



URS 2021

**Proceedings of the
4th Undergraduate Research Symposium**

"Unite for the well-being of the University Community"

3rd of February 2022

Faculty of Medicine
&
Faculty of Allied Health Sciences
University of Jaffna

**Proceedings of the
4th Undergraduate Research Symposium 2021**

**Faculty of Medicine & Faculty of Allied Health Sciences
University of Jaffna
3rd February 2022**

Table of Contents

Message from the Vice Chancellor of the University of Jaffna	1
Message from the Dean of the Faculty of Medicine.....	2
Message from the Dean of the Faculty of Allied Health Sciences	3
URS 2021 Organizing Committee	4
Reviewers of Abstracts	5
Chairpersons of Sessions	6
Panel of Evaluators	7
Agenda	8
Abstracts of Oral presentations	10

Message from the Vice Chancellor of the University of Jaffna

A university is a knowledge center. Searching, teaching, researching and disseminating the knowledge by conducting seminars, workshops, symposia, conferences and extension programmes are some of the key functions of a university.

Being a center of excellence in research, the University of Jaffna continues to sustain a quality research culture from its inception. Many scholars produced by the University of Jaffna are there all over the world with great reputation.

Various faculties of the University of Jaffna have their own symposia and conferences to maintain the research culture of the university. In addition, the university is strongly committed to support and guide its undergraduates to become quality researchers. The 4th Undergraduate Research Symposium is co-hosted by the Faculties of Medicine and Allied Health Sciences, under the theme of "Unite for the well-being of the university community". Physical and mental well-being of the students and staff is one of the essential elements emphasised in the "Health Promoting Universities" concept introduced by the World Health Organisation.

I am very much delighted to see the urge for the search of the future generation of healthcare professions. It is also appreciated that the students are given opportunities to demonstrate the skills they acquired. I congratulate the staff of the Faculties of Medicine and Allied Health Sciences on their continuous effort in organizing this Undergraduate Research Symposium.

I wish the student researchers the very best at the 4th Undergraduate Research Symposium.

Prof. S. Srisatkunarajah
Vice Chancellor
University of Jaffna

Message from the Dean of the Faculty of Medicine

It is a great pleasure to issue this message on the occasion of 4th Undergraduate Research Symposium (URS 2021), of the Faculties of Medicine and Allied Health Sciences, University of Jaffna, Sri Lanka on “Unite for the well-being of the University community”.

The 4th Undergraduate Research Symposium will provide a platform for undergraduates of both faculties to share their research findings, and discuss them with fellow colleagues, academics, and clinicians. The great opportunity will definitely help them to build up their academic career which is considered a noble thing for future leaders to accomplish.

The university encourages the graduates to involve in good research practices. Sharing the research findings with the relevant stakeholders is an essential component of research ethics. The conference is helping the students to achieve it.

I urge the students of both faculties to work towards developing their abstracts into journal articles in the future.

I sincerely thank Prof. S. Srisatkunarajah, Vice Chancellor, University of Jaffna, and all the distinguished invited speakers for their presence and contributions for gracing this occasion. I also thank the URS 2021 Organizing Committee of the Faculties of Medicine and Allied Health Sciences, for organizing this event in the midst of the COVID-19 pandemic.

Lastly, I extend my heartiest congratulations to the student researchers and wish them a fruitful and rewarding experience at the 4th Undergraduate Research Symposium.

Dr. R. Surenthirakumaran
Dean
Faculty of Medicine
University of Jaffna

Message from the Dean of the Faculty of Allied Health Sciences

It is a great pleasure to convey a message to the proceedings of the fourth ‘Undergraduate Research Symposium 2021’ jointly organized by the Faculty of Medicine and the Faculty of Allied Health Sciences.

I would like to thank the Faculty of Medicine for hosting the symposium with our faculty. The primary objective of this research symposium is to provide an opportunity and a platform for the students to engage in research activities and present their research findings in a forum. I am sure that this symposium will provide a friendly surrounding for the student researchers and academics to share their research findings and views with others.

I strongly believe that these types of research symposiums will guide our students to develop writing skills, presentation skills, critical thinking, and building up team spirit. I am glad to see the interest of all student researchers who used this opportunity to improve their knowledge and skills. Students from the Faculties of Medicine and Allied Health Sciences have conducted much useful research in their academic programs and obtained excellent outputs. The valuable research findings will help future researchers to involve more research in the coming years. I would like to thank all the reviewers of the undergraduate research symposium for reviewing the submissions and helping the symposium with the best quality papers.

It’s my honour to extend the felicitations to the committee of the participants and extend my best wishes for the success of the conference.

Mrs. Deivy Thabotharan
Dean
Faculty of Allied Health Sciences,
University of Jaffna

URS 2021 Organizing Committee

Prof. B. Kumarendran (Chairperson)

Mr. S. Thuvaragan (Secretary)

Dr. (Mrs). M. Sooriyakanthan (Joint Editor)

Dr. R. Karunaithas (Joint Editor)

Committee members

Dr. P.A.D. Coonghe

Dr. (Mrs). S. Vathulan

Dr. (Mrs). N. Umasangar

Dr. (Mrs). T. Sathees

Mr. S. Sathees

Mrs. V. Sureshkumar

Mrs. T. Sukirthan

Mr. S. Srishankar

Miss. S. Lakshika

Mr. T. Thushiyananth

Dr. R. Rajphriyadharshini

Reviewers of Abstracts

Prof. S. Kannathasan

Prof. T Kumanan

Prof. (Mrs). M.G. Sathiyadas

Prof. (Mrs). K. Muruganathan

Prof. S. Rajendra

Prof. K. Muhunthan

Prof. N. Suganthan

Prof. S. Sivayogan

Dr. K. Sivapalan

Dr. PAD. Coonghe

Prof. B. Kumarendran

Dr. (Mrs). S. Vathulan

Dr. (Mrs). N. Umasangar

Dr. K. Guruparan

Dr. (Mrs). V. Ambalavanar

Dr. (Mrs). H. Sivakumar

Dr.M. Aravinthan

Dr. B. Sayanthan

Dr. S. Gobisangar

Dr. B. Balagobi

Dr. T. Yoganathan

Dr. (Mrs). R. Niranjana

Dr. (Mrs). K. Sanchayan

Dr. Ramya Kumar

Dr. S. Raguraman

Dr. (Mrs). T. Sathees

Dr. Kausala Sithamparapillai

Dr. (Mrs). M. Sooriyakanthan

Dr. K. Kandeepan

Dr. (Mrs). N. Jegathesan

Dr. R. Karunaitas

Dr. (Mrs). S. Srikokulan

Mr. P. Kalki

Mr. S. Thuvarakan

Miss. S. Sathya

Mrs. T. Gnanakarunyan

Mrs. V. Jagapragash

Mr. S. Sathees

Mrs. L. Kamalarupan

Mrs. D. Thabotharan

Mrs. A. Rajkumar

Mr. S. Jeyakumar

Chairpersons of Sessions

Prof. (Ms). V. Arasaratnam

Prof. S. Sivayokan

Prof. S. Kannathasan

Prof. T. Kumanan

Prof. (Mrs). M. G. Sathiadas

Dr. K. Guruparan

Dr. (Mrs). T. S. Navaratnaraja

Dr. A. Muruganathan

Dr. B. Balagobi

Dr. (Mrs). A. Bhavani

Dr. (Mrs). K. Sanchayan

Dr. T. Yoganathan

Dr. (Mrs). J. A. Pradeepan

Dr. Ramya Kumar

Dr. S. Saba Ananth

Dr. K. Ketheeswaran

Mrs. V. Jegapragash

Dr. Kausala Sithamparapillai

Panel of Evaluators

Dr. Sisira Dharmaratne, Medical Education Unit, Faculty of Medicine, University of Peradeniya.

Prof. Shamini Prathapan, Professor in Community Medicine, Department of Community Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura.

Dr. Nuwan Wickramasinghe, Senior Lecturer and Head, Department of Community Medicine, Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka.

Dr. Anuji Gamage, Senior Lecturer in Community Medicine, Faculty of Medicine, General Sir John Kotelawala Defence University.

Dr. Yawaswi Walpita, Senior Lecturer, Department of Community Medicine, Faculty of Medicine, University of Colombo.

Dr. Y.G.S. Wasana Jayarathne, Senior Lecturer, Medical Education Unit, Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka.

Prof. S.S.P. Warnakulasuriya, Professor and Dean, Faculty of Nursing, University of Colombo.

Dr. Kalpani Abhayasinghe, Senior Lecturer, Department of Nursing & Midwifery, Faculty of Allied Health Sciences, General Sir John Kotelawala Defence University.

Dr. Sivapalan Sanchayan, Medical Education Unit, Faculty of Medicine, University of Jaffna.

Dr. Ashwini de Abrew, Senior Lecturer, Department of Medical Education, Faculty of Medicine, University of Colombo.

A. M. S. Deepani Pathiranage, Department of Nursing, Faculty of Allied Health Sciences, University of Peradeniya.

Agenda

Inauguration session

Venue	Hoover auditorium
Time	08.30am - 10.00am
08.30 a.m	Lightning of oil lamp
08.35 a.m	Welcome address Prof.B.Kumarendran (Chairperson, URS 2021)
08.40 a.m	Address by Dean/Medicine Dr. R. Surenthirakumaran
08.45am	Address by Dean/AHS Mrs. Deivy Thabotharan
08.50 am	Key note Address Prof.S.S. Srisatkunarajah
09.15 am	Key note Address Prof.S.S.P.Warmakulasuriya (Dean , Faculty of Nursing, University of Colombo)
09.50 am	Key note Address Dr.Miyuru Chandradasa (Senior Lecturer, Faculty of Medicine, Ragama)
10.25 am	Vote of thanks Mr.S.Thuvaragan (Secretary, URS 2021)

Phase I	Session 1	Session 2	Session 3
Venue	Hoover auditorium	Lecture hall 1	Lecture hall 2
Time	11.00 am - 12.15pm	11.00 am - 12.15pm	11.00 am - 12.15pm
OP ID	OP1 - OP6	OP7 - OP11	OP12 - OP17
Phase II	Session 4	Session 5	Session 6
Venue	Hoover auditorium	Lecture hall 1	Lecture hall 2
Time	1.00pm - 2.15pm	1.00pm - 2.15pm	1.00pm - 2.15pm
OP ID	OP18 - OP22	OP23 - OP27	OP28 - OP34
Phase III	Session 7	Session 8	Session 9
Venue	Hoover auditorium	Lecture hall 1	Lecture hall 2
Time	2.15pm - 3.30pm	2.15pm - 3.30pm	2.15pm - 3.30pm
OP ID	OP35 – OP39	OP40 – OP44	OP45 – OP51

Abstracts of Oral presentations

Migraine and its associated factors, self-reported triggers, and impact among students of Faculty of Medicine, University of Jaffna

Thushyanthi V¹, Vithyasahar S¹, Jayasuriya J A D S N¹, Samlath A H F¹, Dhananjaya A B¹, Kumar R², Arasalingam A³

¹*Faculty of Medicine, University of Jaffna*

²*Department of Community and Family Medicine, ¹Faculty of Medicine, University of Jaffna*

³*Department of Medicine, ¹Faculty of Medicine, University of Jaffna*

Introduction and Objectives: Headache, a common disorder of the nervous system, has a global prevalence of 50%. Among adults with headache, about 30% have migraine. Headache is a common complaint among medical students. Our objective was to determine the prevalence of migraine, its associated factors, self-reported triggers, and impact among medical students at the University of Jaffna.

Methods: An institutional-based descriptive cross-sectional study was conducted at the Faculty of Medicine, University of Jaffna, among 295 medical students selected by stratified random sampling from five batches. A questionnaire comprising self and interviewer-administered sections was used to gather data. The International Classification of Headache Disorder (ICHD) 3 beta version and the Migraine Disability Assessment Test (MIDAS) was used to identify students with migraine and to assess their impact, respectively. Frequencies, percentages, and the Chi-squared test were used. The critical level was set at 0.05.

Results: Of 295 participants, 128 (43.4%) were male and 167 (56.6%) were females. In total, 206 (69.8%) students had a headache in the last three months, and 46 (15.6%) had symptoms compatible with migraine. Being female ($p=0.01$), sleeping <7 hours ($p=0.022$), spending less time on exercise ($p=0.001$) and having a higher level of stress on the Perceived Stress Scale ($p=0.03$) were significantly associated with migraine. Emotional changes were the most common trigger (87%), followed by bright light (84.8%), examinations (73.9%), and extreme sound (70%). The menstrual phase was reported to be a trigger by over half (58.9%) of the females with migraine. Among those with migraine, about 30%, 33%, and 33% reported mild, moderate, and severe disability, respectively, and 4% had little or no disability.

Conclusion: In conclusion, the prevalence of migraine among students of the Faculty of Medicine, Jaffna, was 15.6%. Lifestyle factors such as sleep, exercise, and stress were found to be associated with migraine. While a substantial proportion experienced migraine-related disability, emotional changes, bright light, examinations, and extreme sound were the identified triggers among the medical students. Raising awareness on the benefits of lifestyle modification to prevent migraine may benefit medical students in Jaffna.

Keywords: Headache, Migraine, Medical students, Jaffna

Theme 1: Students and Wellbeing

OP2

Assertiveness and its associated factors among undergraduate Nursing students, Faculty of Allied Health Sciences, University of Jaffna

Jayawansha D G T L R¹, Sathees S¹, Kajavinthan K²

¹*Department of Nursing, Faculty of Allied Health Sciences, University of Jaffna*

²*Department of Philosophy & Psychology, Faculty of Arts, University of Jaffna*

Introduction and Objectives: Assertiveness is a social communication skill and a personality trait. Assertiveness is the ability, to be honest, direct, and appropriate expression of opinions, feelings, attitudes, and rights without undue anxiety. Assertive nurses can communicate their feelings or ideas with confidence without violating the rights or feelings of others. This study aimed to assess the assertiveness and its influencing factors among undergraduate nursing students, Faculty of Allied Health Sciences, University of Jaffna.

Methods: A descriptive cross-sectional study among 162 nursing students was conducted at the Faculty of Allied Health Sciences, University of Jaffna. Data collection was done using a self-administered questionnaire via google forms. Data was analyzed based on the objectives. Descriptive statistics were performed to describe the level of assertiveness. Associations between assertiveness and its influencing factors were obtained by using ANOVA, t-test, and Pearson product-moment correlation.

Results: Total 154 participants were given their consent to participate in the study (response rate=95%). The mean age of the participants was 24.19 (SD=1.28). More than half of the participants were female (60.4%). The majority of them were (56.5%) Buddhist. Most of the participants (31.8%) were studying in the fourth year. The mean level of Assertiveness of the study participants was found to be 71.59 (SD=7.08) out of 100. The mean level of assertiveness among males and females was 72.6 (SD=7.21) and 71.0 (SD=6.59), respectively. The first-year students had a low mean (69.1, (SD=6.15)) level of assertiveness than fourth-year students (76.0, SD=5.69)). The mean assertiveness of Buddhists and Muslims was 56.5(SD=6.85) and 75.42(SD=6.80), respectively. The level of assertiveness had significant association with age ($p=0.006$, $r=+0.222$), religion ($p=0.031$, $f=3.040$), year of study ($p=0.001$, $f=6.092$) and fathers' education ($p=0.004$, $t=-2.931$). Further following factors were not associated with the level of assertiveness: gender, mothers' education, mothers' and fathers' occupation, number of siblings and monthly family income.

Conclusion: The level of assertiveness among undergraduate nursing students seems adequate, and it showed association with some of their personal factors such as age, religion, year of study and fathers' education. The level of assertiveness seems to be increasing with age and year of study. Males and females may have equal levels of assertiveness. These factors need to be considered while planning assertiveness training programs among the nursing students in the Faculty of Allied Health Sciences.

Keywords: Assertiveness, Influencing factors, Undergraduate nursing student

Prevalence, pattern, and influence of socio-demographic and psychosocial factors on self-medication among medical students of Faculty of Medicine, University of Jaffna

Perera M A D N¹, Hadha N N¹, Pathima sarma M N¹, Mathusuya S¹, Rifan M¹, Surenthirakumaran R², Kumaran S²

¹*Faculty of Medicine, University of Jaffna*

²*Department of Community and Family Medicine, ¹Faculty of Medicine, University of Jaffna*

Introduction and Objectives: Self-medication is the use of medicines by individuals to treat self-recognized illnesses or symptoms without any medical supervision. Such practices may cause serious problems. However, empirical evidence is limited to the current status of its practices and associated factors among medical students. The aim of this study was to determine the prevalence, pattern, and influence of sociodemographic and psychosocial factors on self-medication among medical students of the Faculty of Medicine, University of Jaffna.

Methods: In this descriptive cross-sectional study, 636 medical students participated from the University of Jaffna. A self-administered questionnaire was used, which was developed by the researchers and pretested with a pilot study done with the students of the Faculty of Allied Health Sciences, University of Jaffna. Data was analyzed, processed, and saved with the help of Statistical Package for Social sciences (SPSS Version 25). A Chi-square test was used to determine the association of sociodemographic and psychosocial factors on self-medication among medical students.

Results: Self-medication practice was found to be 65.9% among medical students from the University of Jaffna. Analgesics (60.9%), Antipyretics (47.1%), Supplements-vitamins and minerals (27.9%), Antacids (28.9) and Antibiotics (30.3%) were the most common self-medicated drugs. Of the respondents, 64.4% have taken drugs from pharmacy shops, 29.6% have got drugs from leftover drugs of friends and family. The majority (58.2%) of students have acquired information about dosage from the previous prescription. Academic stress ($p < 0.001$) and relationship stress ($p < 0.001$) were significantly associated with self-medication practice.

Conclusion: The prevalence of self-medication among medical students was considerable. The use of self-medication was significantly associated with academic stress and relationship issues. Therefore, potential problems of self-medication should be emphasized to the students, and further identification of factors associated with unhealthy self-medication practices should be addressed.

Keywords: Self-medication, Medical undergraduates, Socio-demographic factors, Psychosocial factors

Awareness and attitude towards thalassemia among A/L students studying in the Kurunegala Education Zone

Dissanayake W M W¹, Sathees S¹, Karunaithas R²

¹*Department of Nursing, Faculty of Allied Health Sciences, University of Jaffna*

²*Department of Medical Laboratory Sciences, Faculty of Allied Health Sciences, University of Jaffna*

Introduction and Objectives: Thalassemia is one of the most common inherited disorders caused by abnormalities in Hemoglobin synthesis. The successful prevention of the disease depends on the awareness of the general population. The present study aimed to assess the awareness and attitude towards Thalassemia and its associated factors among A/L (aged ≥ 18) students in the Kurunegala education zone.

Methods: A cross-sectional study was conducted among 854 A/L students at the Kurunegala education zone from October 2020 to November 2021. A cluster sampling method was applied to recruit the students. A self-administered questionnaire in Tamil and Sinhala versions was used to collect data. The questionnaires were administered via Google forms and directly to students. Data analysis was performed by SPSS 16 software based on research problems, objectives, and variables. The level of awareness on thalassemia was measured out of 14 marks. Responses for attitude questions were recorded using a five-point 'Likert scale.' Pearson product-moment correlation, ANOVA, and T-tests were applied to find out the associated factors with awareness and attitude.

Results: Completed 493 responses were received (response rate-57.7%). The results indicated that the students had higher awareness with a mean score of 10.37 (SD =2.37) out of 14. Also, the students had a positive attitude towards thalassemia with a mean score of 15.03 (SD= 3.12). Age and the A/L study streams had a statistically significant association with awareness and attitude scores, while the medium of study and positive family history of thalassemia were associated with awareness. The type of school was associated with the student's attitude.

Conclusion: The students had higher awareness and a positive attitude towards thalassemia. National thalassemia prevention programs and the awareness programs of the schools may play a significant contribution in raising awareness of thalassemia among Kurunegala students.

Keywords: Awareness, Attitude, Thalassemia, A/L students, Kurunegala

Prevalence of symptoms of computer vision syndrome and the associated factors among undergraduate students in the Faculty of Allied Health Sciences, University of Jaffna

Hansika D E P D¹, Sathees S¹, Chandrakumar S²

¹*Department of Nursing, Faculty of Allied Health Sciences, University of Jaffna*

²*Teaching Hospital, Jaffna*

Background and Objectives: Computer Vision Syndrome is a condition and a set of symptoms. Those symptoms affect both ocular and extraocular; due to prolonged use of digital screens, such as desktop computers, laptops, smartphones, and tablets. There are so many measures available for the prevention of those kinds of symptoms. This study aimed to assess the prevalence of symptoms of computer vision syndrome and the associated factors among undergraduate students in the Faculty of Allied Health Sciences, University of Jaffna.

Methods: A descriptive cross-sectional study among 348 students in the Faculty of Allied Health Sciences, University of Jaffna was conducted. As the sampling technique, all the students (539) were listed and numbered. Then, among the 539 students, 351 students were selected randomly. A self-administrated questionnaire (via Google forms) was used to collect the data. The data was analyzed by using SPSS 25 and based on the objectives of the study. Descriptive statistics were performed to describe the symptoms of Computer Vision Syndrome. A Chi-squared statistical test was used to see associated factors of the symptoms of Computer Vision Syndrome.

Results: Three hundred and forty-eight out of 351 questionnaires (response rate= 99.14%) were completed and returned. The total number of students who participated in this study had at least one symptom of Computer Vision Syndrome. So, the presence of symptoms of Computer Vision Syndrome was 100 % (n=348). There were 13 symptoms under CVS. Among them, most disturbing symptoms were headache (54.1%, n=190), back pain (10%, n=35), blurred vision (9.1%, n=32), eye strain (8.5%, n= 30), neck pain (6%, n= 21). Only gender (p=0.008) was statistically significant with the occurrence of symptoms of Computer Vision Syndrome. Presenting pre-existing eye disease, using spectacles for refractory errors and duration of using computers more than two hours per day were not statistically significant with the occurrence of symptoms of Computer Vision Syndrome.

Conclusion: Symptoms of Computer Vision Syndrome were very common among undergraduate students in the Faculty of Allied Health Sciences, University of Jaffna. To avoid those symptoms, they need to follow precautions perfectly while working on any digital screen. Better to introduce awareness programs for students of the Faculty of Allied Health Sciences, University of Jaffna regarding the computer vision symptoms, and the preventive measures to avoid or relieve the symptoms of the computer vision syndrome are essential.

Keywords: Computer Vision Syndrome, Eye strains, Headache, Digital screen, Blurred vision, Back pain.

Participation in extracurricular activities and associated factors among students of the Faculty of Medicine, University of Jaffna

Mathuvanathi T¹, Keerthiga U¹, Majure K¹, Mahinthan C¹, Priyamantha H¹, Kumar R², Sathiadas G³

¹*Faculty of Medicine, University of Jaffna*

²*Department of Community and Family Medicine, ¹Faculty of Medicine, University of Jaffna*

³*Department of Paediatrics, Faculty of Medicine, ¹Faculty of Medicine, University of Jaffna*

Introduction and Objectives: Extracurricular activities (ECA) are crucial in medical education as they help to nurture the core competencies of a doctor. This study aimed to assess student participation in ECA, barriers and attitudes towards participation and associated sociodemographic and academic factors among medical students of the University of Jaffna.

Methods: This institutional-based descriptive cross-sectional study was carried out among students of five batches registered in the MBBS course at the Jaffna Medical Faculty. A proportionate stratified random sampling method was used, and the data was collected using a self-administered questionnaire developed by the research team. ECA participation was categorized into non-participation, less participation (1-2 days/week) and greater participation (>2 days/week) to determine the factors associated with participation. Frequencies, proportions, and the Chi-squared test was used in the analysis with SPSS (v21).

Results: A total of 332 medical students participated (response rate 96.5%). About two-thirds (65.1%, n=216) reported participating in ECA; only 97 (29.2%) participated in sports. The majority participated in ECA on <3 days per week (68.1%) and for <2 hours per day (61%). Lack of time (27.5%) and transport (24.6%) were the key barriers to participation. The majority had positive attitudes towards participation; for instance, ECA enabled making new friends (63.2%) and enhanced social skills (60.2%). Ethnicity (p=0.030) and monthly household income (p=0.045) showed a significant association with participation in ECA, whereas Sinhala students and those with lower household incomes were less likely to participate. The phase of the medical programme (p<0.001) and exam results (p=0.019) showed a significant association with the level of participation were students in the para-clinical phase and those who achieved first class or second upper/lower division were less likely to participate.

Conclusion: Over a third of medical students do not participate in any type of ECA at the Jaffna Medical Faculty. Targeted interventions are needed to improve participation with consideration to identified barriers and groups who are less likely to participate in ECA. This may help to improve student wellbeing at the Faculty of Medicine, University of Jaffna.

Keywords: Extracurricular activities, Medical students, Jaffna

Development of pictograms regarding medication use and lifestyle modification for diabetic patients in Teaching Hospital Jaffna

Jeyaraman R¹, Thuvaragan S¹, Surenthirakumaran R²

¹*Department of Pharmacy, Faculty of Allied Health Sciences, University of Jaffna*

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

Introduction and Objectives: Diabetes mellitus is a significant health problem. The best way to increase the quality of life of a Diabetic patient is through lifestyle modifications and proper medication use. The use of pictograms to convey health information may improve patient understanding and increase the efficiency of treatment. This study aimed to develop and pilot the pictograms regarding medication use and lifestyle modification among diabetic patients attending the diabetic clinic, Teaching Hospital, Jaffna.

Methods: It was a mixed-method study and was conducted in three phases. Phase I – Brainstorming, brainstorming discussion was conducted with health professionals and patient experts to identify critical areas/concerns to be covered by the pictograms and the message conveyed. Delphi technique with three rounds among three different groups of patient experts was used for Phase-II. Phase –III is a pilot study in which all diabetic patients were asked to interpret the meaning of adjusted pictograms. The calculated sample size for the pilot study was 426. For this study, the American National Standards Institute (ANSI) standard on Criteria for Safety Symbols to assess the comprehension level of pictograms was used. An 85 % comprehension rate was the minimum cutoff for acceptability.

Results: Pictograms were developed for Healthy diet, Regular exercise, Regular checkups, Stress management, Avoid smoking, Avoid alcohol intake, Footcare, Self-monitoring of blood glucose level, Self-monitoring of blood pressure, Regular eye checkups, Prevention of a hypoglycemic attack, Regular intake of medicine, Storage of insulin, Proper administration of insulin and Insulin injection sites as main vital areas to be covered by pictograms. Out of 426 patients, 288 patients were able to assess the understandability of pictograms due to the covid-19 pandemic situation. Out of 19 pictograms, 18 pictograms had expected comprehension levels and were selected as validated pictograms. Pictograms that did not meet the comprehension level will not be used in future studies.

Conclusion: Newly developed pictograms for medication use and lifestyle modification could be used among patients in hospitals and clinics for providing information regarding lifestyle modification and medication used to diabetic patients, particularly those who have difficulties in reading texts. However, they need to be validated in diabetic patients in other parts of Sri Lanka to determine the universal applicability.

Keywords: Pictograms, Diabetic patient, Lifestyle modification, Medication use.

Medication adherence and influence of selected factors on it among the diabetes mellitus patients attending to Diabetic Clinic at Teaching Hospital Jaffna

Wijethunga P M D G¹, Thuvaragan S¹, Coonghe P A D²

¹*Department of Pharmacy, Faculty of Allied Health Sciences, University of Jaffna*

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

Introduction and objectives: Diabetes mellitus (DM) is a chronic metabolic disease condition characterized by high blood glucose levels. DM patients who are non-adherent to medication have a greater risk to develop different complications, such as cardiovascular complications. This study was conducted to determine medication adherence and the association of selected factors on medication adherence among patients attending the diabetic clinic, Teaching Hospital Jaffna.

Methods: A descriptive cross-sectional study was conducted among adult diabetic patients who attended the diabetic clinic, Teaching Hospital Jaffna, from October to November 2021. A pre-tested interviewer-administered questionnaire was used to collect information. The data was analyzed using SPSS software. The data was analyzed to assess the medication adherence among DM patients attending the diabetic clinic in Teaching Hospital, Jaffna. The association of sociodemographic, patient-related, and therapy-related factors on medication adherence was determined using the Chi-square test. Medication adherence was calculated in percentage according to the missing doses, and the level of medication adherence was categorized into two levels as good ($\geq 80\%$) and poor ($< 80\%$). Ethical clearance was obtained for the study from the Ethical Review Committee, Faculty of Medicine, University of Jaffna.

Results: Among 426 participants, the response rate to the study was 97.65% (n=416). The majority of patients were female (68.8%, n=286). The mean age of patients was 57.69 ± 12.22 years. More than three-fourths of patients (78.1%, n=325) showed good medication adherence. Forgetfulness and lack of reminders were common reasons attributed to non-adherence. Age ($p < 0.05$), family support ($p < 0.05$), frequency of blood glucose check-ups (p value < 0.05), regular clinic visits ($p < 0.004$) polypharmacy ($p < 0.05$) showed statistically significant association with medication adherence.

Conclusion: More than three-fourths of DM patients had good adherence to oral hypoglycemic therapy. It could be further improved by encouraging patients to visit clinics regularly, encouraging caregiver involvement in the care of patients, educating patients on drug therapy, and introducing tablet reminder systems.

Keywords: Medication adherence, Diabetes mellitus, factors, Sri Lanka, Patient

Prevalence and associated factors of diabetic foot ulcer among patients with diabetes mellitus attending Diabetic clinic, Teaching Hospital Jaffna

Fernando I S N¹, Viniththira J¹, Rajendra S², Yanuthy T¹

¹Department of Nursing, Faculty of Allied Health Sciences, University of Jaffna

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

Introduction and Objectives: Diabetic foot ulcer is a major complication of diabetes mellitus. Multiple risk factors are associated with diabetic foot ulcers. Diabetic foot ulcers are the major cause of diabetic foot infection and lower extremity amputation. This study aimed to assess the prevalence of diabetic foot ulcers among diabetic patients and find the association of selected factors with a diabetic foot ulcer.

Methods: It was an institutional-based descriptive cross-sectional study carried out among 292 patients with diabetes mellitus. The data was collected by using a pre-tested interviewer-administered questionnaire after obtaining ethical clearance. A systematic sampling technique was used for selecting participants. The data was analyzed by using SPSS 25. The descriptive statistics were used to describe the variables, and the Chi-squared test was used to identify associated factors.

Results: Among the patients who attended to diabetic center, 292 were taken as samples for this study. Among them, 87.32% (n=255) were responded. Among the participants, 4.7% were type 1, and 95.3% were type 2 diabetes mellitus patients, respectively. The mean duration of diabetes mellitus was 10.7 years. The prevalence of diabetic foot ulcers was 21.2% (n=54) and 53.7% (n=29) of diabetic patients with foot ulcers were males. Gender, age, duration of DM, amputation, diet control, hypertension, retinopathy, neuropathy, HbA1c level, moisturizing dry area of feet, wearing footwear and smoking showed statistically significant associations ($p < 0.05$) with the prevalence of diabetic foot ulcer.

Conclusion: The prevalence of diabetic foot ulcers was high among males. The study found that diabetic foot ulcers had a significant association with gender, age, duration of DM, HbA1c level, retinopathy, hypertension, neuropathy, amputation, moisturizing dry area of feet, wearing footwear and smoking.

Keywords: Diabetic foot ulcer, Diabetes mellitus, Prevalence

Patient satisfaction and associated factors among type 2 diabetics at Primary Care Unit, Thirunelveli and Family Health Centre, Kondavil

Anandarajah L¹, Ediriweera N C¹, Herath A H M A N¹, Jothini T¹, Raveendranathan S¹, Kumar R¹, Kumaran S¹, Yoheswaran Y²

¹*Faculty of Medicine, University of Jaffna*

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

³*Primary Medical Care Unit, Thirunelveli*

Introduction and Objectives: Type 2 diabetes mellitus (T2DM) is an escalating problem in Sri Lanka. Primary care plays a critical role in combatting non-communicable diseases (NCD). The University of Jaffna-affiliated Family Health Centre (FHC), Kondavil adopts a family-centered approach to managing NCD. Patient satisfaction is an indicator of the quality of care and is linked with better clinical outcomes. This study aimed to compare patient satisfaction and associated socio-demographic factors among T2DM patients at FHC, Kondavil with the Ministry of Health's standard model of Primary Medical Care Unit (PMCU), Thirunelveli.

Methods: A comparative analytical cross-sectional study was carried out among all patients with T2DM at FHC, Kondavil and Primary Medical Care Unit (PMCU), Thirunelveli between August 2020 and July 2021. Data was collected with an interviewer-administered questionnaire. Patient satisfaction was assessed with the Patient Satisfaction Questionnaire-18 (PSQ-18). Frequencies, percentages, median, and means were used to summarize the data. The Kruskal Wallis test was used to assess the association between patient satisfaction score (PSS) and selected socio-demographic factors with the critical level set at 0.05.

Results: In total, 120 T2DM patients participated. Out of 70 participants (males: 34.3%, females 65.7%) from FHC, 95.7% (n=65) were highly satisfied and 4.3% (n= 3) moderately satisfied. Out of 50 participants (males: 26.0%, females 74.0%) from PMCU, 78% (n=39) were highly satisfied and 22% (n=11) moderately satisfied. The highest proportion of patients reported satisfaction with communication (FHC 94.3% vs. PMCU 94%); interpersonal relations (FHC 92.9% vs. PMCU 94.0%), technical facilities (FHC 90.0% vs. PMCU 86%) and overall general care (FHC 92.9% vs. PMCU 96%). Accessibility and time satisfaction were lower at both settings compared to the other subdomains (FHC: 84.3%; PMCU: 72%). The highly satisfied proportion in the financial domain was higher at FHC (92%) than PMCU (70%). A significant difference was observed in PSS in the two settings where FHC performed better (p=0.02). PSS differed by occupation (p=0.034) and time to travel for the primary care facility (p=0.047), but not with sex (p=0.695), education levels (p=0.226), and monthly household income (p=0.671).

Conclusion: FHC performs better than PMCU in some domains of patient satisfaction. While certain sociodemographic factors are associated with patient satisfaction. More research is needed to explore patient satisfaction in relation to the family-centered approach at FHC.

Keywords: Jaffna, Primary Care, Patient satisfaction, Diabetes Mellitus

Knowledge, attitude, and practice on diabetic mellitus among the patients attending the Diabetes center in Teaching Hospital Jaffna

Anfas A M¹, Senavirathne W A A S¹, Sumaiya R¹, Ranasinghe A M T¹, Ifthiya A B¹, Kesavan R²,
Kumaran S¹, Aravinthan M³

¹Faculty of Medicine, University of Jaffna

²Provincial Department of Health Services Office, Jaffna

³Teaching Hospital, Jaffna

Introduction and objectives: Diabetes mellitus is a double burden health issue in middle income countries, and it has become a major and growing contributor to mobility and morbidity all over the world. The aim of this study was to describe the knowledge, attitude and practice on diabetic mellitus and their associated sociodemographic factors among the patients attending the Diabetic centre in Teaching Hospital Jaffna.

Methods: It was a descriptive cross-sectional hospital-based study conducted among 430 diabetic mellitus patients selected by systematic sampling. An interviewed administered questionnaire was used to collect data. Level of knowledge was classified as good, average, and poor based on the median score obtained by patients. Attitude and practice were assessed with Likert scale. Attitude was graded as negative and positive. Practice was graded as good and poor.

Results: The median value scored by the patients for knowledge was 26, where 191 (44.4%) of them had good knowledge, 48 (11.2%) had average knowledge and 191 (44.2%) had poor knowledge regarding diabetes mellitus. The knowledge on diabetic mellitus did not show statistically significant differences based on sociodemographic factors such as sex ($p=0.242$), age ($p=0.818$), marital status ($p=0.67$), family income ($p=0.774$), education level ($p=0.77$), current employment status ($p=0.722$), duration of diagnosed disease ($p=0.341$), family history of diabetic mellitus ($p=0.378$). There were statistically significant differences between knowledge on diabetic based on religion ($p=0.013$). Regarding attitudes on diabetic mellitus, 226 (52.6%) of them had positive attitude and 204 (47.4%) of them had negative attitude. Attitude on diabetic mellitus did not differ based on as sex ($p=0.627$), age ($p=0.721$), religion ($p=0.242$), marital status ($p=0.187$), family income ($p=0.682$), education level ($p=0.362$), current employment status ($p=0.673$), duration of diagnosed disease ($p=0.484$) and family history of diabetic mellitus ($p=0.696$). Among the participants 190 (44.2%) of them had good practice on managing diabetic mellitus and 240 (55.8%) of them had poor practice. Practice of diabetic mellitus differed based on sex ($p=0.027$), and marital status ($p=0.035$) and not based on age ($p=0.101$), religion (0.081), family income ($p=0.184$), education level ($p=0.062$), current employment status ($p=0.247$), duration of diagnosed disease ($p=0.924$) and family history of diabetic mellitus ($p=0.149$).

Conclusion: Diabetic patients had more than average knowledge and positive attitudes toward diabetic mellitus but poor practice on following management strategies.

Keywords: Diabetic patients, Knowledge, Attitude, Practice, Jaffna.

Knowledge and practice regarding prevention and management of anaemia and influence of socio-demographic factors among antenatal mothers in Nallur MOH Division

Ahamed M I A¹, Surenthirakumaran R², Thabotharan D¹, Nivetha K¹

¹*Department of Nursing, Faculty of Allied Health Sciences, University of Jaffna*

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

Introduction and Objectives: Anaemia is a public health burden with severe consequences. During pregnancy, maternal demands increase which lead to anaemia. Pregnant mothers are at high risk of having anaemic complications. It affects cognitive and motor development causes fatigue and low productivity and may be associated with low birth weight and increased risk of maternal and perinatal mortality when it occurs in pregnancy. Adequate knowledge regarding anaemia is crucial to prevent anaemic complications among antenatal mothers. This study aimed to assess the knowledge and practice regarding prevention and management of anaemia and the influence of socio-demographic on it among antenatal mothers in the Nallur MOH division.

Methods: Community based descriptive cross-sectional study carried out in Jaffna district from October 2020 to August 2021. The study population was 324 antenatal mothers. An interview administered questionnaire was used to collect the data. Data was analyzed using SPSS (Statistical Package of Social Sciences) version 25, and data was calculated as mean and percentages and presented in tables and diagrams. The Chi-square test was used to identify variables. Ethical approval was obtained from ERC, Faculty of Medicine, University of Jaffna.

Results: All the antenatal mothers were approached; among them 324 antenatal mothers had given their consent to participate. Age range of the participants varied from 18 to 44 years old with the mean age of 29 (SD=6.191). All the participants were Sri Lankan Tamil. Majority of them (85.5%) were Hindus. Participants were categorized into poor knowledge (23.5%) satisfactory knowledge (54.6%) and good knowledge (21.9%) by using 50% predetermine cut off value. Mean knowledge was 55.9. Statistically significant relationship ($p < 0.05$) was found with the age, education, gestational age, gravida, family type and monthly income.

Conclusion: This study showed that the levels of knowledge and practice regarding anemia among pregnant mothers were satisfactory, irrespective of the differences in socio demographic factors among each and every one. These influencing factors need to be considered when planning the education activities.

Keywords: Knowledge, Practice, Anaemia, Antenatal mothers, Jaffna district

Knowledge on Autism among mothers of Kopay Medical Officer of Health area during their first year of motherhood

Priyatharsan K¹, Sansiya T¹, Sinthuja R¹, Gamage K G D N¹, Keerthana K¹, Coonghe P A D², Sivayokan 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 and Objectives: Autism or Autism Spectrum Disorder (ASD), refers to a group of disorders characterized by abnormalities in communication and social interactions and restricted repetitive activities and interests. In the light of increasing prevalence of this condition around the globe and in Sri Lanka, this study was carried out among a group of mothers to assess their knowledge on Autism and to identify the influence of selected sociodemographic factors on the knowledge.

Methods: A descriptive cross-sectional study was carried out among 214 mothers, who were selected by random sampling, during their first year of motherhood in Kopay Medical Officer of Health (MOH) area. Selected mothers were reached through telephone and structured interview questionnaire was used for data collection. Data analysis was carried out using Statistical Products and Service Solutions (SPSS 25). Ethical clearance was obtained from Ethical Review Committee (ERC) of Faculty of Medicine, Jaffna.

Results: Among the 214 mothers, most of them were Hindus (90.65%) and home makers (74.17%) and all of them were Tamils (100%). Only 29% (n = 62) of them had heard about Autism. Among them, majority (66.12%, n = 41) understood it as a disability and more than three quarters of them (79.03%) acknowledged that the condition is on the increase. The educational level of mothers and their partners showed statistically significant difference (p = 0.0011 and 0.029 respectively) on the knowledge score. On the other hand, mothers' profession (p = 0.455), types of family (p = 0.325) and number of children (p = 0.126) did not show significant association with the mothers' knowledge on Autism.

Conclusion: The findings highlighted that only lesser than one third of the mothers were aware of Autism. Hence, systematic interventions are needed to create awareness on Autism among mothers in view of facilitating early recognition and prompt intervention.

Keywords: Autism, Autism Spectrum Disorders (ASD), Autism Knowledge, First year of motherhood, Kopay MOH

Exclusive breastfeeding rate and associated factors among mothers attending Child Welfare Clinics in Jaffna Municipal Council MOH area

Yathushan V¹, Dinoshiga K¹, Suhirthan N¹, Seerdini K¹, Udenaka DMT¹, Rajeev G², Kumarendran B³

¹*Faculty of Medicine, University of Jaffna*

²*MOH, Nallur*

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

Introduction and Objectives: Exclusive breastfeeding (EBF) during first 6 months of life reduces infant morbidity and mortality. The EBF rate for 6 months was 64.4% in a study done in Jaffna district (2010–2012). This study aimed to determine the EBF rate and factors associated with EBF among mothers attending Child Welfare Clinics in the Jaffna Municipal Council MOH area.

Methods: This clinic based descriptive cross-sectional study was carried out from October to December 2020 among 272 mothers who had infants between age of completion of 4 and 9 months at 10 clinic centers located in Jaffna Municipal Council MOH area. Data was collected using an interviewer-administered questionnaire developed using the KoBoCollect app and analyzed using SPSS 26. Ethics approval was obtained from the Faculty of Medicine, University of Jaffna.

Results: The rate of EBF for 4 and 6 months was 92.6% (252/272) and 89.5% (170/190) respectively. 86 out of 272 infants were less than 6 months old infants, in which 4 were not exclusively breastfed. The main reason for the cessation of EBF was self-decision and formula feeds were started. There was no significant association between maternal factors (age, education and employment status) infant factors (sex, parity and birth weight) and socioeconomic factors (monthly income and support) The mean antenatal visits of those who practised EBF and those who did not were 10.5 and 8.5, respectively, indicating a significant association ($p < 0.001$). Likewise mean postnatal visits of those who practised EBF and those who did not were 3.75 and 3.54, respectively, indicating a significant association ($p < 0.001$)

Conclusion: The rate of EBF is relatively high in those who are attending CWC of Jaffna Municipal Council. Aside from antenatal and postnatal health facility visits, no other factor was identified to be associated with EBF. We recommend doing the study at home in the absence of medical staff to increase its authenticity. Mothers should be enlightened about the nutritional benefits of breast milk over formula, and community-based antenatal programmes should be promoted to attain this.

Keywords: Exclusive breastfeeding, Child Welfare, Mothers

Knowledge on postpartum contraception and associated factors among antenatal women admitted to the obstetric wards in the Teaching Hospital Jaffna

Rifka Banu A A¹, Anujan M¹, Sajitha M S F¹, Shanthatharany S¹, Weerasinghe K S S¹, Kumarendran B², Sritharan A³

¹Faculty of Medicine, University of Jaffna

²Department of Community and Family Medicine, ¹Faculty of Medicine, University of Jaffna

³Teaching Hospital, Jaffna

Introduction and Objectives: Unmet need of postpartum contraception is known to have association with unexpected pregnancies and intended abortions. Studies on factors associated with knowledge on postpartum contraception among the population in Jaffna district was scarce. This study aimed to determine the factors associated with knowledge on postpartum contraception among antenatal women admitted to obstetric wards in the Teaching Hospital Jaffna.

Methods: This hospital based descriptive cross-sectional study was carried out among 311 antenatal women admitted in the Teaching Hospital Jaffna during October 2020 to December 2020. Participants were recruited using simple random sampling and data was collected via an interviewer administered questionnaire using KoBo Collect toolbox, a mobile based app. Descriptive and inferential statistics were performed using SPSS Software. Composite score was developed for knowledge and knowledge was compared using median as the cut off. Ethical clearance was obtained from Faculty of Medicine, University of Jaffna.

Results: Response rate was 94% (n=293). The mean (\pm SD) age of the respondents was 28.3 (\pm 5.9) years. Participants were predominantly Tamils (96.9%, n=284), Hindu (76.8%, n=225), married (99%, n=290), living in nuclear family (52.2%, n=153) and had income >30,000 rupees (61.1%, n=179). Considerable proportion was not aware that IUCD (69.9%, n=196) and male condom (58%, n=170) can be obtained from family planning clinic. Remarkable proportion (62.5%, n=183) was not aware whether male sterilisation was a permanent or a temporary method. It was observed that age of the mother (p value =0.02), family income (p=0.03), educational status of the mother (p=0.02), occupation (p=0.03) and attitude towards contraceptive use (p<0.001) were significantly associated with the knowledge. Marital status (p=0.67), ethnicity (p value=0.53), religion (p value=0.1) and family type (p=0.72) showed no associations.

Conclusion: Age of the mother, family income, educational status of the mother, occupation and attitude towards contraceptive use were having association with the knowledge. There is a great need to prioritize education of women to empower them to use postpartum contraception and policies are needed to encourage the women.

Keywords: Contraception, Postpartum contraception, Knowledge on contraception, Factors associated with the knowledge on postpartum contraception

Influence of sociodemographic factors on parental knowledge on usage of antibiotics and prescription pattern of antibiotics among OPD pediatric patients at Teaching Hospital Jaffna

Kularathna W N S M¹, Thuvaragan S¹, Surenthirakumaran R², Sathiadas MG³

¹*Department of Pharmacy, Faculty of Allied Health Sciences, 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 and Objectives: Children are most susceptible to infectious diseases, and antibiotics are frequently prescribed drugs in the pediatric population. Study about the prescription pattern of antibiotics and improved parental knowledge of antibiotics ensure their safe usage. This study aimed to determine the parental knowledge on antibiotic usage and association of socio-demographic factors on it and prescription pattern of antibiotics among pediatric patients at Out Patient Department (OPD), Teaching Hospital Jaffna.

Methods: A hospital-based descriptive cross-sectional study was conducted among parents of pediatric patients under 12 years attending the general OPD at Teaching Hospital Jaffna from August 2021 to September 2021. An interviewer-administered questionnaire was used to collect information about Socio-demographic factors of participants and knowledge regarding antibiotic usage. Prescriptions that contained at least one antibiotic were analyzed to collect data about the prescription pattern of antibiotics. Ethical clearance was obtained by the Ethics Review Committee of the Faculty of Medicine. Collected data was analyzed by using SPSS. A Chi-squared test was used to determine the association between parental knowledge and socio-demographic factors of participants.

Results: Three hundred and seventy-five parents out of 406 responded to the study. (Response rate 92%). The mean age of the parents was 34.4 years (SD± 6.689). The mean age of children was 5.08 years (SD± 3.63). The majority of the participants were females (70.4%, n=264). Only 176 (46.9%) parents had adequate knowledge about antibiotic usage. A significant association was found between educational level and knowledge (p=0.02). Two hundred and eighty-five prescriptions were analyzed. The average number of antibiotics per prescription was 1.07. More than half of the antibiotics 184 (64.6%) were prescribed in generic name, while all the antibiotics were prescribed from the Essential Medicine List. Respiratory tract symptoms (54.7%) were treated with most antibiotics. The most prescribed antibiotic group was penicillin (n=203, 66.6%). The most prescribed antibiotics was amoxicillin (n=73, 23.9%) followed by Co-amoxiclav (n=69, 22.6%). Syrup (n=184, 60.3%) was the major dosage form in the prescribed antibiotics. Results of the prescription analysis showed most of the prescribed indicators followed WHO recommendations.

Conclusion: Parental knowledge regarding antibiotics usage was inadequate. Even though prescribing indicators for antibiotics followed WHO recommendations, the prescription pattern of antibiotics needs further improvement.

Keywords: Prescription pattern, Antibiotics, Parental knowledge, Pediatric patients

Menstrual hygiene management practices and associated factors among women in medical wards of Teaching Hospital Jaffna

Subithirah S¹, Thulasithasan S¹, Janooya P¹, Thushyanthini K¹, Senarathne H M M H¹, Kumarendran B², Sujanitha V³

¹*Faculty of Medicine, University of Jaffna*

²*Department of Community and Family Medicine, ¹Faculty of Medicine, University of Jaffna*

³*Department of Medicine, Faculty of Medicine, ¹Faculty of Medicine, University of Jaffna*

Introduction and Objectives: Menstruation is a natural physiological process. There is a lack of proper practices related to menstrual hygiene as women are not well informed about the need to ensure hygiene. Poor menstrual hygiene practices can lead to genitourinary tract infections and increases the risk for cervical cancer. The aim of this study was to determine the menstrual hygiene management practices and associated factors among women in medical wards of Teaching Hospital Jaffna.

Methods: This institution based descriptive cross-sectional study was carried out among 427 females admitted to medical wards of Jaffna Teaching Hospital from October 2020 to December 2020. Participants were selected using systematic sampling. Informed written consent was obtained. Data was collected using interviewer administered questionnaire and entered using the Kobo collect application. Descriptive and inferential statistics were used to analyse the data using Statistical Product and Service Solutions (SPSS).

Results: Among the participants, 89.5% (n=382) reported using sanitary pads, 17.8% (n=76) changed the absorbents four hourly and majority 82.2% (n=351) changed their absorbents more than six hourly. 89.5% (n=382) wrapped their used absorbents before disposal. 87.1% (n=372) disposed their used absorbents using burying or burning method. 85% (n=363) preferred bathing and 92.3% (n=394) preferred cleaning genital areas during menstruation. There were significant associations between religion ($\chi^2=17.4$, df=1, p-value <0.05), ethnicity ($\chi^2=38.2$, df=1, p-value <0.05), educational level ($\chi^2=4.1$, df=1, p-value <0.05) and knowledge ($\chi^2=23.6$, df=1, p-value <0.05) and menstrual hygiene practices.

Conclusion: Our study found majority of the participants have knowledge about menstrual hygiene and they are practicing proper menstrual hygiene practices. Education on awareness, access to sanitary absorbents and proper disposal of used sanitary absorbents need to be addressed. More studies regarding menstruation are needed in Jaffna.

Keywords: Menstrual hygiene management, Jaffna, Absorbents.

Knowledge and practice on generic medicine substitution and association of selected factors among private community pharmacists in the Jaffna district

Nishad B M¹, Thuvaragan S¹, Coonghe P A D²

¹Department of Pharmacy, Faculty of Allied Health Sciences, University of Jaffna

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

Introduction and Objectives: Generic medicines are used effectively in treating ailments globally. The generic medicine substitution contributed to a significant reduction in the expenditure of patients' medication. Private community pharmacists play an essential role in using generic medicines among patients. This study aimed to assess the knowledge and practice on generic medicine substitution and the association of selected socio-demographic and work-related factors on knowledge among private community pharmacists in the Jaffna district.

Methods: A descriptive cross-sectional study was conducted among 67 pharmacists who were working in the private community pharmacies in the Jaffna district. A self-administered pretested and validated questionnaire was used to collect data from the participants. Knowledge level was categorized with predetermined cut off values as good, moderate and poor. The data was analyzed using SPSS statistical software. Chi-Square and Fisher's exact statistical tests were used to determine the association of factors. The level of significance was determined at *P*-value less than 0.05.

Results: Among 67 participants, 62 responded to this study, whereas the response rate was 92.5%. The mean age of the study participants was 44.27 years (SD = 12.288). More than half of the participants (*n* = 36, 58.1%) were male. Most of the participants (*n* = 24, 38.7%) had 6 to 10 years of experience. The majority of the participants (*n* = 27, 43.5%) had moderate knowledge, and 32.3% (*n* = 20) had poor knowledge. Only 24.2% (*n* = 15) of the pharmacists had good knowledge. Most pharmacists (95.2%, *n* = 59) dispensed generic substitutes for prescribed brands. Profits, promotion by marketing representatives, and manufacturing companies were the most common reasons for the selection of generic substitutes by pharmacists. Knowledge had statistically significant association with age (*P* = 0.019), participation in the workshops regarding generic medicine (*P* = 0.005), and work experience (*P* = 0.022). Attending workshops may be the reason for having good knowledge among pharmacists.

Conclusion: Only 24.2% of the participants had good knowledge. Community pharmacists' knowledge of generic substitution needs to be improved. Conducting regular workshops/seminars and continuous professional development programs could improve pharmacists' knowledge.

Keywords: Generic medicines, Private community pharmacists, Jaffna district, Knowledge, Practice.

Knowledge and associated factors on prevention of deep vein thrombosis among the nurses working at Teaching Hospital Jaffna

Thilini P K¹, Viniththira J¹, Sarma T²

¹*Department of Nursing, Faculty of Allied Health Sciences, University of Jaffna*

²*Department of Surgery, Faculty of Medicine, University of Jaffna.*

Introduction and Objectives: Deep vein thrombosis [DVT] is a blood clot that forms in deep veins of the body, usually in the lower extremities. It is a common problem affecting the patients and may cause potentially life-threatening complications. There is a need to increase the knowledge of nurses on DVT prevention to avoid complications. The study was designed to assess the knowledge on the prevention of deep vein thrombosis and associated factors among the nurses working at Teaching Hospital Jaffna.

Methods: An institutional-based descriptive cross-sectional study was conducted among the nursing officers working at Teaching Hospital Jaffna from September 2020 to November 2021. The target group of this study was 596 staff nurses working in Teaching Hospital Jaffna. Among them, 490 nurses had given their consent for participation. A self-administered questionnaire was given to potential study participants. In that, 382 nurses filled out the questionnaire and returned. The response rate was reported as 77.95% in this study. After the ethical approval, the pre-designed and validated questionnaire was used for assessment. SPSS 16.0 was used to analyse the data, and a Chi-Squared test was performed to identify the influencing factors.

Results: Among the 382 study participants, mean age was 32.12 (± 7.17), nearly half (47.4%) were in 31-40 years of age. More than two third of the study participants (72.5%) were female. Based on the findings, 62% of the study participants had good knowledge on DVT prevention. Mean score of knowledge on DVT prevention among the participants was 20.03 (SD=2.56) with the range from 12 to 24. Educational level of the nurses ($p < 0.001$), educational resources ($p = 0.027$), working experience as a nurse ($p = 0.016$), working unit in last 6 months ($p = 0.001$) have shown statistically significant association with knowledge of the participants.

Conclusion: More than half of the participants had good knowledge and it is recommended to have continuous in-service trainings to improve the knowledge on DVT prevention.

Keywords: Deep vein thrombosis, Nurses, Knowledge, Teaching Hospital Jaffna

Barriers and facilitators of preoperative patient education among nurses in surgical wards/units at Teaching Hospital, Jaffna

Aththanayaka A M R M B¹, Viniththira J¹, Premakrishna S²

¹*Department of Nursing, Faculty of Allied Health Sciences, University of Jaffna.*

²*Teaching Hospital, Jaffna*

Introduction and Objectives: Preoperative patient education can typically provide relevant surgical knowledge and problems that patients are likely to encounter in the preoperative and postoperative phases. Nurses play a main role in providing preoperative patient education. So barriers may affect in different ways for the nurses while providing preoperative patient education, and facilitators may course for successful preoperative patient education. This study aimed to assess the barriers and facilitators in preoperative patient education among nurses in surgical wards/units at Teaching Hospital Jaffna.

Methods: A hospital-based descriptive cross-sectional study was conducted among 157 nurses working in surgical wards and units at teaching hospital Jaffna. No sampling technique was used since all the study populations were selected as samples. The data was collected by pretested self-administered questionnaire. Gathered data was analyzed by using SPSS based on research problems, objectives, variables.

Results: Among the 157 samples, 133 only responded to the questionnaire (84.71%). The average age of the nurses recorded was 32.78 years (SD = 7.503). The majority of nurses were female (79.75%, n=106), and most of them (82.9%, n=109) completed Diploma in Nursing. Half of them (50.4%, n= 67) had service experience of more than 5 years. The majority of the nurses (73.7%, n=98) had training in perioperative nursing. The more frequent barriers were the excessive workload of nurses in wards ($\bar{x}=3.9098\pm 0.89153$). Insufficient/shortage of nursing staff ($\bar{x}=3.5940\pm 0.92963$) and inadequate time for proper delivery ($\bar{x}=3.5639\pm 0.94029$). The more frequent facilitators were establishing a good relationship between patient and nurses ($\bar{x}=4.2707\pm 0.68676$), developing good communication skills by training ($\bar{x}=4.03\pm 0.56327$) and regular assessment to identify the learning needs of the patient ($\bar{x}=3.9624\pm 0.66749$).

Conclusion: The study found that the excessive workload of nurses is the main barrier and establishing a good relationship between nurses and patients was the main facilitator. Increasing the number of staff in the wards will improve the chance of pre-operative patient education.

Keywords: Barriers, Facilitators, Preoperative patient education, Nurses

Knowledge on emergency triage system and associated factors on it among nurses working in Teaching Hospital Jaffna

Mihisarani W S A¹, Viniththira J¹, Luxman M²

¹*Department of Nursing, Faculty of Allied Health Sciences, University of Jaffna*

²*Consultant Emergency Physician, Teaching Hospital, Jaffna*

Introduction and Objectives: Emergency triage is one of the most important management and decision-making concept in the Accident and Emergency Department. All patients will be triaged on arrival at the Accident and Emergency unit. The insufficient knowledge of triage level reduces the quality of care, utilizes unnecessary resources, influences the length of stay, and could affect the mortality rate. This study was aimed to assess the knowledge on Emergency Triage System and associated factors on it among nurses in Teaching Hospital Jaffna.

Methods: This was a hospital-based descriptive cross-sectional study. The sample size was 406. But the sample size was more than ¾ of the total population. Hence, no sampling technique was used in this study. Response rate was 93.64 % (n=486). A validated self-administered questionnaire was used to collect data. Gathered data was analyzed by SPSS 25.0 based on the research problem, objectives, and variables. Descriptive statistics were used to describe the data, and the Chi-squared test was used to find the association between knowledge and the factors.

Results: The average age of nurses was 32.19 years (SD=7.480). The majority of nurses were female and completed Diploma in Nursing. More than half of the participants were lesser than 30 years of age. The mean knowledge of nurses regarding the Emergency Triage system was 74.21% (SD±9.122). Knowledge had statistically significant associations with age (p<0.001), educational level (p=0.002), service experience (p=0.006), working experience in the emergency department (p<0.001), currently working ward/unit/emergency department (p<0.001) and participation of the emergency triage educational program (p value<0.001).

Conclusion: It was found that the nurses of Teaching hospital Jaffna had a moderate level of knowledge on the Emergency Triage System. It is beneficial to conduct frequent in-service training programs to improve and sustain the knowledge.

Keywords: Emergency Triage system, Nurses, Knowledge

COVID-19 infection prevention and control practices and associated factors among nurses at National institute of infectious diseases hospital, Sri Lanka

Luxman K¹, Surenthirakumaran R², Viniththira J¹, Nivetha K¹

¹*Department of Nursing, Faculty of Allied Health Sciences, University of Jaffna*

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

Introduction and Objectives: COVID-19 is a communicable disease also known as SARS-cov-2 belongs to the family of coronaviruses. World Health Organisation declared the COVID-19 outbreak is a global pandemic. Nurses are the frontline workers in the health care system. They are the highest risk group for COVID-19 due to the nature of their occupation that exposed them to infectious people. Improper practice on personal protective equipment and infection prevention and control measures are the main reasons for acquiring COVID-19 among health care workers. This study aimed to assess the level of practice on prevention and control practices of COVID-19 infection, and the associated factors among nurses at National Institute of Infectious Diseases Hospital Sri Lanka.

Methods: A descriptive, cross-sectional study was conducted among 174 nursing officers who were working at the National institute of Infectious Diseases Hospital from October 2020 to November 2021. A validated self-administered questionnaire was used as a google form for data collection. SPSS 25 was used to analyze the data, and a Chi-Squared test was performed to identify the association of the factors with infection prevention and control practices.

Results: The response rate was 87%. The mean age of 33.57 years (SD = 5.271) ranged between 25 and 52 years. Nearly two-thirds of the nurses were female (64.4%). The majority of the nurses were Sinhalese (95.4%). Nearly half of the nurses had an adequate level of practice (52.3%). None of the Socio-demographic factors of the participants was significantly associated with the practice of personal protective equipment and infection prevention and control measures. Practice showed significant association with overall working experience (p=0.038), extra duty hours per day (p=0.045), night shifts per week (p=0.002) and take part in any training on Infection Prevention Control/ Personal Protective Equipment (p=0.010).

Conclusion: The practice of personal protective equipment and infection prevention and control measures are adequate among more than half of the nurses. The following factors were associated with the practice: their overall working experience, daily extra duty hours, the number of night shifts per week and involvement of training programs of personal protective equipment and infection prevention.

Keywords: COVID-19, Infection Prevention and Control (IPC), Personal Protective Equipment (PPE), Nurses, National Institute of Infectious Diseases hospital

Level of perceived satisfaction with acute pain management among the patients with fracture of long bones in Teaching Hospital Jaffna

Heerthikan K¹, Jayalath N T¹, Thivera M¹, Wanninayaka W M O G¹, Pavithra M¹, Coonghe P A D², Ambalavanar D C³

¹*Faculty of Medicine, University of Jaffna.*

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

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

Introduction and Objectives: Pain is an unpleasant sensation that has to be managed properly. In fracture patients, effective pain management plays a major role in their treatment. Although much efforts are put in by the doctors, there is uncertainty about the level of satisfaction with acute pain management. The aim of this study was to assess the level of perceived satisfaction with acute pain management and associated socio-demographic and health related factors among patients with long bones fractures in surgical casualty ward of Teaching Hospital Jaffna.

Methods: An institutional based descriptive cross-sectional study was conducted at ward 24, Teaching Hospital, Jaffna between October 2020 and March 2021. Data was collected through interviewer-administrated questionnaires from patients above 12 years of age with fractures of long bones and who had undergone management within 12 hours of admission. data was analyzed in SPSS 21 (T-test and ANOVA). Femoral neck, intertrochanteric, sub-trochanteric and femoral head fractures were grouped as hip fractures for ease of analysis. Perceived satisfaction score was calculated according to the participant's answers to 11 Likert scale questions which were selected from the Pain Treatment Satisfaction Scale (PTSS), each scoring from 0 to 3. (Overall score 0 to 33) Numerical pain scale was used to assess the level of pain.

Results: Among 120 study participants, 70 were male and 50 were female. The median pain score immediately after fracture was 8, one hour after analgesic administration was 5 and after non-medical intervention following analgesic administration was 4. There was a significant association with the patient's satisfaction and time taken for initial administration of analgesics ($p=0.46$), site of fracture (clavicle $p=0.005$) and type of non-medical intervention (pop cast $p=0.049$, intervention $p=0.011$). There were no significant associations between patient's perceived satisfaction with gender ($p=0.218$), age category ($p=0.935$), educational level ($p=0.130$), marital status ($p=0.095$), past medical history ($p=0.957$) and past surgical history ($p=0.227$).

Conclusion: Majority of the patients were satisfied with the acute pain management. Early onset analgesics administration, non-medical interventions, and lower level of patient's expectation regarding pain management in our community were the reasons for higher overall satisfaction.

Keywords: Acute pain management, Patient's perceived satisfaction, Long bone fracture, Socio demographic and health related factors, Teaching Hospital Jaffna

Factors associated with the patients' attitudes towards medical students' involvement in patient care among inward patients in the medical wards of Teaching Hospital Jaffna

Vaishnavi T¹, Sathurvethan P¹, Pavithra.M¹, Viduranga M N¹, Dayarathne P W M J C¹, Murali V², Sivakanthan S³, Sivansuthan S⁴

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*

⁴*Teaching Hospital, Jaffna*

Introduction and Objectives: Effectiveness of clinical practice which is essential for medical students to develop skills depend on patients' willingness to cooperate and contribute to the education and teaching of the medical students. This study aimed to assess the factors associated with the patients' attitudes towards the medical students' involvement in patient care among inward patients in the medical wards of Teaching Hospital Jaffna.

Methods: A descriptive cross-sectional study was conducted among 427 inward patients in Teaching Hospital Jaffna. Data was collected using an interviewer-administered questionnaire from September 2020 to February 2021. Quantitative data was analyzed by IBM SPSS version 25 for descriptive statistical analysis. Frequencies, percentages and Chi-square test were used for data analysis.

Results: Out of 427 patients, 234 (54.8%) were males. Majority of patients 384 (89.9%) allowed medical students to participate in the ward care while 43 (10.1%) of total patients did not allow. In relation to ward care 184 (44%) of patients allowed medical students to take history and 182 (42.6%) of patients allowed to do examinations. The responses for the involvement in different procedures (Blood drawing, Cannula insertion, Urinary Catheterization, Peritoneal tap, Lumbar puncture) were comparatively low. According to the study, educational level ($p=0.003$), and ethnicity ($p=0.019$) significantly correlated with patients' response to medical history. The age ($p<0.001$), sex ($p<0.001$), civil status ($p<0.001$), educational level ($p=0.003$) and ethnicity ($p=0.037$) had a significant association with allowing to do medical examinations. Age ($p=0.002$), sex ($p=0.015$), civil status ($p<0.001$) of the patients had a significant association with allowing to do interventional procedures.

Conclusion: Majority of patients did not mind presence of students during consultation. During ward setting, majority of the patients allowed to take histories and do the examinations but did not allow to do interventional procedures. This study reflects the positive attitude of the patients towards medical students.

Keywords: Clinical practice, Medical education, Perception, Health care, Civil status

Medication adherence to Metered dose inhalers and associated factors among Asthma patients in Teaching Hospital Jaffna

Jayakumar S¹, Thuvaragan S¹, Surendrakumaran R²

¹*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 and Objectives: The poor medication causes the poor clinical outcome of therapy. Further, it can trigger the incidence of mortality, recurrent hospitalization, and increased healthcare expenditure. This study aimed to determine the medication adherence among asthmatic patients using Metered Dose Inhaler (MDI) at Teaching Hospital Jaffna and to assess the association of socio-demographic-economic factors and disease-related factors on asthma patients' adherence.

Methods: A descriptive cross-sectional study was conducted among the adult asthmatic patients who attended the Medical Clinic, Teaching Hospital Jaffna, from July to September 2021. An interviewer-administered questionnaire was used to collect socio-demographic, economic factors, patient-related factors, and medication adherence. Pretested and validated medication adherence self-reported questionnaire was used, and adherence level was categorized as good and poor. Data were analyzed using SPSS software. A Chi-square test was used to determine the association between variables.

Results: Out of 367 participants, 331 (90.19%) responded to the study. The mean age of patients was 56.9±16.9 years. The majority of the participants (n=192, 58%) were female. 39.9% (n=132) participants showed good adherence and 60.1% (n=192) showed poor adherence. Family history of asthma (p=0.03) showed a statistically significant association with medication adherence among the factors. Forgetfulness, lack of reminders and financial issues were common reasons attributed to non-adherence.

Conclusion: The majority of asthma patients showed poor adherence to MDI. Medication adherence of asthma patients could be improved by introducing appropriate dose reminder systems and financial support to needy patients.

Keywords: Medication adherence, MDI, Asthma patients

The clinical and epidemiological features of patients with liver abscess attended to the Teaching Hospital Jaffna from August 2018 to August 2020

Mary Sureska G¹, Jayala C J J¹, Jerom M A¹, Pranavan S¹, Gunasiri R M P G¹, Kumarendran B², 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 Parasitology, Faculty of Medicine, University of Jaffna*

Introduction and Objectives: Liver abscess, a public health problem diagnosed clinically can manifest with variety of clinical and epidemiological features. Even though the amount of patient with this illness is decreasing annually still we need knowledge about its epidemiology and its presentation to draw up the effective control strategy for the elimination of this life-threatening condition. The aim of this study was to describe the clinical and epidemiological features of patients with liver abscess attended to the Teaching Hospital Jaffna from 2018 to 2020.

Methods: This retrospective descriptive cross-sectional study was conducted among the 325 clinically diagnosed patients with liver abscess admitted to the Teaching Hospital Jaffna from August 2018 to August 2020. There was no specific sampling technique as all the patients within the study period were included. The electronic- Indoor Morbidity and Mortality Return and Bed Head Tickets were the source of information. Data extraction form designed in the Kobo Collect application was used to collect the data mainly focused on a) demographic data of patients b) clinical presentation and c) investigations. After data cleaning, data was analyzed using Statistical Product and Service Solutions (SPSS).

Results: Between August 2018 and August 2020, 325 patients were clinically diagnosed with liver abscess and the middle-aged (n=214, 65.8% of the available data) manual workers(n=36,75% of the available data) with a history of toddy consumption(n=131, 69.84% of the available data) who occupy the majority of the proportion presented with fever(n=250, 80.1% of the available data), abdominal pain (n=222, 88.4% of the available data), constitutional symptoms, leucocytosis (n=210,69.3% of the available data), anaemia (n=101, 33.5% of the available data), elevated ESR (n=65,43.6% of the available data) and alkaline phosphatase (n=129, 61.1% of the available data) highly during the inter-monsoonal period (March to August). No association was observed between the age and sex of these patients. We are unable to find similar studies on secondary data in our literature review among the research studies about liver abscess. To sort out this we considered the not documented data as missing at random and we calculated the percentage again only for the data that is documented for some variables to discuss the findings with past studies.

Conclusion: Still many people specially the middle-aged manual workers who are the breadwinner of the family are affected much by this condition. We recommend conducting awareness programs about the disease, practise hygienic measures while preparing toddy, perform clinical skills and documentation properly.

Keywords: Amoebic liver abscess, Clinical and epidemiological features, Toddy, Jaffna.

Trend and pattern and the influence of socio demographic factors on the trend and pattern of cancers reported to Histopathology unit, Teaching Hospital Jaffna

Lakchani J A M¹, Imran K R M¹, Jabeen M M S¹, Sahir M S M¹, Rajapaksha R M L D¹, Surenthirakumaran R², Thanenthiran A J³

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 and Objectives: Cancer surveillance is an essential strategy to implement evidence- based cancer control programmes and is done by the National Cancer Control Programme in Sri Lanka. The main objective of this study is to describe\ the trend and pattern of cancer patients and the influence of socio demographic factors on the trend and pattern of cancers reported to Histopathology unit, Teaching Hospital Jaffna.

Methods: This study is a hospital-based descriptive cross -sectional study based on secondary data obtained from the records from 01st January 2015 to 31st December 2019 at the Histopathology lab, Teaching Hospital Jaffna.

Results: The study was done on a total of 3266 cancer incidence data which showed a male preponderance of 55% (n=1797). Oral cavity and the pharynx were the most common sites of occurrence with 22.75% (n=743). The highest incidence was in the age group 61-70 years with 33.60% (n=1098). Males were highly accounted with oral and pharyngeal cancers 33.56%. In female population, breast cancers took the highest position with 20.63%. According to our research results, 3266 cancer incidences had been reported to Histopathology unit throughout our study period. This cancer incidences vary with age and sex and deviate from national cancer incidences. Highest recorded cancer was Oro- pharyngeal carcinoma in the population of study which deviated very much from the Sri Lankan incidence in 2020 where it is breast carcinoma highest recorded. Rapid rise of the newly diagnosed cancers from 2015 to 2016 in both sexes noticed. A definitive cause cannot be said but it can be due to the opening of the Thellipallai trail Hospital in January 2014 and increased amount of public seeking therapy in the full equipped hospital. Highest reported cancers were in age group 61-70 years. Researchers found that DNA methylation may involve in the age-related rise of cancer.

Conclusion: Cancers were common among males than females and most common among 50-80 years of age irrespective of sex. Highest recorded cancers to THJ were oropharyngeal, oesophagus, breast, colorectal and lung, Oesophageal carcinomas had an increased predominance. Our study results used as surveillance of cancer for prevention and control of cancer incidence among northern population and provide the baseline knowledge for the practitioners to have a better understanding about the cancer incidence in their community.

Keywords: Cancer surveillance, Cancer control programme, Trend and pattern of cancer, Influence of socio-demographic factor on trend and pattern of cancer

Relationship between neutrophil to lymphocyte ratio and microvascular complications among type 2 diabetes mellitus patients attending the Teaching Hospital Jaffna

Niroshika K K H¹, Sivakumar H², Coonghe P A D³, Aravindan M⁴

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

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

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

⁴*Teaching Hospital, Jaffna*

Introduction and Objectives: Diabetes Mellitus (DM) is a systemic disease that can lead to serious microvascular complications. The role of subclinical vascular inflammation in the pathogenesis of microvascular complications of type 2 DM and the use of hematological indices as predictors of inflammation was already reported. However, the relationship between Neutrophil to Lymphocyte ratio (NLR) and microvascular complications of type 2 DM is yet to be studied. This study aimed to determine the relationship between NLR and microvascular complications among type 2 DM patients attending the Diabetic Center, Teaching Hospital Jaffna.

Methods: This study was carried out among 235 confirmed type 2 DM patients from July 2021 to August 2021. Participants were selected based on the systematic sampling technique, and blood samples were collected into EDTA anticoagulated tubes. History of microvascular complications was collected by referring respective patient's clinical record book. The manual differential count was performed to obtain relative neutrophil and lymphocyte percentages from which the NLR was calculated. Based on the NLR value, patients were categorized into four quartiles, and the occurrence of diabetic retinopathy, neuropathy, and nephropathy was compared between quartiles. The predictive capability of NLR as a marker of microvascular complications was assessed by Receiver Operating Characteristic (ROC) curve analysis.

Results: Among 235 subjects with a mean age of 56.82±11.65 years, 131 (55.7%) were female, and 104 (44.3%) were male. Patients in higher NLR quartiles (Q4 and Q3) had higher statistically significant occurrence of diabetic retinopathy (p=0.005), neuropathy (p<0.05), and nephropathy (p<0.05) when compared to the lower quartiles (Q2 and Q1). Further, statistically significant differences were observed on comparing mean NLR between groups with and without diabetic retinopathy (p=0.007), neuropathy (p<0.05), and nephropathy (p<0.05). Based on the ROC curve analysis, NLR was a better predictor of neuropathy (AUC 0.797; 95% CI 0.737-0.856) followed by nephropathy (AUC 0.758; 95% CI 0.693-0.823) and retinopathy (AUC 0.633; 95% CI 0.537-0.728).

Conclusion: NLR could be useful as a readily available alternative predictive marker for microvascular complications in resource-poor settings.

Keywords: Diabetes Mellitus, Neutrophil to Lymphocyte ratio, Diabetic retinopathy, Diabetic neuropathy, Diabetic nephropathy.

Formulation and evaluation of ketoprofen gels with different gelling agents

Zahra MFF¹, Thuvaragan S¹, Velauthamurty K²

¹Department of Pharmacy, Faculty of Allied Health Sciences, University of Jaffna

²Department of Chemistry, Faculty of Science, University of Jaffna

Introduction and Objectives: Ketoprofen (KT) is a non-steroidal anti-inflammatory drug used for the treatment of rheumatoid and osteoarthritis. Topical KT gels are highly preferred due to their minimal side effects. Gels form at the critical concentration of the gelling agent. The type and concentration of gelling agents influence drug release. Hence, different gelling agents at different concentrations could be incorporated to find the best gelling agent for the topical delivery of KT. This study aimed to formulate and evaluate topical KT gels with different gelling agents such as Carbopol 940, hydroxypropylmethyl cellulose (HPMC) and sodium carboxymethyl cellulose (SCMC).

Methods: KT was dissolved in 95% ethanol with a slow stirring, while methyl and propylparaben were dissolved in propylene glycol, which was added to the drug mixture. It was then loaded into the prepared gel bases of 0.5%, 1% and 1.5% of Carbopol 940, 4% of HPMC and 4%, 5% and 6% of SCMC. Prepared gels were evaluated for their organoleptic characters: homogeneity, pH, viscosity, spreadability, drug content and in-vitro drug release using the dialysis tubing membrane. Drug release data was analyzed to find out the kinetic model they fit in using DDSolver-software. One-way ANOVA was used to compare the best-prepared formulations with marketed products, and the t-test was used to compare their stability data.

Results: Considerable changes were observed in the physicochemical characters of prepared gels. Results of evaluation of prepared gels showed that Carbopol gels were comparable to marketed KT gel among the prepared gels. According to ANOVA analysis, Carbopol gels showed significant differences with marketed KT gel in physicochemical characters. Further drug release studies also showed significant differences between prepared Carbopol gels and marketed KT gel. Stability test revealed that Carbopol gels were the most stable formulations among prepared gels. Drug release from all KT gels best fitted to Korsmeyer-Peppas model.

Conclusion: Carbopol gels were the most stable formulations and comparable to marketed gel among prepared gels. Carbopol gels could be effectively used for the topical delivery of KT, and the drug release occurs by polymer chain relaxation in a gel matrix.

Keywords: Ketoprofen, Gelling agents, Gels, Evaluation

Assess the adequacy of haemodialysis and its associated factors in patients undergoing regular haemodialysis in Teaching Hospital Jaffna

Madhuwanthi S M N¹, Sivakumar H², Surenthirakumaran R³, Thangaraja B R⁴

¹Department of Medical Laboratory Sciences, Faculty of Allied Health Sciences, University of Jaffna

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

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

⁴Teaching Hospital, Jaffna

Introduction and Objectives: Haemodialysis is the most common renal replacement therapy for end-stage renal disease patients in the world. Providing adequate and effective dialysis can improve patients' survival and quality of life along with minimal disease complications and hospitalizations. Adequate delivery of a dose of haemodialysis measured by Kt/V or urea reduction ratio (URR) is a vital determinant of the clinical outcome of chronic haemodialysis patients. This study aimed to assess the adequacy of haemodialysis and associated factors in patients undergoing regular haemodialysis in Teaching Hospital Jaffna.

Methods: This was a laboratory-based descriptive cross-sectional study performed among 100 haemodialysis patients in Teaching Hospital Jaffna. Blood samples were obtained for the measurement of blood urea (pre-dialysis and post-dialysis). Patients who have undergone haemodialysis less than a month duration were excluded. The URR and Kt/V were calculated, and they were used to assess haemodialysis adequacy. Data for associated factors were obtained from the patient's clinical record books. The associated factors were assessed using the Chi-square and Fisher's exact tests in SPSS (version 23.0).

Results: Among the total of 100 patients, 76% were males. The mean (\pm SD) age was 48 (\pm 16) years. In the present study, 66% and 69% achieved adequate haemodialysis based on urea reduction ratio and Kt/V, respectively. The mean (\pm SD) URR and Kt/V were 66 (\pm 7) % and 1.33 (\pm 0.24), respectively. There were a statistically significant associations between dialysis adequacy and gender ($p=0.04$), body mass index ($p=0.03$), and primary renal disease ($p=0.01$). None of the other factors, including age, haemoglobin level, serum albumin level, vascular access type, blood flow rate, haemodialysis frequency and ultra-filtration volume, showed a significant association with haemodialysis adequacy.

Conclusion: The results of the study revealed that a satisfactory number of patients received adequate haemodialysis in Teaching Hospital Jaffna. The patient's gender, body mass index, and primary renal disease were found to be significantly associated with haemodialysis adequacy. Other socio-demographic factors, clinical characteristics, and dialysis characteristics were not found to be associated with haemodialysis adequacy.

Keywords: Haemodialysis adequacy, Kt/V, Urea reduction ratio.

Quality evaluation of selected different marketed brands of polyherbal medicine “Hingwashtak churna” in Kurunegala, Sri Lanka

Dassanayaka D M G G¹, Srikokulan S¹, Christy Jeyaseelan T²

¹Department of Pharmacy, Faculty of Allied Health Sciences, University of Jaffna

²Department of Botany, Faculty of Science, University of Jaffna

Introduction and Objectives: Hingwashtak churna is a polyherbal medicine that consists of eight ingredients viz., *Piper nigrum* Linn, *Piper longum*, *Zingiber officinale* Roscoe, *Nigella sativa*, *Trychyspermum ammi* Sprague, *Cuminum cyminum* Linn, *Ferula foetida*, and *Saindhava Lavana* in equal proportions. It is used to treat different gastrointestinal diseases like gastric ulcer, bloating, acidity, and joint disease. The quality evaluation of hingwashtak churna needs for its acceptability and safety for stakeholders. This study aimed to evaluate the quality of different selected marketed brands of polyherbal medicine “hingwashtak churna” in Kurunegala, Sri Lanka.

Methods: Three different brands of powder form (H₁, H₂ & H₃) of Hingwashtak churna samples were purchased in Kurunegala, Sri Lanka. The preliminary phytochemical screening and physico-chemical tests such as pH, moisture content, ash values and extractive values were carried out for each brand. The results were analyzed with one-way ANOVA using SPSS 22.

Results: The pH of all three brands was within the acceptable limit (pH 5). Loss on drying value of H₁, H₂ and H₃ found as 9.47% ± 0.045, 9.73% ± 0.092 and 11.14% ± 0.105. Ethanol soluble extractive value of H₁, H₂ and H₃ observed as 29.58% ± 0.351, 23.21% ± 0.271 and 19.86% ± 0.583 and water-soluble extractive value were 36.63% ± 1.100, 35.08% ± 1.056 and 31.39% ± 0.600 respectively. Total ash value of H₁, H₂ and H₃ were 19.07% ± 0.857, 17.56% ± 0.965 and 15.33% ± 0.309. Acid insoluble ash value found as 0.97 ± 0.066%, 1.05% ± 0.025 and 1.52% ± 0.097 respectively. Water-soluble ash value of H₁, H₂ and H₃ were 16.10% ± 0.719, 13.67% ± 0.286 and 15.33% ± 0.536 respectively. The results of physico-chemical parameters obtained from the study showed that there were significant differences (p>0.05) among all three marketed brands as well as between each and other brands. Phytochemical screening of aqueous extract revealed the presence of carbohydrates, reducing sugar, flavonoids, saponins, tannins, steroids, phenols, and ascorbic acid in all the brands.

Conclusion: This quality evaluation of three marketed brands of hingwashtak churna showed that the values of physiochemical parameter of formulations present within the permissible limits as per WHO. This kind of measures are essential to establish the quality of the formulations.

Keywords: Polyherbal medicine, Hingwashtak churna, Quality, Evaluation

Comparative analysis of total cholesterol POCT device and standard enzymatic method for total cholesterol measurement among healthy adults at Faculty of Allied Health Sciences, University of Jaffna

Ishani, H M L¹, Sivakumar H², Coonghe P A D³

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

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

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

Introduction and Objectives: Total cholesterol (TC) is a screening marker for dyslipidemia related disease conditions. Regular monitoring of cholesterol was recommended for the early detection and initiating of treatment for hyperlipidemia. Lately, Point of care testing (POCT) devices with dry chemistry-based test strips became popular for the *in-vitro* measurement of cholesterol, due to its simplicity, portability, and rapid display of reliable results. When choosing a cholesterol POCT device, its accuracy is considered relative to clinical laboratory measurements. This study aimed to compare the commercially available cholesterol POCT device and reference enzymatic method (EZ) using a spectrophotometer for the measurement of TC.

Methods: A total of 66 venous and capillary blood samples were collected from healthy, voluntary participants from the Faculty of Allied Health Sciences, University of Jaffna, through a random sampling method. TC levels were measured on capillary blood using POCT device strips based on enzymatic hydrolysis methodology. Serum TC was determined using a spectrophotometer on the same day using the enzymatic method. The agreement between both methods was statistically evaluated using paired sample t-test and Pearson correlation.

Results: The mean (\pm SD) of TC by POCT device and EZ were 165.41 ± 26.352 mg/dl and 164.89 ± 25.702 mg/dl, respectively. The mean difference was 0.515 ($p=0.324$), and it was not statistically significant ($p>0.05$). There was a strong positive correlation between both methods, and it was statistically significant ($r=0.987$, $p<0.001$). The analytical imprecision (2.5%), bias (0.351%) and total error (8.77%) were within the acceptable limits of the National cholesterol education program guidelines (NCEP). The overall total misclassification rate was 9.09%, and the misclassification rate was generally higher for lower value categories.

Conclusion: TC measured by the POCT device and EZ method showed a smaller mean difference, and results support the commutability of both methods. The EZ method manifested a strong positive correlation and a strong agreement with the POCT device, and it meets the limits of analytical acceptability by the NCEP. It indicates the possibility to use the POCT device as an alternative for the EZ method and benefit in large scale population-based screening studies, self-monitoring, fieldwork, and resource-limited settings.

Keywords: Total cholesterol, Point of care testing device, Enzymatic method.

Knowledge on oral anticoagulants and associated factors among patients with warfarin therapy at cardiology clinic, Teaching Hospital Jaffna

Alanroxy T¹, Bogahapitiya D D¹, Rajamanokary N¹, Rathnayake R M C U¹, Sajitha S, Surenthirakumaran R², Guruparan 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 and Objectives: Oral anticoagulant is the most essential treatment of thromboembolic disorders. Regular coagulation monitoring and appropriate dose adjustments are important for safe and effective management. All patients who are on oral anticoagulants should have adequate knowledge regarding the drug as it has serious side effect profile too. This study evaluates patient's knowledge regarding oral anticoagulant therapy and factors affecting the treatments, in cardiac clinic, Teaching Hospital Jaffna. The aim of this study was to assess the knowledge about anticoagulant drugs and the influence of sociodemographic, treatment related and service factors on it among patients on anticoagulants at cardiology clinic, Teaching hospital Jaffna.

Methods: This was a hospital based descriptive cross-sectional study carried out among patients on anticoagulants at cardiology clinic THJ. Totally 332 participants were included in this study. Data was collected with an interviewer administered questionnaire and analyzed by SPSS statistical software. Ethical clearance was obtained from ERC of the Jaffna medical faculty.

Results: A total of 332 patients were participated. Of them 44.6% have scored the average knowledge score and 39.8% of patients scored a poor knowledge score followed by 15.7% with a good knowledge score. Majority of females (90.1%), younger age participants (89.8%) had adequate knowledge when compared with males (75.2%) and older age participants (80.0%) respectively. There was no association between duration of treatment and participants knowledge ($p=0.129$). There was not an association between knowledge and maintaining average INR value within target INR level. Majority (91.0%) who weren't within target INR had adequate knowledge when compared with those who were within target INR (82.6%). There is an association among participants knowledge on anticoagulant therapy and whether the participants were given information or not ($p=0.004$). None of the participant (0.00%) had adequate knowledge who weren't given information about their therapy.

Conclusion: This study revealed the majority of the participants have adequate knowledge about anticoagulant drugs. According to sociodemographic, treatment related and service factors their knowledge about anticoagulant drugs is also at an adequate level.

Keywords: Anticoagulants, Knowledge on anticoagulant, INR

Evaluation of *in vitro* antioxidant and anti-haemolytic activity of methanol bark extract from *Nauclea orientalis* Linn.

Hemachandra G H T K¹, Thuvaragan S¹, Balakumar S²

¹Department of Pharmacy, Faculty of Allied Health Sciences, University of Jaffna

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

Introduction and Objectives: Plant derived natural compounds are good sources of antioxidants and anti-inflammatory agents. Barks of *Nauclea orientalis* Linn. are used in Ayurveda as analgesic, antipyretic, vulnerary and to treat inflammations. This study was undertaken to evaluate the *in vitro* antioxidant and Human Red Blood Cell (HRBC) membrane stabilizing effects of methanolic bark extract of *N. orientalis*, a native plant to Sri Lanka.

Methods: Antioxidant activity was evaluated through Ferric reducing power assay and Phosphomolybdenum method. HRBC membrane stabilization assay under heat and hypotonicity induced conditions were used to determine anti-haemolytic activity. The concentrations of 50 – 800 µg/ml (dry weight basis) of the bark extract were used for both assays. Simple maceration was used for extraction. BHT (Butylated Hydroxytoluene) and ascorbic acid were the standards for antioxidant assays, while Acetyl Salicylic Acid (ASA) at 200 µg/ml as the standard for *in vitro* anti-haemolytic activity. Qualitative phytochemical screening was also done for the bark extract.

Results: Concentration dependent antioxidant activity was observed with bark extract ($p < 0.05$), with 21.845 µg/ml - 351.942 µg/ml of L-ascorbic acid equivalent (AAE) and 10.754 µg/ml - 98.544 µg/ml of BHT equivalent potency. Methanol bark extract inhibited heat induced haemolysis at the concentrations of 400 µg/ml (inhibition of 7.558 ± 0.554 %) and 800 µg/ml (inhibition of 88.435 ± 130.772 %), whereas inhibition of 45.998 ± 4.710 % observed with standard acetyl salicylic acid. Haemolysis inhibitions of 0.971 ± 3.908 % and 0.681 ± 3.165 % were evident at the concentrations of 50 µg/ml and 100 µg/ml of plant extract under hypotonic conditions, while inhibition of 17.658 ± 10.570 % was observed with standard ASA at same conditions. Primary phytochemical screening suggested the presence of tannins, saponins, terpenoids, glycosides and coumarins in the methanol bark extract.

Conclusion: Methanol bark extract of *N. orientalis* exhibited both anti-haemolytic and haemolytic activities. Further extract showed concentration dependent antioxidant activity. Further studies needed on the isolated phytoconstituents from the extract.

Keywords: *Nauclea orientalis*, Bark, Methanol extract, Antioxidant activity, Anti-hemolytic activity

Caregiver burden and the coping mechanisms among the primary caregivers of people diagnosed with dementia

Mahinthan K¹, Kamsika M¹, Thuvaraha M¹, Amarakoon A M M R¹, Piyarathna H D C A¹,

Coonghe P A D², Sivayogan 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 and Objectives: Much of the increase in the prevalence of dementia is in low- and middle-income countries, where mostly the family members take on the role of primary caregivers. This caregiving role implies a great degree of burden on the caregivers. Despite the evidence for prevalence of dementia in Jaffna, the burden of caregivers has not yet been assessed. This study aimed to assess the influence of sociodemographic factors on the degree of burden and coping mechanisms among primary caregivers of people diagnosed with dementia at the Mental Health Unit, Teaching Hospital Jaffna.

Methods: This descriptive cross-sectional study was conducted on 99 primary caregivers recruited using data available at the Mental Health Unit of Teaching Hospital Jaffna. Data was gathered over the phone using interviewer-administered Zarit Burden Inventory (ZBI), Ways of Coping – Revised Scale (WOCS-R) and sociodemographic questionnaires. Student's t test and One-way ANOVA were used in statistical analysis.

Results: The overall proportion of study participants with any degree of caregiver burden was 73.7% (95%CI: 65.0% - 82.4%). Females, caregivers with no formal education or only up to grade 05, those not in marital life, and those unemployed or in domestic work were found to have more burden, although p values were >0.05. Among coping mechanisms, hours of caregiving per day showed significant association with usage of domains positive reappraisal (p<0.001), self-controlling (p=0.03), accepting responsibilities (p<0.001), planful problem solving (p=0.003), confrontive coping (p<0.001) and seeking social support (p=0.018). Educational level showed significant association with domains positive reappraisal (p=0.016), self-controlling (p=0.03), accepting responsibilities (p<0.001), planful problem solving (p=0.041) and avoidance (p<0.001). Age had significant correlation with positive reappraisal (p=0.036), and gender with confrontive coping (p=0.028).

Conclusion: Among primary caregivers, females, caregivers with no formal education or only up to grade 05, those not in marital life, and those unemployed or in domestic work are more at risk of experiencing more burden. Educational level of caregivers and duration of caregiving have a huge impact on the choice of coping mechanism.

Keywords: Dementia, Caregiver burden, Coping mechanisms

Known risk factors, management modalities and its association among knee joint osteoarthritis patients attending the Orthopedic clinic, Teaching Hospital Jaffna

Fazlan M F M¹, Isthika M I F¹, Banu M A T¹, Prathibha J A G D¹, Wimalawardhana, H M K P¹, Kumarendran B², Gobyshanger T³

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 and Objectives: Osteoarthritis is a common disorder which can affect any joint but more common in knee, hip, and hands with multiple risk factors. These risk factors broadly classified into genetic, constitutional, and biochemical factors. Lifestyle modification, medication and surgery are included in management modalities. The aim of the study was to describe the known risk factors, management modalities and its association among knee joint osteoarthritis patients attending orthopedic clinic Teaching Hospital Jaffna.

Methods: This descriptive cross-sectional study was carried out among 399 patients attending orthopedic clinic Teaching Hospital Jaffna using interviewer administered questionnaire from December 2019 to January 2021. Questionnaire and patients' records were specifically used to collect data about management modalities. Overall results were assessed using descriptive statistics and association between known risk factors and management modalities was assessed using inferential statistics (t test and chi square test) using SPSS software. Ethical approval was obtained from Faculty of Medicine, University of Jaffna.

Results: Response rate of our study was 93.4%. Mean age of the participants was 58.9 years. Majority were females (n=265, 66.4%) in that 67.9% had three or more than three completed pregnancies. 79.6% were postmenopausal women. Majority of our participants were in overweight category (41.9%, n=201), 24.8% (n=99) had a positive family history, 18% (n=72) had traumatic history of knee and major occupational risk factor was heavy physical activity which comprise of 25.7% (n=102). 54.4% of the participants showed history of systemic diseases. 79.7% (n=318) of the participants were treated with non-surgical intervention that includes lifestyle modification and medication. Association between known risk factors and management modalities was statistically significant with age (p <0.001), sex (p <0.001), family history (p=0.007), systemic diseases (p-value=0.02) and previous trauma history (p <0.001).

Conclusion: Known risk factors of the knee joint osteoarthritis include, increasing age, female population, BMI, occupational risk factor, family history, history of systemic diseases, previous history of trauma, physical activity level (moderately active) and number of completed pregnancy. Around four fifth of the population were followed non-surgical interventions (79.7%). Age, sex, family history, systemic diseases, and trauma were found to have a significant association with management modalities.

Keywords: Knee joint osteoarthritis, Risk factors, Management modalities, Association

Factors associated with fall among elders visiting to medical clinics, Teaching Hospital Jaffna

Nithuran J¹, Keerthan R¹, Aruni Madhuwanthi Jayathissa K A¹, Nisansala Ranasingha L P G M¹, Sayeinthiny U¹, Sivaganesh S², Kumaran S³

¹*Faculty of Medicine, University of Jaffna*

²*Provincial Department of Health Service, Northern Province*

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

Introduction and Objectives: According to WHO, falls are the second most leading cause of unintentional injury deaths worldwide. Falls and related injuries among elders have become a major public health concern in Sri Lanka. The aim of this study was to describe the fall and determine the factors associated with fall among elders visiting medical clinics in Teaching Hospital, Jaffna.

Methods: A hospital based descriptive cross-sectional study with sample size of 240 was done using interviewer administered questionnaires, clinical records of the participants, MDS-HC v9, Mini Mental State Examination (MMSE) and Lower Extremity Functional Scale (LEFS) tools in elders aged above 65 years. Data was collected by visiting medical clinics, Teaching Hospital, Jaffna. Data was analyzed using Statistical Package of Social Sciences (SPSS 23). Descriptive analysis was done (percentage, proportions and measures of central tendencies). Chi-square test and odd ratio were used to analyse associated factors of fall among elders.

Results: Among 101 participants who experienced fall in last 12 months, 51 (36.2%) of them were between ages of 65 and 70 years. Fifty (50.5%) of them were above the age of 70. Among the participants who experienced fall 59 (24.6%) were female. There was no significant correlation between the participant's gender and experience of fall during last 12 months. The incidence of fall was lesser than half of the population (N=101, 42.1%) in last 12 months with 11.3% single falls and 30.8% (N=74) recurrent falls. Majority (N=82, 81.2%) of the falls happened in their residential places. 28.7% (N=29) had tenderness when moving following the last fall. Age, urinary incontinence, structural foot problems ($p<0.05$), gait disturbances, sleep disturbances, functional status of lower extremity and comorbidities such as lower limb fractures and arthritis ($p<0.05$) showed significant association with age.

Conclusion: Significant number of elderly patients visiting the medical clinics had experienced fall during the past 12 months. There were significant associations between fall and age, urinary incontinence, foot problems gait, sleep, functional status of lower limb.

Keywords: Associated factors, Elders, Fall, Jaffna, Medical clinics. Prevalence

Prevalence and correlates of depression, cognitive impairment and disability among elderly medical clinic attendees

Bhavana S¹, Somasiri W G N C¹, Gunarathna W G M M A I¹, Thayananthi M¹, Nihanatha M¹,
Coonghe P A D², Sivayokan S³, Suganthan N⁴

¹*Faculty of Medicine, University of Jaffna*

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

³*Teaching Hospital, Jaffna*

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

Introduction and Objectives: With the ageing population in Sri Lanka growing, it now becomes necessary to arrange specialized care and treatment to meet the needs of the elderly. Owing to the physical and physiological changes, the elderly is more vulnerable to suffer from various illnesses and disabilities. Moreover, they are also vulnerable to get psychological problems. The aim of this study was to assess the prevalence and correlates of depression, cognitive impairment and disability among the elderly patients attending the medical clinics.

Methods: This institution based, descriptive cross-sectional study was carried out in the medical clinics at the Teaching Hospital Jaffna, among medical clinic attendees aged 60 and above. Systematic sampling method was used to collect 122 samples. An interviewer-administered questionnaire including the 15-item Geriatric Depression scale, Montreal Cognitive Assessment, World Health Organization Disability Assessment Schedule 2.0, and a sociodemographic section were used. The data was analyzed using Student's T-Test and One-way ANOVA.

Results: Depression was prevalent in 44.3% (95% CI– 35.5 - 53.1) of the elderly attending medical clinics, while cognitive impairment was prevalent in 80.3% (95% CI– 73.2 - 87.4), and disability in 95.9% (95% CI – 92.4 - 99.4). The level of depression was significantly associated with gender ($p=0.013$), marital status ($p=0.019$), and living arrangement ($p<0.001$). Educational level showed significant association with cognitive impairment ($p=0.045$) and disability ($p=0.008$). In addition, disability showed significant association with marital status ($p=0.027$).

Conclusion: Among the elderly patients attending the medical clinics, females and those living alone were at more risk of developing depression. Those who did not marry were more likely to develop depression and disability. Those with no formal education or with primary education were more likely to develop cognitive impairment and disability.

Keywords: Ageing, Dementia, Depression in elderly, Functional decline, Gerontology

The relationship between peri-menopausal symptoms, sociodemographic factors, and health-related quality of life during menopausal transition among Jaffna Zonal Education school teachers

Aravinthan S¹, Rinothja R¹, Panuwaran R¹, Shashikala P T K¹, Savitha 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 and Objectives: Peri-menopause is the time when the ovary begins to make less estrogen. Biological changes associated with menopause will cause menopausal symptoms. These symptoms affect the pre and postmenopausal women's wellbeing and quality of life and are influenced by many factors. This study aimed to investigate the relationship between peri-menopausal symptoms, socio-demographic factors, and the health-related quality of life of female teachers of Jaffna Education Zone.

Methods: This descriptive cross-sectional study among school teachers of Jaffna education zone was carried out considering our target population (45 to 65 years). Menopausal Rating Scale (MRS) was used to assess menopause related symptoms even through this was not validated among our population. SF 36 survey was used to assess the health-related quality of life. T test, Chi square test, analysis of variance and correlation coefficient were used to determine the relationship between menopausal symptoms, quality of life and sociodemographic factors.

Results: The mean age of total population (n=368) was 51.15 years. Most of them (86.1%) were married and living with their partner. The highest mean score of MRS was found in joint and muscular discomfort domain (22.8%-severely and 8.7%- extremely suffering) followed by urinary problem domain. Marital status was significantly ($p < 0.05$) associated with peri-menopausal symptoms, while other factors such as age ($p = 0.814$), education ($p = 0.856$) and children ($p = 0.895$) had no significant association. Among the teachers 13.9% had affected quality of life (QoL). The most affected domain of QoL was emotional functioning (41.0%). Socio-demographic factors such as age ($p = 0.840$), marital status ($p = 0.302$), education ($p = 0.686$), and children ($p = 0.431$) had no significance with QoL. Health related QoL is indirectly proportional to peri-menopausal symptoms ($r = -0.5000$).

Conclusion: Most of the women, around the peri-menopausal stage are affected with peri-menopausal symptoms. Marital status has positive influence on the peri-menopausal symptoms. The presence of menopausal symptoms was significantly associated with a decreased health-related quality of life in the women.

Keywords: Peri-menopause, Marital-status, Factors, Wellbeing

Prevalence and antibiotic sensitivity pattern of selected pathogenic bacteria in the sputum of patients with non-cystic fibrosis bronchiectasis attending Respiratory Clinic, Teaching Hospital Jaffna

Attanayaka H R Y¹, Gnanakarunyan T J¹, Coonghe P A D², Ramachandran R³, Athavan M³

¹Department of Medical Laboratory Sciences, Faculty of Allied Health Sciences, University of Jaffna

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

³Teaching Hospital, Jaffna

Introduction and Objectives: Non-cystic fibrosis (non-CF) bronchiectasis is a chronic inflammatory respiratory disease with irreversible dilation of the bronchial tree. It has become a major respiratory disease in developing countries and a major contributor to chronic respiratory morbidity. Presently increased proportions of multidrug-resistant organisms are seen in non-CF bronchiectasis patients. This study aimed to determine the prevalence and antibiotic sensitivity pattern of selected pathogenic bacteria in the sputum of patients with non-CF bronchiectasis attending Respiratory clinic, Teaching Hospital, Jaffna.

Methods: An institutional-based descriptive cross-sectional study was performed on patients with non-CF bronchiectasis attending the Respiratory clinic, Teaching Hospital, Jaffna. Sputum samples were collected, and the microbial culture was performed. The isolated organisms were identified according to the Laboratory Manual in Microbiology, 2nd edition by Sri Lankan College of Microbiologists. The Antibiotic sensitivity tests were done according to the Clinical Laboratory Standards Institute method.

Results: Of the 39 samples collected, 28 yields significant growth. *Pseudomonas species* were the most frequently isolated (57.14%) organism, followed by Coliform (42.86%). *Pseudomonas species* showed resistance to Aztreonam (37.5%), Meropenem and Cefoperazone sulbactam (18.8%), Gentamicin and Cefepime (12.5%) and Ceftazidime, Ticarcillin-clavulanic acid, and Imipenem (6.3%). Whereas all the isolated *Pseudomonas species* were sensitive to Ciprofloxacin and Piperacillin-tazobactam. Around 6.25% of the *Pseudomonas species* isolated were multidrug-resistant. Conversely, isolated Coliform showed resistance to Ampicillin (75.0%) and Amoxicillin-clavulanic acid (25.0%), Cefuroxime and cefotaxime (16.7%) although they exhibited sensitivity to Gentamicin, Netilmicin, Cefepime, Piperacillin-tazobactam, Imipenem, Meropenem, Amikacin and Aztreonam.

Conclusion: *Pseudomonas species* and Coliform bacteria isolated from the sputum of patients with non-CF bronchiectasis exhibited Antimicrobial resistance against certain first-line antibiotics. However, the present study did not reach the calculated sample size due to time limitations, and therefore, further studies need to be done in future.

Keywords: non-CF bronchiectasis, Antibiotic sensitivity, Drug resistance.

Bacteria in burn wound, antibiotic sensitivity pattern, associated risk factors among burn patients admitted to Surgical wards and Plastic surgery unit, Teaching Hospital Jaffna

Rupasinghe C S¹, Gnanakarunyan T J¹, Ramachandran R², Sarma T³, Pallavan E², Surenthirakumaran R⁴

¹Department of Medical Laboratory Sciences, Faculty of Allied Health Sciences, University of Jaffna

²Teaching Hospital, Jaffna

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

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

Introduction and Objectives: Burn injury causes disruption of normal skin barrier of body. The surfaces of the burn wounds are sterile instantly after the thermal injury. With the increase of time, wounds are colonized with bacteria such as *Staphylococcus aureus* and gram-negative bacteria *Pseudomonas aeruginosa*, Coliforms, *Acinetobacter* spp. This study aimed to determine the prevalence of bacterial pathogens in burn wounds, antibiotic sensitivity patterns, the association between bacterial colonization and risk factors among patients admitted to the surgical wards and plastic surgery unit at Teaching Hospital, Jaffna.

Methods: This was a laboratory-based descriptive cross-sectional study performed on patients admitted to surgical wards and plastic surgery unit, Teaching hospital, Jaffna. Wound swabs specimens of burn patients were collected from 10th of May to 19th of August 2021, inoculated, and the antibiotic sensitivity pattern was tested for all isolated bacteria. Obtained data were analyzed by Statistical Package of Social Sciences version 25. The p-value of <0.05 was considered to indicate a statistically significant difference. The correlation between factors of burn patients was assessed by using Fisher's exact test.

Results: Out of 38 wound swab samples from the patients, 32 (84.2%) yielded significant growth. Study revealed that the prevalence of *Staphylococcus aureus* 17 (39.6%), *Pseudomonas aeruginosa* 13 (30.2%), Coliforms 08 (18.6%), *Acinetobacter* spp 05 (11.6%). All the isolated *Staphylococcus aureus* 17 (100.0%) were sensitive to Teicoplanin and Linezolid. All the isolated *Pseudomonas aeruginosa* 13 (100.0%) were sensitive to all first-line and second-line antibiotics. All the isolated Coliforms were sensitive to Amikacin, Ceftazidime, Cefepime, Ticarcillin-clavulanic acid. *Acinetobacter* spp. were resistant to 100.0% Ticarcillin-Clavulanic acid. There-were significant relationships between the culture positivity and the duration of wound, and types of dressings, p <0.05. Culture positivity was increased with the time duration of the wound. There were no significant relationships between culture positivity and total burn surface area, site of specimen collection, underline diseases, age and gender.

Conclusion: The most common isolate was *Staphylococcus aureus*. Positive cultures were more frequent among patients with over two-weeks (>15 days) duration of burn wounds. Early detection and proper treatment can prevent the bacterial infection of burn wounds.

Keywords: Burn wounds, Bacteria, Antibiotic sensitivity

Prevalence of nasal carriage of *Staphylococcus aureus* and its antimicrobial resistance pattern in patients on hemodialysis, at Hemodialysis Unit, Teaching Hospital Jaffna

Jayawardana A P¹, Gnanakarunyan T J¹, Ramachandran R², Coonghe P A D³, Thangarajah B R³

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

³*Teaching Hospital, Jaffna*

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

Introduction and Objectives: *Staphylococcus aureus* causes serious bacterial infections in hemodialysis patients. Compared to healthy controls, patients on chronic hemodialysis have twice the rate of *Staphylococcus aureus* nasal colonization and most of these infections are of endogenous origin. Since the hemodialysis patients are immunocompromised, both the methicillin-sensitive *Staphylococcus aureus* (MSSA) and methicillin-resistant *Staphylococcus aureus* (MRSA) are responsible for 70%-90% of vascular access site infections. Determination of antimicrobial resistance patterns is essential for the antibiotic prescription. The present study aimed to determine the prevalence of nasal carriage of *Staphylococcus aureus*, its antimicrobial resistance pattern and factors associated with *Staphylococcus aureus* nasal carriage in patients on hemodialysis at Hemodialysis Unit, Teaching Hospital Jaffna.

Methods: An institution-based descriptive cross-sectional study was conducted among 79 hemodialysis patients at the Hemodialysis Unit, Teaching Hospital Jaffna. Nasal swabs were collected and inoculated onto Blood and MacConkey agar. Gram staining, catalase and coagulase tests were done. Antibiotic sensitivity test was done according to the Clinical and Laboratory Standards Institute (CLSI) method. The associated factors were assessed using Chi-square and Fisher's exact tests in SPSS (version 25.0). The $p < .05$ was deemed as statistically significant.

Results: The prevalence of nasal carriage of *Staphylococcus aureus* was 16.5% (12.7 % MSSA, 3.8 % MRSA) in 79 hemodialysis patients. Among the isolated *Staphylococcus aureus*, 30.8% were resistant to Erythromycin, 23.1% to Cefoxitin and Clindamycin. However, all the isolates were sensitive to Ciprofloxacin, Gentamicin, Teicoplanin and Vancomycin. There were significant associations between *Staphylococcus aureus* nasal carriage and previous use of antibiotics ($p = .035$), vascular access type ($P = .016$), diabetes mellitus ($P = .002$), and recent hospitalizations ($p = .011$). Age, gender, duration on hemodialysis and line related infections were not significantly associated with nasal carrier status of *Staphylococcus aureus*.

Conclusion: The prevalence of nasal carriage of *Staphylococcus aureus* in the current study was lower compared to some studies carried out in other parts of the country. Although isolated strains were sensitive to routine antibiotics, previous use of antibiotics, recent hospitalization, diabetes mellitus significantly associated with *Staphylococcus aureus* nasal carriage.

Keywords: Hemodialysis, *Staphylococcus aureus*, Nasal colonization, Antimicrobial resistance

Comparative evaluation of imported and local brands of drug information leaflets of antibiotics and non-steroidal anti-inflammatory drugs available in community pharmacies in Jaffna Municipal area

Alahakoon A A D A M¹, Thuvaragan S¹ and, Sanchayan K²

¹*Department of Pharmacy, Faculty of Allied Health Sciences, University of Jaffna.*

²*Department of Pharmacology, Faculty of Medicine, University of Jaffna.*

Introduction and Objectives: Drug information leaflets (DILs) are crucial for providing drug-related information to health care professionals and patients for safe medication use. This comparative study was conducted to evaluate DILs of antibiotics and non-steroidal anti-inflammatory drugs (NSAIDs) produced by both local and imported manufacturing companies for the availability and compatibility of essential clinical information.

Methods: This was a descriptive, cross-sectional study. A total of 120 leaflets consisting of both imported and local brands of antibiotics and NSAIDs were evaluated for the availability and compatibility of 20 essential clinical information criteria according to the guidelines of the National Medicine Regulatory Authority (NMRA), Sri Lanka. Clinical information was matched against British National formulary and clinical pharmacology textbooks for compatibility. The maximum score given for a leaflet was 20, and the minimum was 0. The level of compatibility of leaflets was categorized as 0-25%, 26-50%, 51-75% and 76-100%. Descriptive statistics were used to analyze the data using SPSS 25 software.

Results: The total DILs included 70 antibiotics and 50 NSAIDs brands. None of the leaflets included all clinical information according to NMRA guidelines. Especially information regarding the splitting of tablets was absent in all tablet dosage forms of antibiotics and NSAIDs leaflets. All local DILs did not indicate references, excipients, and date of last revision. The maximum and minimum scores obtained for leaflets were 17 and 4, respectively. The mean score obtained for imported and local antibiotics leaflets was 12.6 and 11.5, respectively, and for NSAIDs, leaflets were 11 and 10.8. The majority (69.16%, n=83) of the DILs have obtained scores in the range of 51 -75%.

Conclusion: Some of the essential information were lacked in the DILs. Local products provide less information compared to imported counterparts. Therefore, manufacturers and regulatory authorities should pay attention to design and revise DILs with complete and up-to-date information.

Keywords: Drug information leaflets, Antibiotics, Non-steroidal anti-inflammatory drugs, Evaluation, Local and imported brands

Prevalence of urinary bacterial pathogens, their antimicrobial susceptibility patterns, and the associated risk factors among the catheterized patients in Medical and Surgical wards, Teaching Hospital, Jaffna

Thilakarathne P K G N N¹, Gnanakarunyan T J¹, Ramachandran R², Coonghe PA D³

¹Department of Medical Laboratory Sciences, Faculty of Allied Health Sciences, University of Jaffna

²Teaching Hospital, Jaffna

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

Introduction and Objectives: Infection in any part of the urinary system is defined as a urinary tract infection. Although a urinary catheter is important, inappropriate usage and left for too long will lead to hazardous consequences such as morbidity and mortality in the patient and increased hospital cost. This study aimed to determine the prevalence of urinary bacterial pathogens, their antimicrobial susceptibility patterns, and the associated risk factors among the catheterized patients in medical and surgical wards, Teaching Hospital, Jaffna.

Methods: This institutional-based descriptive cross-sectional study was carried out over a period of one month, including patients who have an indwelling urinary catheter for more than 48 hours after being admitted to medical and surgical wards, Teaching Hospital, Jaffna. Catheter urine samples were inoculated onto Cysteine Lactose Electrolyte Deficient agar, and antibiotic sensitivity was tested on all isolated bacteria according to the Laboratory Manual in Microbiology by Sri Lankan College of Microbiologists. The obtained data was analyzed using SPSS version 25.

Results: Of the 108 catheter urine samples from the catheterized patients, 39 (36.1%) yielded significant growth. The common bacterial isolates were coliform 14 (35.9%), followed by *Pseudomonas* spp. 5 (12.35%), *Enterococcus* spp. 5 (12.8%), *Staphylococcus saprophyticus* 3 (7.7%), *Proteus* spp. 1 (2.6%), and coagulase-negative staphylococcus 1 (2.6%). *Candida* spp. (25.6%) was isolated as fungal organisms. Isolated coliforms were sensitive to Gentamicin (86.7%) and resistant to Ampicillin (86.6%). *Pseudomonas* spp. were sensitive to Ciprofloxacin and Norfloxacin (80%) and resistant to Aztreonam and Cefoperazone-sulbactam (60%). Statistical significance was not found with gender and comorbidities related to significant growth. However, there was a significant relationship seen with age ($p=0.001$) and duration of catheterization ($p<0.001$). Particularly, 3-5 days of catheterization showed 25.6% culture positivity, and >5 days of catheterization showed 63.3% of significant growth.

Conclusion: The incidence of urinary tract infection among catheterized patients in Teaching Hospital, Jaffna was 36.1% and mainly caused by coliform, *Pseudomonas* spp., and *Enterococcus* spp. Significant growths were high among more than 60 years of age and when the duration of catheterization increased.

Keywords: Catheter, Significant growth, Urinary tract infection, Antibiotic sensitivity

Knowledge, attitude, and practice on school based sexual and reproductive education among teachers, in Jaffna Educational Zone, Jaffna

Jayasinghe J M M C¹, Thabotharan D¹, Nithlavarnan A²

¹ *Department of Nursing, Faculty of Allied Health Sciences, University of Jaffna*

² *Department of Education, Faculty of Arts, University of Jaffna*

Introduction and Objectives: Effective School-based sexual and reproductive education (SBSRE) can prevent adolescents' sexual and reproductive health problems. The teacher plays the main role in imparting SBSRE. Even though SBSRE is a vital need, there was less importance given in South-Asian countries, including Sri Lanka. Therefore, this study aimed to assess the knowledge, attitude, practice, and association and correlation of practice with socio-demographic factors and attitude, of teachers' on SBSRE, in Jaffna Educational Zone, Jaffna.

Methods: A school-based descriptive cross-sectional study was carried out among the Science and Physical Education teachers (Grade 6-11) in Jaffna Educational Zone, through a self-administered questionnaire, after obtaining permission from Ethics Review Committee. As it is a population study, no sampling method was used.

Results: Among the total 212 population, respondents rate was 85.37% (31), the majority were Sri Lankan Tamil, females, ranged in age from 41-50. Respondents' mean marks of knowledge, attitude, and practice were 73.34, 38.39, and 54.24 out of 100, respectively. Their practice was significantly associated with the educational qualification ($p < 0.001$) and their attitude ($r = 0.439$, $p < 0.001$). The majority marked menstrual blood as polluted, masturbation as abnormal sexual behaviour, contraception was useless for the adolescents, and not participating in any program on SBSRE (149). Minority marked, abortion is legally accepted, and sex before age 14 was taken as rape, thus fewer marks on legal aspects of sexuality. The majority were not known Hepatitis b and Herpes simplex virus as Sexually Transmitted Diseases. Teachers have less practice on contraception, males' teaching practice was higher than females, and the most preferred source of knowledge was books.

Conclusion: Even though they have good knowledge, poor attitude and practice reduced the impartation of SBSRE. Thus, separate subjects, a clear curriculum, health-education programs to both teachers and community through health-sector, annual re-evaluation, and inspiration are recommended to enhance their attitude and practice towards SBSRE.

Keywords: School-based sexual and reproductive education (SBSRE), Knowledge, Attitude, Practice, Teachers.

Stress, depression, anxiety, and associated factors among A/L students of the Karaveddy Educational Division, Jaffna

Abinaya S¹, Sathyapireyan V¹, Jayasundara J P S¹, Ekanayake S A M S¹, Mithirashree S¹, Sivakanthan S², Kumar R¹, Sivathas S³

¹*Faculty of Medicine, University of Jaffna*

²*Faculty of Arts and Faculty of Medicine, University of Jaffna*

³*Teaching Hospital, Jaffna*

Introduction and Objectives: Adolescence is a transient period in which many psychological and physiological changes take place, making adolescents more prone to stress and stress-related psychological dysfunction such as anxiety and depression. The G.C.E A/L examination is a major source of stress for school-going adolescents. This study aimed to determine the prevalence of stress, depression, anxiety and their associated sociodemographic and educational factors among A/L students in Karaveddy Educational Division in Jaffna District.

Methods: A descriptive cross-sectional study was carried out among A/L students of all five 1AB schools in Karaveddy Educational Division. Data was collected by visiting the schools. A complete enumeration of the study population was carried out using a self-administered questionnaire, which included questions about the participants, their schooling, and the Depression, Anxiety and Stress Scale (DASS-21). Data was analyzed with Statistical Package for Social Sciences (SPSS 21). Frequencies, percentages, and the Chi-square test were used in the analysis. The critical value was set at 0.05.

Results: In total, 465 students participated (response rate 100%). Out of them, 61.9% (n=288) recorded scores compatible with stress, among whom 15.5% (n=72) had severe stress, and none had extremely severe stress. Among the 24.1% (n=112) who had depression, 0.9% (n=04) had severe and extremely severe depression. Of the 37.0% (n=172) with anxiety, 4.9% (n=23) and 3.2% (n=15) had severe and extremely severe anxiety respectively. Not changing schools after O/L (p=0.009) and sleeping ≥ 7 hours (p=0.026) were significantly associated with stress. The parent/guardian's education level being <O/L (p \leq 0.001) not having changed schools after O/L (p=0.033) and spending >2 hours per day on social media (p=0.005) were significantly associated with depression. Residing in a boarding (p=0.039) and sleeping ≥ 7 hours (p=0.036) were significantly associated with anxiety.

Conclusion: A substantial proportion of A/L students in Karaveddy Educational Division recorded scores compatible with stress, depression, and anxiety. Further research is needed to assess the mental health status of students in other schools of the Karaveddy and other divisions in Jaffna. Urgent measures are needed to improve the mental health status of adolescents.

Keywords: Stress, Depression, Anxiety, Adolescence, Jaffna district, Advanced level students.

Family members' knowledge on family members' support to promote the mental health of psychiatric patients attending to the psychiatric clinic at Base Hospital, Tellippalai

Thennakoon T M N C M¹, Sathees S¹, Subendran M²

¹*Department of Nursing, Faculty of Allied Health Sciences, University of Jaffna.*

²*Mental Health Unit, Base Hospital, Tellippalai*

Introduction and Objectives: Mental illnesses are characterized as disease entities in which a person frequently has a change of thought, mood, or actions because of psychological distress. It is easy to cure a mental illness with good family support, and it is very important to prevent relapse. To provide the right kind of family support, people need to have good knowledge about it. This study aimed to assess the family members' knowledge on family members' support to promote Mental Health of Psychiatric Patients attending the Psychiatric Clinic at Base Hospital, Tellippalai.

Methods: A descriptive cross-sectional study was conducted among 768 family members of psychiatric patients attending the Psychiatric Clinic at Base Hospital, Tellippalai. Data was collected by using an interview administered questionnaire. Data was analyzed based on the objectives. Descriptive statistics were performed to describe the level of knowledge. Association between the level of knowledge with socio-demographic factors was analyzed using the ANOVA test.

Results: Out of 380, 347 participants have participated in this study (response rate= 91%). The mean age of participants was 41.1 (SD=8.2). The level of knowledge regarding family members' support to promote the mental health of psychiatric patients among participants was adequate. A high level of Education (P=0.006) and being the male gender (P=0.022) of the caregiver had a significant association with the knowledge level of family members. Age, marital status, number of family members, religion, ethnicity, monthly family income, relationship to the patient, and primary caregiver of the patient were not significantly associated with the level of knowledge.

Conclusion: Most of the participants had good knowledge regarding family support. It depends on the level of education and gender of the caregiver. These factors need to be considered while choosing a caregiver for a psychiatric patient.

Keywords: Knowledge, Family members' support, Psychiatric patients

Knowledge, attitude, practice, anxiety and associated sociodemographic factors towards COVID-19 pandemic among selected categories of healthcare workers in base hospitals of Jaffna District

Asra A C F¹, Vithursana S¹, Timothy Y¹, Haleema N M N¹, Rasnayake R M S R K¹, Murali V², Sivathas S³

¹*Faculty of Medicine, University of Jaffna*

²*Ministry of Health, Sri Lanka*

³*Teaching Hospital, Jaffna*

Introduction and Objectives: Healthcare workers are a risk group for COVID-19 infection and related anxiety. They must have sufficient knowledge, positive attitudes, and adopt good practices to protect themselves from infection. Objective of this study was to describe the knowledge, attitude, and practice related to COVID-19 anxiety levels and associated sociodemographic factors among selected categories of healthcare workers in Base Hospitals of Jaffna District.

Methods: A descriptive cross-sectional study was carried out among grade medical officers, nurses, and attendants in all four base hospitals in Jaffna District. Proportionate stratified sampling was used to select the sample. Data was collected by self-administered questionnaires among grade medical officers and nurses and through interviewer-administered questionnaires among attendants. The questionnaires consisted of questions about sociodemographic factors, knowledge, attitude, practice, and anxiety levels by Corona Anxiety Scale of healthcare workers towards COVID-19. Data was analyzed on SPSS (v21) using descriptive statistics and inferential statistics. Unpaired T test, chi square test and correlation were used for the analysis.

Results: In total, 356 healthcare workers aged between 25 and 54 years with a mean age of 38.8 ±7.04 years participated, including 77 (21.6%) grade medical officers, 162 (45.5%) nurses and 117 (32.9%) attendants. Among them, 38.2% (n=136) were males and 61.8% (n=220) were females. Majority used social media (85.7%, n=305) as their source of information on COVID19. Among the participants, grade medical officers had better knowledge (89.6%, n=69) than nurses (75.3%, n=122) and attendants (67.5%, n=79). Among the participants (92.2%, n=71) of the grade medical officers, 82.7% (n=134) of the nurses, 81.2% (n=95) of the attendants had a positive attitude. Precautionary measures were followed by the majority of the grade medical officers (85.7%, n=66), nurses (72.2%, n=117) and attendants (73.5%, n=86). Only 28.9% (n=105) of the workers had anxiety. Mean values of knowledge, attitude and anxiety scores differed significantly between grade medical officers and other groups. Attitude had correlation with age and with work experience. Practice was correlated with the place where they work. Anxiety had correlations with occupation and with the hospital they work. There was a significant association between the anxiety and practice (P=0.0001).

Conclusion: Most of the healthcare workers had good knowledge, positive attitude, good practice, and low level of anxiety. However, the progress on infection control and prevention of COVID-19 should be conducted to increase the attitude and practice further.

Keywords: Knowledge, Attitude, Practice, Anxiety, COVID-19, Healthcare workers, Sri Lanka

Prevalence of common menstrual problems and their association with psychological stress among the female medical students of University of Jaffna

Athithyan R¹, Fernando M T K C¹, Kinoshia L¹, Srimanne D N P W¹, Thushara T¹, Murali V², Bhavani G

¹*Faculty of Medicine, University of Jaffna*

²*Ministry of Health, Sri Lanka*

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

Introduction and Objectives: Menstruation is a normal vaginal bleeding that occurs as part of a woman's monthly cycle. Variations in menstrual patterns are frequently observed among young females and affected by a number of factors. Menstrual abnormalities and psychological stress are the two very common complaints among female medical students. The aim of this study was to estimate the prevalence of common menstrual problems (irregular menstrual period, heavy menstrual bleeding, dysmenorrhea and premenstrual symptoms) and to determine the associated psychological stress factors among female medical students of University of Jaffna

Methods: An institution based descriptive cross-sectional study was carried out among 390 female medical students from 6 batches in Faculty of Medicine, University of Jaffna in 2020. Proportionate stratified random sampling and self-administered online questionnaire was used to collect data. Ethical clearance was obtained from Faculty of Medicine, Jaffna. The data was analyzed using IBM SPSS-21. WaLIDD score, Symptom Severity Score (SSS) and Perceived Stress Scale (PSS-10) were used to assess dysmenorrhea, heavy menstrual bleeding, and perceived stress respectively. Chi squared, t test and Pearson correlation were used for analysis.

Results: Out of 404 students, 390 (96.5%) responded. Irregular menstruation, dysmenorrhea and heavy menstrual bleeding were reported by 14.9% (n=58), 78.7% (n=307) and 2.6% (n=10) students respectively. More than half of the students affected by at least one kind of premenstrual symptoms. 50.5% (197) were affected by psychological stress most of the time. Psychological stress showed statistically significant associations (<0.05) with premenstrual symptoms and heavy menstrual bleeding. Dysmenorrhea (p=0.392) and irregular menstruation (p=0.373) did not show statistically significant associations (>0.05) with psychological stress. Although dysmenorrhea was highly prevalent among menstrual abnormalities, it was not associated with psychological stress.

Conclusion: Common menstrual problems in the target population were strongly associated with psychological stress. Given the higher prevalence of psychological stress associated with menstrual problems it would be beneficial to screen students for psychological stress related to menstrual problems.

Keywords: Irregular menstrual period, Heavy menstrual bleeding, Dysmenorrhea, Premenstrual symptoms, Psychological stress factors, Medical students, Jaffna.

Knowledge, attitudes, and practices related to blood donation in a selected population in Jaffna

Ziyad S¹, Amarasingam S¹, Sangaralingam K¹, Gamage P K H R A¹, Sosai S T¹, Kumar R², Seneviratne D³, Sooriyakumar T⁴

¹*Faculty of Medicine, University of Jaffna*

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

³*Blood Bank, Teaching Hospital, Jaffna*

⁴*Haematology Unit, Teaching Hospital Jaffna*

Introduction and Objectives: Blood transfusion is a lifesaving clinical procedure. The only source of blood products used in blood transfusion procedures are human donors; a substitute is yet to be discovered. Poor knowledge and negative attitudes regarding blood donation have resulted in insufficient availability of blood and blood products for transfusion procedures in many settings. This study aimed to assess knowledge, attitudes and practices related to blood donation and their associated socio-demographic factors in Jaffna.

Methods: A descriptive cross-sectional study was carried out among service-users visiting the Motor Traffic Department, District Secretariat, Jaffna, between 12 noon and 4 pm for six weeks. The required sample size was 377. Consecutive sampling was used to recruit 300 consented adults lesser than 60 years. Data was collected with an interviewer-based questionnaire developed by the investigators. Data collection ended prematurely due to the COVID-19 pandemic. Frequencies, proportions, and the Chi-Square test were used to analyze the data with SPSS (v25). The critical level was set at 0.05. Ethical clearance was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna.

Results: A total of 300 service users participated; of them, most were females (59%), between 18 to 39 years (77%), with at least O/L qualifications (90%). Knowledge on basic eligibility criteria for blood donation was lower compared to knowledge on risk behaviors that rendered them ineligible. Although an overwhelming majority (96%) believed that people should donate blood, only 21% had donated even once in their lifetime. The most common reason cited by participants for not having donated blood was that they had not been approached for blood donation (42%). Male gender ($p < 0.001$) and being employed ($p = 0.013$) were significantly associated with having donated blood.

Conclusions: Knowledge gaps exist even among a fairly educated population in Jaffna. Attitudes on blood donation seem favorable, although practices are poor. Blood donation campaigns should address identified knowledge gaps and actively recruit the public for blood donation.

Keywords: Knowledge, Attitudes, Practices, Blood donation, Jaffna

Clinical outcomes of fracture of neck of femur patients treated by two different types of orthopaedic implants at the Teaching Hospital Jaffna

Kogilan A¹, Perera U L S R¹, Mithula K¹, Herath H P V H¹, Sharmiya V¹, Kumar R², Gobyshanger T³

¹Faculty of Medicine, University of Jaffna

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

³Teaching Hospital, Jaffna

Background: Proximal Femoral Nail Antirotation (PFNA) and Dynamic Hip Screw (DHS) are two types of orthopaedic implants that are frequently used to treat fracture of the neck of femur in the Teaching Hospital Jaffna. PFNA is superior to DHS for femoral neck fractures. PFNA is not freely available in public hospitals. So patients are compelled to purchase PFNA out-of-pocket, in many occasions. Patients from low socio-economic status have to receive DHS which is sub-optimal, despite the fact that the surgeon's recommendation should be decisive in determining the implant received. This study compares short- and long-term clinical outcomes by implant type and acquisition of the recommended implant, and differences in long-term clinical outcomes by socioeconomic factors.

Methods: An analytical cross-sectional study was carried out in patients, with age >45 years, who were treated with PFNA or DHS implants at an orthopedic unit at the Teaching Hospital Jaffna between July 2019 and June 2020. Data on short- and long-term clinical outcomes, and socioeconomic factors were collected over the phone using an interviewer-administered questionnaire. Data were also extracted from Bed Head Tickets and from Clinic Records. Analysis was performed on IBM SPSS (v25) using descriptive statistics, independent t-test, Mann Whitney U test and one way ANOVA.

Results: A total of 153 implant surgeries were performed to patients with fracture of the neck of femur in the one-year period. 121 patients met the inclusion criteria. 51% responded and thus 62 patients with fracture of neck of femur were recruited and the data from them were analyzed in this study. There was no significant difference in the time from surgery to discharge, discharge to cast removal, or cast removal to regaining normal functionality, by implant type and acquisition of the surgeon's recommendation ($p > 0.05$). When comparing long-term clinical outcome by the Oxford Hip Score (OHS) there was no significant difference between the types of implants used ($p = 0.411$). However, OHS was higher in patients who acquired the recommended implant compared to those who did not ($p = 0.004$), and the OHS differed in different age group ($p < 0.001$), employment status ($p = 0.003$), occupational category ($p = 0.017$), breadwinner status ($p = 0.046$), work index ($p = 0.035$) and rehabilitation follow-up status ($p = 0.001$).

Conclusion: Although the surgeon's recommendation should ideally determine access, the restricted availability of PFNA has resulted in inequitable long-term clinical outcomes in patients treated for femoral neck fracture in Teaching Hospital Jaffna.

Keywords: Femoral neck fracture, Proximal femoral nail anti-rotation, Dynamic hip screw, Healthcare inequity, Jaffna

Acknowledgements

We would like to express our sincere gratitude to the Vice Chancellor, University of Jaffna, Dean, Faculty of Medicine and Dean, Faculty of Allied Health Sciences for their wholehearted support in organizing this event successfully.

We are grateful to Prof. S. Srisatkunarajah, Vice Chancellor, University of Jaffna for gracing the event in spite of his tight schedule.

We extend our heartfelt thanks to keynote speakers Prof. S. S. P. Warnakulasuriya (Dean, Faculty of Nursing, University of Colombo) and Dr. Miyuru Chandradasa (Senior Lecturer, Faculty of Medicine, Ragama).

We would like to acknowledge the academic staff of the Faculties of Medicine and Allied Health Sciences of the University of Jaffna and Consultants from Teaching Hospital Jaffna for their valuable contribution in reviewing the abstracts.

Our special thanks to all as the evaluators and the chairpersons of the sessions.

We acknowledge the assistance from the staff of the Dean's office of the Faculty of Medicine for their administrative and organizational work related to the symposium.

Our thanks to Guru printers for undertaking the printing of the proceedings within a short time.

We wish to acknowledge all the members of the Faculties of Medicine and Allied Health Sciences and the students for their presence at the symposium.

*URS 2021 Organizing Committee
Faculties of Medicine and Allied Health Sciences
University of Jaffna
3rd February 2022*

