent past years in Teaching Hospital Jaffna.

Methodology: This was a descriptive cross-sectional study conducted among mothers who underwent caesarean section in Teaching Hospital Jaffna to assess the pattern of caesarean section by using interviewer administered questionnaire and data extraction form. Analysis was performed by using Statistical Package for Social Sciences (SPSS). Ethical approval was obtained from the Ethics Review Committee, Faculty of HYPO Medicine, University of Jaffna.

Results: Of the 385 sample size, only 142 samples were collected. Majority, 54.2% of the caesarean sections (n=72) were emergency procedures of which 70.1% (n=98) were primary caesarean sections. More than half of the study participants underwent primary caesarean section (59.2%, n=85). Among the study participants, most of them underwent caesarean section for their first pregnancy (39.4%, n=57). Previous caesarean section was shown to be a major contributor to increased elective caesarean section rates. Maternal factors such as mother's age ($p = 0.002$), gestational age ($p = 0.017$), parity ($p < 0.0001$), number of caesarean section ($p < 0.0001$) have statistically significant associations with caesarean section. Antenatal screening such as anomaly scan ($p = 0.4$) did not show statistically significant associations with caesarean section. Medical conditions also didn't influence the pattern of caesarean section.

Conclusion: This study shows that emergency caesarean section rates are high in Teaching Hospital, Jaffna. Maternal factors contributed more to the high caesarean section rates than antenatal care factors. Of the maternal factors, gestational age and parity were the major contributors to the high emergency Caesarean section rates.

Key words: Caesarean section; Maternal care factors; Antenatal care factors.

OP38: Knowledge on prevention and management of postpartum hemorrhage and influence of socio demographic and work related factors on it among midwives in Jaffna district

Nivetha K¹, Kamalarupan L², Coonghe P A D³

1 Faculty of Allied Health Sciences, University of Jaffna

2 Department of Nursing, Faculty of Allied Health Sciences, University of Jaffna

3 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

Introduction: Postpartum hemorrhage is the one of the leading cause for the maternal mortality in worldwide. It's life threatening condition and an obstetric emergency. It is still an important issue in developing countries. World Health Organization (WHO) define the postpartum hemorrhage (PPH) is a blood loss of 500ml or more within 24 hours after birth. Adequate knowledge of midwives regarding prevention and management of PPH help to identify the risk population as much as early and minimize the complications due to PPH.

Methodology: Institutional based descriptive cross sectional study was carried out in Jaffna district from August 2018 to July 2019. Study population was 186 public health midwives working either in the field or in the hospitals. A self-administered questionnaire was used to collect data. Data was analyzed by using SPSS (Statistical Package of Social Sciences) version 21 and data was calculated as mean and percentages and presented in tables and diagrams. Chi-square test was used to identify variables. Ethical approval was obtained from ERC, Faculty of Medicine, University of Jaffna.

Results: All the midwives (208) were approached, among them 186 midwives had given their consent to participate. Response rate was 89.4%. Age range of the participants varied from 27 to 65 years old with the mean age of 37.6 (SD=7.4). All the participants were Sri Lankan Tamil. Majority of them (91.4%) were Hindus. The participants who worked in field and hospital were 71.5% and 28.5% respectively. Participants were categorized into adequate knowledge (54.8%) and inadequate knowledge (45.2%) by using 50% pre determine cut off value. Mean knowledge was 55.9. Statistically significant relationship ($p < 0.05$) was found with the age, educational level, advance level stream, current working places, participated in-service training programme regarding PPH, numbers of training programme and experienced in managed PPH mother.

Conclusion: The study revealed that more than half of the midwives had adequate knowledge about prevention and management of postpartum hemorrhage.

Keywords: Knowledge; Postpartum hemorrhage; Public health midwives; Jaffna district

OP39: Factors influence the knowledge on pregnancy induced hypertension and its management among midwives in Jaffna District

Murali S¹, Kamalarupan L², Coonghe P A D³, Thabotharan D²

1 Faculty of Allied Health Sciences, University of Jaffna

2 Department of Nursing, Faculty of Allied Health Sciences, Faculty of Medicine, University of Jaffna

3 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

Introduction: Pregnancy induced hypertension (PIH) is a non-communicable disease. It is a major cause of maternal and perinatal mortality and morbidity worldwide. PIH develops during pregnancy due to failure of trophoblast to completely invade and thereby destroying the spiral arteries by 20-24 weeks of pregnancy. Adequate knowledge of midwives regarding PIH, its symptoms and adverse outcomes will help to identify the risk population as much as early and minimize the complications due to PIH.

Methodology: This descriptive cross sectional study was carried out in Jaffna district from August 2018 to July 2019. Study population was 208 midwives working either in the field or in the hospitals. A self-administered questionnaire was used to collect data. Data was analyzed by using SPSS version 21 and data was summarised as mean and percentages and presented in tables and diagrams. Pre-determined cut-off was used to assess the knowledge level, 50% was taken the cut-off. According to the score midwives were categorized into adequate knowledge and inadequate knowledge. Chi-square test was used to determine associations. Ethical approval was obtained from ERC, Faculty of Medicine, University of Jaffna.

Results: All the midwives (208) were approached, among them 186 midwives gave their consent to participate. Response rate was 91.6%. The age of the participants varied from 27 to 65 years old with the mean age of 37.5 (SD 7.4). All the participants were Sri Lankan Tamil. Majority of them (91.4%) were Hindus. The participants who worked in field and hospital were 73.1% and 26.9% respectively. Participants were categorized into adequate knowledge (66.1%) and inadequate knowledge (33.9%). Mean knowledge was 65.0. Statistically significant relationship ($p < 0.05$) was found with the age, religion, total experience in midwifery and participated in-service training programme regarding PIH

Conclusion: The study revealed that more than half of the midwives had adequate knowledge about pregnancy induced hypertension and its managements.

Keywords: PIH; midwives; knowledge; Jaffna.

OP40: Knowledge and practice on intake of folic acid supplements, dietary folate and influence of socio-demographic factors on them among pregnant women attending to the antenatal clinic, Teaching Hospital Jaffna

Maduranga W K¹, Thuvaragan S², Kumuthini S³, Coonghe P A D⁴

1 Faculty of Allied Health Sciences, University of Jaffna

2 Department of Pharmacy, Faculty of Allied Health Sciences, University of Jaffna

3 Department of Pharmacology, Faculty of Medicine, University of Jaffna

4 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

Introduction: Maternal folic acid supplementation (FAS) during the preconceptional period significantly reduces the risk of Neural tube defects. Knowledge and Practice regarding the usage of FAS and consumption of dietary folate (DF) preconceptionally and during the pregnancy with its influencing socio-demographic factors among the pregnant women was investigated in this study.

Methodology: A descriptive cross sectional study was conducted among pregnant women of above eighteen years old attended to the antenatal clinics, Teaching Hospital Jaffna during June to July 2019. An interviewer-administered validated questionnaire was used to collect information about socio-demographic factors, details on pregnancy, knowledge and practice of the FAS and DF. The total scores achieved in knowledge parts were categorized as good and poor knowledge and practice part were categorized as good, moderate and poor practice separately. Data were analyzed using SPSS version 23.

Results: Among 323 participants, response rate was 95.0% ($n=307$). 41.7% ($n=128$) participants were found to have “good knowledge”. But 60.6% ($n=186$) found to be “good practice”, 33.6% ($n=103$) “moderate practice” and 5.9% ($n=18$) “poor practice” towards the FAS and DF. Among the socio demographic factors occupation was statistically significant on knowledge ($p=0.037$), whereas age ($p=0.007$) and level of education ($p=0.048$) showed statistically significant on practice of FAS. 52.1% ($n=160$) had good knowledge regarding DF and 96.9% ($n=288$) knew FAS can protect their baby against some medical condition. 50.1% ($n=149$) knew that FAS should be taken before pregnancy and should be continued for the first trimester of pregnancy. 61.2% planned their pregnancy, but 50.5% practiced preconceptional FAS. Participants get knowledge on FAS mainly from midwives and nurses.

Conclusion: Even though most of participants have poor knowledge, they have comparatively good practice on usage of FAS. Education and age were significantly influenced on practice and occupation was association with knowledge of FAS.

Key words: Preconceptional folic acid supplements; neural tube defects; periconceptional period.

OP41: A study on the prevalence of burnout syndrome, associated factors and coping strategies adopted by medical students of the University of Jaffna

Lakmali D¹, G.de Silva H¹, Weerasinghe M¹, Kumar R², Sathiadas M G³

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Department of Paediatrics, Faculty of Medicine, University of Jaffna

Introduction: Burnout syndrome

(BOS) is described as a syndrome of emotional exhaustion, depersonalization and reduced work performance. It is mainly seen amongst professionals in the medical field, and is linked to exposure to chronic stressors. Medical students are exposed to chronic stress and are known to develop BOS. This study aims to determine the prevalence and factors associated with BOS and coping strategies adopted by students of the Faculty of Medicine, University of Jaffna.

Methodology: This descriptive cross-sectional institutional-based study which included all the first to fourth year medical students. Data was collected using a self-administered questionnaire. Data were entered into SPSS. BOS was measured using the Oldenburg Burnout Inventory (Student version). Descriptive statistics were used to describe the data and the Chi Square test assessed the association between selected factors and the presence of BOS. Ethical clearance was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna.

Results: Of 455 participants, 381 (83.7%) had BOS. Presence of BOS was significantly associated with year of study ($p=0.048$), performance at the first examination for medical degrees ($p=0.019$), social media use ($p=0.021$), dietary habits ($p=0.027$) and interaction with lecturers ($p=0.032$) and juniors ($p<0.001$). Being junior, poor exam performance, greater social media use, a change in dietary habits, and less interaction with lecturers and juniors were associated with BOS. Among active coping strategies, being positive (88.1%), planning (88.0%), getting advice (75.6%), listening to music (77%), finding comfort in religious activities (77.4%) and getting emotional support (77.9%) were widely reported. Keeping feelings to one's self and solving problems alone (54.5%) were commonly reported avoidant strategies with a few indulging in alcohol (8.7%), tobacco (7.3%) and other substances (7.6%).

Conclusion: Conclusion BOS is widespread among Jaffna medical students with some groups more vulnerable than others. Preventive strategies that address lifestyle factors such as diet, social media use, and substance abuse combined with interventions to increase student interaction with lecturers and peers and promote development of coping strategies may be beneficial. Ultimately, the curriculum may need to be revised to reduce the workload of medical students.

Keywords: Burnout syndrome; medical students; academic factors; coping strategies; Jaffna

OP42: Psychological stress level, selected influencing factors and coping strategies among allied health sciences students University of Jaffna

Rahumathan A¹, Nachinarkinian C S², Kandeepan K³, Sivathas S⁴

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Department of Biochemistry, Faculty of Medicine, University of Jaffna

4 Teaching Hospital, Jaffna

Introduction: High stress level among university students is an important issue. . Coping strategies were used to manage a stressful or taxing situation. Varied ways of coping have been reported by Allied Health Sciences (AHS) students.

Methodology: This descriptive cross sectional study was conducted among 362 AHS students at UOJ, non-probability sampling techniques was used. Self-administered questionnaire consisted of four sections: section A consists of demographic factors, section B consist of stress version of Depression anxiety stress scale (DASS21) used to assess the stress level; section C consists of developed questionnaire used to assess the Influencing factor, section D consists of Brief cope inventory used to assess coping method. The data was analyzed using SPSS. Descriptive statistics and bivariate analysis (Chi square test) used for the analysis. Approval was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna.

Results: Out of the 331 respondents, 168 (50.8%) experienced mild to severe stress. Among them BSc.NursingBSc.MLS, B.Pharm students were 56 (17.0 %), 54 (16.4 %), 58 (17.5 %) respectively. The stress level is influenced by socio-demographic, academic and personal factors (p-value 0.073). Coping strategies used by the students are self-distraction (90.2%), active coping (95.3%), denial (81.6%), substance abuse (30.7%), behavioral disengagement (83.1%), venting (84.1%), positive reframing (88.8%), planning (88.5%), humor (85.5%), acceptance (90.2%), religion (88.8%), self-blame (81.9%), use of emotional support (89.3%).

Conclusion: Students from all the three fields studied were exposed to stress. The introduction of stress management education into the curriculum could prove useful in combatting this problem.

Key words: Psychological stress; Coping Strategies; Unit of allied health science; Jaffna

OP43: Adaptability and influence of personal and academic factors on it among first to third year medical students of University of Jaffna

Piyarathna H U L I¹, Wanniarachi S A¹, Madushani P H T¹, Surenthirakumaran R², Suganthan

N³

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Department of Medicine, Faculty of Medicine, University of Jaffna

Introduction: University entry is a time of great change for students. The extent to which students are able to effectively navigate such change likely has an impact on their success in the university. The objective of this study is to assess the adaptability of first to third year medical students of Faculty of Medicine, University of Jaffna to the environment in the medical faculty.

Methodology: This was a cross sectional study of 560 medical students of first to third year from Faculty of Medicine carried out from May 2018 to March 2019. Self-administered questionnaire was used for data collection. Questionnaire was scored using validated scoring system. Collected data was analyzed using SPSS.

Results: Of the first to third year medical students 462 were included the study and Response rate was 82.55. Majority of the student's age is less than 24 years and most are females and get financial support from parents. Regarding the academic factors, majority (n=250) have two in-course assessments per year. Most resolve their academic doubts by getting support from friends. Most (n= 174) of the participants engage in 10 to 20 hours of self-study per week and use library facilities frequently. A statistically significant influence on adaptability at level 0.05 (p-value) was identified with regard to gender where females have more mean adaptability score than males, academic year where students below second year have more mean adaptability score, number of in course assessment where students who faced less than two in-course assessments have greater mean adaptability score, hours of compulsory attendance per week where students who attend less than 20 hours have more mean adaptability score and using library facility frequently where students who are using library facility more frequently have higher mean adaptability score.

Conclusion: Gender of the student, current academic year, number of in-course assessments per year, hours of compulsory attendance per week and using library facility have significant influence on the adaptability level of students. The findings suggest that academic factors influence more on adaptability than personal factors. Adaptability scale used was developed by the investigators which was not previously used or validated. This gives an inconclusive result as found in this study. A study with validated scale and scoring system on regular basis, including all the batches will help the faculty designing an effective support system for the students.

OP44: Prevalence and knowledge on substance use among basketball players of registered clubs in Jaffna

Vageesan S¹, Harirhaam Y¹, Yathev B¹, Sivakanthan S², Mathanraj C J²

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

Introduction: Substance abuse is a global health and social problem. People abusing alcohol, tobacco and other prohibited substances in Jaffna has shown a dramatic increase within the past decade. Substance abuse is common among team sports due to a number of reasons. Basketball is an emerging sport in Jaffna and there is an increase in the number of clubs, players, tournaments and fans.

Methodology: A descriptive cross sectional institution based study was carried out among all the basketball players registered under the Jaffna District Basketball Association. A total of 208 players participated in this research. Data was collected through self- administered questionnaire to assess the knowledge and self-reported practices of substances. Data were collected when they attend for matches and practices and was analysed using Statistical Package for Social Sciences (IBM SPSS V21). Mean, standard deviation, percentages and proportions were used to summarize the data. The chi squared test was used to analyse the association between socio demographic, economic factors and the knowledge and prevalence of substance abuse.

Results: A total number of 208 players participated in this study. The overall prevalence of substance abuse was 33.7% (n=70). The current users were 27.4% (n=57) and the past users were 13 (6. 25%).Further 7.7%, 58.7%, 33.7% recoded poor average and good knowledge on the harmful effects of substance abuse. Age (p=0.034), gender (p=0.003), educational level (p=0.021) and knowledge on harmful effects of substance abuse (p=0.008) were associated with the prevalence of substance use. The factors affecting alcohol use and smoking were age (p=0.021), (p=0.001), educational level (p=0.001), (p=0.005) and knowledge on harmful effects (p=0.026), (p=0.024) respectively.

Conclusions: Prevalence of substance abuse was widely prevalent among the basketball players of Jaffna. The players have an average knowledge on the harmful effects of substance use.

Key words: alcohol; basketball; prevalence; smoking; substance abuse

OP45: The prevalence, knowledge on substance usage and correlates among the G.C.E A/L students in the Sandilipay Educational Division

Dilusha K¹, Sampavi R¹, SupanchanaR¹, Sivakanthan S², Mathan Raj C J²

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

Introduction: Substance usage among school-going adolescents is a widespread problem in many parts of the world. Adolescence is a critical phase in human development, and it is characterized by the tendency to adopt risk behaviors such as the use of illicit drugs.

Methodology: A descriptive cross sectional study was conducted among 589 A/L students in the Sandilipay Educational Division in the Jaffna district. Cluster sampling technique was used. Data were collected using a self-administered questionnaire from October 2018 to January 2019. The Statistical Package for Social Science (SPSS) version 21 was used for descriptive and bivariate analysis. Ethical clearance was obtained from the Ethics Review Committee of the Faculty of Medicine, Jaffna.

Results: Of the 589 A/L students, 77(13.1%) have used at least one substance irrespective of time and frequency in lifetime. Substance use was reported among 90.9% of males (n=70) and 9.1% of females (n=07) The substances used by the students were arrack (29.9%, n=23), wine (20.8%, n=16) toddy (19.5% , n=15), mava (16.9% , n=14), beedi (9.9% ,n=07) and cannabis (1.3% ,n=01).The level of knowledge about substance use among students was poor (82.9%, n=488). Family related factors such as marital status of the parents (p<0.001), residence of participants (p<0.001), substance usage of father(p<0.001), father using substance in front of children (p=0.004), substance usage of family members (p<0.001) and social factors such as substance usage of friends (p=0.012), friends' motives (p=0.001) and the presence of substance supplying outlets (p=0.003) have significant influence on substance usage.

Conclusion: Considerable prevalence of substance usage was reported among the A/L students of the Sandilipay Educational division. Most of the students had a poor knowledge on substance use. Substance usage among the A/L students was mainly influenced by family related factors and friends. Thus health promotion of the students and community is inevitable in controlling the substance use among adolescents.

Keywords: arrack; friends; mava; social factors; students

OP46: Knowledge and attitude towards child abuse among schoolteachers in the Jaffna Educational Zone

Shanthana V¹, Vaikunthan G¹, Vennilavan S¹, Kumar R², Sathiadas M G³

1 Faculty of Medicine, University of Jaffna

2 Department of Community & Family Medicine, Faculty of Medicine, University of Jaffna

3 Department of Peadiatrics, Faculty of Medicine, University of Jaffna

Introduction: Child abuse is a major social issue in Sri Lanka. Victims of child abuse do not typically self-report to child protection services. As children spend most of the day time in schools, teachers can play an important role in prevention.

Methodology: This was a descriptive cross-sectional study carried among teachers of Grades 6 to 11 classes in schools of Jaffna Educational Zone. Proportionate stratified random sampling was used to select the sample. Data were collected using a self-administered questionnaire. Data analysis was performed with the Statistical Package for Social Science (SPSS 21). Percentages and proportions were used to summarize the data and the Chi Square test to assess the association between knowledge/attitudes and selected factors. Ethical clearance was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna.

Results: 223 teachers participated in the study. Overall, 8, 50 and 42% of teachers had good, average and poor knowledge on child abuse, respectively. Most teachers had a neutral attitude (51%) with only a few (16%) demonstrating favorable attitudes. Confidence in reporting child abuse and the legal system was relatively high with <20% agreeing they lacked knowledge on reporting/identifying child abuse and had no confidence in the legal system. Knowledge was not significantly associated with assessed factors; attitudes were significantly associated with family type ($p=0.026$), number of children ($p=0.047$) and education level ($p=0.016$). The primary sources of knowledge were school awareness programmes and the media. Only a quarter had ever participated in a training programme on child abuse.

Conclusion: Most teachers have average knowledge and show neutral attitudes towards child abuse. Child abuse prevention training needs to be introduced into teacher training curricula to increase knowledge and shift attitudes favorably.

Key words: child abuse; teachers; knowledge; attitudes

OP47: Knowledge and attitudes towards gender-based discrimination (GBD) and associated factors among medical students of University Of Jaffna

Piyumi M¹, Hirushi M¹, Kumari WN¹, Kumar R², Ambalavanar V³

1 Faculty of Medicine, University of Jaffna

2 Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3 Department of Microbiology & Parasitology, Faculty of Medicine, University of Jaffna

Introduction: Gender Based Discrimination (GBD) refers to discrimination based on a person's gender or sex. GBD is a major cause for concern in an academic environment and remains understudied within the university system of Sri Lanka. This study aimed to assess knowledge and attitudes towards GBD and associated factors among medical students of University of Jaffna.

Methodology: A descriptive cross-sectional study was carried out among first, second- and third-year medical students of the University of Jaffna during October to December 2018, using self-administered questionnaire. Data were entered into SPSS (v.23) and analyzed using descriptive statistics and Chi-square test. Knowledge scores were categorized as good (16-22), average (10-15) and poor (<10). Attitudes were categorized as favorable or unfavorable. Ethical clearance was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna.

Results: The study was conducted among 546 first, second and third year medical students of the Faculty of Medicine, University of Jaffna. In total, 406 students responded giving a response rate of 74.3%. Good, average and poor knowledge on GBD scored by 14%, 49.3% and 36.7% participants, respectively. Among the knowledge areas assessed, 24.6%, 22.7%, and 35.2% recorded correct responses on ability to identify GBD, laws that protect women from losing their jobs/promotions after pregnancy and the female : male ratio in political representation respectively. Although the majority had favorable attitudes towards gender equality (78.1%), about half agreed: that money should be spent on the son's education before the daughter's in a poor family (55.3%), that the man should be the decision-maker in the home (50.9%) and that changing nappies, giving a bath, and feeding kids are only the mother's responsibility (47.6%). Knowledge on GBD was significantly associated with mother's employment status ($p=0.009$). Attitudes were influenced with sex ($p<0.001$), religion ($p<0.001$), ethnicity ($p<0.001$) and relationship status ($p=0.012$)

Conclusion: Knowledge on GBD was unsatisfactory, although attitudes were favorable among medical students of University of Jaffna. Gender awareness programs need to target gaps in knowledge and attitudes towards GBD and be tailored for specific student populations with consideration to sex, ethnicity/religion, and relationship status.

OP48: Sero-prevalence and the associated factors of *Toxoplasma gondii* among pregnant women attending the antenatal clinics at Teaching Hospital Jaffna and the Base Hospital Thellipalai: A preliminary study

Priyanjana K.W Bathiya¹ ; Kannathasan S² ; Muruganathan A²

¹Faculty of Medicine, University of Jaffna

²Department of Parasitology, Faculty of Medicine, University of Jaffna

Introduction: Infection with the protozoan parasite *Toxoplasma gondii* is common and usually asymptomatic, but it can have serious consequences in pregnant women if passed to the developing foetus i.e. congenital malformation, abortion and still birth. Meanwhile, there are reports on stillbirths of unknown origins from Northern Province, which may also be due to toxoplasmosis. This preliminary study was carried out to find out the seroprevalence and the associated factors of *Toxoplasma gondii* among pregnant women attending to the selected antenatal clinics.

Methodology: This cross-sectional study was conducted among the pregnant women attended to the antenatal clinics at Teaching Hospital, Jaffna and Base Hospital, Thellipalai from June 2019 to July 2019. An interviewer-administered questionnaire was used to collect socio-demographic information and possible risk factor information on toxoplasmosis from participants. A total of 91 blood samples were collected from the pregnant women. All serum samples were tested for IgG against *T. gondii* using commercially available ELISA protocol. Ethical clearance was obtained from the Ethical Review Committee, Faculty of Medicine, University of Jaffna. Data was analyzed in SPSS version 23.

Results: Out of 91 participants, 13 pregnant mothers (14.3%) were seropositive for the *Toxoplasma* IgG. This alarms that the 85.7 % of mothers are at risk of acquiring new infection. This newly contracted infection may be transmitted to the foetus and cause serious consequences. Further, contact with soil (home gardening) showed a significant association with *Toxoplasma* seropositivity ($p < 0.05$). The sero-positivity was higher (40.7%, n=37) among pregnant women who had the history of contact with soil. This finding reveals that the soil is the most possible source of infection.

Conclusion : This preliminary study showed that the seropositivity of *Toxoplasma gondii* among the participants was low (majority of the participants are at risk) and having significantly higher risk of contact with soil. Also, awareness to be created to the relevant authorities and among women.

Keywords: Seroprevalence, Pregnant women, *Toxoplasma gondii*, still births.

OP49: Prevalence of depression and anxiety and influence of selected associated factors among undergraduates of the University of Jaffna

Ninuja T¹, Sanchiga S¹, Abinaya A¹, Murali Vallipurathan², Sivakanthan S³, Somasundaram DJ³

1Faculty of Medicine, University of Jaffna

2Ministry of Health

3Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

4Office for National Unity and Reconciliation (ONUR)

Introduction: Depression is a mood disorder that causes a persistent feeling of sadness and loss of interest. Anxiety is a feeling of apprehension and fear, characterized by palpitations, sweating, and feelings of stress. Various factors contribute for the initiation and progression of depression.

Objectives: To measure the prevalence of depression and anxiety and determine the association of selected factors among the undergraduates of the University of Jaffna.

Methodology: A descriptive cross sectional institution based study was carried out among the undergraduate students of the University of Jaffna. Proportionate stratified random sampling method was used. A total of 446 students participated in this research. Data were collected through self-administered questionnaire. DASS-21 tool was used to assess the severity of depression and anxiety. Collected data were analysed using Statistical Package for Social Sciences (SPSS Version 21).

Results: Of 446 undergraduate students recruited, 34.3% were males with age ranging from 19 to 29 years. The mean age of the participants was 22.9 ±1.5 years. Prevalence of depression was 41.3% while anxiety was 47.5%. Age (p = 0.018), academic year of the students (p = 0.026), place of living (p=0.041) and alcohol intake (p=0.033) had significant association with depression. Academic year of students (p=0.002), ethnicity (p=0.001), religion (p=0.003), place of living (p=0.010), faculty (p=0.045) and adequacy of income (p=0.018) showed association with anxiety.

Conclusion: Prevalence of depression and anxiety were higher among the undergraduates in the University of Jaffna. The findings of this study emphasize the need for initiation of anxiety and depression management interventions and increased mentoring facilities as mentors help the students with better coping strategies and boost their self-esteem and confidence.

Keywords: academic year; anxiety; depression; ethnicity; undergraduates

OP50: Influence of socio-demographic factors on emotional quotient of first year undergraduates in University of Jaffna

Safwaan MN¹, Piraveen A¹, Ihran SM¹, Sivathas S², Coonghe PAD³

1Faculty of Medicine, University of Jaffna

2Teaching Hospital Jaffna

3Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

Introduction: Emotional intelligence comprises interpersonal and intrapersonal intelligence. Interpersonal intelligence is the intelligence one uses to understand and manage relationships with other people. This is important for developing qualities like empathy and building up effective relationships. Intrapersonal intelligence is the intelligence one uses to know and understand oneself which is important for self-awareness, self-regulation and self-motivation management of interpersonal and intrapersonal emotions is vital for an individual's success.

Objective: To assess the relationship between socio demographic factors and Emotional Quotient (EQ) amongst first year undergraduates in the University of Jaffna.

Methodology: This was a descriptive cross sectional study was carried out among 312 first year undergraduates in University of Jaffna. EQ was assessed with self-administered Genos Emotional Intelligence concise version (7 domains; 31 questions equally weighted; total score 155). Socio-demographic data were obtained using a self-administered questionnaire. Analysis was performed using SPSS. Ethical approval was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna.

Results: Of the 312 participants, 60% were females. The Mean age of participants was 21.4 ± 1 years. Nearly 60% of students demonstrated an "average" level of EQ or above. However, Ethnicity ($p=0.046$), Faculty ($p=0.002$), Level of Family Support ($p=0.015$) and Aesthetic activities in school ($p=0.002$) were independent predictors of EQ. Several expected factors such as sex ($p=0.2$), family type ($p=0.4$) and education level of mother ($p=0.06$) and father ($p=0.7$) did not show statistically significant associations with EQ.

Conclusion: Several psychosocial factors were found to be independent predictors of emotional intelligence in the study population which plays a significant role in shaping an individual's characteristics amongst society. This study suggests that emotional skills development might enhance the performance and social interaction of undergraduates in University of Jaffna.

Key words: Emotional Intelligence, Interpersonal Intelligence, Intrapersonal Intelligence, Undergraduates

OP51: The knowledge, perception and preventive practice on gender based violence among the prospective teachers of National College of Education in Koppai, Jaffna.

Kulatheepan N¹, Coonghe PAD², Sivakanthan S²

1Faculty of Medicine, University of Jaffna

2Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

Introduction: Gender based violence (GBV) is a significant problem globally and in Sri Lanka. A lack of understanding and increasing number of GBV is a matter of national concern in Sri Lanka. School teachers can play an important role in improving knowledge of students regarding GBV and they are the effective solution for the early prevention of GBV.

The objective of this research is to assess the knowledge, perception and preventive practice on GBV among the Prospective teachers of National College of Education (NCOE) in Koppai, Jaffna.

Methodology: This is a descriptive cross sectional study among 319 prospective teachers. Simple random sampling was performed. Self-administered questionnaire has been used and data were analyzed using SPSS. Chi-square test was performed to assess the relationships. Ethical approval was obtained.

Results: Among participants, 71.8% were female. The mean age of these participants was 22 years. Hindus were the majority (87.1%) of the population. Among the study population 93.7% were Tamil and 91.2% were unmarried. Among the total sample 32% of prospective teachers got good grading (males=22.2%, females=35.8%) of knowledge on GBV and 25.4% of them got poor grading (males=31.1%, females=23.2%). One-fourth of the population had past experience on GBV. Unmarried population had better knowledge than other civil status groups. Those who had past GBV experience, had poor knowledge than others. Among the experienced people nearly half of them reported to the relevant institution. Most of them (55%) went to police station to report the violence. Among the study population most of the Tamils (70.2%), Hindus (71.6%), Unmarried (70.8%) and Jaffna district people (72.3%) had positive perception toward the prevention of GBV than other groups.

Conclusion: Most of the unmarried and Jaffna district prospective teachers were having good knowledge compared to others on GBV. Also those who have experienced the GBV in past had poor knowledge regarding GBV. Those who had past experience in GBV should be educated about Gender based violence and Preventive measures.

Key words: Gender, Sex, Gender based violence (GBV), Perception, Preventive practice.

OP52: Influence of socio demographic, health care and medication related factors on compliance to anti- diabetic therapy among diabetic patients attending medical clinic, Teaching Hospital, Jaffna.

Nuskiya NLF¹, Sameera HU¹, Banu MHS¹, Surenthirakumaran R², Suganthan N³

1Faculty of Medicine, University of Jaffna

2Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3Department of Medicine, Faculty of Medicine, University of Jaffna

Background: Despite established care in health sectors, there is a fact of increasing incidence and prevalence of Diabetes Mellitus in Jaffna and island wide with patients also ending up in complications of Diabetes Mellitus. Most of the complications can be prevented with good glycemic control and to reach this, compliance is needed. If we consider the compliance of pharmacological treatment which is the major challenge among diabetic patients.

Objectives: To assess the level of compliance and the influence of socio demographic, healthcare and medication related factors on compliance to Anti-Diabetic therapy among Diabetes patients attending at medical clinic Teaching Hospital Jaffna.

Methodology: Descriptive cross-sectional study was carried out on 402 diagnosed Diabetic patients attending medical clinic Teaching Hospital Jaffna, employing an interviewer administered questionnaire.

Results: Within 402 patients, 38.1% were in the age group of 51-60 years and 56.2% of them were females. 37.8% of the participants studied grade 6 to 10, 75.6% of them were married. The good medication adherence rate was 35.3%. Patients with good controlled blood sugar was 30.47% and among them 49.6% were with good medication adherence. In HbA1c compliance 40.1% were good drug compliance and 51.9% were poor drug compliance. 31.8% male patients had good drug compliance while 38.1% female patients had good drug compliance. Students and retired person had good drug compliance compared to other groups. 50% good drug compliance was observed in patients with higher income ($p=0.006$). Statistically significant relationship was found between the health care related factors.

Conclusion and Recommendation: Socio-demographic economic factors and health-care related factors influence on the drug compliance of the patients. Adherence over medication is the cornerstone for blood sugar control and therefore minimizing its complications. Health sector in Jaffna both curative and preventive need to optimize the focus towards measures to optimize blood sugar control of patients towards High Medical Adherence.

Key words: Drug compliance, Diabetic mellitus

OP 53: Practice related to usage of traditional medicine and influencing factors on it among the diabetic patients attending medical clinic at Teaching Hospital, Jaffna.

Thamiliny S¹, Coonghe PAD²

1Faculty of Medicine, University of Jaffna

2Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

Background: Traditional medicine (TM) use is common in patients with chronic disease such as diabetes mellitus. Sri Lanka is a developing Asian nation with a rich culture of Ayurvedic and native medical culture. The purpose of study is to describe the practice related to usage of traditional medicine and influencing factors on it among diabetic patients attending Medical clinic at Teaching Hospital, Jaffna.

Methods: This is a hospital based cross sectional descriptive study. Study was conducted from 2018 to 2019. systematic sampling method was used. The relevant data were collected using interviewer administered questionnaire and were analysed using SPSS version 23. The association between socio demographic factors, disease related factors and practice of traditional medicine usage was determined by using chi-square test. $P < 0.05$ was considered as statically significant.

Results: out of 288 patients enrolled in the study, 162(56.3%) admitted being TM users along with conventional anti-diabetic treatment. Fenugreek (82.7%), gymnena slyveste (54.3%), bitter gourd (27.2%) were identified as most commonly used herbs by patients. Retail shop/market (84.6%) was the main source for obtaining the TM and diabetes patients (71.6%) were the main source of TM information. Only 21.6% patients disclosed regarding their TM usage to the attending physician while majority 78.4% were non-revealers. The most common reason (77.8%) stated for not revealing TM use was did not enquired by physician and most common reason for using TM as reported by (91.4%) users was advice from parents/elders. Experienced adverse effects from western medicine, other medical problems had influence on Traditional medicine usage. While Socio demographic factors and other disease related factors such as Duration of disease, regular follow up, family history of diabetes, type of diabetes, current western medications, complications of diabetes failed to show significant association on Traditional medicine usage.

Conclusion: majority of patients use TM along with modern medicine without physician's advice. Hence, healthcare professionals should be aware of this while taking clinical history and treating patients that may reduce drug interactions due to use of TM particularly in the elderly population.

Key words: Traditional medicine, Anti-diabetic treatment, Diabetes mellitus, Herb, Sri Lanka.

OP54: The effect of socio-demographic factors on the level of Job satisfaction among the academic staff at University of Jaffna

Sivasuntharan S¹, Pratheeba T¹, Coonghe PAD², Sivarajah N²

1Faculty of Medicine, University of Jaffna

2Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

Background: Academic staff are an important portion of the workforce who are entrusted with the responsibility of educating the future working population and their satisfaction with the job is important and if any unmet needs exist those needs are to be brought to light and attended to.

Objective: The study aims to determine the effect of socio-demographic factors on the level of job satisfaction among the academic staff of University of Jaffna.

Methodology: Institutional based descriptive cross sectional study was conducted among the permanent academic staff (n=270) during the period May 2018 to 2019 at University of Jaffna following the exclusion of those on maternity and sabbatical leave with the help of a self-administered questionnaire and analysis performed with the help of SPSS 21.

Results: Among the academic staff, the male(42.9%) academic staff were more satisfied compared to the female(32.4%) academic staff, Hindus were more satisfied(44.2%) while academic staff of other religions were less satisfied(15%), the academic staff who were married were more satisfied(43.5%) compared to those who were unmarried(35.1%), the academic staff who had no children, 37%(27) were satisfied while 32.9%(24) were unsatisfied, the academic staff who had 1 child were more satisfied(47.2%) than those who had no children(37%) and more than 1 child(40%), the academic staff who received a salary greater than 95000 rupees were more satisfied(42.7%) compared to those who received a salary less than 95000 rupees(36.7%), those with higher designation(from lecturer to senior lecturer and finally professor), there is an increase in the number of academic staff who are satisfied(36.4% to 40.4% and 55.0% respectively), the academic staff that possessed a doctoral qualification were more satisfied(56.3%) compared to the ones that had qualifications other than that(35.9%), the academic staff who possessed a teaching experience greater than 15 years were more satisfied(50%) compared to the individuals who had a teaching experience less than 15 years(36.9%). Furthermore, we noticed that 4% (6) only strongly agreed regarding the physical comfort of the working environment while disagreement summated to 30.9% (46) and 5.4% (8) only strongly agreed on the organized management system while disagreement summated to 21.5% (32).

Conclusion: There is an association between the highest educational qualification ($p=0.027<0.05$ at two degrees of freedom) which was noted from the chi squared tests.

OP55: Correlation between glycolated haemoglobin and salivary amylase levels of diabetic patients attending diabetic center, Teaching Hospital of Jaffna

S. A. F. Asmiya^{1*}, Mahalingam Aravinthan² and Vasanthy Arasaratnam³

¹*Medical Laboratory Sciences, Unit of Allied Health Sciences, Faculty of Medicine, University of Jaffna*

²*Consultant Endocrinologist, Teaching Hospital of Jaffna*

³*Department of Biochemistry, Faculty of Medicine, University of Jaffna*

Introduction – Diabetes Mellitus (DM) has emerged as a major global health problem. Diagnosing and monitoring diabetes is the way for its prevention, thus reducing the burden of disease. As saliva is easily available and accessible when compared with serum, salivary biomarkers can be helpful in diagnosing DM.

Objectives – To find the correlation between glycosylated haemoglobin (HbA_{1c}) level and salivary amylase level in DM patients who attend the Diabetic Centre, Teaching Hospital of Jaffna.

Methodology – Ethical Review Committee, Faculty of Medicine, University of Jaffna gave the Ethical clearance. Unstimulated saliva was collected from the patients and salivary amylase was estimated by CNPG3 (2-chloro-2-nitro phenyl-2malto trioside) substrate method. Test report values of fasting plasma glucose (FPG) and Glycosylated haemoglobin (HbA_{1c}) levels were obtained from the Chemical Pathology laboratory, Teaching Hospital, Jaffna. Pearson's correlation coefficient was used to assess the correlation of HbA_{1c} with salivary amylase.

Results – Out of the 89 type 2 DM patients (aged group between 31 and 70) 39 (43.8%) were males. The mean age and the duration of DM were 51.2 (\pm 9.2) years. The mean FPG, HbA_{1c} and salivary amylase activity were 120.7 (\pm 45.4) mg/dl; 6.5 (\pm 2.0)% and 3182.5 (\pm 2659.5) U/l respectively. It showed a significant positive correlation between age and duration [$r=0.825$], age and FPG [$r= 0.743$], age and HbA_{1c} [$r= 0.750$], age and salivary amylase [$r= 0.793$], duration and FPG [$r=0.886$], duration and HbA_{1c} [$r=0.933$], duration and salivary amylase activity [$r=0.934$], FPG and HbA_{1c} [$r= 0.937$], FPG and salivary amylase activity [$r=0.898$]. A significant positive correlation in the level of fasting salivary amylase with the increase in HbA_{1c} was revealed ($r=0.961$, $p<0.0001$, $n=89$)

Conclusions –Fasting salivary amylase level can be used as a non-invasive diagnostic and monitoring fluid to assess the glycaemic status in diabetes mellitus patients.

Keywords- Saliva, Salivary Amylase, Glycosylated Haemoglobin, Diabetes Mellitus

OP56: Knowledge on dog bite management and influence of socio-demographic and personal factors on it among patients attending out-patient department at Divisional Hospital Kondavil.

Keerththana M¹, Surenthirakumaran R², Thabotharan D¹, Indramohan K³

1Allied Health Science Unit, Faculty of Medicine, University of Jaffna

2Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3Teaching Hospital Jaffna

Introduction: Rabies is a deadly disease with no cure which is mainly caused by dog bites. The Ministry of Health's goal is to reduce the number of human deaths from rabies to zero by 2020. According to the statistical bulletin 2014 number of dog bite cases are rising. Therefore, detailed study on knowledge in dog bite management among people are a current need of the society.

Objectives: The objectives of this study were to assess the knowledge on dog bite management and influence of socio-demographic and personal factors on knowledge.

Methods: This study was conducted in Divisional Hospital Kodavil, from August 2018 to July 2019. Descriptive cross sectional study was carried out and the systematic sampling method was employed to select subjects for this study. The data were collected from 427 patients through pretested interviewer administered questionnaires. SPSS statistical program version 21.0 was used for data analysis. Descriptive statics techniques and Pearson's chi squares analysis were used to manage the data and the association between knowledge and factors.

Results: Of the 427 subjects interviewed. The majority were females (52.5%), Hinduism (88.8%), Age between 20 - 40 years old. More than 75% of the participants knew that dogs were reservoir of rabies, transmission was by biting, the rabies can't treat easily after the one set of clinical signs and necessary to vaccinate after bitten by dog. Only 36.1% participants knew that wounds should be wash with soap and water. Around 70% of participants knew that observation should be done in responsible dog. Age group 41 – 60 years, Males, Hindus, participants who studied A/L and higher studies, participants who had monthly income above Rs 20,000.00, having Health related occupation, came from extended family and participants who had previous exposure to dog bite had good knowledge than others. Educational level, occupation, type of family and previous exposure were statistically influenced on participant's knowledge ($p < 0.05$).

Conclusion: There was lack of knowledge regarding other animal reservoirs, mode of transmission, causative organism, dangerous biting sites and clinical features of rabies infected patients and dog. School and community based awareness programs should be upgraded further to improve the knowledge among public.

OP57: Relationship between serum albumin and anion gap among patients admitted to intensive care units at Teaching Hospital, Jaffna

Francis AS¹, Kumanan T², Arasaratnam V³

1Medical Laboratory Sciences, Unit of Allied Health Sciences, Faculty of Medicine, University of Jaffna

2Department of Medicine, Faculty of Medicine, University of Jaffna

3Department of Biochemistry, Faculty of Medicine, University of Jaffna

Background: Anion gap is a calculated parameter used to interpret acid-base disorders. But, for the clinical interpretation serum albumin, which is the most abundant anion in human serum, is not taken into account. Acid- base disorders and hypoalbuminemia are common findings among critically ill patients. This study was aimed to find the relationship between serum albumin and anion gap among patients admitted to Intensive Care Units (ICUs), Teaching Hospital, Jaffna.

Methodology: Ethical Review Committee, Faculty of Medicine, University of Jaffna gave the Ethical clearance. This study was conducted among 48 patients admitted to Medical and Surgical ICUs, Teaching Hospital, Jaffna. Serum albumin level was estimated by Bromocresol Green method. Serum electrolytes concentrations were obtained from patient's Bed Head Ticket to calculate anion gap. Simple linear regression analysis was performed.

Results: Of the 48 patients, 28 were from Medical ICU and 20 were from Surgical ICU. Mean serum albumin level of the patients admitted to Medical and Surgical ICUs were 27.9(\pm 6.00) and 31.3(\pm 5.13)g/L respectively and the Mean anion gap were 12.7(\pm 1.91) and 13.4(\pm 1.82)mmol/L respectively. Both the serum albumin and anion gap among the patients admitted to Medical and Surgical ICUs did not differ significantly between males and females ($P>0.05$); age groups I (21-40years), II (41-60years) and III (61-80years)($P>0.05$). Hypoalbuminemia among total patients, patients admitted to Medical ICU and Surgical ICU were 75.0%, 78.6% and 70.0% respectively. Both the serum albumin and anion gap did not significantly differ between the patients with different disease conditions admitted to Surgical ICU ($p>0.05$) while significantly differed among the patients with different disease conditions admitted to Medical ICU ($p<0.05$). There was a significant ($p<0.001$) strong positive correlation (r) between serum albumin and anion gap among the total patients ($r =0.85$) patients admitted to Medical ICU($r =0.86$) and patients admitted to Surgical ICU($r =0.83$). The slope of regression between serum albumin and anion gap exhibited 0.27-0.29mmol/g/L($p<0.001$).

Conclusion: Anion gap positively correlates with serum albumin and a variance of 0.27-0.29mmol in anion gap for every 1g/L difference in serum albumin. Therefore, anion gap should be interpreted after correction for serum albumin.

Keywords: Serum albumin, Anion gap, Hypoalbuminemia

OP58: Correlation between glycated haemoglobin (HbA_{1c}) level and lipid profile of type 2 diabetic patients attending Diabetic Centre, Teaching Hospital, Jaffna

Fasona AHS¹, Aravinthan M², Arasaratnam³

1Medical Laboratory Sciences, Unit of Allied Health Sciences, Faculty of Medicine, University of Jaffna

2Consultant Endocrinologist, Teaching Hospital of Jaffna

3Department of Biochemistry, Faculty of Medicine, University of Jaffna

Introduction: Type 2 diabetes mellitus (T2DM) leads to an increased prevalence of dyslipidaemia. Dyslipidaemia is the major risk factor for cardiovascular disease in T2DM. HbA_{1c} serves as a gold standard to indicate the glycaemic status over long term. The present study was carried out to evaluate the HbA_{1c} in predicting the risk of developing diabetic dyslipidaemia.

Objectives: To find the correlation between glycosylated haemoglobin (HbA_{1c}) level and lipid profile of type 2 diabetic patients.

Methodology: Ethical Review Committee, Faculty of Medicine, University of Jaffna gave the Ethical clearance. Blood samples were collected from the T2DM patients attending Diabetic Centre, Teaching Hospital, Jaffna. Lipid profile was measured and Glycated haemoglobin (HbA_{1c}) & fasting plasma glucose (FPG) levels were obtained from the Chemical Pathology Laboratory, Teaching Hospital, Jaffna.

Results: Out of the 104 diabetic patients 46 (44.23%) were males. The mean age and the duration of diabetes mellitus were 54.86 (± 10.73) years and 7.86 (± 5.10) years respectively. The mean of HbA_{1c}, FBG, total cholesterol, triglycerides, HDL-C, LDL-C and VLDL levels, Total Cholesterol/HDL ratio (Cardiac Risk Ratio), LDL/HDL ratio, Non-HDL Cholesterol, Atherogenic Coefficient (AC) were 8.373(± 1.8844)%, 7.37(± 1.65)mmol/L, 190.52(± 51.73)mg/dL, 160.41(± 64.34)mg/dL, 41.13(± 11.08)mg/dL, 116.78(± 50.55)mg/dL, 32.08(± 12.87)mg/dL, 5.11(± 2.28), 3.22(± 1.91), 149.39(± 56.75)mg/dL, 4.11(± 2.26) respectively. HbA_{1c} positively correlated with FBG ($r=0.823$), total cholesterol ($r=0.792$), triglycerides ($r=0.483$), LDL-C ($r=0.83$) and VLDL levels ($r=0.483$), total cholesterol/HDL ratio (Cardiac Risk Ratio) ($r=0.925$), LDL/HDL ratio ($r=0.91$), Non HDL Cholesterol ($r=0.86$), Atherogenic Coefficient (AC) ($r=0.924$) and negatively correlated with HDL Cholesterol ($r=-0.708$). All the correlations were statistically significant.

Conclusions: HbA_{1c} level has strong association with risk of Acute Coronary Syndrome (ACS). Occurrence of ACS was significantly more in patients with poor glycaemic control than those with good glycaemic control. Dual marker capacity of HbA_{1c} may be utilized to screen the risk of cardiovascular disease is higher in diabetic patients.

Keywords: Acute Coronary Syndrome, Glycated haemoglobin, dyslipidaemia, diabetes mellitus

OP59: Comparing the effect of delayed serum separation on creatinine measurement by Jaffe method with sarcosine oxidase enzymatic method

Siromiya AJF¹, Arasaratnam V²

1Medical Laboratory Sciences, Unit of Allied Health Sciences, Faculty of Medicine, University of Jaffna

2Department of Biochemistry, Faculty of Medicine, University of Jaffna

Introduction: Creatinine is a nitrogenous organic waste product and increased in serum under abnormal renal function. Commonly used methods for creatinine measurement are Jaffe and Sarcosine Oxidase (enzymatic) methods. Delays in serum separation may cause changes in serum creatinine level. This could lead to misclassification of the stages of Chronic Kidney Disease.

Objectives: Comparing the effect of delayed serum separation from blood on creatinine measurement by Jaffe method with Sarcosine Oxidase enzymatic method.

Methodology: Ethical Review Committee, Faculty of Medicine, University of Jaffna gave the Ethical clearance. Blood samples were collected and creatinine level was measured as soon as the serum was separated by Jaffe and enzymatic methods. Creatinine concentrations in the serum obtained from blood samples stored for 2 & 6 hours and 1, 2 & 3 days, at room temperature ($\approx 27-29^{\circ}\text{C}$) and in a refrigerator were measured.

Results: Creatinine concentrations in the serum separated from the blood samples stored at room temperature by Jaffe method at 2 & 6 hours were 1.23 (± 0.01) & 1.47 (± 0.01) mg/dL and by enzymatic method were 1.11 (± 0.01) & 1.22 (± 0.01) mg/dL. Serum creatinine levels in blood stored for 1, 2 and 3 days and measured by Jaffe method were 1.74 (± 0.02), 2.12 (± 0.07) and 2.24 (± 0.07) mg/dL respectively and by enzymatic method were 1.31 (± 0.04), 1.41 (± 0.03) and 1.47 (± 0.01) mg/dL respectively. The mean creatinine concentrations measured in samples stored in the refrigerator for 2 & 6 hours by Jaffe method were 1.25 (± 0.01) & 1.32 (± 0.02) mg/dL and by enzymatic method were 1.09 (± 0.01) & 1.10 (± 0.01) mg/dL. The blood stored for 1, 2 & 3 days measured by Jaffe method were 1.49 (± 0.01), 1.67 (± 0.09) & 1.72 (± 0.07) mg/dL and by enzymatic method were 1.19 (± 0.01), 1.23 (± 0.09) and 1.32 (± 0.07) mg/dL respectively.

Conclusions: Blood samples can be stored up to 6 hours at room temperature without significant changes in serum creatinine level and storage in a refrigerator is the best method for delayed serum separation. Enzymatic method gives more accurate values of serum creatinine level than the Jaffe method.

Key words: Creatinine, Jaffe method, Enzymatic assay, Chronic Kidney Disease

OP60: changes in estimated glomerular filtration rate and microalbuminuria with the duration of diabetes mellitus type 2 in patients attending the diabetic centre, Teaching Hospital, Jaffna

Hadeeka AHF¹, Aravinthan M², Arasaratnam V³

*1*Medical Laboratory Sciences, Unit of Allied Health Sciences, Faculty of Medicine, University of Jaffna*

2Consultant Endocrinologist, Teaching Hospital of Jaffna

3Department of Biochemistry, Faculty of Medicine, University of Jaffna

Introduction: Diabetic patients have increased risk of developing microvascular complications and affect the kidney function.

Objectives: To investigate the changes in estimated glomerular filtration rate (eGFR) and microalbuminuria with the duration of type 2 diabetes mellitus (T2DM) patients attending the Diabetic Centre, Teaching Hospital Jaffna.

Methodology: Ethical Review Committee, Faculty of Medicine, University of Jaffna gave the Ethical clearance. Patients diagnosed as T2DM were included. Serum creatinine, albumin levels were estimated. eGFR was calculated by using CKD-EPI equation. The test report value of microalbuminuria was obtained from Chemical Pathology Laboratory, Teaching Hospital Jaffna.

Results: A total of 63-T2DM patients aged between 34-79 years was included and 22 (34.9%) were males. The mean age was 59.10 (\pm 11.30) years [males 56.45 (\pm 12.73) years, females 60.51 (\pm 10.34) years; $p=0.176$]. The mean duration of diabetes mellitus was 6.08 (\pm 4.79) years [5.45 (\pm 4.06) years males, 6.41 (\pm 5.16) years females; $p=0.453$]. The mean serum creatinine, eGFR and Albumin Creatinine Ratio (ACR) were 1.33 (\pm 0.40) mg/dL ($p=0.451$), 53.07 (\pm 16.4) ml/min/1.73m² ($p<0.001$) and 7.73(\pm 8.67) mg/mmol ($p=0.569$) respectively. eGFR differed significantly between males and females ($p<0.001$). With the increase in the duration of diabetes mellitus, the mean serum creatinine [less than 5 years- 1.10(\pm 0.22) mg/dL($p=0.744$); 5-10 years- 1.33(\pm 0.12) mg/dL ($p=0.883$); more than 10 years-1.74(\pm 0.53) mg/dL ($p=0.382$)] and ACR [less than 5 years- 2.17(\pm 1.25) mg/mmol ($p=0.062$); 5-10 years-9.73(\pm 7.89) mg/mmol ($p=0.769$); more than 10 years-15.07(\pm 10.63) mg/mmol (0.409)] were increased while the eGFR decreased [less than 5 years- 64.91(\pm 17.32) ml/min/1.73m² ($p=0.003$); 5-10 years-49.79(\pm 10.31) ml/min/1.73m² ($p<0.001$); more than 10 years-36.24(\pm 11.58) ml/min/1.73m² ($p=0.017$)]. The different groups of patients having T2DM for different duration showed significant differences in eGFR between males and females.

Conclusion: eGFR and ACR provided more accurate assessment of renal function. Hence it is recommended to assess eGFR and ACR for early detection and management of Diabetic Nephropathy and Chronic Kidney Diseases.

Keywords: Creatinine, eGFR, Albumin Creatinine Ratio (ACR), Duration of diabetes, type 2 Diabetes Mellitus.

OP61: Evaluation of the interference of bilirubin on alkaline phosphatase activity measurements

Anpu K¹, Arasaratnam V²

1Medical Laboratory Sciences, Unit of Allied Health Sciences, Faculty of Medicine, University of Jaffna

2Department of Biochemistry, Faculty of Medicine, University of Jaffna

Introduction: Alkaline Phosphatases (ALPs) are a group of enzymes and their activity measurements are routine tests carried out by laboratories to screen for liver diseases, bone diseases, etc. Bilirubin interferes with various analyte estimations, including the activity of ALP, providing in false values.

Methodology: Ethical Review Committee, Faculty of Medicine, University of Jaffna gave the approval. Blood was drawn from 10 healthy voluntary adults to prepare pooled serum. Optimum wavelengths for the measurement of bilirubin by diazo-sulphanilic acid and ALP activity by 4-aminophenazone methods were determined. Serum bilirubin level and ALP activity of pooled serum were measured. Bilirubin solutions of different concentrations were prepared, added to pooled serum [group I (1.1, 1.2, 1.4, 1.6 and 1.8mg/dL), group II (2, 2.5, 3 and 5mg/dL) and group III (10, 20, 30, 40, 50 and 60mg/dL)], and ALP activity of the serum samples were measured

Results: Optimum wavelengths for the estimation of bilirubin concentration and ALP activity were 540nm and 520nm respectively. Mean bilirubin concentration and ALP activity in the pooled serum were 1.03 (± 0.01) mg/dL and 116.1 (± 1.05) U/L respectively. In the serum sample added with bilirubin, Group I, no significant change ($p > 0.05$) in ALP activity was observed. In Group II, up to 3mg/dL of bilirubin, there were no significant change ($p > 0.05$) in ALP activity and above 3mg/dL of bilirubin there were significant changes ($p < 0.05$) in ALP activity. This was true for the ALP activity with bilirubin concentrations of Group III ($p < 0.05$). Among group I ($r = -0.142$, $p > 0.05$) and group II ($r = -0.209$, $p > 0.05$) there was no significant correlation between bilirubin concentration and ALP activity. But in group III there was significant ($r = -0.967$, $p < 0.001$) correlation between bilirubin concentration and ALP activity.

Conclusion: There is significant interference by bilirubin above 3mg/dL on the measurement of the ALP activity.

Key words: Alkaline phosphatase, Bilirubin, Interference.

OP62: Comparison of the serum calcium levels of postmenopausal women attend Family Health Centre, Kondavil with that of premenopausal women from the same area

Kokularamanan K¹, Surenthirakumaran R², Arasaratnam V³

1Medical Laboratory Sciences, Unit of Allied Health Sciences, Faculty of Medicine, University of Jaffna

2Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna

3Department of Biochemistry, Faculty of Medicine, University of Jaffna

Introduction: Postmenopausal women have high chances to have osteoporosis, i.e. loss of calcium from bone and hence they need calcium supplementation. In Jaffna, calcium level in water is high.

Objective: To assess the association between the serum calcium level of postmenopausal women who attend Family Health Centre, Department of Community and Family medicine, Kondavil, Jaffna and calcium level in their drinking water; as well as that of the premenopausal women from the same area as that of the postmenopausal women.

Methodology: Blood was collected from 22 postmenopausal women. The 22 premenopausal women who live at or around neighborhood of postmenopausal women were selected for blood collection. Water was collected from their main drinking sources. Calcium levels were estimated by O-Cresolphthalein complexone (O-CPC) method.

Results: Mean serum calcium level of postmenopausal (48-79 years) and Premenopausal (19-44 years) women were 1.97(±0.12) and 2.22(±0.09) mmol/l respectively. Mean calcium level of water was 2.90(±0.58) mmol/l. Serum calcium levels of postmenopausal were significantly (P<0.001) less than that of the premenopausal. Premenopausal women were grouped into 15-24, 25-34 and 35-44 years of ages and mean serum calcium levels were 2.29(±0.001), 2.23(±0.07) and 2.21(±0.10) mmol/l respectively. There was negative correlation but not statistically significant (P=0.486, r:-0.157) between ages and serum calcium levels of premenopausal women. Postmenopausal women were grouped into 45-54, 55-64, 65-74 and 75-84 years and the mean serum calcium levels were 2.07(±0.07), 1.88(±0.08), 2.00(±0.10) and 1.8(±0.06)mmol/l respectively. Serum calcium levels of postmenopausal women were significantly decreased with ages (P=0.01, r:-0.539) and length of menopause (P=0.008, r:-0.552). No correlation between serum calcium levels of premenopausal women and calcium levels of water (P=0.973, r:-0.008). There was negative correlation between serum calcium levels of postmenopausal women and calcium levels of water but statistically not significant (P=0.157, r:-0.312).

Conclusion: Serum calcium levels of postmenopausal women were independent of drinking water calcium levels and decreased with age and lengths of menopause.

Key words: Premenopausal women, Postmenopausal women, Serum Calcium, water calcium level

OP63: Influence of frequency of hemodialysis on serum uric acid level in patients who are undergoing regular hemodialysis at hemodialysis unit, Teaching Hospital, Jaffna

Jenifer BA¹, Kumanan T², Arasaratnam V³

¹Medical Laboratory Sciences, Unit of Allied Health Sciences, Faculty of Medicine, University of Jaffna

²Department of Medicine, Faculty of Medicine, University of Jaffna

³Department of Biochemistry, Faculty of Medicine, University of Jaffna

Introduction: Chronic renal failure (CRF) leads to haemodialysis or kidney transplantation for survival. Due to impaired renal function, accumulation and retention of various products such as uric acid in blood will result. Hence the influence of frequency of hemodialysis on serum Uric Acid level was assessed in the patients undergoing regular dialysis.

Methodology: Ethical Review Committee, Faculty of Medicine, University of Jaffna gave the Ethical clearance. This is a laboratory based descriptive cross-sectional study and conducted in the patients who are undergoing regular Hemodialysis at Teaching Hospital, Jaffna. Uricase-peroxidase method was used to measure Serum Uric Acid (UA) level.

Result: Among the 32 patients aged between 16 to 71 years and 22 were males. Serum UA level in patients ranged between 2.76 and 11.31 [mean was 6.11 (± 1.78)] mg/dl. A negative correlation was observed between serum UA level and age of the patients but not significant ($r = -0.116$, $p = 0.365$). The mean serum UA levels in male and female patients were 5.90 (± 1.49) and 6.57 (± 2.31) mg/dl respectively and the levels were not significant ($p = 0.334$). Number of haemodialysis ranged from 1 to 3 in a week. Among them, 14, 17 and one patients had dialysis once, twice and thrice in a week. There was a significant relationship between frequency of haemodialysis and serum UA level ($p = 0.031$). The ratio between the duration of haemodialysis and volume of ultra-filtrate (DOH & VOUF) ranged from 1.05 to 8.00 [mean of 1.70 (± 1.50)]. Inverse correlation between the ratio of DOH & VOUF and serum UA level was observed but not significant ($r = -0.225$, $p = 0.215$).

Conclusions: Due to haemodialysis there were no significant changes in UA levels & age of the patients and, males & females. Serum UA level inversely correlated with the ratio between DOH and VOUF but not significant.

Keywords: Hemodialysis, Volume of Ultra-Filtrate, End Stage Renal Failure (ESRF), Chronic Kidney Disease (CKD), duration of haemodialysis.

OP64: In-vitro evaluation of antibacterial activity of essential oils

Murugathas V^{1*}, Kalki P² and Gnanakarunayan TJ³

1 Pharmacy, Unit of Allied Health Sciences, Faculty of Medicine, University of Jaffna

2 Pharmacy, Unit of Allied Health Sciences, Faculty of Medicine, University of Jaffna

3 Medical Laboratory Sciences, Unit of Allied Health Sciences, Faculty of Medicine, University of Jaffna

Introduction: Infectious diseases are the main challenge to the world and it is the second leading cause of death in the world. This high mortality rate is mainly due to the antibiotic resistance. The development and spread of resistance to currently available antibiotics is a global concern. Medicinal plants contain a wide range of chemical substances that can be used to treat chronic diseases and infectious diseases. Essential oils are one of the secondary metabolites in plants.

Objectives: To evaluate the antibacterial activity of essential oils.

Methodology: Ethical clearance was obtained from Ethical Review Committee, Faculty of Medicine, University of Jaffna. Essential oils (Cinnamon oil, Clove oil and Cardamom oil) were extracted by steam distillation. Antibacterial activity were evaluated by disc diffusion assay and the minimum inhibitory concentrations (MIC) were evaluated by broth micro dilution using Resazurin as an indicator against clinically important pathogenic bacterial species (*Pseudomonas aeruginosa* and *Staphylococcus aureus*). Ciprofloxacin was used as control for the antibacterial activity.

Results and Discussion: The extraction yield percentages of Cinnamon, Clove and Cardamom were 2.61%, 7.12% and 0.0021% respectively. Due to the lower yield percentage of cardamom oil, it was excluded from this antibacterial susceptibility study. Both bacterial species were susceptible to both essential oils. Both essential oils and ciprofloxacin have significant antibacterial activity ($p < 0.05$) and the type of bacteria are not significantly influence in the antibacterial activity ($p > 0.05$). The broth micro dilution testing was shown that cinnamon oil is active in very low concentration than clove oil against both bacterial species.

Conclusion: It can be concluded that essential oils have significant antibacterial activity and the efficacy of cinnamon oil is higher than clove oil.

Key words – Antibacterial activity, Broth dilution, Essential oils