



9th URS 2025



Proceedings of the
9th Undergraduate Research Symposium

“Enhance Exploratory Learning”

FACULTY OF MEDICINE
UNIVERSITY OF JAFFNA

7th of November 2025



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University of Jaffna
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**Sponsored by Jaffna Medical Faculty Overseas
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Message from the Vice Chancellor of the University of Jaffna



It is with great pleasure that I extend my warm greetings to all participants and organizers of the 9th Undergraduate Research Symposium (URS) of the Faculty of Medicine, University of Jaffna. The Undergraduate Research Symposium, held annually by the Faculty, serves as an excellent platform for medical undergraduates to present their research findings and engage with a wider academic community.

The theme of this year's Symposium, "Enhance Exploratory Learning" aptly reflects the Faculty's commitment to fostering a vibrant research culture through experiential and inquiry-based learning. The URS is not merely an academic event—it is an opportunity for students to cultivate critical thinking, enhance communication skills, and prepare for future professional pursuits in healthcare, academia, and beyond.

I wish to express my sincere appreciation to the staff of the Faculty of Medicine for their dedicated efforts in organizing this significant event. It is indeed an honour to welcome Dr. Chrishanthi Rajasooriyar, Consultant Oncologist, Teaching Hospital, Jaffna, as the Keynote Speaker for the 9th Undergraduate Research Symposium.

The Symposium plays a vital role in building a strong foundation for research and in empowering our students to develop their capacity for scientific inquiry. I encourage all student researchers to embrace this experience fully engage in meaningful dialogue, collaborate with peers, and be inspired to continue their journey in research and innovation.

Congratulations to all the student researchers for their hard work and achievements. I wish you every success and hope the 9th Undergraduate Research Symposium will be a rewarding and memorable experience for all.

Professor. S. Srisatkunarajah
Vice-Chancellor
University of Jaffna

Message from the Dean of the Faculty of Medicine



With great pleasure, I extend my heartfelt greetings to the participants and the organizers of the **9th Undergraduate Research Symposium (9th-URS2025)** of the Faculty of Medicine, University of Jaffna, Sri Lanka. The theme, “*Enhance Exploratory Learning*” aptly reflects the thriving research culture the institute has fostered to generate new ideas and concepts for a wide range of health-related problems.

The **Undergraduate Research Symposium** is an annual event that serves as a vital platform for students to share their research findings to their peers and the faculty. This event will not only generate new knowledge, but also cultivate a spirit of inquiry. Active engagement in such academic endeavors, improves the critical thinking, research capacity, and communication of the students. Encouraging undergraduates to pursue medical research will undoubtedly lead to meaningful contributions to the advancement of medical science, patient care and benefit the broader healthcare community.

I take this opportunity to express my sincere appreciation to **Prof. S. Srisatkunarajah, Vice Chancellor of the University of Jaffna**, and the **Keynote Speaker Dr. Chrishanthi Rajasooriyar, Consultant Oncologist, Teaching Hospital, Jaffna**, for their invaluable contributions. I also thank all distinguished speakers for their insights and expertise.

A special acknowledgment goes to the **Jaffna Medical Faculty Overseas Alumni (UK)** for their generous support, emphasizing the significance of collaboration and financial assistance in making this event possible. Furthermore, I commend the **9th-URS2025 Organizing Committee** for their dedication and collective efforts in ensuring the symposium's success.

Finally, I congratulate all **student researchers** and wish them a **productive, enriching, and rewarding experience** at the **9th Undergraduate Research Symposium**.

Prof. R. Surenthirakumaran

Dean

Faculty of Medicine

University of Jaffna

Message from the Convener, 9th URS 2025



It is my great pleasure to extend this message as the Convener of the 9th Undergraduate Research Symposium (URS) – November 2025, Faculty of Medicine, University of Jaffna. Founded in 2018, this renowned academic forum has provided medical students with a significant avenue for scholarly engagement and research dissemination.

The 9th URS, themed “Enhance Exploratory Learning,” emphasizes the essential role of research, in meeting the continuously evolving challenges of the medical field. In an era of rapid medical advancements, it is vital to prepare ourselves to both engage with and contribute to these ongoing transformations. Introducing research at the undergraduate level encourages curiosity and sharpens analytical thinking, while also fostering the skills and mindset needed to drive future innovations in medicine. I am confident that 9th URS 2025 will motivate young minds to explore uncharted territories in medicine and make significant contributions to the progress of healthcare.

On behalf of the 9th URS 2025 Organizing Committee, I extend my heartfelt gratitude to the Vice-Chancellor of the University of Jaffna and the Dean of the Faculty of Medicine for their consistent support and encouragement, which have played a crucial role in making this event a success.

I am deeply grateful to our keynote speaker, Dr. Chrishanthi Rajasooriyar, Consultant Oncologist, Tellippalai Trail Cancer Hospital (TTCH), for generously sharing her expertise and inspiring the next generation of researchers. I would also like to extend my sincere thanks to the Jaffna Medical Faculty Overseas Alumni – United Kingdom (JMFOA – UK) for their generous financial support and valued collaboration, which have been instrumental in the success of this event.

A special note of thanks goes to all members of the 9th URS Committee for their dedication and commitment in organizing this symposium. I also wish to express my profound appreciation to the academic staff, extended faculty members, administrative teams and supportive staff, whose dedication and tireless efforts have made this event possible.

In conclusion, I extend my sincere congratulations to all medical students, the true protagonists of this event, for their dedication, diligence, and active engagement. I am confident that this initiative will serve as a foundational platform, enabling them to advance further in research and achieve academic excellence.

Dr. T. Yoganathan,
*Convener, 9th URS – November 2025,
Faculty of Medicine, University of Jaffna.*



Students seated front row (left to right): Mr. K. Kalakeshavan, Mr. K. Sulakshan, Mr. S. Govarthan, Ms. W. P. T. Nimasara, Ms. M. J. Saara Samma, Ms. R. Ramsani, Ms. M. Nivethana, Ms. A. S. F. Minthasha, Ms. T. Upthaya, Ms. P. Dishni, Ms. T. Thamilmathy

Seated Second row (left to right): Dr. P. Deneshan, Dr. P.A.D. Coonghe, Prof. S. Kannathasan, Dr. T. Yoganathan (Convener, 9th URS), Prof. R. Surenthirakumaran (Dean, Faculty of Medicine), Dr. T. S. Navaratinaraja, Dr. Ramaya Kumar, Dr. S. Sujanja, Dr. R. Niranjana, Dr. B. Senthuran

Students standing (left to right): Mr. S. Kugapriyan, Mr. J. Sivalaxshan, Mr. R. Athithan, Mr. U. Shanjoy, Mr. R. Jegathguru, Mr. R. Divakaran, Mr. B. Jeyachandran, Mrs. S. Sasrubi, Mrs. T. Tharmika, Mrs. S. Vithushany, Mrs. J. Narthana, Mrs. V. Nishani, Mrs. K. Saranya, Ms. N. Saranya, Mrs. S. Thivahari, Ms. S. Mathami, Ms. S. Mathumai, Ms. A. Theivigaa

Absentees: Prof. S.Kumaran, Dr. J. A. Pradeepan, Dr. Nirubaa Umasankar, Dr. K. Sanchayan, Dr. K. Sithamparapillai, Dr. S. Raguraman, Dr. S. Vinojan, Dr. S. Yathukulan, Ms. V. Murugathas, Ms. M. Shobana, Mr. V. Gajenthiran, Mr. K. Bakeekaran, Ms. T. Sukirthan, Ms. N. Jesinthiran, Ms. V. Sureshkumar, Ms. A. Benitta, Ms. R. Laxshika, Mr. S. Mauran, Mr. A. Thayanithy, Mr. Rinoshan, Mr. U. Yathurshan, Mr.S. Kirishigan

9th URS 2025 Organizing Committee

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4. Dr. T. S. Navaratnaraja
5. Dr. Ramya Kumar
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7. Dr. Nirubaa Umasankar
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9. Dr. R. Niranjan
10. Dr. K. Sanchayan
11. Dr. K. Sithamparapillai
12. Dr. S. Raguraman
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28. Mr. R. Divakaran
29. Miss. N. Saranya

30. Ms. S. Thivahari
31. Ms. A. Benitta
32. Ms. R. Laxshika
33. Mr. S. Mauran
34. Mr. A. Thayanithy
35. Mr. B. Jeyachandran
36. Mr. Rinoshan

Student members

37. Mr. Jagathguru Ramkumar
38. Ms. Saara samma
39. Ms. ASF Minthasha
40. Ms. W P T Nimsara
41. Ms. Upaththya Thennakoon
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53. Ms. Mathumai Srikan
54. Mr. Kuneswaran kalakeshavan
55. Ms. Mathami
56. Ms. Theivigaa Arumugathash

Winners of Awards – 43rd Batch

Velauthar Sothinagaratnam Memorial Award

Awarded to the best research in Community & Family Medicine in the field of Microbiology

Mr.Idroos Sahib Mohamed Sajith

Miss.Mahendrarasha Mathusha

Miss.Sehu Alahudeen Fathima Amna

Miss.Muhammadhu Riyal Fathima Risle

For the project titled: Factors associated with knowledge and attitude about dengue and practices towards dengue control among grade 12 school students in Jaffna Educational Division

Dr. Muruganathan Award

Awarded to the best research which got highest marks in the field of mental health among undergraduate researches conducted by Community & Family Medicine & should pass 2nd examination

Mr.Edwin Joy Vithushan

Miss.Kakalallage Pathumi Wasana Sandaruwani

Miss.Mathangi Kuganathan

Miss.Warnakulasuriya Surekha Vishwanthi Peiris

For the project titled: Social media usage patterns and its effects on academic performances and mental health of medical students in University of Jaffna.

Covinthapillai Candiah Research Award

Awarded to the best 3 researches undertaken by students in Phase I

Mr.Edwin Joy Vithushan

Miss.Kakalallage Pathumi Wasana Sandaruwani

Miss.Mathangi Kuganathan

Miss.Warnakulasuriya Surekha Vishwanthi Peiris

For the project titled: Social media usage patterns and its effects on academic performances and mental health of medical students in University of Jaffna

Mr.Idroos Sahib Mohamed Sajith

Miss.Mahendrarasha Mathusha

Miss.Sehu Alahudeen Fathima Amna

Miss.Muhammadhu Riyal Fathima Rislal

For the project titled: Factors associated with knowledge and attitude about dengue and practices towards dengue control among grade 12 school students in Jaffna educational division

Mr.Shanmugavel Dhuwakaran

Miss.Navaretnam Jashikka

Miss.Mithuciga Rajendra

Miss.Baseer Sarjana

For the project titled: Nutritional status and its association with selected factors and academic performance among grade ten students of Nallur educational division

Miss.Madara Dewmini Samaraweera

Mr.Kandeepan Mohanabthan

Miss.Isuri Upeksha Charitha Gamage

Miss.Mohamed Fathima Shireen

For the project titled: Knowledge and Practice of standard precautions among the nursing staff at Teaching Hospital – Jaffna

Miss.Moorthy Suwathinee

Miss.Krishnabala Sagithira

Miss.Ilango Shangavi

Mr.Muthunaidelage Rumesch Dhananjaya Perera

For the project titled: Career choices and associated factors among the medical undergraduates of Faculty of Medicine, University of Jaffna, Sri Lanka

Miss.Arthika Suthan

Miss.Sowganthika Ganesalingam

Mr.Sathiyeswaran Shathurnithan

Miss.Algama Koralalage Dilara Yasangi Perera

Mr.Rankoth Pedige Denuthu Kawinda Jayasiri

For the project titled: The association between menstrual pattern, premenstrual syndrome and sleep quality among GCE A/L students in schools under the Jaffna, Municipal Council area

Miss.Hewa Gamage Oshani Nayanathara

Mr.Galhenage Yasith Kavishka Wijayananda

Miss.Seluxsika Soundararajan

Mr.Thanabalan Keerthigan

Mr.Mohamed Mubarak Abdul Basith

For the project titled: Knowledge, attitude, practice and factors associated with hand hygiene practice among medical students, Faculty of Medicine, University of Jaffna

Prof. Appakutty Sinnathamby Memorial Award

Awarded annually to the best proposal in reproductive health related topics in community medicine

Miss.Sowganthika Ganesalingam

Mr.Sathiyeswaran Shathurnithan

Miss.Algama Koralalage Dilara Yasangi Perera

Mr.Rankoth Pedige Denuthu Kawinda Jayasiri

Miss.Arthika Suthan

For the project titled: The association between menstrual pattern, premenstrual syndrome and sleep quality among GCE A/L students in schools under the Jaffna Municipal Council Area

Reviewers of Abstracts

Prof. K. Muhunthan	Dr. S. Thirumagal
Prof. G. Sathiadas	Dr. S. Sivaganesh
Prof. S. Sivayogan	Dr. A. J. Thanenthiran
Prof. S. Kannathasan	Dr. S. Thuvaraga
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Dr. S. Suganja	
Dr. S. Yathukulan	
Dr. N. Saravanabhava	
Dr. S. Kumaravel	

Chairpersons and Evaluators

Venue	Chairperson	Evaluators
Panel 01: Women Health Hoover Auditorium	Prof. A. Murugananthan <i>Professor in Parasitology, Department of Parasitology, Faculty of Medicine, University of Jaffna</i>	Prof. K. Muhunthan <i>Chair Professor of Obstetrics and Gynecology, Faculty of Medicine, University of Jaffna.</i> Dr. T. Gowribahan <i>Consultant Urological Surgeon, Teaching Hospital, Jaffna</i>
Panel 02: NCD and Lifestyle Medicine Conference Hall	Prof. S. T. Sarma <i>Professor in Surgery Department of Surgery, Faculty of Medicine, University of Jaffna.</i>	Prof. M. G. Sathiadas <i>Chair Professor of Paediatrics, Faculty of Medicine, University of Jaffna.</i> Dr. S. Pirasath <i>Consultant Physician Base Hospital/Point Pedro</i>
Panel 03: Multidisciplinary Perspectives Lecture Hall I	Dr. H. Sivakumar <i>Head, Senior Lecturer, Department of Pathology, Faculty of Medicine, University of Jaffna</i>	Dr. S. Sanchayan <i>Lecturer in Medical Education Faculty of Medicine, University of Jaffna</i> Dr. B. Nishahan <i>Consultant Physician Base Hospital, Tellippalai.</i>

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Abstracts

Abstract 1

Knowledge on maintaining a healthy body weight among pregnant women admitted to the obstetric wards of Teaching Hospital of Jaffna

Ishara Piyumal YK¹, Amirthavarshini S¹, Ravindu AP¹, Wijayanthy W¹, Loshana P¹, Raguraman S², Coonghe PAD³

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Background and objectives: Maintaining a healthy body weight during pregnancy refers to achieving appropriate gestational weight gain based on pre-pregnancy body mass index (BMI). Inappropriate weight gain is associated with adverse outcomes such as gestational diabetes, hypertensive disorders, preterm birth, and low birth weight. This study aimed to assess the knowledge regarding maintaining a healthy body weight among pregnant women admitted to the obstetric wards of the Teaching Hospital, Jaffna.

Methods: A descriptive cross-sectional study was conducted among 303 pregnant women using systematic sampling. A structured, pretested questionnaire was used to collect data on sociodemographic details, knowledge about weight maintenance, and pregnancy-related factors. Knowledge scores were categorized as good ($\geq 75\%$) and poor ($< 75\%$) based on percentage of correct responses. Chi-square test assessed associations at $p < 0.05$ significance level. Ethical clearance was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna.

Results: 81.5% ($n=247$) demonstrated good knowledge while 18.5% ($n=56$) had poor knowledge, with a mean score of 84.8% ($SD=13.4$). Significant associations were observed between knowledge and income ($p=0.013$), education level ($p=0.005$), and presence of healthcare professionals in the family ($p<0.001$). Women who had tertiary education showed the highest proportion of high marks (50%). Current pregnancy complications showed significant association ($p=0.019$), while previous complications ($p=0.866$) and parity ($p=0.993$) showed no significant associations with knowledge.

Conclusions: While overall knowledge was satisfactory, disparities exist across income and educational levels. Focused antenatal educational interventions are recommended, particularly targeting women with lower income, lower educational attainment, and those without healthcare professionals in their families, to ensure better maternal and infant health outcomes.

Keywords: healthy body weight, pregnancy, maternal knowledge, antenatal care, weight gain

Abstract 2

Knowledge and attitudes regarding menstrual hygiene among students of Jaffna National College of Education

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Background and objective: In Sri Lanka, knowledge and attitudes regarding menstrual hygiene remain suboptimal as literature suggests. As future educators, having better knowledge and attitudes on menstrual hygiene is crucial to shape young minds. This research studies on assessing the knowledge and attitudes regarding menstrual hygiene among students of Jaffna National College of Education.

Methods: An institutional-based descriptive cross-sectional study conducted among 339 students of Jaffna National College of Education in the period from 09th August 2024 to 30th November 2024. Data was collected by using self-administered questionnaires. Data analysis was performed using SPSS and descriptive data were displayed in percentages, proportions and tables. Chi-square test and one-way ANOVA test were used to analyse the association between variables.

Results: All 339 students responded (response rate 100%). The majority were females (84.4%), Hindu by religion (64%), and belonged to the arts stream (51.6%). Only 9.7% of participants demonstrated good knowledge of menstrual hygiene, while 85.5% had average and 4.8% poor knowledge. A significant association was found between knowledge and sex ($p=0.005$), with females showing higher knowledge levels. However, no significant association was observed between knowledge and educational stream ($p=0.131$). Regarding attitudes, 68.4% of the participants expressed positive attitudes toward menstrual hygiene, 24.2% were neutral, and 7.4% had negative attitudes. Students with higher knowledge scores demonstrated more favourable attitudes ($p=0.012$).

Conclusion: Knowledge and attitudes regarding menstrual hygiene among students were moderate, with clear gender and discipline-related variations. Higher knowledge levels (Science related streams) were associated with more favourable attitudes, emphasizing the need to strengthen menstrual health education within teacher training curricula. Integrating structured educational programs and promoting open discussions can improve awareness and attitudes, helping future teachers guide younger generations toward healthy menstrual practices.

Keywords: menstrual hygiene, knowledge, attitudes, Teaching College students, Jaffna National College of Education

Abstract 3

Immediate postpartum complications and neonatal outcomes of antenatal anaemia among mother-newborn pairs in the obstetrics wards of Teaching Hospital, Jaffna

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Background and objective: Anaemia in pregnancy, defined as haemoglobin (Hb) <11 g/dL, remains a major global health concern, affecting approximately 40-45% of pregnant women worldwide. In Sri Lanka, the prevalence of antenatal anaemia is estimated at around 29-34%, varying by region and socioeconomic background. Maternal anaemia is linked to complications such as postpartum haemorrhage, preterm delivery, and low birth weight. This study aimed to determine the immediate postpartum complications and neonatal outcomes associated with antenatal anaemia among mother-newborn pairs in the obstetrics wards of Teaching Hospital Jaffna.

Methods: A hospital based descriptive cross-sectional study was conducted among anaemic mothers and their newborns in wards 18, 20, 21 and 22 (Gynaecology and Obstetrics) of Teaching Hospital Jaffna from 9th August 2024 to 20th January 2025. Data were collected using interviewer-administered questionnaires and data extraction forms. Data analysis was performed using SPSS version 21 and Fisher's Freeman - Halton test was applied to assess associations between sociodemographic factors, postpartum complications, and neonatal outcomes. A p-value <0.05 was considered statistically significant.

Results: Of the 351 participants, 308 (87.7%) mothers did not experience any immediate postpartum complications. Among those affected, postpartum haemorrhage (7.4%) and blood transfusion (5.4%) were the most common complications. Regarding neonatal outcomes, 88.3% of newborns had no complications, while preterm birth (4.4%) was the most frequent adverse outcome. One neonatal death was recorded. No significant associations were found between sociodemographic characteristics and postpartum complications. A significant association was identified between postpartum blood transfusion and household income ($p = 0.022$).

Conclusion: Although most mothers and neonates did not develop complications, preterm births and postpartum haemorrhage emerged as leading adverse outcomes in mothers with antenatal anaemia. Strengthening antenatal screening, nutritional supplementation, and management of maternal anaemia is essential to reduce maternal and neonatal risks. Enhanced postpartum monitoring and community-based nutritional interventions are recommended to further improve outcomes.

Keywords: antenatal anaemia, postpartum complications, neonatal outcomes, postpartum haemorrhage, pre-term birth

Abstract 4

Indications for oophorectomy and immediate post-operative complications in women who underwent oophorectomy between 2022 and 2024 at Teaching Hospital Jaffna

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Background and objective: Oophorectomy, the removal of one or both ovaries, is performed for various gynaecological indications, including ovarian pathology and risk reduction for malignancy. However, the procedure is associated with immediate post-operative complications. This study aimed to analyse the indications and immediate post-operative complications, and the influence of socio-demographic, clinical and surgical factors among women undergoing oophorectomy from 2022 to 2024.

Methods: An institution-based retrospective cross-sectional study of all Bed Head Tickets (BHT) of women who underwent oophorectomy was planned. The estimated sample size was 268. Data were extracted using a content-validated data extraction sheet covering socio-demographics, symptoms, surgical details, complications, and other factors. Data were analysed using SPSS and presented as percentages and tables. Chi-square and Fisher's exact tests were used for inferential analysis with a significance level of $p < 0.05$.

Results: In total, 198 BHTs were located. The mean age at oophorectomy was 50.85 years, with 73.7% aged 40-59 years. Half the sample (50%) had received prior medical treatment, mainly non-hormonal (47%). The most common indication for oophorectomy was menstrual abnormalities (61.1%), followed by uterine fibroids (62.1%) and ovarian cysts or endometriosis. Bilateral oophorectomy accounted for 87.4% of surgeries, mainly performed via open technique (93.9%). Immediate post-operative complications included bleeding (4.5%) and requirement for ICU care (4%). A significant association was found between age and menstrual abnormalities, while malignant findings were more common in those aged 60-89 years.

Conclusions: Menstrual abnormalities and fibroids were the leading indications for oophorectomy, while immediate post-operative complications were infrequent. Strengthening early screening and awareness of menstrual abnormalities may aid in timely diagnosis and surgical planning, thereby improving outcomes and reducing avoidable procedures. Further large-scale studies are recommended to confirm these findings and explore long-term outcomes.

Keywords: oophorectomy, menstrual abnormality, bleeding, post-operative complications

Abstract 5

Unmet need for contraception and its association with knowledge on contraception among postpartum mothers in the Jaffna MOH area

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Background and objective: Unmet need refers to when a woman is fertile and sexually active but is not using contraception and reports not wanting to conceive in the near future. The extended postpartum period, the first year after childbirth, is a crucial opportunity to improve maternal and child health. This study aimed to determine the unmet need for contraception and its association with knowledge on contraception among mothers in the extended postpartum period visiting child-welfare clinics in the Jaffna Medical Officer of Health (MOH) area.

Methods: A field-based, descriptive cross-sectional study was conducted among 237 mothers in the extended postpartum period attending 10 child welfare clinics in Jaffna MOH area. Data were collected using an interviewer-administered questionnaire. A knowledge score was computed for each participant (min 0, max 34). SPSS was used for statistical analysis. Chi-square tests, independent t-tests and one-way ANOVA were used to assess associations (significance level 0.05).

Results: In total, 237 postpartum women participated (mean age 31.05 years, SD 4.98). They were all married, mostly Hindu (75.5%), had completed their A/L (62.1%) and had a monthly income of $\geq$ LKR 50,000 (56.1%). Unmet need for contraception was 25.6%, and significantly higher among women $\leq$ 35 years (20.2%) compared to women $>$ 35 years (8.0%; $p=0.010$). Education level, employment status, and monthly household income was not associated with unmet need ($p>0.05$). Mean knowledge score was 15.6 (SD 6.3) and differed significantly by employment status ($p=0.001$) where employed women were more likely to have a higher score. Knowledge score was not associated with unmet need for contraception ($p=0.112$). Although participants relied mostly on health workers for contraceptive information (86.9%), knowledge on when fertility resumes after childbirth was poor with only 18.6% responding correctly.

Conclusion: Postpartum unmet need remains high, particularly among younger women in Jaffna, with serious knowledge gaps on postpartum contraception. Although we expected knowledge to be associated with unmet need, this study did not elicit such a finding, suggesting that structural factors may be at play. Comprehensive sexual and reproductive health education coupled with youth-friendly contraceptive services delivered by trained health workers may help to reduce unmet need.

Keywords: unmet need for contraception, extended postpartum period, maternal health, contraceptive methods, family planning, Jaffna

Abstract 6

Assessing the relationship between menstrual pattern and BMI among Advanced Level female students of schools in Jaffna Educational Zone

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Background and objective: Menstrual problems are common in adolescent girls. Menstrual patterns can be influenced by hormonal, genetic and underlying health factors. These patterns have an impact on body mass index (BMI), contributing to obesity and metabolic disorders. Aim of the study is to assess the relationship between menstrual patterns and BMI.

Methods: A school-based descriptive cross-sectional study was conducted among Grade 12 female students in the Jaffna educational zone. The study population comprised all female students in selected schools. Using cluster sampling, 24 clusters were randomly chosen to obtain a final sample of 478 participants. Data were collected using a self-administered questionnaire to assess socio-demographic characteristics, and menstrual patterns. Height and weight were measured. BMI was calculated and categorized according to Asia-Pacific standards. Data entry and analysis were done using SPSS. Descriptive statistics, correlation analysis and chi-square tests were applied to determine associations between menstrual patterns and BMI, with $p < 0.05$ considered statistically significant.

Results: Among 478 participants, a 100% response rate was obtained for menstrual pattern-related data, while 96.2% provided anthropometric measurements. The mean age of the participants was 17.81 years (SD=0.532), ranging from 16 to 19 years. The mean age at menarche was 12.86 years (SD=1.086), with approximately one-third (36%) attaining menarche at 13 years. Greater proportion of participants (71.5%) reported regular menstrual cycles. Majority of adolescents (74.5%) had a normal menstrual cycle length (21–35 days). Most participants (31.4%) reported a menstrual duration of 5 days. Body Mass Index revealed that 45.2% fell within the normal range, 32.4% were underweight, while, 11.1% were categorized as overweight and 11.3% as obese. The mean BMI was 20.72 (SD=3.816) kg/m² and the median was 20.34 (IQR=17.86-22.83) kg/m². BMI showed a significant association with early menarche ($p=0.001$) and menstrual irregularities ($p=0.014$), but not with menstrual cycle length ($p=0.383$) or duration of menstruation ($p=0.911$).

Conclusion: Menstrual patterns appear to influence BMI, highlighting the importance of menstrual health in adolescents. A concerning prevalence of overweight and obesity supports the need for early identification of menstrual and nutritional issues. The study recommends routine screening for obesity and abnormal menstrual patterns, as well as promoting healthy lifestyles.

Keywords: menstrual pattern, menarche age, menstrual irregularity, adolescent obesity, Jaffna

Abstract 7

Knowledge in gestational diabetes mellitus and its associations with socioeconomic and pregnancy factors among pregnant mothers attended antenatal clinic at Teaching Hospital, Jaffna

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Background and objective: Gestational diabetes mellitus (GDM) is a common complication during pregnancy that causes risks to both mother and fetus. The global prevalence of GDM is increasing, especially in South Asia. Adequate knowledge on GDM is essential to promote prevention, timely screening and effective management. This study determined the knowledge on GDM and its association with socioeconomic and pregnancy factors among pregnant mothers undergone Oral Glucose Tolerance Test at antenatal clinic, Teaching Hospital Jaffna.

Methods: This hospital-based cross-sectional study was conducted from August to November 2024. It included 350 non-diabetic pregnant women selected systematically. Data were collected using an interviewer-administered structured questionnaire and a data extraction sheet for pregnancy-related variables. Knowledge was assessed using this questionnaire, which consists 20 items, covering meaning of GDM, risk factors, screening, complications, management and preventive measures of GDM, giving a maximum score of 20. The questionnaire was developed based on FIGO and WHO guidelines and validated through a pretest among 20 mothers. Knowledge scores were classified as satisfactory or unsatisfactory, using a 50% threshold. Data analysis was performed with SPSS 26 using descriptive statistics and chi-square tests.

Results: Among the 350 participants, 48.3% demonstrated satisfactory overall knowledge. However, this differs domain wise: 28.6% for meaning of GDM, 19.4% for risk factors, 33.4% for screening and management, and 53.7 % for complication. Increasing age and higher educational status were significantly associated with better knowledge on GDM ($p=0.029$, $p=0.036$ respectively). Employed women exhibited higher knowledge than housewives (76, 37.1%) and women from rich (78.9%) households demonstrated more satisfactory knowledge than poor counter parts (31.1%). Partner's education level showed a positive association. Among pregnancy related variables multiparous women showed higher satisfactory knowledge (50.3%) than primi-parous women (46.8%). Knowledge did not significantly differ by trimester ($P=0.275$), BMI ($p=0.187$), or previous GDM history ($p=0.705$). However, having a relative with DM was significantly associated with better knowledge ($p=0.021$).

Conclusion: In conclusion, knowledge on GDM is inadequate, particularly on risk factors. Sociodemographic factors such as education and income level influence the awareness. It is recommended to include GDM as a topic in Health Science to help mothers to take preventive strategies from early age onwards.

Keywords: gestational diabetes mellitus, pregnant women, knowledge, socioeconomic factors, Jaffna

Abstract 8

Knowledge and practices of oral hygiene among pregnant mothers attending antenatal clinics in the Nallur MOH area

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Background and Objective: Good oral hygiene is essential for overall health and is particularly important during pregnancy. Poor oral hygiene in pregnancy has been associated with adverse outcomes such as preterm birth and low birth weight. However, oral health remains a neglected area of antenatal care in Sri Lanka. This study aimed to assess the knowledge and practices of oral hygiene among pregnant mothers attending antenatal clinics in the Nallur MOH area.

Methods: A community-based descriptive cross-sectional study was conducted among pregnant mothers attending all antenatal clinics under the Nallur MOH division from August to November 2024. Systematic sampling was used to select 246 participants. Data were collected using a pretested interviewer-administered questionnaire assessing sociodemographic details, oral hygiene knowledge, and practices. Knowledge was scored out of 32 items and categorized as good (>65%), average (50–65%), or poor (<50%). Data were analysed using SPSS software with descriptive statistics and chi-square tests to determine associations between variables.

Results: Among 246 respondents, the mean age was 28.5 ± 4.5 years. Most participants had completed GCE A/L (n=148, 48.8%), 192 participants were housewives (78%). Regarding period of amenorrhea, number of participants who were in their second trimester was 104 (42.3%), third trimester was 102 (41.5%), and first trimester was 40 (16.3%). Among the participants 139 (56.5%) had previous pregnancy. Majority of the participants, 65.9% (n=162) had good knowledge of oral hygiene, 30.5% (n=75) had average knowledge, and 3.6% (n=9) had poor knowledge. While only 34.6% had a dental examination within six months prior to pregnancy. A significant association was observed between higher knowledge and longer brushing duration ($p < 0.001$). Educational level was significantly associated with oral hygiene practices ($p = 0.047$).

Conclusion: Although most pregnant mothers demonstrated good knowledge of oral hygiene, gaps remain in translating knowledge into regular preventive dental practices. Limited dental visits and misconceptions about safety during pregnancy indicate importance of oral health education and integrate it into routine antenatal care programs.

Keywords: oral hygiene, pregnancy, maternal health, dental care, antenatal education

Abstract 9

Impact of changes in diet and lifestyle patterns on the occurrence of gestational diabetes mellitus among pregnant women attending obstetric clinic, Teaching Hospital, Jaffna

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Background and objective: Gestational Diabetes Mellitus (GDM) commonly occurs in pregnant women; leading to severe complications to both mother and the foetus. Understanding the role of dietary and lifestyle pattern in the development of GDM is crucial for better risk assessment and management. This study aimed at determining the impact of dietary and lifestyle changes on the development of gestational diabetes by assessing the dietary and lifestyle changes before and during the current pregnancy in women with and without GDM.

Methods: This is a hospital-based descriptive analytical study carried out at the Obstetrics Clinic, Teaching Hospital, Jaffna. An equal number of GDM (204) and non-GDM (408) women at the third trimester were enrolled using random sampling method. To ensure unbiased selection, pregnant women in each list of the daily clinic admission book were randomly selected using systematic sampling method. An interviewer-administered questionnaire validated by supervisors was used to collect information on socio-demographic details, pre-pregnancy BMI, dietary patterns, physical activity levels, alcohol use, smoking, family support and previous gestational diabetes, before and during the pregnancy. Data was analysed using SPSS version 21.

Results: Majority were between 19 and 34 years (53.1%), with a mean age of 28.68 (± 4.91) years, within BMI 18.5 to 24.9 kgm⁻², unemployed, and had education above G.C.E (O/L). Higher number of the GDM mothers were non-vegetarians (50.3%, $p > 0.05$) consumed fast-food (64.5%, $p = 0.001$), sugary beverages (61.2%, $p = 0.03$), consumed frequent meal (51.7%, $p = 0.14$) while were highly concerned eating healthy food ($p < 0.001$). Mothers with GDM consumed less amounts of fruits, vegetables, green leaves, cereals and legumes (71.4%, $p = 0.036$); 83.8%, $p < 0.001$; 68.9%, $p = 0.001$ 84.6%, $p = 0.001$ respectively), water (45%, $p = 0.21$), Women with GDM consumed starchy foods (56.2%, $p = 0.37$), and fatty foods (49.4% $p = 0.37$) in high amount. Women with GDM, reduced regular exercise (51.6%, $p = 0.742$) and daily activities (62.9%, $p = 0.008$). Family support was low to the women with GDM (71.4%, $p = 0.001$).

Conclusion: This study showed that unhealthy eating habits and reduced of physical activity increased the risk of developing GDM. Pregnant women must be advised to include fruits, vegetables, grains, and legumes while avoiding fast food and sugary drinks. Further should be encouraged to carry out regular physical activity.

Keywords: gestational diabetes mellitus, life style modification, healthy diet, physical activities, maternal and foetal health

Abstract 10

Adverse pregnancy outcomes associated with advanced maternal age among mothers who deliver in the maternity wards of Teaching Hospital Jaffna, Sri Lanka

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Background and objective: Advanced maternal age has been associated with many maternal and neonatal complications. This study was performed to compare the pregnancy outcomes between women of advanced maternal age (>35 years) and younger women (18-35 years) who delivered in the maternity ward of Teaching hospital Jaffna (THJ).

Methods: This was an Analytical cross-sectional study. The study was conducted in the maternity ward of Teaching hospital Jaffna, from July 29, 2024 to October 5, 2024. A total sample size of 240 was selected using stratified systematic sampling, consisting of 120 cases (mother's age >35 years) and 120 controls (18-35 years), maintaining a 1:1 ratio. Data were collected using interviewer-administered questionnaire. Statistical analysis was performed using standard package for social science (SPSS) software, and the chi-square test was applied to determine the association between maternal age and complications.

Results: The sample included 120 mothers in each age group. The majority of participants in both the 18-35 group (72.5%, n=87) and the age >35 years group (78.3%, n=94) were homemakers. The total rate of lower segment caesarean section (LSCS) delivery was higher in the advanced maternal age group (61.6%, n=74) compare to the younger group (44.1%, n=53). The advanced maternal age group was significantly associated with low birth weight (p= 0.015) and fetal distress (p=0.047), with older group reporting a 20.0% incidence of fetal distress (n=24). Conversely, muconium aspiration was more prevalent in the younger age group (4.2%) compare to the older group (2.5%) and show significant association with maternal age (p=0.038). There was no statistically significant association found for Gestrational Diabetes Mellitus (p=0.323) or pregnancy induced hypertension (p=0.636).

Conclusion: Advanced maternal age (above 35 years) is associated with increased rates of advanced outcomes, including an elevated likelihood of low birth weight (and higher rate of lower segment caesarean section deliveries, which contribute to an increased need for neonatal intensive care unit admissions. Specialized prenatal care programs and standardized screening protocol should be established for women of advanced maternal age to monitor for and manage potential complication.

Keywords: advanced maternal age, maternal complications, neonatal complications, pregnancy induced hypertension, postpartum hemorrhage

Abstract 11

Addressing knowledge gaps in gestational diabetes mellitus among field health midwives in Jaffna district, Sri Lanka: A step toward strengthening maternal health systems

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Background and objective: Gestational Diabetes Mellitus (GDM) is a common pregnancy-related complication with potential adverse outcomes for both mothers and newborns. In Sri Lanka, Field Health Midwives (FHM)s are primary providers of antenatal care and play a pivotal role in the early identification, referral, and management of GDM. Despite widespread antenatal care coverage, knowledge gaps among FHM)s may limit the effectiveness of care delivery. This study aimed to assess the knowledge of GDM and associated socio-demographic and work-related factors among FHM)s in the Jaffna district.

Methods: A descriptive cross-sectional study was conducted among all 143 FHM)s in the Jaffna district, covering 14 Medical Officer of Health (MOH) areas. Data were collected using a pre-tested, self-administered questionnaire focusing on GDM risk factors, complications, diagnosis, and management. Knowledge was assessed using a composite score (range 0–100), categorized as adequate ($\geq 50\%$) and not adequate ($< 50\%$). Overall and domain-specific knowledge analysis was conducted using SPSS, employing descriptive and inferential statistics. Chi-square and independent t-tests were used to determine the association (significance set at $p \leq 0.05$).

Results: The median age of participants was 39 years, with 52% holding a Diploma in Midwifery. The mean overall knowledge score was 64.3 ± 13.7 , with 64.3% showing over all adequate knowledge (cutoff $\geq 50\%$). Majority had adequate knowledge on recurrence (92.3%), GDM complications (86%) and risk factors (51.7%). Around one-third had adequate knowledge on screening timing (38.5%) and glucose thresholds (30.1%). Knowledge adequacy was significantly associated with age ($p < 0.001$), educational qualification ($p < 0.001$), training duration ($p < 0.001$), and completion of internships ($p < 0.001$), but not with years of service ($p = 0.095$) or recent exposure to GDM cases ($p = 0.301$).

Conclusion: The findings show that there was knowledge gaps among the FHM)s particularly knowledge on GDM risk factors, glucose thresholds, and screening timing. In-service training programmes on GDM emphasising screening, management and risk factors would strengthen maternal healthcare services and improve pregnancy outcomes.

Keywords: gestational diabetes mellitus, field health midwives, maternal Health

Abstract 12

Nutritional intake and the association of starch and sugar intake with selected factors among pregnant women in the obstetric wards in Teaching Hospital, Jaffna

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Background and objective: Maternal nutrition during pregnancy is crucial for both maternal and fetal health. This study aims to describe the nutritional intake of pregnant women, the sources of knowledge about maternal nutrition and the association between selected socio-demographic and other factors with the starch intake among pregnant women who are admitted at the obstetric wards in Teaching Hospital Jaffna (THJ).

Methods: This is an institutional-based descriptive cross-sectional study carried out at obstetrics wards in the THJ. Estimated sample size was 374. Data were collected using an interviewer-administered questionnaire from 375 pregnant women admitted to the obstetric wards of THJ during the data collection period (August– November 2024). Dietary intake of pregnant women was assessed by 24 hour dietary recall. Data was entered and analyzed at a 95% confidence interval using Statistical Product Service Solution software (SPSS version 27). Association between antenatal services and knowledge resources was assessed by Independent T-test. The association was assessed by Independent T-test for employment status and one-way ANOVA for education status and religion.

Results: Around 48.8% of pregnant women consumed cereals and starchy foods within recommended range. Meanwhile sugar by 66.1%, vegetables by 8.5%, fruits by 6.5% and pulses by 8.5% consumed within recommended range. The animal proteins such as fish, meat and dried fish by 7.5%, eggs by 41.9% and milk and milk products by 60.3% consumed within recommended range. Cereals and starchy food intake significantly differed by employment status with employed showing lower score (10.2 +/- 3.96) than unemployed (11.082 +/- 3.65) (p=0.044). Sugar intake significantly differed by consultation of VOG with those who consulted showing lower score (4.2 +/- 3.59) than those who not consulted (5.4 +/- 3.53) (p=0.003).

Conclusions: The study found inadequate intake of vegetables, fruits, pulses, and proteins, though water and milk consumption were satisfactory. Recommendations included personalized dietary counseling and regular nutritional assessments.

Keywords: nutritional intake, association of starch and sugar intake, selected factors, pregnant women, obstetric wards

Abstract 13

Knowledge on exclusive breastfeeding and perceived barriers among mothers of babies (6 months – 2 years) in paediatric wards at Teaching Hospital, Jaffna

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Background and objective: According to WHO, exclusive breastfeeding is recommended for the first 6 months of a baby's life, and this is also followed in Sri Lanka. However, several factors influence EBF, including sociodemographic characteristics, knowledge, and barriers that may interrupt and ultimately affect the baby's health. This study aimed to assess the knowledge and perceived barriers regarding EBF among mothers of children aged six months to two years in the pediatric wards of Teaching hospital Jaffna, and to determine how socio-demographic factors influence exclusive breastfeeding.

Methods: Data was collected through a structured interviewer administered questionnaire (IAQ) in a hospital based descriptive cross-sectional study, conducted among mothers of children aged 6 months to 2 years in the pediatric wards of Teaching Hospital Jaffna. Knowledge and perceived barriers along with socio-demographic influences, were assessed using the IAQ. A systematic sampling method of probability sampling was used. Data were corrected according to guidelines; equal scores were given for correct answers and no scores were assigned for incorrect ones. Knowledge levels were categorized as poor (0-40), average (41-69), or good (≥ 70). The Chi-square test of independence and Fisher's exact test were applied to assess the associations between socio-demographic factors and knowledge levels.

Results: Out of 233 respondents, 96.1% correctly identified the recommended six-month duration for exclusive breastfeeding, but only 77.7% had exclusively breastfed. Overall, 44.2% of mothers had good knowledge, 52.8% had average knowledge, and 3% had poor knowledge on exclusive breastfeeding. Nearly half (49.8%) reported lack of information and experience as barriers, while 37.3% cited inadequate breast milk production, 41.6% inadequate breastfeeding places in public, and 34.3% embarrassment to breastfeed in public. Additionally, 21.9% faced difficulties obtaining help from healthcare workers. Marital status and number of children significantly predicted knowledge levels.

Conclusion: Although mothers demonstrated appreciable knowledge regarding exclusive breastfeeding, several practical barriers prevented adherence. Therefore, increased awareness and motivation by healthcare providers are essential. Promotion of recommended exclusive breastfeeding practices through traditional methods and social media, along with demonstrations of expressed breast milk feeding before hospital discharge is strongly recommended.

Keywords: exclusive breastfeeding, Teaching Hospital, Jaffna, knowledge, perceived barriers

Abstract 14

Prevalence, associated factors and complications of early onset type 2 diabetes mellitus among those attending Diabetic Centre, Teaching Hospital, Jaffna between 2020 and 2023

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Background and objective: Early-onset Type 2 Diabetes Mellitus (T2DM), between 18 and 40 years, is becoming a public health issue. This study aims at determining the frequency of early onset of T2DM and to identify the associated factors and complications observed in the patients attending the Diabetic Centre, Teaching Hospital Jaffna from January 2020 to December 2023.

Methods: This descriptive cross-sectional study selected 184 patients by systematic sampling method, and the data which was analysed using SPSS were gathered through interviewer-administered questionnaires.

Results: Among the 1104 patients registered at the Diabetic Centre between January 2020 and December 2023, 567 (51.3%) were in the age group of 18–40 years, and 417 (74.8%) had T2DM, with a female predominance (64.5%). The number of T2DM admission declined from 2020 (40.7%) to 2023 (33.4%). Majority were aged between 31–40 years, where the females and males were respectively belonging to the age groups of 36–40 and 31–35 years. Most of them were married (males 68.2%, females 75.8%), and not completed GCE (A/L) (males 65.9%, females 64.6%), with the monthly income between LKR 21,000 and 40,000 (males 34.1%, females 21.2%). From the age groups of 18-20 to 36-40 years in both males (0 to 21.2%) and females (4 to 27.3%), the positive family history increased. Smoking (31.8%) and alcohol use (49.4%) were high in males. Frequent sugary drink consumption (males 44.7%, females 37.4%) and “sometimes” fast food consumption (males 48.2%, females 57.6%) were more in males than in females. Inadequate sleep (males 35.3%, females 36.4%), and immediate post-dinner sleep (males 37.6%, females 38.4%) also contributed to early T2DM. Significant associated factors were female gender (64.5%), consumption of refined grains (males 72.9%, females 65.7%), high screen usage time (males 82.4%, females 92.9%) and physical inactivity (over 80%).

Conclusion: This study concludes that early-onset T2DM is strongly linked to female gender, lifestyle and socioeconomic factors such as unhealthy diets, physical inactivity and high screen usage time. The female gender and lower educational levels were the predominant determinants emphasizing the need to educate the community on lifestyle modification to prevent and control the development of T2DM.

Keywords: early onset, type 2 diabetes mellitus, associated factors, complications

Abstract 15

Prevalence of digital eye strain and its associated factors among Advanced Level students in Jaffna Educational Zone

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Background and objective: With the increased use of digital devices, digital eye strain (DES) has become prevalent, with symptoms like burning, dryness, blurred vision, headaches, and fatigue. Factors such as ergonomics, environmental conditions, and socioeconomic status influence DES severity. Prolonged screen exposure not only causes ocular discomfort but may also lead to transient or persistent reductions in visual acuity (VA) due to accommodative fatigue and refractive stress. Therefore, this study focuses on assessing the prevalence of DES and its association with VA among Advanced Level (A/L) students in the Jaffna educational zone.

Methods: A school-based descriptive cross-sectional study was conducted among 393 A/L students from 13 schools (October 2023-May 2025). Proportionate stratified random sampling was used, with each school representing a stratum based on the number of A/L students. Data were collected via a self-administered questionnaire and DES was measured using a 16- symptom scale; a score >6 was considered indicative of DES. VA was assessed using the Snellen chart. Analysis was performed with SPSS version 20; chi-square tests were applied for categorical variables and ANOVA for continuous variables ($p < 0.05$). Ethical approval was obtained from the Faculty of Medicine, University of Jaffna.

Results: Among 393 students, 42.7% were males and 57.3% females. The response rate was 100%. DES was found in 10.9% ($n=43$). The most common symptoms were headache, tearing, burning sensation and excessive blinking. Significant associations were observed between DES and laptop use ($p=0.002$), computer use ($p=0.004$), and duration of daily laptop time ($p=0.002$). Factors such as spectacles use ($p=0.005$), using devices in the dark ($p<0.001$), and lower Snellen chart score (scores $<6/6$; $p<0.001$) were also significantly associated with DES. Poor posture (types C& F) were also associated with DES. There was a significant association between DES and VA ($p<0.001$).

Conclusion: Although the prevalence of DES (10.9%) among students was low, the observed associations between DES, VA & device usage patterns emphasize the importance of ergonomic awareness, regular eye screening and preventive education to minimize the risk of DES among school students.

Keywords: digital eye strain, visual acuity, screen time, ergonomics, students, Jaffna

Abstract 16

Association between parent-child interaction in chronic disease management and knowledge on parental chronic diseases among children in Tellippalai Education Zone

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Background and objective: Chronic diseases like diabetes mellitus (DM) and dyslipidaemia (DL) are rising globally, requiring effective lifestyle changes and family involvement for optimal control. Adolescents can influence their parents' health behaviours through positive communication and support. The aim of the study was to assess the association between parent-child interaction in chronic disease management and knowledge on parental chronic diseases among children in Tellippalai education zone.

Methods: A descriptive cross-sectional study was conducted among 426 Grade 11 students in the Tellippalai Education Division using cluster sampling. Students whose parents had either DM or DL were included. Data were collected through a self-administered structured questionnaire assessing knowledge on DM and DL, categorized as good or poor based on a pre-set scoring system. Quality of parent-child interaction was evaluated through the frequency of health-related discussions and shared decision-making and student involvement in parental disease management. Data were analysed using SPSS with descriptive statistics and chi-square tests to assess associations.

Results: Among 426 participants, 71.1% had poor knowledge of DM and 85.4% had poor knowledge of DL. Students with good knowledge (DM 28.9%, DL 14.6%) were more likely to engage in frequent health-related discussions with parents and participate in their disease management ($p < 0.05$). A positive association was found between better knowledge and stronger parent-child interaction.

Conclusion: Students with better understanding of DM and DL showed stronger engagement with their parents in disease management. Strengthening school-based health education via health clubs, curriculum integration, health campaigns, etc, could enhance both adolescent knowledge and family involvement in chronic disease care.

Keywords: diabetes mellitus, dyslipidaemia, knowledge, parent-child interaction, disease management

Abstract 17

Prevalence of type 2 diabetes mellitus and associated risk factors among middle-aged adults in a workplace setting

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Background and objective: Diabetes mellitus is a growing global health concern, contributing significantly to morbidity and mortality. The rising prevalence, particularly among middle-aged individuals, highlights the need for early detection and intervention. This study aimed to determine the prevalence of type 2 diabetes mellitus and associated risk factors (physical inactivity, unhealthy diet, overweight and high blood pressure) among middle-aged adults in a workplace setting.

Methods: This community-based, descriptive, cross-sectional study included 178 middle-aged staff in Divisional Secretariat Office Nallur. Data were collected using structured, self-administered questionnaires. Sample size was calculated based on Rannan-Eliya et al. (2023), with an estimate of 176. Data were analyzed using SPSS, and the chi-square test was used to assess associations between diabetes status and selected risk factors with a significance level of $p < 0.05$.

Results: Among 178 participants, 11.8% were diabetic and 38.8% were pre-diabetic. Physical inactivity was common (66.3% at moderate/high risk), but no significant association was found ($p = 0.453$). Similarly high-risk dietary group (46.6%) showed no association with diabetes status ($p = 0.566$). Blood pressure was elevated in 46.6% of participants but also showed no significant association ($p = 0.870$). BMI showed a notable association with diabetes prevalence, which increased from 6.8% in normal BMI to 12.5% in overweight and 22.6% in obese participants. Pre-diabetes was most common in the obese group (45.2%), indicating a borderline association between higher BMI and pre-diabetes/diabetes ($p = 0.080$).

Conclusion: Unhealthy dietary habits, physical inactivity, elevated blood pressure, diabetes, and pre-diabetic conditions were common among participants. The study could not explain the associations of these factors with diabetes. These findings highlight the need for targeted, evidence-based workplace interventions.

Keywords: diabetes mellitus type 2, risk factors, prediabetes, obesity, elevated blood pressure

Abstract 18

Prevalence, complications, and factors associated with glycaemic control in type 2 diabetes mellitus among elderly residents in free-service Elders' Homes in Jaffna District

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Background and objective: Diabetes mellitus is a growing global health concern affecting all age groups, particularly the elderly, who are more vulnerable to diabetes-related complications. Enhancing diabetes awareness and self-care practices can improve lifestyle choices and reduce complications. This study aimed to determine the prevalence, complications, and factors associated with glycaemic control in Type 2 Diabetes Mellitus (T2DM) among elderly residents in elders' homes offering free services in the Jaffna district.

Methods: A descriptive cross-sectional study was conducted in four elders' homes providing free services in the Jaffna district. Data were collected from all eligible residents using an interviewer-administered questionnaire via the Kobo Collect application. Statistical analysis was performed using SPSS. Descriptive statistics summarized the data, and Chi-square tests were used to identify associations between glycaemic control, complications, and other variables.

Results: A total of 291 elderly residents participated (100% response rate), with 48.1% diagnosed with T2DM. The highest prevalence was noted among individuals aged over 80 years (68.8%), smokers (65.1%), and those consuming alcohol (58.5%). Glycaemic control (FBC <125 mg/dl) was achieved in 79.5% of diabetic participants. However, a high prevalence of complications was reported: nephropathy (86.61%), neurological (81.98%), peripheral vascular (74.11%), retinopathy (64.29%), and cardiac complications (17.86%). Good glycaemic control was significantly associated with high medication adherence (91%), while age and physical activity level did not show association. Both controlled and uncontrolled T2DM groups had similar clinic follow-up attendance (87%), while daily glucose monitoring was notably low (1.1%) in both groups.

Conclusion: Almost half of the elderly residents had T2DM. Although good glycaemic control was observed in the majority, diabetes-related complications were high. Collaboration with nearby healthcare institutions would enable the institutions to run regular screening and follow-up programmes which would lead to early detection of the disease and its complications and improved diabetic care.

Keywords: diabetes mellitus, elders' homes, glycaemic control, diabetic complications, Jaffna district

Abstract 19

Prevalence of skipping breakfast, reasons for skipping breakfast and knowledge on healthy breakfast among advanced level students in Nallur Division

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Background and objective: Breakfast is often regarded as the most important meal of the day, playing a vital role in maintaining overall health, concentration, and academic performance. However, skipping breakfast is increasingly common among adolescents due to various lifestyle, social, and behavioural factors. This study aims to assess the prevalence of skipping breakfast, explore the reasons for skipping breakfast, and evaluate the level of knowledge on healthy breakfast habits among the 2025 batch Advanced Level students in the Nallur division.

Methods: A descriptive cross-sectional study was conducted among 392 2025 Batch Advanced Level students from Nallur educational zone using proportionate stratified random sampling. Skipping breakfast was defined as not having breakfast on at least one day in a week. Data were collected via a self-administered questionnaire developed by the researchers and validated by the supervisors. Based on a scoring system developed by the researchers, knowledge level regarding healthy breakfast were categorized as very poor (0-3), poor (4-6), average (7-9), good (10-12) and excellent (13-15). Data analysis was performed with SPSS, and the chi-square test assessed associations between breakfast skipping and selected variables, with a significance level of $p < 0.05$.

Results: Among 389 participants, 62.2% skipped breakfast at least once per week, while 37.8% never skipped. Skipping was more common among tech, arts and commerce stream students. Reported reasons for skipping breakfast were: lack of appetite 39.3%, early extra classes 32.6%, over sleeping 22.1%, usual habit 20.1%, to avoid sleepiness during studying 15.7%, breakfast choices 15.1%, to reduce weight 10.2%, feeling discomfort 8.4%, economic crisis 7.1%, no one to prepare breakfast 6.1%, to reduce expenditure 5.9%, due to influence 3.3%. In the sample, 67.1% had good to excellent knowledge about healthy breakfast.

Conclusions: Although most students had adequate knowledge about the importance of breakfast, a majority still skipped it. Skipping was more frequent among certain academic and sociodemographic groups. Interventions promoting time management, family involvement and affordable breakfast options may help to improve regular breakfast consumption among students.

Keywords: skipping breakfast, associated factors, healthy breakfast, school students, dietary habits

Abstract 20

Quality of sleep and its associated factors among Nursing Officers working in Teaching Hospital, Jaffna

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Background and objective: Nurses often experience disrupted sleep patterns. This study aims to assess sleep quality and identify socioeconomic, environmental, and work-related factors influencing sleep among nurses at Teaching Hospital Jaffna.

Methods: This institution-based descriptive cross-sectional study was carried out among 268 Nursing Officers working in the Teaching Hospital Jaffna. Self-administered questionnaires were used to gather details of socio-economic, environmental, health, behavioural, and work-related factors and the Pittsburgh Sleep Quality Index (PSQI) was used to assess sleep quality. A standard scoring system using the PSQI was applied, where a score ≤ 5 was categorized as good sleep quality and > 5 as bad sleep quality. SPSS (v23) was used for analysis. Descriptive statistics were used to summarize the data and the Chi-square test was performed to determine the associated factors. Statistical significance was considered as $p < 0.050$.

Results: The mean age was 30. Majority were females (74.6%), married (60.4%), diploma holders in nursing (73.9%), working in Intensive Care Units (ICU) and Operation Theatres (OT, 36.6%), followed by surgical and gynaecological units (22.4%), and clinic and unit (20.9%). The most common duty schedule was double shifts (39.9%), while single shifts and avoidance of night duties were reported by 17.5% and 6% of staff, respectively. Majority (72.8% n=195) of the Nursing Officers had bad sleep quality. Poor sleep was most prevalent among female staff (75.5%), those working in ICU and OT (25.7%), and nurses performing double duties (58.6%). Statistically significant associations were found between sleep quality and income ($p=0.002$), loan obligations ($p=0.016$), lighting in the sleeping area ($p=0.036$), social media use after 6 pm ($p=0.032$), working environment ($p=0.005$), shift patterns ($p<0.001$), number of shifts per week ($p=0.035$), occurrence of double shifts ($p=0.004$), night shifts per week ($p<0.001$) and having a day off after a night shift ($p=0.013$).

Conclusion: Work factors mostly affected nurses' sleep, highlighting the need to revise duty schedules and improve workplace support for nursing staff.

Keywords: nursing officers, sleep quality, Teaching Hospital, Jaffna

Abstract 21

Prevalence and association of screen time with Computer Vision Syndrome among the 2025 Advanced-Level students in Nallur Educational Division, Jaffna

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Background and objective: The rise in digital screen use, especially after the COVID-19 pandemic, has led to increased cases of Computer Vision Syndrome among students, which may impact learning and quality of life. This study aimed to determine the prevalence and association of screen time with Computer Vision Syndrome among the 2025 Advanced-level students in Nallur educational division, Jaffna.

Methods: This institutional-based descriptive cross-sectional study was carried out among 2025 Advanced-level students in Nallur educational division. Stratified proportionate sampling was done based on the student population in each school, ensuring proportionate representation. A validated questionnaire was used to assess the presence of Computer Vision Syndrome; data on the duration of screen time, posture, lighting conditions, and spectacle usage were also collected. Data were analysed with SPSS. Chi-square test was used to assess the association between CVS symptoms and digital screening patterns. The significance level was set at $p < 0.05$.

Results: A total of 383 students participated in the study, with 46.7% (n=179) males and 53.3% (n=204) females. Prevalence of Computer Vision Syndrome was 20.5%, and a statistically significant association was found with the following: females more affected (25.4%) compared to males (15.2%). Spectacle using was reported by 32.5%, while 19.1% did not use spectacles. Regarding posture, 18.5% used a seated posture, while 39.5% used a lying posture. For the distance between the eyes and the device, 28.3% maintained a less than 20cm, and 20.9% maintained 20cm or more. Most students used devices at night (25%), while 14% used them during the day. Glare was present for 44.4%, while 15.7% had no glare. Regarding brightness, 21.3% used less than 25%, 15.9% used 25-49%, 22% used 50-75%, and 50% used more than 75%.

Conclusion: The study emphasizes promoting healthy screen habits among students to reduce Computer Vision Syndrome risk, recommending posture correction, filter glasses, brightness adjustment, proper lighting, and awareness of gender-specific factors to prevent future occurrences.

Keywords: prevalence, screen time, computer vision syndrome, Advanced-Level students

Abstract 22

The effects of work-related stress on self-care and self-reported patient care among Intern Medical Officers in Hospitals of Northern Sri Lanka

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Background and objective: ‘Stress’ was recognized by WHO as a state of worry or mental tension caused by a difficult situation. Everyone experiences stress to some degree. Work-related stress among intern medical officers can have enormous effects on themselves (self-care) and patient care. This can lead to poor quality services, decreased patient satisfaction and medical errors. The aim of this study was to describe the effects of work-related stress on self-care and self-reported patient care among intern medical officers in Hospitals of Northern Sri Lanka

Methods: This hospital based cross-sectional descriptive study was conducted in all hospitals with intern medical officers in the Northern Province from October 2023 to March 2025. The data collection occurred from August to November 2024 using validated pre-tested questionnaire. Estimated sample size was 427, but there were only 127 intern medical officers in the Northern Province. Of them, 122 participated. The findings were evaluated using a scoring system to classify self-care and self-reported patient care as either “significantly or less affected “. Statistical analysis was performed in SPSS, with t-test used to assess associations with socio-economic factors.

Results: Among the 122 intern medical officers, most were single, female, residing close to the hospital. The majority experienced physical (94.3%) and emotional exhaustion (92.7%), sleep <42hours/week (98.3%), skipping meals (100%), limited physical activity (67.2%) and leisure time activity (41.0%) were reported. Self-care was affected in 77.9% and self-reported patient care in 59.8%. However, no statistically significant differences were found in self-care or self-reported patient care based on gender, financial difficulties, or civil status.

Conclusion: Self-care was negatively affected with sleep, skipping meals, leisure time and physical activities, low involvement in spiritual and sexual activities. Work-related stress lead to physical and emotional exhaustion, headaches and communication difficulties with peers and family. None of the intern medical officers smoked and only 9.8% reported occasional alcohol use, indicating good awareness of health. This research recommends to conduct similar researches that includes all intern medical officers of Sri Lanka, implement structured duty hours, increase the intern medical officers count in ward, and digitalize the patient records.

Keywords: intern medical officers, work-related stress, self-care, self-reported patient care, hospitals of Northern Sri Lanka

Abstract 23

Determination of knowledge, attitude, and practices of insulin handling and injection techniques in diabetic patients who attend Diabetic Centre and Medical Clinics in Teaching Hospital, Jaffna

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Background and objective: Diabetes mellitus remains a major global health challenge, especially in low-resource settings such as Sri Lanka. Insulin therapy is essential for glycaemic control, yet improper storage, administration, and disposal practices compromise its effectiveness. This study aimed to evaluate the knowledge, attitudes, and practices (KAP) regarding insulin handling and injection techniques and their association with sociodemographic factors among diabetic patients attending Teaching Hospital, Jaffna.

Methods: A hospital-based descriptive cross-sectional study was conducted at the Diabetic Centre and Medical Clinics of Teaching Hospital Jaffna from August to November 2024 among 388 diabetic patients aged ≥ 18 years who had been on insulin therapy for at least three months. A validated, interviewer-administered questionnaire was used which is developed by the research team and content validated by two experts. Knowledge (0–7), attitude (6–30), and practice (0–7) domains were scored, with a total KAP score out of 44. Data were analyzed using descriptive statistics and chi-square tests to determine associations between KAP scores and sociodemographic variables (SPSS v26). Ethical approval was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna.

Results: Participants were equally distributed by gender (50.3% female), predominantly aged 51–70 years (69.3%), unemployed (55.9%), and educated up to grade 10 (36.9%). While 96.9% of participants achieved a total KAP score of 22 or higher out of 44, critical gaps persisted. Most participants (73.5%) stored insulin in refrigerator doors exposing it to temperature fluctuations and 42.8% discarded used needles in household trash. Knowledge scores were significantly associated with age ($p=0.019$) and education ($p=0.011$); practice scores correlated strongly with education ($p<0.001$). Attitudes were generally positive (96.9% scored $\geq 23/30$). No significant associations were found with gender or insulin therapy duration ($p>0.05$).

Conclusion: Although most participants achieved relatively higher total KAP scores, notable discrepancies existed between knowledge and practice, particularly in storage and sharps disposal. Strengthening structured patient education through repeated counselling and hands-on training is essential to promote safe insulin handling.

Keywords: diabetes mellitus, insulin therapy, needle disposal

Abstract 24

Breakfast habits, student attentiveness and associated factors among second-year undergraduates at the University of Jaffna

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Background and objective: Skipping breakfast is common among undergraduates and can lead to gastric irritation, fatigue, inattentiveness, and ultimately poor cognitive performance. This study investigated breakfast habits, student attentiveness and associated factors among second-year undergraduates of the University of Jaffna.

Methods: A descriptive cross-sectional study was conducted among second-year students of four faculties (Medicine, Science, Arts, and Allied Health Sciences) of the University of Jaffna. Stratified random sampling was used to ensure proportionate representation from the four faculties. Data were collected by directly issued self-administered questionnaires (August-September 2024). Student attentiveness was measured with a composite score based on 15 statements (min 15, max 75); a lower score indicated higher attentiveness. Data were analyzed using SPSS v21. Independent t-tests, one-way ANOVA and chi-square tests were used to determine the factors associated with breakfast habits and student attentiveness (significance level 0.05).

Results: In total, 329 students participated (response rate 100%). Most participants were females (58.1%); 69.6% were Tamil, 20.7% Sinhala, and 9.7% Muslim; 54.7% were boarded and 31.9% stayed at home. In the sample, 66% (n=218) reported usually having breakfast; in the prior three days, 43.6% (n=139) had breakfast on all three days, 20.7% on two days (n=66), and 35.7% (n=114) once or not at all. Among those who usually consumed breakfast, 28.3% reported inadequate, 28.8% adequate, 14.8% excess and 27.9% a mixed intake of starch. Sex ($p=0.001$), place of residence ($p=0.016$), and living with parents ($p=0.001$) were associated with breakfast consumption; females, student residing at home, and those living with parents were more likely to usually have breakfast. Mean attentiveness score was 34.1 (SD 18.0); it differed significantly between those who usually had breakfast (mean 30.8, SD 8.4) and those who did not (mean 40.8, SD 12.7; $p=0.001$).

Conclusion: Second-year undergraduates at the University of Jaffna who had breakfast recorded higher attentiveness scores than those who did not. Health promotion efforts should raise awareness about the relationship between breakfast habits and attentiveness and also ensure the availability of healthy breakfast options at hostels and faculties. Potential confounders like sleep quality and stress levels need further exploration in nationally representative samples.

Keywords: breakfast habits, cognitive performance, attentiveness, undergraduates, Jaffna

Abstract 25

A cross-sectional study of factors influencing cancer screening decisions among Senior School Teachers in Nallur Division, Jaffna

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Background and objective: Cancer is a major global health challenge, with survival rates improving through early detection and quality treatment. Previous studies indicate that cancer screening decisions are influenced by knowledge, education, fear, trust in healthcare, and accessibility, while barriers include poor knowledge, low income, stigma, fear, cultural beliefs, and practical constraints (time and distance). However, the influential factors in Jaffna remain unexplored. This study aimed to assess the factors influencing cancer screening decisions among teachers aged 50-60 years in the Jaffna district.

Methods: An institution-based descriptive cross-sectional study was conducted among teachers, aged 50-60 years from schools in the Nallur division, Jaffna. As the study population (429) was nearly equal to the calculated sample size, all eligible participants were included. A self-administrated questionnaire was developed based on previous literature and discussions with supervisors and validated by an onco-surgeon, was used to collect data. Data were scored (+1/-1/0) and analyzed using SPSS, with cumulative scores (>0=influential) assessing positive (fear, knowledge, convenience) and negative (distancing, ignorance, avoidance) influences. Influential factors were determined using the chi-square test (significance level of 0.05).

Results: This study examined the influential factors among 385 teachers (response rate: 89.74%). The sample consisted predominantly of females (272, 70.6%), Hindus (341, 88.6%), and married individuals (331, 86.0%). Findings revealed fear (154, 40%) and knowledge (206, 53.5%) promoted screening participation, while ignorance and avoidance hindered it. Time constraints (184, 47.8%), location issues (88, 22.9%) and low cancer literacy (154, 39.9%) were prominent, with psychosocial factors outweighing demographic influences. “Awareness about early detection” ($p<0.01$) and “fear of cancer ($p=0.02$)” positively influenced to attend the cancer screening program. “Absence of past medical history ($p=0.03$)” and “absence of family history of cancer ($p=0.04$)” negatively influenced the attendance. Males, Hindus and Married individuals were more likely to accept the particular influencing factors.

Conclusion: Cancer screening participation was mainly influenced by psychosocial factors rather than demographic variables. Fear and awareness about early detection encouraged participation, while ignorance, lack of cancer history, time constraints, and poor accessibility discouraged it. Targeted education, workplace-based awareness programs, and improved access are recommended to enhance screening participation.

Keywords: cancer screening, early detection, participation factors, teachers, barriers

Abstract 26

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

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Background and objective: Medical students are particularly prone to physical inactivity due to their demanding academic schedules. This study assessed the level of physical activity, knowledge and attitude towards physical activity, and associated factors among medical students at the University of Jaffna.

Methods: An institution-based descriptive cross-sectional study was conducted among Jaffna medical students selected through proportionate stratified sampling. Data collection was done by using a self-administered questionnaire (August to November 2024). Physical activity was measured with the International Physical Activity Questionnaire Short Form (IPAQ-SF) and evaluated against WHO standards. Knowledge was assessed by calculating the % responding correctly to each question. Attitudes and barriers were evaluated on a four-point Likert scale (strongly agree-strongly disagree). Data were analyzed with SPSS (v21). Factors associated with participation were determined using the chi-square test (significance level 0.05).

Results: In total 389 students participated (response rate 94.2%). The majority were females (67.6%, n=263) and Tamil students (53%, n=203). Just over half (50.3%, n= 189) reported participating in physical activity in the prior week (IPAQ-SF MET values >0). Based on IPAQ-SF activity levels, however, 80.3% (n=302) of students were inactive (0-600MET). By WHO standards, 11.3% met the criteria for adequate moderate activity, 8.2% for adequate vigorous activity. Knowledge gaps were identified in relation to the recommended duration of physical activity and its immediate benefits. Attitudes were generally positive although about a third strongly agreed/agreed that sports did not interest them (35.95%), that they did not have skills to participate in physical activities (35.7%), and felt that competitive sports were not suitable for women (31.4%). Key barriers to physical activity were heavy academic load (87.3%) and lack of time (84.2%). Participation in physical activity was significantly associated with gender, ethnicity, academic phase, exam results and type of residence ($p \leq 0.05$); males, Tamil students, para-clinical students, and those who lived at home, were more likely to be active.

Conclusion: Participation in physical activities is inadequate among medical students of the University of Jaffna. Interventions addressing academic and structural barriers, coupled with improved awareness and supportive infrastructure, are needed to promote active lifestyles among medical students.

Keywords: physical activity, medical students, participation, IPAQ, University of Jaffna

Abstract 27

Adherence and adverse effects among patients on anti-tuberculosis therapy attending Pannai Chest Clinic, Jaffna

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Background and objective: Tuberculosis remains prevalent in Sri Lanka. Although the treatment is lifesaving, poor adherence to the medication remains a problem, leading to drug resistance for anti-tuberculosis medication in Sri Lanka. The objective of this study was to describe the adherence and adverse effects and identify the factors associated with adherence among patients on anti-tuberculosis therapy attending Pannai Chest Clinic, Jaffna.

Methods: This was a clinic-based descriptive cross-sectional study conducted at Chest Clinic, Pannai among 109 patients with tuberculosis who had completed at least one-month treatment. The data was collected by using interview administered questionnaire, extraction sheets and analysed using SPSS23 software. Adherence was defined as not missing any dose of the anti-tuberculosis treatment. Standard descriptive statistics, Chi-square test and Fisher's exact test were used in the analysis with a significance level of 0.05.

Results: Of the 109 patients' majority (96.3%) were adults (≥ 18 years) with a mean age of 48.6 years, and more than two-thirds (67.9%) were males. 58.7% were unaware about tuberculosis before diagnosis. Family support was seen in 92.7%. 52.3% reported that staff explained about the disease and importance of the treatment. Adherence to anti-tuberculosis medications was 85.3%. 77.1% experienced at least one adverse effect. Common adverse effects were numbness/tingling of extremities (51.4%), loss of appetite (33.0%) and joint pain (14.7%). The frequency of adverse effects was slightly higher during the continuation phase (77.9%) than the intensive phase (60%), but this difference was not statistically significant. Factors associated with adherence were missing clinic visits ($p < 0.001$), and sex ($p = 0.016$). Forgetting medication was more prevalent among males compared to females. There was no significant association between adherence and duration of therapy, family support, awareness of TB and adverse effects.

Conclusion: Despite having good family support and no significant association with adverse effect, 14.7% of the patients did not adhere to their anti-tuberculosis medication. Since strict adherence to treatment is crucial for successful treatment of tuberculosis and to prevent relapse and drug-resistance, measures are needed to identify people more vulnerable to non-adherence and improve their adherence.

Keywords: tuberculosis, adherence, adverse effects, anti – tuberculosis medications

Abstract 28

Eight-year retrospective study of poisoning deaths at Teaching Hospital Jaffna, Sri Lanka

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Background and objective: Poisoning is a global medico-social issue and a major public health problem in developing countries like Sri Lanka. It can occur either intentionally or unintentionally. The prevalence of poisoning varies depending on factors such as the type of poison, geographical location, availability, and social and cultural influences. This study aims to describe the patterns of poisoning (type of poison, circumstances, and sources), the period of survival after poisoning, and the associated sociodemographic factors among fatal poisoning cases based on post-mortem reports from the Judicial Medical Officer (JMO) Office at Teaching Hospital, Jaffna.

Methods: This is a descriptive cross-sectional study based on secondary data from post-mortem reports of all poisoning-related deaths at the JMO Office, Teaching Hospital, Jaffna, recorded between 2015 and 2023. Cases under suspicion or with an unknown cause of death were excluded. Data were collected using data extraction sheets and analysed using SPSS (v21).

Results: An eight-year retrospective analysis of 122 post-mortem reports revealed that poisoning-related deaths were predominantly suicidal (76.2%). Among these cases, 42.7% were linked to relationship problems. Males (76.2%) were more commonly affected than females, and 69.67% of the deceased were married. The highest proportion of poisoning deaths (14.6%) was recorded in the Uduvil Divisional Secretariat area. Housewives (16.0%) and farmers (14.9%) were the most vulnerable groups to suicidal poisoning. Out of 94 recorded suicide cases, 17.0% had previous suicide attempts, 12.8% had a history of psychiatric illness, and 3.2% had a family history of attempted suicide. The most common poisoning method in the suicidal cases was agrochemicals, primarily involving organophosphates. Other methods included plant poisons such as alary seeds, corrosive substances like kerosene and acids, various medications including metformin, antidepressants, and paracetamol, narcotic drugs such as methamphetamine and heroin, as well as cyanide and methanol.

Conclusion: The high prevalence of suicidal poisoning, especially among middle-aged men, underscores the need for stricter pesticide control, safer farming practices, and stronger mental health and economic support. Policy reforms, community awareness programs, and improved healthcare infrastructure are essential for reducing poisoning-related deaths and building a more resilient society.

Keywords: poisoning, agrochemicals, deaths, suicide, Jaffna

Abstract 29

Microbiological contamination in reverse osmosis water supply chain: An assessment of microbial quality from production to consumption among hostel students in University of Jaffna

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Background and objective: Reverse Osmosis (RO) treatment is widely used to provide microbiologically safe drinking water in areas with poor groundwater quality, such as the Jaffna Peninsula in Sri Lanka. However, the risk of secondary microbial contamination after treatment remains a concern, particularly in decentralized systems. This study aimed to assess the microbial quality of RO-treated water along the supply chain and identify associated storage and hygiene factors among hostel students through a structured questionnaire survey.

Methods: Fifty water samples were collected from four points: production sites (immediately after RO treatment), storage tanks at production sites, distribution tanks used by suppliers, and 5-liter bottles stored in student hostels. Microbial analysis was performed using the membrane filtration technique to detect Total Coliforms and *Escherichia coli* as contamination indicators. A structured questionnaire was administered to 280 students to gather information on water usage frequency, storage duration, container cleaning practices, and satisfaction with water quality. Data were analysed using SPSS, and associations were tested using Pearson's correlation, with $p < 0.05$ considered statistically significant.

Results: RO-treated water met microbiological standards at production points; however, contamination was frequently detected in storage and end-use samples; 45% of end-use samples exceeded SLS limits for Total Coliforms, and 20% showed TNTC (>2000 CFU/100 mL). Occasional *E. coli* contamination was also found. Among students, 50.4% and 30.4% used RO-treated water always and frequently (at least once daily), respectively. Only 47.1% cleaned containers weekly, 18.9% monthly, and 15.4% never cleaned them. Most students (68.6%) obtained water from third-party distributors, and 30.4% stored water for 3–5 days at room temperature. A weak negative correlation ($r = -0.147$, $p < 0.05$) was observed between satisfaction with water quality and perceived changes in taste, odour, or appearance.

Conclusion: The study demonstrated that RO-treated water met standards at production but was subject to significant secondary contamination during storage and end-use. Improper handling, infrequent cleaning of containers, and prolonged storage were major contributing factors. These findings highlight the need for improved post-treatment handling, regular container maintenance, and awareness programs for students and distributors to ensure safe RO water consumption in hostel settings.

Keywords: RO-treated water, microbial contamination, storage conditions, hygiene, student hostels, Jaffna

Abstract 30

Risk factors associated with abdominal hernia among patients admitted to surgical wards of Teaching Hospital, Jaffna

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Background and objective: Abdominal wall hernias affect all ages and sexes. Major risk factors include weightlifting, constipation, weight gain, smoking, and past surgeries. Identifying these risks helps prevent hernias and enhances the health and efficiency of the working population. This study aimed to assess association between known risk factors of abdominal hernia and the occurrence of abdominal hernia among patients admitted to the surgical wards of Teaching Hospital Jaffna (THJ).

Methods: A descriptive cross-sectional study was conducted among 143 patients admitted to the surgical wards of THJ. Patients with abdominal hernia were identified through the admission book and bed head tickets (BHT). An interviewer-administered questionnaire including socio-demographic, physical activity, alcohol, smoking habit, past medical history was used to collect data, which was analysed using SPSS software. Descriptive statistics and chi square tests were applied for data analysis. P value <0.05 was considered statistically significant. Ethical clearance was obtained from the University of Jaffna.

Results: Majority (79.7%) were males. Mean age and Body Mass Index was 56.7 (± 15.8) years and 24.8 (± 3.3) kgm⁻² respectively. Most common type of hernia was direct inguinal hernia (75%), followed by periumbilical hernia (10.4%), para umbilical hernia (4.1%), and incisional hernia (4.1%). Highest incidence was observed in the 50 to 70-year age group. Vigorous intensity activities were reported by 65 patients (45.5%, p=0.156). Majority of patients were not regular alcohol consumers (86.3%, p=0.281), and non-smokers (53.8%). Respiratory and gastrointestinal illness was reported by 39.9% (p=0.958) and 28.7% (p=0.442) of the patients respectively, while constipation was reported by 29.4% (p=0.074). Farmers and fishermen were mostly affected, followed by labourers and housewives, and office workers and professionals. Forty-five patients (31.5%) reported previous abdominal surgeries. Statistical analysis revealed a highly significant association between prior abdominal surgery and hernia development (p<0.001).

Conclusion: Most abdominal hernia cases occurred in males above 50 years of age engaging in prolonged vigorous activity. The findings suggest that reducing working hours after the age of 50 and minimizing alcohol consumption could help prevent the occurrence of hernias. Prior abdominal surgery and constipation were significant risk factors.

Keywords: abdominal hernia, physical activity, alcohol consumption, Teaching Hospital, Jaffna

Abstract 31

Association between overcrowding and patient satisfaction in a general surgical unit at Teaching Hospital, Jaffna

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Background and objective: Overcrowding in hospital wards presents a growing challenge to healthcare systems in lower-income countries, significantly impacting patient satisfaction and quality of care. This study aimed to determine the association between overcrowding (measured by patient-to-nursing staff ratio (PNR) and bed occupancy ratio (BOR)) and patient satisfaction (PS) with ward care at a general surgical unit at Teaching Hospital Jaffna.

Methods: The first component of the study measured PNR and BOR for each patient during their hospital stay (PNR>5:1 and BOR>1:1 were considered overcrowding). The second component was a descriptive cross-sectional study to assess patient satisfaction among patients awaiting discharge from the same surgical unit. Consecutive sampling was used to include all patients who matched the study criteria (September 2024-January 2025). An interviewer-administered questionnaire with 28 questions assessed PS. A PS score (min 1, max 5) was computed for each participant a score of ≥ 4 was considered to convey satisfaction. Chi-square tests were used to determine the association between overcrowding and PS. Pearson's correlation coefficient assessed the relationship between PNR/BOR, and PS score (significance level 0.05).

Results: In total, 240 patients participated in the PS study (response rate of 93.8%). Mean age was 47.1 years; 43.8% were males. Mean duration of hospital stay was 4.2 days (SD 1.3). Mean PNR was 8.5 (SD 2.2), indicating overcrowding, and BOR was 0.7 (SD 0.3); 96.2% experienced overcrowding based on PNR and 10.4% based on BOR. Mean PS score was 3.9 (SD 0.4). A higher proportion of patients were dissatisfied with bathroom facilities (46.3%), illumination and ventilation (34.2%), and waiting time for bathroom use (32.2%). There were significant associations between PS and overcrowding, as measured by PNR ($p=0.001$) and BOR ($p=0.045$). A weak negative correlation was observed between PS score and PNR ($r=-0.218$, $p<0.001$) and BOR ($r=-0.143$, $p=0.026$).

Conclusion: PNR was well above the recommended standard in the general surgical unit at THJ. Overcrowding had an inverse relationship with PS. Addressing this issue requires optimizing PNR, expanding infrastructure, and improving ward facilities. Efficient and equitable resource allocation within and among hospitals should be a priority.

Key words: overcrowding, patient satisfaction, bed occupancy ratio, patient-to-nursing staff ratio, Jaffna

Abstract 32

Knowledge, attitude, and factors associated with organ donation and transplantation among the students of Faculty of Medicine, University of Jaffna

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Background and objective: End-stage organ failure is one of the major outcomes of non-communicable diseases. While organ transplantation is the most preferred treatment for end-stage organ failure, donor shortages remain a barrier. Medical students, as budding doctors, could play a crucial role in promoting organ donation, as their knowledge and attitudes can influence public perception. This study aims to assess the knowledge, attitude, and sociodemographic factors associated with knowledge and attitude regarding organ donation and transplantation among students of the Faculty of Medicine, University of Jaffna.

Methods: A descriptive cross-sectional study was conducted among 387 medical students from October 2023 to May 2025, selected through stratified random sampling. Data were collected using a self-administered questionnaire and analysed with SPSS. Knowledge was measured with 10 questions; attitude was assessed using a Likert Scale. Scores above 50% indicated adequate knowledge, and scores above 10 reflected a positive attitude. Chi-square, Fisher's Exact, and Pearson's correlation tests were used, with $p < 0.05$ considered significant. Ethical clearance was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna.

Results: Among the participants, 55.6% were female and 44.4% male. Adequate knowledge was found in 73.1%, and 65.4% showed positive attitudes. While kidney donation awareness was high, knowledge about pancreas and small intestine donation was limited. Only 9.3% were aware of medicolegal aspects of organ donation and transplantation. With respect to attitudes, only 33.1% expressed willingness to donate, with 42.6% citing lack of awareness as the primary barrier. Knowledge significantly correlated with age ($p < 0.001$) and academic batch ($p < 0.001$), while attitude was associated with batch ($p = 0.009$). A positive correlation existed between knowledge and attitude ($r = 0.149$, $p = 0.003$).

Conclusion: Most students showed adequate knowledge and positive attitudes. However, willingness to donate was limited, with lack of knowledge reported as a barrier. These findings highlight the need for structured education and awareness programs on organ donation within the medical curriculum.

Keywords: knowledge, attitude, organ donation and transplantation, medical students

Abstract 33

Demographic, clinical and virological parameters of dengue fever and dengue haemorrhagic fever cases admitted to the Teaching Hospital, Jaffna

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Background and objective: Dengue is a major public health issue in Sri Lanka, presenting from mild febrile illness to severe haemorrhagic manifestations. Studying demographic, clinical, and virological factors are crucial for improving patient management and preventing future outbreaks. This study aimed to describe the demographic, clinical and virological parameters of dengue fever (DF) and dengue haemorrhagic fever (DHF) cases admitted to the Teaching Hospital Jaffna in 2023.

Methods: This was a retrospective study of Bed Head Tickets (BHT) of clinically suspected dengue cases admitted to the medical wards of the Teaching Hospital Jaffna in 2023. In total, 298 clinically suspected dengue cases were analysed, including BHTs of males and females above 12 years of age. Data were analysed using SPSS version 26. Associations between categorical variables were tested using the chi-square test, and a p-value <0.05 was considered statistically significant. Ethical clearance was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna.

Results: Among 298 clinically suspected dengue cases 185 (62.1%) were DF and 113 (37.9%) were DHF. The mean age was 34.38 years (± 15.196), and males were predominantly affected. Most DHF cases were from the Jaffna MOH, while DF cases were from Nallur MOH. Seasonal variation shows that cases peaked in December - January for DHF, and January - February for DF. A previous history of dengue infection was significantly associated with DHF ($p < 0.001$). Liver enlargement was more frequent in DHF ($p < 0.001$), while nausea/vomiting, retro-orbital pain, and arthralgia were more common in DF. Laboratory findings revealed leukopenia (21.3%), thrombocytopenia (37.6%) and elevated SGOT levels (70.6%) among DHF patients. NS₁ antigen was more frequently positive in DHF cases (5.7%) than in DF (1.3%), though many results were not available.

Conclusion: Dengue infection predominantly affected males and showed seasonal and regional clustering in 2023. DHF was linked with secondary infections and more severe clinical and laboratory abnormalities. Strengthening virological diagnostics, ensuring early detection, and implementing preventive measures in high-risk areas during peak seasons are recommended to improve dengue control and patient outcomes.

Keywords: dengue fever, dengue haemorrhagic fever, Teaching Hospital, Jaffna

Abstract 34

Parental and guardian satisfaction with paediatric inpatient care at the Teaching Hospital Jaffna

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Background and objective: Patient satisfaction is a key measure of healthcare quality, reflecting both clinical outcomes and the patient–provider relationship. This study aimed to assess the satisfaction of parents and legal guardians regarding the care provided to their children when admitted to the paediatric wards of the Teaching Hospital Jaffna.

Methods: A hospital-based descriptive cross-sectional study was conducted from 9th August 2023 to 30th November 2024 among parents and legal guardians of children who were admitted for more than three days. The required sample size was 148. Participants were selected using a systematic random sampling method with a sampling interval of 5; every 5th patient in the admissions register was included. Data were collected using an interviewer-administered, pre-tested questionnaire, which was validated prior to the study. The instrument evaluated satisfaction related to communication with doctors and nurses, ward facilities, and the overall care process. Statistical analysis was performed using descriptive statistics and mean satisfaction scores; associations were analysed using the chi-square test, with a significance level set at $p < 0.05$.

Results: A total of 148 participants were included, of whom 93.9% were mothers, 2.7% fathers, and 3.5% other legal guardians. The majority (85.1%) were housewives in the age group 24 to 64 years (mean 35.3, SD 7.0 years). The mean global satisfaction score was 4.93 ± 0.31 , indicating high overall satisfaction. Item-wise analysis showed that 96% of respondents were highly satisfied with doctors' communication, 94% with nurses' communication, and 91% with the care process. However, satisfaction with ward facilities was relatively lower (82%), mainly due to inadequate space and ventilation.

Conclusion: Parental and guardian satisfaction with paediatric care at Teaching Hospital, Jaffna was generally high, particularly regarding communication and responsiveness of healthcare staff. However, aspects such as ward space and ventilation need improvement. Enhancing the physical environment and maintaining clear, compassionate communication between healthcare providers and caregivers are recommended to sustain and further improve satisfaction levels.

Keywords: parental satisfaction, guardian satisfaction, paediatric ward, Teaching Hospital, Jaffna

Abstract 35**Invasive treatment modalities for patients with peripheral arterial disease: A hospital-based study in Northern Sri Lanka**

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Background and objective: Peripheral arterial disease (PAD) is a vascular disease that causes narrowing of arteries external to the heart and brain. The incidence of PAD is rising due to increasing risk factors, including aging, lifestyle, and chronic illnesses. Invasive treatments are the only effective options in advanced stages of PAD. This study describes the types of invasive treatment modalities for PAD, short-term complications, and the sociodemographic and clinical factors associated with short-term complications of patients who underwent invasive treatment for PAD at Teaching Hospital Jaffna (THJ) within a 4-year period (Jan 1, 2020- December 31, 2023).

Methods: We conducted a retrospective cross-sectional study analyzing bed head tickets (BHT) of patients with PAD who underwent invasive procedures at the Accident & Emergency Operation Theatre (OT), Casualty OT, and Interventional Radiology Unit of THJ (August-November 2024). Data were extracted from bed-head tickets (BHTs) and analyzed using SPSS v21. Fisher's exact test was used to determine the association of selected short-term complications with procedure type and other variables (significance level 0.05).

Results: A total of 144 BHTs were analyzed. Most patients (n=87, 60.4%) were >60 years, and nearly three-quarters (n=106, 73.6%) were male. The majority underwent endovascular procedures (n=86, 59.7%), followed by amputation (n=45, 31.3%), open bypass (n=9, 6.3%), and hybrid procedures (n=4, 2.8%). Common indications for invasive procedures were critical limb ischemia (n=67, 46.5%) and gangrene (n=36, 25%). Complications occurred in 7% (n=10) of cases: bleeding (n=5, 3.5%), surgical site infections (n=2, 1.4%), delayed wound healing (n=2, 1.4%), and deep vein thrombosis (n=1, 0.7%). The breakdown of complications by procedure was as follows: endovascular (n=3), open bypass (n=2), and amputation (n=5). Complications were significantly associated with duration of hospital stay (p=0.008), but not with age, sex, procedure, or comorbidities (p>0.05).

Conclusion: The most common modality of invasive treatment for PAD are endovascular, although almost a third still undergo amputation. Complications were higher after open bypass and amputation compared to endovascular procedures, consistent with the literature. Patients need to be educated about PAD so that they present early for treatment to be eligible for endovascular procedures.

Keywords: peripheral arterial disease, vascular surgery, invasive treatment modalities, complications, Northern Sri Lanka

Abstract 36

Gender-based differences in career plans of House Officers and Residential House Officers at Teaching Hospital, Jaffna

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Background and objective: Gender is a significant factor that influences the career plans of medical professionals. Various factors including work-family conflict, societal perceptions and discrimination based on gender are known to impact career choices. This research aims to describe gender differences in career plans, perceptions on the influence of the personal and professional environment on career plans and associated factors among House Officers (HO) and Residential House Officers (RHO) at Teaching Hospital Jaffna.

Methods: A hospital-based descriptive cross-sectional study was conducted at Teaching Hospital Jaffna. A self-administered questionnaire was used to collect data from August 9, 2024 to September 30, 2024 from all HOs and RHOs. The questionnaire was issued to the study participants and collected next day. The data was analyzed using SPSS 26. Standard descriptive statistics and the Fisher's exact test were used in the analysis (significance level 0.05).

Results: A total of 76 doctors participated with a response rate of 92.1%; 06 participants were removed from the analysis owing to missing data. Among the remainder, 60 (85.7%) were HOs and 10 (14.2%) were RHOs; 33 (47.1%) were males and 37 (52.9%) were females. In the sample, 75.8% (n=25) of males and 64.9% (n=24) of females planned to specialize ($p = 0.321$). A higher proportion of males (76%) showed interest in surgery-related specialties compared to females (41.7%); more females (58.3%) than males (29.2%) showed preference for non-surgical specialties. Female preference (29.2%) was slightly higher for obstetrics and gynaecology compared to males (24%). Males were more likely than females to perceive availability of time to spend with family ($p=0.014$), working hours ($p<0.001$), on call schedules ($p=0.011$) as having influenced their career plans.

Conclusion: The study highlights substantial gender-based differences in career choices among early-career doctors. Consistent with the literature, more males showed preference for surgery-related fields, while females went for non-surgical specialties. In contrast, more female doctors showed interest in obstetrics and gynaecology than reported in the Sri Lankan literature. Gender-specific factors need to be considered in medical education and workforce planning. Providing adequate support systems could help bridge gender gaps in certain specialties.

Keywords: gender, career plans, house officers, residential house officers

Abstract 37

Stigma and discriminatory attitudes towards people living with HIV among ward staff at Teaching Hospital, Jaffna

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Background and objective: HIV remains a critical global health issue, with a significant rise in cases observed recently in Sri Lanka. Stigmatizing and discriminatory attitudes of healthcare workers are barriers to service utilization among people living with HIV (PLHIV). This research aims to describe stigma and discriminatory attitudes towards PLHIV among ward staff (House Officers-HO, Nursing Officers-NO and Health Attendants-HA) at Teaching Hospital Jaffna (THJ).

Methods: A hospital-based descriptive cross-sectional study was conducted at THJ. All HO, NO and HA providing in-ward care were invited to participate. A self-administered questionnaire containing the internationally-validated 'Standardized Brief Questionnaire' measuring stigma/discriminatory attitudes among health workers was used to collect data. A stigma score (min 9, max 45) was computed based on responses to Section 05 ("Opinions about PLHIV") of the Brief Questionnaire. A higher score indicated more stigma. Data were statistically analyzed using SPSS (v27); independent t-test and one-way ANOVA were used to test differences in stigma scores (significance level 0.05).

Results: In total, 41 HO, 113 NO and 24 HA participated with response rates of 74.5%, 86.9%, and 51.0%, respectively; 53.4% were Sri Lankan Tamil, 41.6% Sinhalese, 4.5% Moors, and 0.5% Indian Tamil; 11.3% had prior experience caring for PLHIV. HA had the highest stigma score (mean 22.8, SD 3.3), followed by NO (mean 22.2, SD 3.0) and HO (mean 19.8, SD 3.3; $p < 0.001$). Over two-thirds (72.8%) strongly agreed/agreed that "people get infected with HIV because they engage in irresponsible behaviors" (HO 63.4%, NO 73%, HA 87.5%); 66.1% strongly agreed/agreed that "most PLHIV do not care if they infect others" (HO 63.4%, NO 64.9%, HA 77.2%). Stigma scores significantly differed by ethnicity, with Sri Lankan Tamils showing higher scores (mean 22.3, SD 2.3) compared to Sinhalese (mean 21.4, SD 3.7) and Moors (mean 19.1, SD 3.7; $p = 0.018$), although this result may be influenced by confounding based on staff category. There were no significant differences in stigma score based on whether participants had training in HIV-related stigma.

Conclusion: This study highlights prevailing stigma and discriminatory attitudes towards PLHIV among healthcare staff at THJ. We recommend strengthening HIV education, incorporating anti-stigma/discrimination content early in training, in in-service training, and adopting equity-oriented policies to safeguard the rights of PLHIV in healthcare.

Keywords: HIV/AIDS, stigma, discrimination, healthcare workers, inpatient care

Abstract 38

Knowledge on and attitude towards antibiotic prescription for acute infections and associated factors among junior doctors working at the Teaching Hospital, Jaffna

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Background and objective: Inappropriate antibiotic use results in treatment failure, disruption of microbiome, and antimicrobial resistance. Rational antibiotic prescription depends on sound knowledge and positive attitude of doctors. Aim of this study was to assess the knowledge on and attitude towards antibiotic prescription for acute infections among junior doctors at Teaching Hospital, Jaffna and associated factors.

Methods: A hospital-based descriptive cross-sectional study was conducted at Teaching Hospital Jaffna. Data was collected using interviewer-administered questionnaire from August 9, 2024 to November 30, 2024. All 71 junior doctors, defined as those within three years of registration/provisional registration with the Sri Lanka Medical Council, at the hospital during the study period were included. SPSS software (2023) was used for data analysis. Standard descriptive statistics were applied. Chi-square tests were used to assess associations between categorical variables (significance level 0.05).

Results: Response rate was 100%. Most (81.7%) worked in wards. Over half were Intern Medical Officers. Regarding knowledge, 35.2% scored above 80%, 43.7% scored 60–79%, and 21.1% below 60%. The maximum and minimum knowledge scores were 100% and 33% respectively. The means and SD of the scores for knowledge were 69% and 15.7 and for attitude 4.7 and 1.15 respectively. There were no statistically significant associations between knowledge and gender, workplace, years since graduation, place of medical education or designation. Positive attitude scores ranged from two to six, with 32.4% scoring the maximum possible positive score. Minimum score of two was scored by 4.2%. No significant association was found between attitude and gender, years after graduation, place of medical education or work place. A statistically significant association ($p=0.004$) was observed between job designation and attitude score with 44.7% of Intern Medical Officers and 11.8% of the Senior House Officers scoring six for positive attitude.

Conclusion: A notable proportion scored below 60% in knowledge though majority demonstrated moderate to high knowledge levels. Intern Medical Officers showed a significant association with positive attitude compared to the Senior House Officers. These findings emphasize the need for strict implementation of Antimicrobial Stewardship Programme and targeted training to ensure responsible antibiotic prescribing.

Keywords: junior doctors, knowledge score, attitude, antibiotic prescription, acute infections

Abstract 39

Attention span among first-year undergraduates at the University of Jaffna: Associations with demographic factors, academic streams, and Z-scores

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Background and objective: Attention span, a key component of cognitive functioning, is crucial for academic success. While widely studied globally, little is known about the attentional capacities of undergraduates in Sri Lanka. This study aimed to assess the attention span among first-year undergraduates at the University of Jaffna and to identify its association with selected demographic factors, Advanced Level streams, and Z scores.

Methods: An institutional-based, descriptive cross-sectional study was conducted among 427 first year undergraduates selected via stratified random sampling from seven faculties at the University of Jaffna. Data were collected using a self-administered questionnaire developed for the study, which captured socio-demographic details and Z scores. Four dimensions of attention (sustained, alternating, divided, and selective) were measured using a 20-item, five-point Likert scale, with higher total scores indicating a greater attention span. Data were analyzed using SPSS 21 with descriptive statistics, chi-square tests, and independent t-tests; statistical significance was set at $p \leq 0.05$.

Results: The sample included students from the faculties of Agriculture (n=46), Allied Health Sciences (n=20), Hindu Studies (n=18), Management (n=100), Medicine (n=58), Science (n=117), and Technology (n=68). Attention span was significantly associated with several factors: Males demonstrated higher attention scores than females ($p < 0.001$). Higher parental education (maternal: $p = 0.012$; paternal: $p < 0.001$), greater family income ($p = 0.010$), and living at home versus a hostel ($p < 0.001$) were correlated with higher scores. Significant differences were observed across faculties ($p < 0.001$), with Science and Management students scoring higher than the reference mean of 59. Biology and Commerce A-level streams outperformed Arts and Technology streams ($p = 0.044$). Higher Z scores were significantly associated with higher total ($p = 0.016$), sustained ($p < 0.001$), and selective attention ($p < 0.001$).

Conclusion: Significant variability in attention exists among first year undergraduates, influenced by socio-demographic background, faculty, and prior academic achievement. These findings suggest a need for targeted interventions, such as faculty specific cognitive support workshops and initiatives to mitigate socio-economic and environmental disadvantages, particularly for hostel residents and students from lower income backgrounds.

Keywords: attention span, first year undergraduates, University of Jaffna, Advanced-Level Z score, cognitive performance

Abstract 40

Inferior pelvic calyceal radiological anatomy of the kidney: A retrospective study of Computer Tomographic evidence from a tertiary care unit in the Northern Province

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Background and objective: Most kidney stones are located in the lower calyx, where removal can be challenging. Retrograde Intrarenal Surgery (RIRS), performed using a Flexible Ureterorenoscope (FURS), is a minimally invasive method for stone removal. The success of RIRS depends on renal anatomy, especially the Infundibulopelvic Angle (IPA), Infundibular Length (IL), and Infundibular Diameter (ID), which affect scope access and stone retrieval. This study aimed to estimate these parameters to provide reference values useful for planning RIRS by assessing renal Computer Tomographic parameters, including kidney dimensions, pelvicalyceal anatomy, and ureteric characteristics.

Methods: A descriptive retrospective study was conducted in the Radiology Department, Teaching Hospital Jaffna, using CT images of adult kidneys. Renal parameters—bipolar length, infundibular angle, infundibular length, diameter, and number of calyces were measured by investigators under consultant supervision, as these are not routinely reported. Convenience sampling was used until the required sample size was reached. Measurements were based on literature identifying their relevance to FURS success in lower pole stones. Data were analyzed using SPSS v21 with descriptive statistics and comparisons by age and sex to assess FURS eligibility.

Results: By studying the normal inferior pelvic calyceal anatomy, we measured the parameters such as ID, IL IPA, WDHU, BPL, LC, and TMC in normal kidneys to perform FURS according to values reported in the literature. Our study found that approximately 55.7% of patients met the expected criteria for directly contributing factors ID, IL, and IPA while around 65.86% of patients were within the reported ranges for indirectly contributing factors (WDHU, BPL, LC, and TMC). Furthermore, it was observed that individuals in the 25–54-year age group, particularly

Conclusion: We can proceed the FURS procedure for RIRS other than the SWL and PCNL among them according to our research. Recommendations are to enhance the success of FURS establishing radiological criteria, standardizing pre-operative imaging upgrading infrastructures, conducting comparative studies, ensuring proper patient counseling.

Keywords: infundibulopelvic angle, infundibular length, calyces, flexible ureterorenoscopy and retrograde intra-renal surgery

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