



URS 2022

**Proceedings of the
5th Undergraduate Research Symposium**

Wisdom through Research



**Faculty of Medicine
University of Jaffna**

5th of December 2022

**Proceedings of the
5th Undergraduate Research Symposium 2022**

**Faculty of Medicine
University of Jaffna
December 05, 2022**

**Sponsored by Jaffna Medical Faculty Overseas Alumni - UK
In partnership with Jaffna Medical Faculty Alumni Association**

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Message from the Vice Chancellor of the University of Jaffna



The university is considered a place that creates, revises, shapes, and disseminates knowledge. The basic functions of a university are imparting and disseminating knowledge through teaching and learning, research and the conduct of seminars, symposia and extension programmes. The University of Jaffna, since its inception, has nourished a quality research culture. This is reflected in the vision of the university to become a center of excellence in research. Over the decades, the university has produced many scholars of high repute. The research culture at the University of Jaffna is enhanced by the research conferences and symposia hosted by its different departments and faculties.

The University of Jaffna is also strongly committed to cultivating an interest in and yearning for research among its undergraduates. The 5th Undergraduate Research Symposium hosted by the Faculty of Medicine under the theme “Wisdom through Research” is an important event in this regard. It is important that we encourage our students to collaborate across disciplinary boundaries in their collective pursuit of knowledge. Those who present their work at this Symposium deserve special praise as they collected data for their research during the trying times of the COVID – 19 pandemic and continued their tasks under the difficult conditions created by the economic crisis in Sri Lanka.

I am indeed proud that the budding healthcare professionals who graduate from the University of Jaffna possess a strong foundation in research, and are provided opportunities, such as this annual symposium, to demonstrate the research skills they have acquired during their undergraduate years. I congratulate the staff of the Faculty of Medicine on their initiative to organize this student research symposium. I wish the student researchers and organizers the very best at the 5th Undergraduate Research Symposium.

Prof. S. Srisatkunaraiah
Vice Chancellor
University of Jaffna

Message from the Dean of the Faculty of Medicine



I am pleased to convey this message of congratulations in the Proceedings of the 5th Undergraduate Research Symposium (URS2022).

The ever-increasing flow of scientific information demands a better understanding of scientific knowledge. A certain amount of experience in research methodology is essential for budding healthcare professionals in order for them to be able to harness scientific knowledge towards improving medical practice and health outcomes more broadly. Carrying out research, critically analyzing scientific communications and attending and presenting at research conferences/symposia are now essential elements of undergraduate medical education.

The Undergraduate Research Symposium is an annual event at the Faculty of Medicine, University of Jaffna. It is an extension of the rigorous research training we provide our students. Exploring the process of knowledge creation is a first step in the journey towards becoming critically-oriented, independent thinking, innovative practitioners of medicine. As the Faculty works towards strengthening undergraduate research training in the form of the Evidence-Based Practice & Research Module that spans the breadth of the undergraduate medical programme, this conference symbolizes what our future holds.

The 5th Undergraduate Research Symposium is also a celebration of our undergraduate research achievements. It will provide an opportunity for our students to share their research findings, and discuss them with fellow colleagues, their teachers, and academics. The 40th Batch of medical students carried out their research in the midst of the COVID-19 pandemic. It was a difficult task and now they are reaping the benefits of their hard work. I hope this symposium will further support their learning and professional development.

I sincerely thank Prof. S. Srisatkunarah, Vice Chancellor, University of Jaffna, and Prof. Krish Nirantharakumar, the Chief Guest, for gracing this occasion. I also thank the URS2022 Organizing Committee of the Faculty of Medicine for their great effort towards making this event a success. I congratulate the student researchers and wish them a fruitful and rewarding experience at the 5th Undergraduate Research Symposium.

Prof. R. Surenthirakumar
Dean
Faculty of Medicine
University of Jaffna

Message from the Coordinator URS2022



On behalf of the Organizing Committee of URS2022, I warmly welcome you to the 5th Undergraduate Research Symposium of the Faculty of Medicine, University of Jaffna. I am deeply honoured to be entrusted with the responsibility of coordinating this event and thank the Faculty of Medicine for this opportunity.

The conference theme, *Wisdom through Research*, was chosen to mark the enduring need for wisdom and reflection in medical practice. While evidence-based practice is data-driven, medicine is essentially about people and relationships. Undergraduate research training at the Faculty of Medicine, while emphasizing evidence-based practice, also fosters teamwork and collaboration among students, as important in the training of young doctors.

To put a conference together is no small task, especially in the midst of an economic crisis. I thank the Vice Chancellor, University of Jaffna, and Dean, Faculty of Medicine for their whole-hearted support for this event. I am also very grateful for the financial support extended by the Jaffna Medical Faculty Overseas Alumni – United Kingdom in partnership with the Jaffna Medical Faculty Alumni Association.

With heartfelt gratitude I acknowledge the time and expertise of the academic staff of the Faculty of Medicine, Consultants at the Teaching Hospital Jaffna, and experts at the Office of the Provincial Director of Health Services, Northern Province, who willingly reviewed and provided feedback on the abstracts submitted for consideration, and also generously agreed to serve as Chairs and Evaluators at such short notice.

I sincerely thank the URS2022 Organising Committee for their immense support in organizing this event. Unlike past years, the Committee includes student members from the 41st and 42nd Batches this year. This event would not have been possible without their contribution.

Finally, I thank Prof. S. Srisatkunarajah, Vice Chancellor, University of Jaffna, and Prof. Krish Nirantharakumar, the Chief Guest, for honouring us with their presence at URS2022. I also thank the faculty members, consultants at the Teaching Hospital Jaffna, and the students of the 40th and 42nd Batches for their presence.

Dr. Ramya Kumar
Coordinator/URS2022

Chief Guest – Prof. Krishnarajah Nirantharakumar



We are honoured to have with us Prof. Krishnarajah Nirantharakumar (Krish) as our Chief Guest. He is the theme lead for health informatics and Professor in Health Data Science and Public Health at the Institute of Applied Health Research, University of Birmingham.

Krish's unique innovative programme of work, known as "Automated Clinical Epidemiology Studies (ACES)", has led to the University of Birmingham gaining an international reputation for being one of the few universities globally to have successfully researched and knowledge-engineered epidemiological study designs into computer-executable formats. The software, named DExtER (Data Extraction for Epidemiological Research) has resulted in more than 60 peer-reviewed original research publications. Building on the ACES platform, Krish has established six clinical specialty-specific "Real World Evidence" research groups, focusing on diabetes and endocrinology, gastroenterology, ophthalmology, nephrology, women's health, and mental health. These research groups have contributed to over 25 publications, many in high-impact general medical and specialty journals.

Krish's clinical research interests are focused on diabetes, endocrinology, and multimorbidity. He leads the clinical epidemiology group at the Centre for endocrinology, diabetes, and metabolism (CEDAM). He has published in high-impact journals such as BMJ, PLOS Medicine, Diabetes Care and Journal of Clinical Endocrinology and Metabolism.

Krish has been an expert panel member to the NICE guideline committees focusing on diabetes and has been invited to be part of the clinical advisory group for acute care at Diabetes UK in recognition of his outstanding track record on in-patient diabetes research. He also leads two multimorbidity consortiums, one focusing on multimorbidity in pregnancy and another focusing on using artificial intelligence.

Having completed his medical degree in Sri Lanka in 2002 in Colombo, Krish has a long history of collaboration with the Faculty of Medicine, University of Jaffna. At present, he is a co-investigator in the Global Atrial Fibrillation Research Project, an NIHR-funded collaboration between the University of Birmingham and partner institutions in Sri Lanka, Brazil, and China, that seeks to improve the management of atrial fibrillation in low-resource settings. The local arm of the project, based at the Jaffna Medical Faculty, is currently underway and is contributing tremendously to research training and capacity building in Jaffna. He is currently involved in establishing a transdisciplinary research centre at the Faculty of Medicine, University of Jaffna.

URS2022 Organizing Committee



Seated (Left to Right): Dr. Kumuthini Sanchayan, Dr. P.A.D. Coonghe, Prof. Gitanjali Sathiadas, Prof. R. Surenthirakumar (Dean), Dr. Ramya Kumar, Dr. Kausala Sithamparapillai, Dr. S. Suganja, Mr. N. Arumugathash (Deputy Registrar)

Standing (Left to Right): Ms. Thenuja Sivasubramaniam, Ms. Mathangi Navakumar, Mr. P. Vijenthiran, Mr. K. Kajan, Ms. Gopikha Sivakumar, Ms. Sashiwarni Saravanan, Mr. S. Thuvakaran, Mr. V. Gajenthiran, Mrs. Narthana Jesinthiran, Mr. H.M. Lalith Kumara, Ms. Ann Anobiya Alstan, Mrs. Thayalini Sukirthan, Mrs. Saranya Navaratnarajah, Mr. K. Bakeekaran, Mr. P. Gopalapillai

Absent: Dr. S. Vinojan, Mrs. Vithushany Sureskumar, Mrs. Sasrubi Sathees, Mr. Anjelo Joseph

Programme Overview

	Venue	Time	
Inauguration	Hoover Auditorium	08.30 - 10.00	
Tea break	Conference Hall	10.00 - 10.30	
Sessions	Sub theme 1- Chronic illness and care	Hoover Auditorium	10.30 - 12.30
	Sub theme 2 – Women , Children and Nutrition	Lecture Hall I	10.30 - 12.30
	Sub theme 3 – Education, the pandemic and beyond	Lecture Hall II	10.30 - 12.30
Lunch break	Conference Hall	12.30 - 14.30	
Awarding ceremony	Conference Hall	14.30 - 15.00	

URS2022 Organising Committee

Staff:

Dr. Ramya Kumar

Mr. S. Thuvakaran

Dr. Kumuthini Sanchayan

Mr. V. Gajenthiran

Dr. P.A.D. Coonghe

Mr. K. Kajan

Prof. Gitanjali Sathiadas

Mr. K. Bakeekaran

Dr. Kausala Sithamparapillai

Mr. P. Vijenthiran

Dr. S. Suganja

Mr. P. Gopalapillai

Dr. S. Vinojan

Students:

Mrs. Sasrubi Sathees

Ms. Gopikha Sivakumar

Mrs. Vithushany Sureskumar

Ms. Thenuja Sivasubramaniam

Mrs. Thayalini Sukirthan

Ms. Mathangi Navakumar

Mrs. Narthana Jesinthiran

Ms. Sashiwarni Saravanan

Mrs. Saranya Navaratnarajah

Mr. Anjelo Joseph

Ms. Ann Anobiya Alstan

Mr. H.M. Lalith Kumara

Reviewers of Abstracts

Faculty Reviewers

Dr. V. Ambalavanar
Dept. of Microbiology

Dr. K. Sanchayan
Dept. of Pharmacology

Dr. P.A.D. Coonghe
Dept. of Community & Family Medicine

Dr. S. Sanchayan
Medical Education Unit

Dr. R. Kumar
Dept. of Community & Family Medicine

Prof. M.G. Sathiadas
Dept. of Paediatrics

Prof. B. Kumarendran
Dept. of Community & Family Medicine

Dr. K. Sithamparapillai
Dept. of Physiology

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Dept. of Obstetrics & Gynaecology

Prof. S. Sivayokan
Dept. of Psychiatry

Dr. T. S. Navaratnaraja
Dept. of Pharmacology

Dr. S. Suganja,
Dept. of Community & Family
Medicine

Dr. N. Parameswaran
Dept. of Community & Family Medicine

Dr. N. Umasankar
Dept. of Paediatrics

Dr. S. Raguraman
Dept. of Obstetrics & Gynaecology

Dr. S. Vinojan
Dept. of Surgery

Dr. G. Rajeev
Dept. of Community & Family Medicine

External Reviewers

Dr. R. Gajanthan
Teaching Hospital Jaffna

Dr. B. Nisahan
Base Hospital Tellippalai

Dr. R. Kesavan
Department of Health, Northern
Province

Dr. S. Sivaganesh
Department of Health, Northern
Province

Dr. J. Mathanraj
Teaching Hospital Jaffna

Dr. T. Sooriyakumar
Teaching Hospital Jaffna

Chairpersons and Evaluators

Venue	Chairpersons	Evaluators
Hoover Auditorium <i>Subtheme 1</i> Chronic illness and care	Dr. Valarmathy. Ambalavanar, Senior Lecturer, Dept. of Microbiology, Faculty of Medicine Dr. S. Sanchayan, Lecturer, Medical Education Unit, Faculty of Medicine	Dr. S. Premakrishna, Consultant Anaesthetist, Teaching Hospital Jaffna Dr. V. Sujanitha, Senior Lecturer, Department of Medicine, Faculty of Medicine
Lecture Hall I <i>Subtheme 2</i> Women, children, and nutrition	Dr. Thiyahiny S. Navaratnaraja, Senior Lecturer, Dept. of Pharmacology, Faculty of Medicine Dr. Thurka Paramanathan, Lecturer, Dept. of Biochemistry, Faculty of Medicine	Dr. Janaki Arulmoli, Consultant Anaesthetist, Teaching Hospital Jaffna Dr. K. Guruparan, Senior Lecturer, Department of Obstetrics and Gynaecology, Faculty of Medicine
Lecture Hall I <i>Subtheme 3</i> Education, the pandemic, and beyond	Dr. A. Muruganathan, Senior Lecturer, Dept. of Parasitology, Faculty of Medicine Dr. S. Raguraman, Senior Lecturer, Dept. of Obstetrics & Gynaecology, Faculty of Medicine	Dr. Nilmini Hettiarachchi, Consultant Transfusion Physician, Teaching Hospital Jaffna Dr. Brammah R Thangarajah, Senior Lecturer, Department of Medicine, Faculty of Medicine

Abstracts of Oral Presentations

ID	Title and Authors	Estimated Time
Hoover Auditorium: Subtheme 1 – Chronic illness and care		
OP 01	Lung metastases in patients with head and neck cancers in northern Sri Lanka: A retrospective analysis <u>S. Sohana</u> , J. Athithya, N. Thulasihan, E.M.T.W.P.D.K Ekanayaka, K.H.S.N.R. Fernando, R. Kumar, C. Rajasooriyar	10.40 a.m.
OP 02	Patterns of lower extremity amputation and known risk factors among the lower limb amputees at Teaching Hospital Jaffna <u>M.N.F. Nuskiya</u> , M.S.M. Safras, M.J.F. Jisla, H.K.W.S Vijerathne, S. Anne Nirushala, P.A.D. Coonghe, S.T. Sarma	10.50 a.m.
OP 03	Antibiotic sensitivity pattern of uropathogens, among inpatients with a positive urine culture at Teaching Hospital Jaffna <u>K. Thilukshikka</u> , P.A.N. Anuruddha, M.V. Spelman Croos, R. Erandi, S. Pravina, R. Kumar, B. Balagobi, R. Rajanthi	11.00 a.m.
OP 04	Patients with hypothyroidism attending to the Endocrine Clinic in Teaching Hospital Jaffna: Patients' characteristics, adherence to management and associated factors <u>M.F.F. Fasna</u> , S. Vineeba, W.A. Shashika Lakshan, M.N.A. Azka, P.N. Rathnayake, M. Aravinthan, B. Kumarendran	11.10 a.m.
OP 05	Distribution and determinants of chronic kidney disease among patients treated in Teaching Hospital Jaffna S. Gowthaman, <u>M. Mayurika</u> , U. Aaqila, S. Navaraj, C.K. Miriyagalla, R. Kesavan, T. Peranantharajah	11.20 a.m.
OP 06	Control of diabetes mellitus and influence of socio demographic and economic factors and knowledge of diabetes on control among type 2 diabetes mellitus patients attending the diabetic clinic, Teaching Hospital Jaffna <u>K. Piranavan</u> , T. Brakaasini, B. Balajeevan, R.A.D. Lakmini, H. D. Jayasundara, R. Surenthirakumaran, M. Aravinthan	11.30 a.m.
OP 07	The association of socio demographic and health related factors with the pattern of tuberculosis among newly diagnosed patients at Chest Clinic Jaffna R.A.P.U. Jayawickrama, R. Thesavan, S. Bavashankary, <u>N. Sibisha</u> , W.I.J. Madhushanka, P.A.D. Coonghe, M. Athavan	11.40 a.m.
OP 08	Potential drug-drug interactions in the prescriptions of patients attending medical clinics of Teaching Hospital Jaffna <u>V. Kajaniya</u> , R. Henola, N.G.A.A. Gamage, R.G.H.A. Wijesiril, R.H.S. Fernando, R. Kumar, T.S. Navarataraja	11.50 a.m.

OP 09	The influence of health care related and socioeconomic factors on treatment adherence of end-stage renal disease patients at Teaching Hospital, Jaffna J.R.K. Fernando, S. Sivasenturan, <u>S. Umayal</u> , V. Vijayatharan, R. Surenthirakumaran, V. Bavanthan	12.00 p.m.
OP 10	The characteristics of patients with Diabetes Mellitus on first presentation to the Diabetic Center in Teaching Hospital Jaffna <u>K.M. Sirin</u> , S.K. Sanfa, N. R. Jahan, L.P.M. Imesh, P.A.D. Coonghe, M. Aravinthan	12.10 p.m.
Lecture Hall I: Subtheme 2 – Women, children and nutrition		
OP 11	The association between body mass index and academic performance in selected primary schools in the Jaffna Municipal Council Area A. Ragathipan, <u>R. Nirojan</u> , M. Thuvaraka, A.H.H. Zeenath, M.A.L. Piyumi P.A.D. Coonghe, S.T. Pieris	10.40 a.m.
OP 12	Discrepancy between ultrasound scan estimated foetal birth weight and real birth weight and the associated factors among newborns delivered in the Teaching Hospital Jaffna R.M.S. Anjana, <u>K. Thamiliny</u> , M. Niluja, C. Prahalathan, R.A.K.S. Rupasinghe, A. Sritharan, B. Kumarendran	10.50 a.m.
OP 13	Association of maternal characteristics with neonatal parameters among live births in obstetric wards of Teaching Hospital Jaffna. <u>G.A.S. Geethma</u> , K. Karunaruban, K. Arthika, U. Sahana, P.A.D. Coonghe, S.K. Arulmoli	11.00 a.m.
OP 14	Trends, associated socio demographic factors and outcomes of teenage pregnancy in selected MOH areas in Jaffna district <u>N.M. Husny</u> , M.G.L.D.B. Senarathne, M.N.F. Nusha, R.M.K.S. Subasinghe, M.F.F. Shifani, S. Sivaganesh, S. Sivakanthan	11.10 a.m.
OP 15	Knowledge and practices towards nutritional anaemia and associated factors among mothers of children admitted to paediatric wards in the Teaching Hospital, Jaffna <u>U.Thenuka</u> , K. Piranavan, K. Keerthanam, W.M.R. Fernando, M.R.F. Sahani, M.G. Sathiadas, B. Kumarendran,	11.20 a.m.
OP 16	Clinical profile of children with seizure disorders admitted to the Professorial Paediatric Unit, Teaching Hospital Jaffna <u>K. Dilan Amith</u> , D.D. Thisara, R. Nidhusha, A.H. Shafa-ath, W.F. Shahana, R. Kumar, M.G. Sathiadas	11.30 a.m.

OP 17	Knowledge, occurrence and associated factors of self-reported symptoms of polycystic ovary syndrome among female students of College of Nursing, Jaffna U. Jathushan, <u>C. Gowribalan</u> , P. Sharmila, K.A.K.M. Dayawansha, S.P.S.I. Chandranath, S. Raguraman, B. Kumarendran	11.40 a.m.
OP 18	Maternal perceptions on their children's screen time and its correlates among children attending child welfare clinics in the Jaffna Municipal Council MOH area S. Deemanthika, P. <u>Kaveenshan</u> , V. Pushpanjali, R. Puviluxshan, I. Prabodhani, U. Nirubaa, B. Kumarendran	11.50 a.m.
OP 19	Aetiology, level of anaemia, and associated factors among pregnant women with anaemia referred to the Haematology Unit, Teaching Hospital Jaffna: A retrospective analysis <u>R. Rahavi</u> , A. Nethmi, S. Vishnuja, , V. Thadshayini, J. Lahiru, R. Kumar, T. Sooriyakumar	12.00 p.m.
OP 20	Knowledge, attitude and practice of infant and young children feeding among public health midwives in Jaffna district D. Yoganya, M.S.M. Sabir, R.M.V. Chamodika, S. Venshahar, <u>R.M.T. Ratnayaka</u> , R. Kesavan, S. Nithyananda	12.10 p.m.
Lecture Hall II: Subtheme 3 – Education, the pandemic and beyond		
OP 21	Prevalence of obesity and overweight and associated sociodemographic and work related factors among the staff working at Divisional Secretariat Offices, Nallur and Jaffna <u>V. Akalya</u> , T. Nirosan, R.A.K.D.P. Ranaweera, M. Sivatharshan, W.K.M.S.U. Wickramasinghe, R. Surenthirakumaran, V. Murali	10.40 a.m.
OP 22	Adjustment difficulties, loneliness and associated factors among freshers at the Faculty of Medicine, University of Jaffna E.T.M. Abeywickrama ,M.A. Anoosa Banu, R.M.D.N. Karunarathna , A.G.O.D. Kumara, <u>K.Vivarjitha</u> , R. Kumar, S. Sivayokan	10.50 a.m.
OP 23	Adaptation to online- based learning during the COVID -19 pandemic crisis and its associated factors among medical students, Faculty of Medicine, University of Jaffna J.A.C.S. Jayalath, K. Arany, <u>M.H.N. Rahil</u> , W.A.D.S. Senavirathna, M. Sumiththa, B. Kumarendran, T.S. Navaratinaraja	11.00 a.m.
OP 24	Motivation towards learning and associated factors among medical students of the Faculty of Medicine, University of Jaffna D.M.N. Karavita, B. Abirami, <u>T. Elamaran</u> , S.I. Dissanayake, J. Abirami, R. Surenthirakumaran, M.G. Sathiadas	11.10 a.m.

OP 25	Prevalence of overweight and obesity, associated factors and weight reduction methods adopted by medical students of Faculty of medicine, University of Jaffna H.K.P.S. Anuththara, K. Thanusiya, S. Vejayashanth, , H.W.R.S. Gunathilake, <u>R. Bhanuka</u> , V. Murali, S. Kumaran	11.20 a.m.
OP 26	Difficulties faced in participating in online interactive sessions and factors influencing participation medical undergraduates of the University of Jaffna <u>S. Sathiyapradhap</u> , J.K.W.H.K. Karunathilaka, M.F. Zujani, S.M. Sathir A.M. D.T. Adikari, R. Surenthirakumaran, S. Kumaran	11.30 a.m.
OP 27	The institutional mortality rate and pattern of mortality among patients admitted to Jaffna Teaching Hospital H.M. Najvi , M.J.M. Javeeth , A.C. Samaranayake , <u>N.M. Mushahitha</u> , V.G.S.S. Gamage, P.A.D Coonghe, R. Gajanthan	11.40 a.m.
OP 28	Knowledge of substance use and the association of socio-economic factors among Advanced Level students in Jaffna Hindu College and Vembady Girls' High School R. Sivalaxan, <u>D.M.K.G.S.M. Dissanayaka</u> , S.S.M. Seneviratnae, J. Nitharsana, K. Thanusha, R. Surenthirakumaran, S. Sivakanthan, S. Sivathas	11.50 a.m.
OP 29	Clinical and epidemiological features of typhus fever notified by Teaching Hospital Jaffna to selected MOH areas in Jaffna District S. Divaniga, N. Jeevithan, K.U.G. K. Gayamal, B.G. Thilinka, <u>T. Charanya</u> , S. Sivaganesh, M. Aravinthan	12.00 p.m.
OP 30	Changes in academic performance of 4 th year undergraduates, Faculty of Medicine, University of Jaffna during COVID - 19 and associated factors <u>P. Kopithah</u> , J. Aaruran, K. Yalini, T.M.S. Kusumaratne, W.M.S. Shachintha, V. Murali, S. Kumaran, A. Nithlavarnan	12.10 p.m.

Lung metastases in patients with head and neck cancers in northern Sri Lanka: A retrospective analysis

Sohana S¹, Athithya J¹, Thulasihan N¹, Ekanayaka EMTWPK¹, Fernando KHSNR¹, Kumar R², Rajasooriyar C^{3,4}

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³*Tellipalai Trail Cancer Hospital*

⁴*Teaching Hospital Jaffna*

Background and Objective: Head and neck cancer (HNC) is the commonest cancer in Sri Lanka. Prognosis is greatly influenced by the stage at diagnosis. CT scanning is a sensitive imaging modality to diagnose pulmonary metastasis—the commonest site of distant metastases—and is routinely performed at diagnosis in patients with HNC. The objective of this study was to determine the proportion of patients with lung metastases on staging CT and its association with patient- and tumour-related prognostic factors in patients with HNC referred to Tellipalai Trail Cancer Hospital during an 8-year period (01/01/2013 to 31/12/2020).

Methods: This institutional-based analytical cross-sectional study was carried out from September to December 2021. Data were extracted from records of all patients with HNC, with a staging CT of the chest, referred to Tellipalai Trail Cancer Hospital during the 8-year period. Frequencies, percentages, and Fisher’s exact test was used in the analysis with SPSS-26. The critical level was set at 0.05.

Results: Data were extracted from the records of 211 patients with HNC. Among them, 125 (59.2%) were ≥ 60 years and 144 (68.2%) were male. The most common site of HNC was the oral cavity (n=86, 40.8%), followed by the pharynx (n=75, 35.5%), larynx (n=45, 21.3%), and salivary glands (n=5, 2.4%). Only 9 (4.3%) patients had lung metastases at presentation; among them, 5 had the primary tumour in the pharynx, 2 in the larynx, and 1 each in the oral cavity and salivary glands. Among them, the commonest histological type and grade were squamous cell carcinoma (n=8) and grade 2 (n=3); lung metastases showed more or less equal distribution across stages. Most patients with metastases were males (n=7), alcohol consumers (n=7), and smokers (n=6). However, there was no association between the presence of lung metastasis and patient- and tumor-related prognostic factors.

Conclusions: Lung metastasis at diagnosis among patients with HNC (4.3%) is much lower in our study setting compared to studies from other parts of the world, including New York (37%), Taiwan (20%), and Holland (11.8%). Further research is needed to explore the utility of routine CT chest for patients with HNC in Sri Lanka.

Keywords: Head and neck cancer, Pulmonary metastasis, Staging, Computerized tomography

Patterns of lower extremity amputation and known risk factors among the lower limb amputees at Teaching Hospital Jaffna

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Background and Objective: Amputation refers to the surgical removal of a limb or part of a limb. The incidence of lower limb amputation is rising globally. This study describes the pattern of lower extremity amputation and known risk factors among patients who underwent lower limb amputations at Teaching Hospital Jaffna (THJ) during a 4-year period (1st January 2017 to 31st December 2020).

Methods: This is a hospital-based descriptive cross-sectional study based on secondary data. Data were extracted from the BHTs of 384 amputees. Descriptive and inferential statistics were performed using SPSS software. The relationships between variables were determined using the chi-square test.

Results: In total, 384 cases of major lower limb amputations were analysed; 134 (34.9%) patients in 2017, 72 (18.8%) in 2018, 67 (17.4%) in 2019, and 111 (28.9%) in 2020, had undergone lower limb amputation. Most amputees were in their sixth decade of life. Female to male ratio was 1:2.6. Indications for amputation were: 60.7% (n=233) chronic wound, 21.1% (n=81) after trauma, 12.5% (n=48) due to infection, 1.6% (n=6) due to tumours and 4.2% (n=16) due to other causes. Toe (66.4%, n=255), below the knee (24.0%, n=92), ankle (8.1%, n=31), and above the knee (1.3%, n=5) were the four types of amputations identified. Right-sided (50%, n=192), left-sided (47.9%, n=184), and bilateral amputations (1.8%, n=7) were identified. Diabetes mellitus (70.8%, n=272), hypertension (35.7%, n=137), chronic kidney disease (10.7%, n=41), congestive cardiac failure (6.3%, n=24), congenital vascular abnormalities 1% (n=4) and others (25.8%, n=99) were documented; 7% (n=27) were smokers and 5.2% (n=20) consumed alcohol; 15.4% (n=59) had a past history of amputation. Only one death was documented in the BHTs within the 4-year period. There was a significant association between age group ($p < 0.001$), sex ($p = 0.025$), comorbidities ($p \leq 0.05$), and indication.

Conclusions: The highest number of amputations was undertaken in 2017. The majority were toe amputations due to chronic wound in patients with diabetes mellitus. Screening measures should be undertaken to identify and educate risk groups regarding glycaemic control and foot hygiene.

Keywords: Lower limb amputation, Risk factors, Comorbidities

Antibiotic sensitivity pattern of uropathogens among inpatients with a positive urine culture at Teaching Hospital Jaffna

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Background and Objective: Inappropriate use of antibiotics has led to the emergence of antimicrobial resistance. This study describes the antibiotic sensitivity patterns of uropathogens and the association of age and sex with uropathogen isolated in adult inpatients with a positive urine culture at Teaching Hospital Jaffna.

Methods: All positive urine culture reports of adult inpatients (>18years) investigated at the Microbiological Unit of Teaching Hospital Jaffna during a 3-month period (October 1st to December 31st 2020) were analysed retrospectively. Data were extracted manually from the culture reports and then analysed with SPSS v27. Chi-Square test was used to assess the association between age, sex, and uropathogen. The critical value was set at 0.05.

Results: Data were extracted from 426 culture reports. The mean age was 53 years (SD 19.9); almost half (47.2%, n=201) of the reports were of patients ≥ 60 years, and the majority were female (60.1%, n=256). Antibiotics had been prescribed prior to culture to 183 (43%) patients, most commonly co-amoxiclav (24%, n=44). Coliforms were the commonest isolate (63.7%, n=270), followed by *Candida* spp (18.9%), *Pseudomonas* (8.2%), *Acinetobacter* (4.2%), *Enterococcus* (4.2%) and *Staphylococcus aureus* (0.7%). Age group (p=0.042) and gender (p=0.03) were significantly associated with the type of uropathogen. A large proportion of Coliform isolates showed resistance to several commonly prescribed antibiotics, including ampicillin (91%), ceftazidime (66.6%), ceftriaxone (60%), amoxicillin (51.9%), cefuroxime (46.1%), norfloxacin (43.6%), cotrimoxazole (41.5%) and ciprofloxacin (41.5%), while a substantial proportion was also resistant to nitrofurantoin (23.7%), gentamicin (22.4%), amikacin (16.9%) and meropenem (12.4%). A large proportion of *Pseudomonas* isolates showed resistance to aztreonam (66.6%) and cotrimoxazole (50%), while a substantial proportion was also resistant to meropenem (33.3%), ciprofloxacin (32.4%), norfloxacin (32.3%), gentamicin (30.3%), amikacin (30%) and ceftazidime (22.2%).

Conclusions: Antibiotic resistance is a worrying concern at Teaching Hospital Jaffna. A sizeable proportion of patients with urinary tract infections receive antibiotics prior to culture. Urine should be sent for culture before commencing antibiotics to ensure that treatment is guided by sensitivity patterns. Institutional policies are needed to guide prescription and monitor resistance to commonly prescribed antibiotics.

Keywords: Uropathogens, Antibiotic sensitivity pattern, Empirical antibiotic therapy, Coliforms

Patients with hypothyroidism attending the Endocrine Clinic in Teaching Hospital Jaffna: Patient characteristics, adherence to management and associated factors

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Background and Objective: Patient characteristics and adherence to management are major contributors to better clinical outcomes. The objective of this study was to describe the patients with hypothyroidism attending the Endocrine Clinic in Teaching Hospital Jaffna.

Methods: This hospital-based cross-sectional analytical study was conducted among 401 patients with hypothyroidism attending the Endocrine Clinic, Teaching Hospital Jaffna, using an interviewer-administered, face-validated questionnaire in the KoboCollect app. Questions regarding patient characteristics, knowledge on hypothyroidism and adherence to management were included in the questionnaire. All patients above 18 years who attended the clinic were recruited. Data were analysed using SPSS; independent sample t-test and correlation coefficient were used for statistical analysis with a 5% critical level.

Results: A greater percentage of participants were females (80.8%), married (69.1%), Hindus (82%), completed GCE O/L or A/L (65.6%), housewives (39.4%) or unemployed (18%) with a monthly income between Rs. 21,000 and 40,000 (46.6%) and diagnosed with hypothyroidism for 1 and 5 years (67.8%). Percentages of participants who correctly understood the meaning of the thyroid gland and the concept of hypothyroidism were 27.4% and 15.7%, respectively. Knowledge on hypothyroidism was associated with religion ($p=0.002$) and duration of diagnosis ($p=0.002$) and there was no evidence for association with sex, age, marital status, family income, educational status, and employment status. All participants knew the correct method of taking thyroxine tablets. Adherence to management was associated with sex ($p=0.038$) and there was no evidence for association with age, religion, marital status, family income, educational status, employment status, and duration of diagnosis. Knowledge on hypothyroidism and its management was positively correlated with adherence to management and it was statistically significant ($r=0.141$, $p=0.005$).

Conclusions: Knowledge on hypothyroidism was associated with religion and duration of diagnosis. Adherence to management was associated with sex. Religion, duration of diagnosis, and sex could be considered in improving the knowledge and adherence to management.

Keywords: Hypothyroidism, Knowledge, Patient characteristics, Adherence to management

Distribution and determinants of chronic kidney disease among patients treated in Teaching Hospital Jaffna

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Background and Objective: Chronic kidney disease (CKD) is a major public health problem in Sri Lanka. CKD has increased in the Jaffna district over the past five years. This study describes the aetiologies of CKD and the presence of known risk factors among patients who were treated in Teaching Hospital Jaffna in 2020.

Methods: This was a descriptive cross-sectional study among patients who were treated for CKD in the Teaching Hospital Jaffna in 2020. A checklist was used to derive clinical data from BHTs; details concerning the patient's residence, including the surrounding environment within a 1 km radius, were obtained from a geographic information system (GIS). Data were analysed in SPSS software. Percentages and frequencies were used to summarise the data.

Results: In total, 304 patients were treated for CKD at Teaching Hospital Jaffna in 2020. Most patients were between 40-60 years (75%), males (68.4%) and of Tamil ethnicity (91.8%). With respect to aetiology, 42.8% of CKD were related to diabetic nephropathy, 3.3% were CKD of unknown origin (CKDu) and 53.9% were CKD due to other causes. Patients between 40 to 60 years of age (n=120) were predominantly affected by CKD. Most with renal failure who were not on dialysis (n=62) had diabetic nephropathy, while those who had dialysis or renal transplant (n=100) had nephropathy that was not due to diabetes or CKDu. While assessing the possible risk factors by using GIS, we found that the majority had no paddy field or vegetable garden and no major water reservoirs within 1km of their residence.

Conclusions: CKD is comparatively high among patients between 40 to 60 years of age. Males were predominantly affected by CKD irrespective of aetiology, which may be due to behavioural and occupational factors. Aetiological factors should be identified and eliminated to increase the life expectancy and quality of life of CKD patients.

Keywords: CKD, Risk factors, Hypertension, Diabetic nephropathy

Control of diabetes mellitus and association of socio-demographic factors and knowledge of diabetes among type 2 diabetes mellitus patients attending the Diabetic Centre, Teaching Hospital Jaffna

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Background and Objective: Diabetes mellitus has become a significant and growing contributor to morbidity and mortality worldwide. Knowledge on diabetes and various patient characteristics determine the level of control of diabetes mellitus. This study aimed to describe the level of control of diabetes and its associated factors in adults with type 2 diabetes mellitus attending the Diabetic Centre at Teaching Hospital Jaffna.

Methods: It was a descriptive cross-sectional hospital-based study conducted among 284 adults with type 2 diabetes mellitus. Participants were selected by systematic random sampling. An interviewer-administered questionnaire was used to collect data. Data extraction sheets were used to extract HbA1c values. Raw data were analysed and processed using SPSS. Ethics approval was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna.

Results: The majority were females (57.4%) with a greater proportion (47.9%) in the 51 to 75 years age group. Just over a three-quarter (76.4%) were from nuclear families, 77.1% were married, 30.6% had studied up to A/L, 56% were unemployed and 33.5% had a family income between LKR 21,000 and 40,000. In the sample, 47.2% had poorly controlled diabetes (HbA1c >7%) and 52.5% had a knowledge score less than the cut-off value. Control of diabetes was associated with sex (p=0.015), age (p<0.001), marital status (p=0.021), educational qualification (p<0.001), family income (p<0.001), employment status (p<0.001), and knowledge of diabetes (p<0.001). Individuals over 75 years of age, females, and those with no schooling were more likely to have poorly controlled diabetes.

Conclusions: Just under half the sample had poorly controlled diabetes and over half had poor knowledge on diabetes. Age, sex, marital status, educational qualifications, family income, employment status, and understanding of diabetes may influence the control of diabetes. More studies exploring the factors associated with glycaemic control among individuals with type 2 diabetes mellitus are much needed in Sri Lanka.

Keywords: Type 2 diabetes mellitus, Glycaemic control, Knowledge on diabetes

The association of sociodemographic and health-related factors with the pattern of tuberculosis among newly diagnosed patients at Chest Clinic Jaffna

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Background and Objective: In Sri Lanka annually 8,000 patients with tuberculosis disease are detected. This figure is 200-250 for the Jaffna district. The pattern of tuberculosis refers to the distribution of pulmonary and extra pulmonary tuberculosis according to various sociodemographic and health-related factors. This study aimed to assess the influence of sociodemographic and health-related factors on the pattern of tuberculosis among newly diagnosed patients with tuberculosis at the District Chest Clinic Jaffna during 2016 - 2020.

Methods: A descriptive cross-sectional study was performed based on secondary data available at the Chest Clinic Jaffna. Frequencies and percentages were used to describe the factors. The association between sociodemographic and health-related factors with the pattern of tuberculosis was assessed using the chi-square test.

Results: In the sample of 1003 newly diagnosed patients, the mean age was 47.9 years and 36.7% were below 40 years. Among them, 65.4% had pulmonary tuberculosis and 34.6% had extra pulmonary tuberculosis (EPTB). Tuberculosis lymphadenitis was the leading cause of EPTB at 24.9%. Low education and unemployment were identified as risk factors. Over half (52.2%) had studied only up to O/L. Diabetes was identified as a risk factor in 20% of the sample.

Conclusions: The pattern of tuberculosis in the Jaffna district is closely linked to age, gender, education level, BMI, smoking status, and comorbidities. The prevalence was high in MOH areas Jaffna, Chavakachcheri, and Kopay. This population has to be targeted for health promotion activities. Screening for diabetes, malnutrition, and smoking is recommended at the time of diagnosis of tuberculosis along with referral for appropriate remedial action.

Keywords: Pattern of tuberculosis, Jaffna, Diabetes, Extra pulmonary tuberculosis, Health factors

Potential drug-drug interactions in the prescriptions of patients attending medical clinics of Teaching Hospital Jaffna

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Background and Objective: Drug-drug interactions (DDIs) refer to the effects one drug may have on another when administered together. The prevalence of potential DDIs (pDDIs) in outpatient prescriptions reported in the literature varies from 22% to 76%. This study evaluated pDDIs and their association with age, sex, and the number of drugs in prescriptions of patients attending medical clinics of Teaching Hospital Jaffna (THJ).

Methods: This institution-based descriptive cross-sectional study was carried out on the latest prescriptions of patients treated with at least two drugs at medical clinics of THJ. Data were collected from 150 prescriptions from each of the four medical units, using systematic sampling (n=600). British National Formulary (BNF 80) was used to identify pharmacokinetic and pharmacodynamic pDDIs; pharmacokinetic interactions were classified according to severity. The association between pDDI and age group and sex were analysed using chi-square test; p<0.05 was considered significant.

Results: Of 600 prescriptions, 327 (54.5%) belonged to females. The mean age was 57.5 years (SD 14.6); 44% (n=276) were in the >60 years age group. In total, 152 pDDIs were identified in 86 (14%) prescriptions; 50 (58.1%) prescriptions had one, 14 (16.3%) had two, 16 (18.6%) had three, 4 (4.7%) had four, and 2 (2.3%) had five pDDI. Among the 152 pDDIs identified, 49.3% (n=75) were pharmacokinetic and 50.7% (n=77) were pharmacodynamic interactions. Among the pharmacokinetic, 53.3% (n=40) were moderate and 46.7% (n=35) severe; no mild interactions were identified. Within the severe category, the atorvastatin and diltiazem combination (n=12) was the most frequent drug pair. Among pharmacodynamic interactions, hypotension was the most commonly observed pDDI (n=46); the most common combination causing hypotension was losartan potassium and hydrochlorothiazide (n=15). The presence of pDDI was associated with older age (p=0.01) and the number of drugs prescribed (p<0.01).

Conclusions: The prevalence of pDDI among patients treated at medical clinics of THJ (14%) is relatively low. Advancing age and polypharmacy may increase the risk of DDIs. Closer monitoring of high-risk patients could prevent or reduce adverse outcomes of DDIs.

Keywords: Potential drug-drug interactions, Polypharmacy, Teaching Hospital Jaffna

Subtheme 1: Chronic illness and care

OP9

The influence of health care related and socioeconomic factors on treatment adherence of end-stage renal disease patients at Teaching Hospital Jaffna

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Background and Objective: End-stage renal disease is a major health concern in Sri Lanka. The outcome of management is low compared to that of developed countries. An important reason may be poor adherence to treatment. This study aimed to assess the treatment adherence of patients with end-stage renal disease at Teaching Hospital Jaffna and the influence of socio-economic and health service-related factors on treatment adherence.

Methods: This descriptive cross-sectional study was carried out among 102 patients with end-stage renal disease attending haemodialysis at Teaching Hospital Jaffna. An interviewer-administered questionnaire developed on the KoBo collect app was used to collect data. Treatment adherence was measured through a composite scoring system with consideration to hospital attendance, drug compliance, diet, fluid modification, and health interest. Data analysis was done using SPSS software. Ethics approval was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna.

Results: The majority of the patients fell in the age category of 18-50 years and most of them were males (66.7%). In the sample, 55.9% of patients had satisfactory treatment adherence. Chi-square test showed a significant association between treatment adherence and patient satisfaction with doctor's service ($p=0.002$), distance from hospital ($p=0.012$), and dialysis outcome ($p=0.002$). Socio-economic factors such as monthly income ($p=0.048$) and educational qualification ($p=0.002$) were also significantly associated with treatment adherence.

Conclusions: Over half (55.9%) of the sample showed satisfactory adherence to treatment for end-stage renal disease at Teaching Hospital Jaffna. There was a significant relationship between some socio-economic and health service-related factors and treatment adherence. More research on renal replacement therapy is needed to bring this major health issue prevailing in the country into the limelight. We recommend covering other aspects that are known to influence treatment adherence like family support and also including other satellite units in Jaffna.

Keywords: End-stage renal disease, Jaffna, Haemodialysis, Health care, Treatment adherence

Characteristics of patients with diabetes mellitus on first presentation to the Diabetic Center in Teaching Hospital Jaffna

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Background and Objective: Diabetes mellitus is a multifactorial disease. Its risk factors include age, family history, history of gestational diabetes, high body mass index (BMI), unhealthy diet, physical inactivity, smoking, alcohol, and stress. Much of the burden of diabetes is caused by its complications, namely retinopathy, nephropathy, neuropathy, myocardial infarction, peripheral vascular disease, and cerebral vascular accidents. Hypertension and dyslipidemia are comorbid conditions related to diabetes mellitus. This study describes the prevalence of risk factors, complications, and glycemic control (HbA1c) among patients with diabetes mellitus who present for the first time to the Diabetic Center, Teaching Hospital Jaffna, during a six-month period in 2020.

Methods: This is a hospital-based descriptive cross-sectional study. Data were extracted from the computerized database available at the Diabetic Center, Teaching Hospital Jaffna. Data were analyzed using SPSS software. Numerical variables were summarized into mean or median. The prevalence of risk factors and complications were summarized as frequencies and percentages.

Results: Out of 500 patients, over half were males (52.6%), between 51 and 75 years of age (55.6%), and within the obese range (58.6%). With respect to comorbidities, 42.6% had hypertension and 39.2% had dyslipidemia on their first visit. In the sample, 8.8% had a history of myocardial infarction, 8.2% had neuropathy and nephropathy, 3.2% had retinopathy, 1.6% had cerebrovascular accidents, and 0.2% had peripheral vascular diseases. Among males and females, 39.9% and 19.4% had complications, respectively. With respect to glycaemic control, 14.2% had good control (HbA1c ≤6.5%) and 85.8% had unsatisfactory or poor control (HbA1c >6.5%).

Conclusions: More than half the patients who presented for the first time to the Diabetic Centre, Teaching Hospital Jaffna were found to be within the obesity range. The most prevalent complications were myocardial infarction, neuropathy, and nephropathy, with males being more affected than females. The majority had poorly controlled diabetes mellitus on presentation. Early initiation of screening may help to prevent complications.

Keywords: Diabetes mellitus, Complications, Glycaemic control, Risk factors

The association between body mass index and academic performance in selected primary schools in the Jaffna Municipal Council Area

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Background and Objective: Academic performance is shaped by numerous health and social factors. Nutrition is an important determinant of academic performance. The aim of this study is to assess the association between body mass index (BMI) and academic performance in primary schools participating in the nutritional programme implemented in the Jaffna Municipal Council Area.

Methods: This is a retrospective study on academic performance in selected primary schools in the Jaffna Municipal Council Area. Data on BMI and marks of three term tests in Tamil language, mathematics, and environmental studies were collected from the Provincial Department of Education, Northern Province, and entered into Kobo Collect and analyzed with SPSS version 21 software. The chi-square test and Fisher's exact test were used with the critical value at 0.05. We categorized BMI as underweight, normal, overweight/obese. The academic performance of students categorized based on marks as good, average and poor (≥ 70 – Good, 70-50 – Average, < 50 – Poor).

Results: Data on 2063 primary school children were collected; only 1776 were included in the analysis owing to missing data. In the sample, there was a higher proportion of females (53%) than males (47%). Most children had a normal BMI (63.7%) and among the rest, 17.8% were underweight, 12.2% were overweight and 6.3% were obese. There was a statistically significant association between BMI and performance in Tamil language and mathematics. Tamil language marks among Grade 3 ($p=0.035$) and Grade 4 ($p=0.011$) female students, as well as Grade 5 male students ($p=0.05$), were associated with the BMI category. Mathematics marks of Grade 5 female students were associated with the BMI category ($p=0.028$). The results suggest that children who had BMI in the underweight range did not perform as well as students in the normal and overweight/obese BMI categories.

Conclusions: Underweight students did not perform as well as students who had normal or overweight/obese BMI in Tamil language and mathematics term tests. As there may be many confounding factors distorting the relationship between BMI and academic performance, a multivariate analysis will be useful. Necessary steps need to be taken by the respective authorities to improve the nutritional status of school children.

Keywords: BMI, Academic performance, Nutritional status, Primary schools

Discrepancy between ultrasound scan estimated foetal birth weight and real birth weight and the associated factors among newborns delivered in the Teaching Hospital Jaffna

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Background and Objective: The accuracy of ultrasound scan (USS) estimated foetal weight is associated with several factors. The objective of this study was to determine the discrepancy between USS estimated foetal birth weight and real birth weight and the associated factors among newborns delivered in the Teaching Hospital Jaffna.

Methods: This cross-sectional analytical study was carried out from August 2020 to January 2022 among 318 mother and baby pairs delivered within the 37th to 41st week of gestation at Teaching Hospital Jaffna using data extraction from the Bed Head Tickets (BHT) and analyzed using SPSS. The characteristics of participants were summarized using frequency and percentage for categorical variables and mean (SD) or median (IQR) for numerical variables. Statistical significance was assessed at a 95% confidence level.

Results: Coverage of the intended sample size was 100%. Maternal characteristics included gestational diabetes (GDM 11.3%), pregnancy-induced hypertension (PIH 7.5%), hypothyroidism (4.1%), normal vaginal delivery (64.2%) and caesarean section (33%). Numerical characteristics [median (IQR)] included age at registration [29 (25-33)] years, POA at last USS [273 (264-280)] and POA at parturition [274 (265-281)] days. The majority were male babies (55.3%). The mean of the last USS estimated foetal weight was 3012g (SD=428) while mean of birth weight was 2987g (SD=466). The discrepancy between the USS estimated foetal weight and birth weight was symmetrically distributed and the mean was 24.5g (SD=318g, 95% CI=-11 to 60g). Sex of the infant (t=-2, df=316, p=0.046), PIH (t=-3.5, df=316, p=0.001) and GDM (t=2.2, df=316, p=0.03) were associated with the discrepancy. POA when the last USS was taken, POA at parturition and the previous number of parities had positive correlations, while maternal age had a negative correlation.

Conclusions: Mean discrepancy was 24.5g (SD=318g, 95% CI=-11 to 60g). Sex of infant, GDM, and PIH were associated with the discrepancy between USS estimated foetal weight and birth weight. A large sample study could provide a more precise estimate for this population.

Keywords: Ultrasound scan, Pregnancy induced hypertension, Gestational diabetes mellitus, Period of amenorrhoea

Association of maternal characteristics with neonatal parameters among live births in obstetric wards of Teaching Hospital Jaffna

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Background and Objective: Maternal factors influence neonatal health and development. This study aims to describe maternal characteristics and neonatal parameters and determine the association between them.

Methods: This is a hospital-based retrospective descriptive cross-sectional study conducted on 660 live births that occurred in Teaching Hospital Jaffna (THJ) from July 2021 to January 2022. Data extraction forms were used to extract data on maternal characteristics and neonatal parameters. Frequency statistics and bivariate analysis were used to analyse data.

Results: In the sample, 10.4% (n=68) and 14.8% (n=98) of mothers were teenagers and mothers of advanced maternal age, respectively. A third (33%, n=215) had body mass index (BMI) higher than the normal range. Prevalence of gestational diabetes mellitus (GDM) was 10.8% (n=71), pregnancy-induced hypertension (PIH) 4.4% (n=29), maternal anaemia 9.2% (n=61), hypothyroidism 3.3% (n=22) and asthma 2.4%. Among babies, 20.5% (n=135) were of low birth weight (LBW), 0.3% had high birth weight and others were of normal birth weight (79.2%, n=523). With respect to length, 12.2% (n=80) had low birth length, while 82.2% (n=542) and 5.6% (n=37) were of normal and high birth length, respectively. In addition, 30.3% (n=200) babies were born with low occipital frontal circumference (OFC), while 69.1% (n=456) and 0.6% (n=4) were born with normal and high OFC, respectively. There was a significant association between birth weight ($p < 0.001$), birth length ($p = 0.002$), OFC ($p = 0.001$) and maternal BMI. There was a significant association between OFC ($p < 0.001$), birth weight ($p < 0.001$), birth length ($p = 0.002$) and maternal PIH. OFC and maternal anaemia also had a significant association ($p = 0.047$).

Conclusions: This study revealed that 1/3 of the mothers had high BMI, 1/5 of the babies had LBW and 1/3 had low OFC at THJ. There was a significant association between pre-pregnancy BMI and all neonatal parameters. Birth weight and birth length were significantly related to maternal PIH. OFC was significantly associated with anaemia and PIH. Maternal age and other maternal morbidities did not have an association with neonatal parameters.

Keywords: Neonatal parameters, Maternal factors, Jaffna, Maternal diseases, Low birth weight

Trends, associated socio-demographic factors, and outcomes of teenage pregnancy in selected MOH areas in Jaffna District

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Background and Objective: Teenage pregnancy is an emerging global threat and a contributor to adverse pregnancy outcomes and is known to be linked with socio-economic status. This study describes trends in teenage pregnancy and the association of sociodemographic factors with outcomes of teenage pregnancy in selected MOH areas of the Jaffna district during a 5-year period.

Methods: This was a descriptive cross-sectional study. Data on 347 teenage pregnancies that occurred between January 2016 and December 2020 were extracted from the eligible couple register (H 526) and pregnant mothers register (H 513) in three MOH areas (Jaffna, Nallur, Sandilipay) in the Jaffna district.

Results: Among the 347 teenage pregnancies 49, 72, 79, 81, and 99 teenage pregnancies occurred in 2016, 2017, 2018, 2019, and 2020, respectively. The breakdown was as follows: 47.6% were 19 years, 33.4% were 18 years, 15.3% were 17 years, 2.9% were 16 years, and 0.9% were 15 years of age. The majority (54.2%) had studied up to GCE O/L. Just over (50.1%) were in the abnormal BMI range. Less than half (47.0%) of the teen mothers had taken folic acid before pregnancy and were immunized against rubella. In the sample, 19.5% were documented as using a contraceptive method, and pre-pregnancy screening was done in 39.8%. With respect to delivery, 63.7% underwent normal vaginal delivery, while 15% underwent caesarean section. A small proportion resulted in low birth weight (14.7%), pre-term birth (5.2%), abortion (1.4%), congenital abnormalities (0.9%), and stillbirth (0.9%). There was no evidence of a statistically significant association between the age of mothers and contraception use, pre-pregnancy folic acid use, pre-pregnancy screening, rubella immunization status, mode of delivery, preterm birth, low birth weight, congenital abnormalities, stillbirth, or abortion.

Conclusions: This study shows an increasing trend in teenage pregnancies. Interventions are needed to prevent teenage pregnancies, including community-based research.

Keywords: Adolescent pregnancy, Socio-demographic factors, Pregnancy outcomes, Public health midwife

Knowledge and practices towards nutritional anaemia and associated factors among mothers of children admitted to paediatric wards in the Teaching Hospital Jaffna

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Background and Objective: As anaemia is a common issue among children, studying maternal knowledge and practices on nutritional anaemia would be useful for prevention. The objective of this study was to describe the knowledge and practices towards nutritional anaemia and to determine the associated factors among mothers of children admitted to the paediatric wards at the Teaching Hospital Jaffna.

Methods: This institution-based cross-sectional analytical study was conducted among 427 mothers of children admitted to paediatric wards of Teaching Hospital Jaffna from August 2020 to January 2022 using an interviewer-administered questionnaire in the KoBoCollect app and analyzed using SPSS.

Results: The response rate was 100%. Mean age of participants was 33 (SD 6) years and majority were married (88%), Tamils (98.4%), housewives (75.6%), living in nuclear families (72.4%), studied up to GCE A/L or below (87.4%), with reported monthly incomes less than Rs. 30,000. A little over half the sample (55.5%, n=237) had heard about nutritional anaemia. Regarding practices, the majority (84.8%) followed the proper cooking method of green leaves. Even though most (86.9%) named iron deficiency as a cause for nutritional anaemia, only 8% took green leaves twice a day and 44.7% took green leaves more than 4 times a week. While 32.1% of people had green leaves 2-4 days per week, 11.7% did so once per week and 3.5% had them less than once per week. Knowledge was associated with average monthly family income ($p < 0.001$, $X^2 = 50.08$, $df = 1$), educational level of the mother ($p < 0.001$, $X^2 = 34.89$, $df = 1$), and occupation status ($p < 0.001$, $X^2 = 26.31$, $df = 1$). Practices regarding nutritional anaemia were associated with educational level of mothers ($p < 0.001$, $X^2 = 25.41$, $df = 1$), occupation status ($p < 0.001$, $X^2 = 17.17$, $df = 1$) and type of family ($p < 0.001$, $X^2 = 12.731$, $df = 1$).

Conclusions: A little over half the women in the sample had heard about nutritional anaemia. Knowledge was associated with the average monthly family income, educational level of the mother, and occupation status. Practices regarding nutritional anaemia were associated with educational level of mothers, occupation status, and type of family. Raising awareness among the public regarding nutritional anaemia is recommended.

Keywords: Nutritional anaemia, Knowledge, Practices

Clinical profile of children with seizure disorders admitted to the Professorial Paediatric Unit, Teaching Hospital Jaffna.

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Background and Objective: Seizure is a common neurological disorder accounting for 3 to 5% of paediatric hospital admissions in Sri Lanka, with significant mortality and morbidity. There are limited studies on childhood seizure disorders in Sri Lanka. This study describes the clinical profile and association of demographic, perinatal and other factors with the aetiology and long-term clinical outcome of seizure disorders among children admitted for the first time with seizures from January 1st 2014 to December 31st 2020 to the Paediatric Professorial Unit of Teaching Hospital Jaffna.

Methods: This was an institution-based cross-sectional study on secondary data extracted from 605 clinical records of children admitted following seizure between January 1st 2014 and December 31st 2020. Patient characteristics were summarized as frequencies and percentages. Numerical variables were summarized into mean or median. Associations between demographic and perinatal factors with aetiology and clinical outcome were assessed using chi-square test (critical level 0.05).

Results: Among 605 children with seizure disorders, 55.5% were males. Mean age was 2.05 (SD 0.8) years. Among them, 78% were diagnosed with febrile convulsions, followed by seizure of non-specified aetiology (16.4%), and epilepsy (6%). Seizure disorders were most prevalent in the 1 to 5 years age group (63%). Sodium and potassium were the main electrolytes investigated; 18.8% had abnormal potassium and 10.4% had abnormal sodium levels. The most frequently done investigation was computed tomography (20.7%), usually for children with epilepsy and seizures of non-specified aetiology. Sodium valproate, carbamazepine and phenobarbital were the principal drugs prescribed. Among those who received sodium valproate, carbamazepine and phenobarbital, 9.4%, 1.3%, and 0.75%, respectively, were given an inadequate dose. Age group, perinatal factors, postnatal complications, drug regimen, developmental delay and family history of epilepsy were significantly associated with the aetiology of seizure disorders ($p \leq 0.05$). A family history of seizure of non-specified aetiology was significantly associated with long-term clinical outcomes ($p \leq 0.05$).

Conclusions: The commonest aetiology of seizure disorders was febrile convulsion. Several perinatal and developmental factors were associated with aetiology and clinical outcomes. Inadequacy sodium valproate dose was identified among children with epilepsy and seizures of non-specified aetiology, indicating need for further research.

Keywords: Seizure disorders, Epilepsy, Perinatal factors, Computed tomography, Sodium valproate

Knowledge, occurrence and associated factors of self-reported symptoms of polycystic ovary syndrome among female students of College of Nursing, Jaffna

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Background and Objective: Knowledge regarding polycystic ovary syndrome (PCOS) is essential for early detection and treatment. The objective of this study was to assess knowledge and self-reported PCOS and to determine the associated factors among students of the College of Nursing Jaffna.

Methods: This institution-based descriptive cross-sectional study was carried out from August to December 2021 among female students between 21 and 26 years at the College of Nursing Jaffna, using a self-administered questionnaire that consisted of sections related to knowledge, associated factors, and self-reporting of PCOS. Data analysis was performed using chi-square and t-test in SPSS.

Results: The response rate was 94% (216/230). A greater proportion of respondents were Tamils (97.7%), Hindus (81.9%), and first-year students (44.9%). The median (IQR) of age was 23 (22-24) years, age at menarche 13 (12-13) years, and BMI 20.0 (20.7-23.5) kg/m². In the sample, 62.5% (n=135) had heard about the condition PCOS, and just over 50% were aware of the features of PCOS. Complications of PCOS known by participants were subfertility (39.8%), diabetes mellitus (24.5%), endometrial cancer (16.2%), and non-alcoholic steatohepatitis (6.5%). Possible management options for PCOS known by participants include medication (58.8%), surgery (43.5%), exercise (44.4%), indigenous medicine (28.7%), and dietary modification (48%). Among the participants, 17 (7.9%, 95% CI: 4.8%-12.1%) reported having hirsutism, while 33 stated they had menstrual irregularity (n=33, 15.3%). Only three participants (1.4%) reported that multiple cysts were found in their ultrasound scan of ovaries. Health seeking for conditions related to PCOS include acne (23.3%), hair loss (21.8%), and menstrual irregularities (8.8%). The BMI was associated with the Ferriman Gallwey Hirsutism score.

Conclusions: More than half the participants had heard about the condition called PCOS. Knowledge regarding the complications was comparatively less. Hirsutism was associated with BMI. Educating young women regarding PCOS is recommended.

Keywords: Polycystic ovary syndrome, Knowledge, Self-reported symptoms, Occurrence

Maternal perceptions of their children's screen time and its correlates among children attending Child Welfare Clinics in Jaffna Municipal Council MOH area

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Background and Objective: Mothers' awareness of screen time plays a major role in children's mental, physical and social well-being. The objective of this study was to describe maternal perceptions on their children's screen time and its correlates among the children attending Child Welfare Clinics in the Jaffna Municipal Council Medical Office of Health (MOH) area.

Methods: This descriptive cross-sectional study was carried out among 423 mothers who attended 10 Child Welfare Clinics in the Jaffna Municipal Council MOH area from August 2020 to January 2022. We used convenient sampling as the sampling technique. An interviewer-administered questionnaire was used to collect data. Data were summarized as frequencies and percentages and analyzed by using the one-way ANOVA test.

Results: Coverage of the intended sample was 91% (385/423). The majority of the respondents were aged 26 to 30 years (45.5%), housewives (55.3%), and studied up to A/L (40%). Components of knowledge on screen time included correct description of screen time (26.5%) and recommended maximum screen time for children below 2 years (28 %). There were mixed perceptions of screen time. The majority of mothers agreed with the desired perception while a considerable number of mothers had wrong perceptions. Less than half (45.5%) of participants agreed that they follow strategies to control screen time such as monitoring the child while they use screen media and setting time limits for screen media use. Maternal perception on screen time was associated with maternal education ($p < 0.001$), number of household members ($p = 0.034$), availability of personal television ($p < 0.001$), availability of personal gaming console ($p < 0.001$), and availability of other personal screen media ($p < 0.001$).

Conclusions: Approximately half of the mothers in the Jaffna Municipal Council MOH area have the desired knowledge on screen time. Most of the mothers have mixed perceptions with correct perceptions predominant. Maternal perceptions were associated with maternal education, number of household members, and the presence of gaming consoles. Over 50% of mothers did not have any strategies to reduce their children's screen time.

Keywords: Screen time, Maternal perceptions, Medical Officer of Health, Strategies

Aetiology, level of anaemia and associated factors among pregnant women with anaemia referred to the Haematology Unit, Teaching Hospital Jaffna: A retrospective analysis

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Background and Objective: Anaemia in pregnancy has detrimental consequences for foetal and maternal health. Iron deficiency anaemia (IDA) is known to be a common cause of anaemia during pregnancy. This study aimed to describe the aetiology, level of anaemia and associated factors among pregnant women referred to the Haematology Unit, Teaching Hospital Jaffna.

Methods: This institution-based cross-sectional study was carried out at the Haematology Unit, Teaching Hospital Jaffna. Data were extracted from records of all pregnant women with anaemia referred to the Haematology Unit during a six-month period (September 2019 to February 2020). The WHO classification of anaemia in pregnancy was used to categorise the level of anaemia. Chi-square and Fisher's exact test were performed on SPSS (v22). The critical level was 0.05.

Results: Of 126 records, over half (52.4%, n=66) belonged to pregnant women in the third trimester. A large majority (85.7%, n=108) was on iron supplements. In total, 90.5% (n=114) had a diagnosis of IDA; 19.8%, 68.3% and 11.9% had mild, moderate and severe anaemia, respectively. Mean haemoglobin and mean cell volume (MCV) were 8.6g/dl (SD 1.5), and 73.9fl (SD 12.6), respectively. Age (p=0.007), number of children (p=0.023), and compliance to treatment with haematinics (p=0.024) were significantly associated with the level of anaemia. Younger pregnant women, primigravidae and women who were not compliant with treatment with haematinics were more likely to have moderate to severe anaemia.

Conclusions: IDA is the most common aetiology of anaemia among pregnant women referred to the Haematology Unit at Teaching Hospital Jaffna. That the majority had IDA while on haematinics needs to be explored, particularly in light of the association with compliance. A closer follow-up of compliance to haematinics may be needed for younger primigravidae.

Keywords: Anaemia in pregnancy, Iron deficiency anaemia, Aetiology of anaemia, Jaffna

Subtheme 2: Women, children, and nutrition

OP20

Knowledge, attitude and practice of infant and young child feeding among public health midwives in Jaffna district

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Background and Objectives: Feeding plays a major role in the growth and development of infants and young children. Knowledge, attitude, and practice of infant and young child feeding (IYCF) among public health midwives are important as they are the designated healthcare workers for maternal and child health in the field. This study describes the knowledge, attitude, and practice of IYCF among public health midwives in the Jaffna district.

Methods: This cross-sectional descriptive study was carried out from September 2021 to December 2021 among public health midwives in the Jaffna district. A self-administered questionnaire was used to collect data. Data collection was done in polyclinics and the respective Medical officer of Health (MOH) monthly conferences. Knowledge and attitude were determined to be good, adequate, and inadequate based on a cumulative score.

Results: The response rate to the questionnaire was 91.1% (n=123). In the sample, 97% of PHM had adequate or good knowledge about breastfeeding; 91.9% had adequate or good knowledge about complementary feeding; and 97.8% had adequate or good attitudes toward breastfeeding. However, only 63% of PHM had adequate and good attitudes towards complementary feeding. A higher proportion of midwives who had 6-10 years of experience (36.4%) and those who had 11-15 years of experience (34.5%) had inadequate attitudes towards complementary feeding. All the midwives reported they practice the Ministry of Health's IYCF guidelines.

Conclusions: As attitudes towards complementary feeding seem lacking among 27% of PHM, the Ministry of Health should take steps to address this problem. It was observed that age, experience, and educational level are associated with knowledge, attitude, and practice. Recently registered midwives have better attitudes than senior, more experienced midwives, which may be due to changes in the midwifery course and inadequate opportunities for in-service training.

Keywords: Infant and young child feeding, Exclusive breastfeeding, Complementary feeding, Public health midwife

Subtheme 3: Education, the pandemic, and beyond

OP21

Prevalence of obesity and overweight and associated sociodemographic and work-related factors among the staff working at Divisional Secretariat Offices, Nallur and Jaffna.

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Background and Objective: Obesity is one side of the double burden of malnutrition. The prevalence of overweight and obesity has increased over time. Hence, we carried out a study to estimate the prevalence of obesity and overweight and associated sociodemographic and work-related factors among the staff working at Divisional Secretariat Offices, Nallur and Jaffna.

Methods: A descriptive cross-sectional study was carried out among staff working at Divisional Secretariat Offices, Nallur and Jaffna. Simple random sampling technique was used, and the recruited sample size was 357. An interviewer-administered questionnaire was used to collect data on socio-demographic and work-related factors (type of work and work demand). Anthropometric measurements were taken and BMI was calculated and then categorized as underweight (<18.5 kg/m²), normal weight (18.5–24.9 kg/m²), overweight (25–29.9 kg/m²), and obese (≥30 kg/m²). Bivariate analysis was carried out on SPSS.

Results: The majority were females (60.5%), married (87.1%), graduated (72.5%), Tamils (99.7%), Hindus (83.5%), field workers (56.6%), and having moderate workload (62.5%). Underweight, normal weight, overweight, and obesity were recorded among 3.1% (n=11), 40.4% (n=144), 42% (n=15,0), and 14.6% (n=52) of the staff. Half (n=70) of the males were overweight and 9.2% (n=13) were obese. Among females, the prevalence of overweight and obesity was 37% (n=80), and 18.1% (n=39), respectively. Associations were not found between socio-demographic or work-related factors with BMI category, except with respect to religion (p=0.019). The prevalence of overweight or obesity was higher in Christians than in Hindus.

Conclusions: The prevalence of overweight and obesity was relatively high in this study population. Work-related factors were not found to be associated with the BMI category. We recommend carrying out periodical BMI assessments at the DS office in order to encourage staff to maintain their BMI at a healthy level.

Keywords: Obesity, Overweight, Sociodemographic factors, Work demand

Adjustment difficulties, loneliness, and associated factors among freshers at the Faculty of Medicine, University of Jaffna

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Background and Objective: The transition from school to university is challenging. Some students adapt quickly, while others face difficulties, resulting in homesickness and loneliness. This study describes adjustment difficulties, loneliness, and associated socio-demographic factors among students of the junior-most batch at the Faculty of Medicine, University of Jaffna.

Methods: This descriptive cross-sectional study was carried out among students of the junior-most batch (43rd) of medical students at the University of Jaffna. Adjustment difficulties and loneliness were assessed with a self-administered questionnaire. The UCLA Loneliness Scale was used to assess loneliness where a higher score indicated a greater level of loneliness. The chi-square test was used to determine the factors associated with adjustment difficulties while the independent t-test and one-way ANOVA were used to assess differences in loneliness. The critical level was considered as 0.05.

Results: In total, 141 (of 187) students participated with a response rate of 75.4 %. Of them, about two-thirds were female (66.6%) and from districts other than Jaffna (66%). In the sample, 61% agreed or strongly agreed that they had adjusted “pretty well” while 10% disagreed or strongly disagreed with the statement and the rest were neutral. The common adjustment difficulties experienced were academic load (71.6%), feeling the urge to travel home every weekend (74.5%), difficulties communicating in English (66.6%), and adapting to food available in Jaffna (63.9%). Students who studied in Tamil medium before entering university were more likely to have difficulty communicating in English ($p < 0.01$); males were more likely to feel burdened by academic load ($p = 0.035$); those who stayed at the hostel were more likely to have difficulty adjusting to food available in Jaffna ($p = 0.026$). There was no significant difference in mean UCLA loneliness score by gender or ethnicity, but the score was higher among Jaffna district students (19.4, SD 9.1) than others (12.9 SD 9.26; $p = 0.005$), and in students coming from home (18.6 SD 13.9) than students who were boarded or in hostels (13.2 SD 9.67; $p = 0.003$).

Conclusions: Students in the Jaffna Medical Faculty appear to be adjusting reasonably well, although a small proportion struggle. Living in a boarding place or hostel appears to be a protective factor against loneliness. Student support programmes need to target students who are more vulnerable to adjustment difficulties and loneliness.

Keywords: Adaptation, Loneliness, UCLA score, Adjustment difficulties

Adaptation to online-based learning during the COVID-19 pandemic crisis and its associated factors among medical students, Faculty of Medicine, University of Jaffna

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Background and Objective: During the COVID-19 pandemic crisis educational activities were switched from face-to-face learning to digital learning. The objective of this study was to describe adaptation to online-based learning (OBL) during the COVID-19 pandemic and to determine the associated factors among medical students in the Faculty of Medicine, University of Jaffna.

Methods: This university-based descriptive cross-sectional study was carried out among 427 medical students in the Faculty of Medicine, University of Jaffna in August 2021 using Google Forms. Stratified and simple random sampling methods were used in two stages. Data were analyzed using SPSS; descriptive and inferential statistics were used to analyze the data. A t-test was used. Adaptation to OBL was quantified using a composite score.

Results: The response rate was 89.7% (383/427). Participants included second (35.5%), third (30.8%), and fourth (32.6%) year medical students. The majority of the participants were females (65.3%). Preference of mode of teaching included OBL (52.5%), traditional face-to-face learning (30.8%) and not feeling a difference between these two methods (16.7%). Students perceived both an increase (36.8%) and a decrease (36.8%) in their attendance in LMS-based learning, while 39.7% reported an increase and 24.3% a reduction in their attendance during Zoom lectures. Adaptation to OBL was associated with batch ($p < 0.001$), prior use of Zoom ($p < 0.001$), purchase of a new device for OBL ($p < 0.001$), voice clarity in OBL ($p < 0.001$), difficulty in unmuting to talk or removing raised hand ($p < 0.001$), internet coverage issue in the home area ($p = 0.003$), background noise at home ($p = 0.011$), difficulty in finding a new place with a good network connection ($p = 0.046$), difficulty in swapping the type of data connection such as mobile data and Wi-Fi ($p < 0.001$), difficulty in changing the device ($p < 0.001$), obtaining a special data package ($p = 0.006$), financial assistance to get data connection ($p = 0.005$), and facility to get a loan ($p < 0.001$).

Conclusions: The majority preferred OBL and the associated factors are determined in this study. OBL could be improved with consideration to the associated factors.

Keywords: Adaptation, Online, Face-to-face learning, COVID-19, Medical students

Motivation towards learning and associated factors among medical students of the Faculty of Medicine University of Jaffna

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Background and Objective: Motivation towards learning is crucial in medical education. This study aims to assess students' motivation towards learning and associated personnel, academic factors, and availability of resources at the Faculty of Medicine, University of Jaffna.

Methods: This was an institutional-based descriptive cross-sectional study carried out among medical students from five batches registered in the MBBS course at the Jaffna Medical Faculty. Proportionate stratified random sampling was used and the data were collected with a self-administered online questionnaire developed by the research team. Motivation towards learning was categorized into good (>120), satisfactory (90-120), and poor (<90). Frequencies, proportions, and the chi-squared test was used in the analysis with SPSS (v23).

Results: A total of 439 medical students participated (response rate 97.1%). Females made up 60.2% of the sample. Majority were between the ages 23 to 25 years (56.1%). Over three-quarters (79.7%) had a satisfactory level of motivation, with 12.7% and 7.6% having a good and poor level of motivation, respectively. Over half (60.3%) of the sample were involved in more than two case-based discussion (CBD) sessions during the two months prior to data collection. Majority used sources from seniors (74.5%) and YouTube (79.5%) as their learning sources in addition to books and lecture notes, and had a proper electricity connection (97.4%) and used smartphones (93.2%). In the sample, 80.9% used mobile data as their network mode. Hours of studying per day ($p=0.004$), phase (pre-clinical or clinical) ($p=0.046$), and number of CBD, SGD, and tutorial sessions were associated with the motivation level.

Conclusions: The greater proportion of students had a satisfactory level of motivation. Majority relied on their seniors and YouTube videos as learning resources. Students in the clinical phases were more motivated than pre-clinical batches. Participation in tutorials, CBD, and SGD improved the motivation of the participants.

Keywords: Motivation towards learning, Medical students, Jaffna

Prevalence of overweight and obesity, associated factors, and weight reduction methods adopted by the Medical Students of the Faculty of Medicine, University of Jaffna

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Background and Objective: In Sri Lanka, there is a relatively high prevalence of overweight and obesity, particularly abdominal obesity, among adults. To control the disease at an early stage, urgent public health measures are required. This study describes the prevalence of overweight and obesity, associated factors, and weight reduction methods adopted by students of Faculty of Medicine, University of Jaffna.

Methods: An institution-based descriptive cross-sectional study was done among students of the Faculty of Medicine, University of Jaffna from August 2020 to January 2022. After the exclusion of pregnant/lactating students and those on regular medications, 567 of a total study population of 722 students from all five batches participated in the study. Data were collected by self-administered questionnaires. Height and weight were measured and BMI was calculated. BMI was categorized according to the WHO cut-offs (underweight BMI <18.5, normal weight BMI 18.5 to <25, overweight BMI 25 to <30, obese BMI >30). Data were entered and analyzed using SPSS. Chi-square test was done to find out the association among the variables.

Results: A total of 46.4% (n=263) were obese (24.16%) or overweight (22.22%), and 10.4% were underweight. Out of the overweight and obese, 31.7% (n=83) resided in boarding places, 49.6% (n=130) at the hostel, and 18.7% (n=49) at home. Most of the obese or overweight students (81.5%, n=457) had none to a slight disturbance in sleep, which was categorized based on the Promise scoring system. Among the participants, physical activity levels were categorised according to the METs scoring system and 33.2% (n=162) had low, 27.7% (n=135) had moderate and 39.1% (n=191) had high physical activity. There was no significant association between sleep disturbance and BMI (p=0.729) but there was an association between physical activity and BMI (p=0.039). Among weight reduction methods followed by the students, diet planning 42.2% (n=111) was the commonest, while surgical interventions were rarely followed.

Conclusions: The prevalence of overweight and obesity was 46.4% among the students. The diet pattern of all the students was nearly the same. There was no association between sleep disturbance and BMI but there was an association between physical activity and BMI. Most of the students followed a diet plan to reduce weight.

Keywords: Obesity, Overweight, Sleep, Physical activity, Diet

Difficulties faced in participating in online interactive sessions and factors influencing participation among medical undergraduates of the University of Jaffna

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Background and Objective: Online interactive sessions became a leading alternative teaching method during the Covid-19 pandemic in Sri Lanka. This study aimed to determine the difficulties faced in participating in online interactive sessions and to describe the influence of socio-economic and academic factors and internet connectivity, on participation among medical undergraduates of the University of Jaffna.

Methods: An institution-based descriptive cross-sectional study was carried out among medical undergraduates of the University of Jaffna using a stratified sampling technique. A self-administered questionnaire was used to collect data. Assessment of difficulty in participating in online interactive sessions was surveyed using a 5-point Likert scale. The chi-squared test was applied to measure the association between difficulties in participation and socio-economic, academic factors, and internet connectivity.

Results: Of 379 participants, 18.7% (n=71), 20.6% (n=78), 31.1% (n=118), and 29.6% (n=112) were from 38th, 39th, 40th and 41st batches, respectively. Among the students, 21.2% (n=81) were from the Jaffna district. Difficulties with participating in online interactive sessions were reported by 22.4% (n=85). PowerPoint Presentation was the preferred mode of teaching of the majority [88.4%, (n=335)]. Over three-quarters (76.6%) reported no internet connectivity or network disruption while following the sessions. Difficulties with participating in online interactive sessions had a statistically significant association with the permanent residence of the students (p=0.021), stability of internet connection (p<0.001), and the mode of teaching (p<0.001).

Conclusions: Even though over 75% reported that they had no internet connectivity/interruption, one-quarter complained that they faced difficulties while participating in online interactive sessions. The latter may be due to other sorts of problems, including health issues, time management, interaction with lecturers, and the technology knowledge of students.

Keywords: Online interactive sessions, Medical undergraduates, Difficulties, Distance learning, Jaffna.

The institutional mortality rate and pattern of mortality among patients admitted to Jaffna Teaching Hospital

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Background and Objective: Mortality statistics provide a valuable measure for assessing community health status. They are used as a cornerstone in formulating health plans and policies to prevent or reduce premature mortality. This study aimed to determine the mortality rate and the pattern of mortality among patients admitted to Jaffna Teaching Hospital in 2019.

Methods: This is a hospital-based descriptive cross-sectional study based on secondary data. Institutional mortality rate and pattern of mortality were determined using a data extraction form to extract data from the Indoor Morbidity and Mortality Register (IMMR) and Medical Statistics Unit of Teaching Hospital Jaffna. Descriptive and inferential statistics were performed using SPSS software.

Results: A total of 134,258 patients were admitted to the Teaching Hospital Jaffna in the year 2019. Of them, 1696 patients were certified dead accounting for a mortality rate of 1.26%. In total, 59.1% of the patients certified dead were male. In the sample, mortality was highest among the 60–75 years age group accounting for 671 patients (39.6%), closely followed by the above 75 years age group (n=398, 23.5%). Leading causes of death among Jaffna Teaching Hospital inpatients in 2019 were diseases of the respiratory system (23.8%) and cardiovascular system (21.9%). In males, the leading cause of death was diseases of the respiratory system and in females, diseases of the circulatory system. Infant death was higher compared to mortality among young children and adolescents. Among the deaths, 369 deaths were of patients who resided within 5 km, followed by 315 within 5 to 10 km, and 251 within 10-15 km of the hospital.

Conclusions: The leading causes of death in Jaffna Teaching Hospital in 2019 were diseases of the respiratory and circulatory systems. The peak of hospital death occurs among the elderly, especially the young elderly. Comorbidities that develop in early adulthood may lead to an increased death rate in the young elderly population.

Keywords: Mortality rate, Cause of death, Jaffna Teaching Hospital

Knowledge of substance use and the association of socio-economic factors among Advanced Level students in Jaffna Hindu College and Vembady Girls' High School

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Background and Objective: Adolescents are increasingly becoming victims of substances, and this has become a major social and health problem island wide as well as in Jaffna. This study aims to describe the knowledge on substance use and the association of socio-economic factors, among Advanced Level (A/L) students in Jaffna Hindu College and Vembady Girls' High School.

Methods: This school-based descriptive cross-sectional study was carried out among A/L students in Jaffna Hindu College and Vembady Girls' High school. A self-administered questionnaire was distributed during school hours and students were requested to fill it out without interference from the researchers. Knowledge was assessed on various aspects and marks were given from 0 to 20. Total marks less than 10 was considered poor knowledge, marks between 10-13 average knowledge, and marks over 13 good knowledge. Data were analyzed in SPSS using chi-square test with a critical level of 0.05.

Results: In total, 512 students participated representing both genders and all A/L streams. A greater proportion of students had good knowledge (42.2%), while 33.8% had average knowledge and 24% had poor knowledge. Among A/L streams, engineering technology students had a lack of knowledge (37.7%). Only a few students were not aware of the names of substances (8.4%) and two students (<0.01%) were unable to list any side effects of substance use. In the sample, over a third (36.3%) of students had never participated in awareness programmes on substance use. Common sources of knowledge among students were telemovies (71.1%), social media (66.6%), internet (63.5%), newspapers (56.6%), teledramas (55.3%), and books (27%). There was a significant association between the level of knowledge and A/L stream ($p=0.004$), but there was no evidence of an association between knowledge and gender, the highest educational qualification of parent/guardian, or the residential area of the students.

Conclusions: Most students had obtained knowledge on substance use through telemovies and social media. In order to improve their knowledge further, awareness programmes by the Ministry of Health or other reliable sources should be provided via one of the above media which will easily reach adolescents.

Keywords: Substance use, Adolescents, Knowledge, High school

Clinical and epidemiological features of typhus fever notified by Teaching Hospital Jaffna to selected MOH areas in Jaffna District

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Background and Objective: Typhus is an emerging notifiable disease in Sri Lanka and is fairly common in Jaffna. This study aims to describe the clinical and epidemiological features of typhus fever in four selected Medical Officer of Health (MOH) areas in Jaffna district.

Methods: This is a cross-sectional analytical study of 384 typhus fever cases notified by Teaching Hospital Jaffna to Jaffna, Sandilippay, Kopay, and Nallur MOH areas, which accounted for the highest number of notified cases in Jaffna district in 2019 and 2020. Data were extracted from 384 BHTs and 237 H411 forms using the KoboCollect app. Chi-square test, independent t-test, and ANOVA were used to assess the associations in SPSS (critical level 0.05).

Results: Out of the 384 notified cases, only 237 H411 forms were identified at the MOH level. Typhus was more common in the age group <19 years (31.5%) and distributed evenly between the sexes. Common symptoms were fever (96.9%), headache (50%), cough (43.8%), chills and rigors (40.6%), arthralgia (25%), and myalgia (23.4%). Eschar rash (39.8%), lymphadenopathy (12.2%), hepatomegaly (6%), splenomegaly (4.9%), and pneumonitis (2.1%) were recorded in BHTs. With respect to investigations, 61 (15.6%) and 39 (10.2%) cases had leukocytosis and leucopenia, respectively, and 39.1% had an abnormal platelet count. The highest proportion of cases was reported from the Jaffna MOH area (31.2%). The mean time between onset and hospitalization was 5.7 (SD 2.7) days with a median of 4 (IQR 3-6). The highest and lowest mean times between admission and notification were in Jaffna (mean 2.12, SD 2.55) and Sandilippay (mean 0.93 SD 1.62) MOH areas, respectively. The mean time between notification to MOH and field investigation was 1.49 (SD 2.18) days with a median of 1 (IQR 0-2). The latter differed significantly by MOH area ($p < 0.05$).

Conclusions: Typhus fever presents with non-specific symptoms and signs, which may partly explain the delays in notification. Health authorities need to raise awareness in the community regarding early health seeking for fever. Further research is needed to evaluate the reasons for delays in notification and the lack of H 411 forms at the hospital and MOH levels.

Keywords: Typhus, Notification, Clinical features, Jaffna

Subtheme 3: Education, the pandemic, and beyond

OP30

Changes in academic performance of 4th year undergraduates, Faculty of Medicine, University of Jaffna during COVID-19 and associated factors

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Background and Objective: COVID-19 is a global health problem. As a consequence, the education system has shifted from face-to-face learning to online learning, affecting academic performance in various ways. This study aimed to estimate the difference in academic performance before and during COVID-19 and to describe the association of selected factors with academic performance among 4th year undergraduates of the Faculty of Medicine, University of Jaffna.

Methods: An institution-based cross-sectional study was conducted among medical undergraduates of the University of Jaffna. The data were collected by self-administered questionnaires and analysed by the statistical software SPSS (v25) using t-test and chi-square test.

Results: In total, 139 undergraduates participated with a response rate of 93.9% (139/148). The total number of males was 64 (46%). There were significant differences in the academic performance before and during COVID-19 in microbiology ($p=0.047$), parasitology ($p=0.016$), and pharmacology ($p=0.09$). Participants showed improved performance in parasitology whereas performance fell in microbiology and pharmacology during COVID-19. There were no significant differences in academic performance in pathology ($p=0.113$). With respect to psychological aspects, 23.7% ($n=33$) experienced stress, 36.0% ($n=50$) anxiety, and 41.0% ($n=57$) depression during COVID-19, according to DASS-21. The majority used smartphones ($n=105$, 75.5%) and mobile broadband ($n=120$, 86.3%) for e-learning. Overall, 55.4% ($n=77$) were moderately satisfied with e-learning. There was no significant association between family income and hours spent on self-study ($p=0.970$) or e-learning ($p=0.308$).

Conclusions: Academic performance improved in parasitology, reduced in microbiology and pharmacology, and did not change significantly in pathology during COVID-19. There was no significant association between family income and hours spent in self-study and e-learning. In Sri Lanka, there is a need for more research on COVID-19 and academic performance.

Keywords: COVID-19, Academic performance, Medical undergraduates



ISBN 978-624-6150-13-6