URS 2025

Proceeding of the 7th Undergraduate Research Symposium

"Better Health Through Research"

10th of October, 2025

Faculty of Allied Health Sciences
University of Jaffna

FACULTY OF ALLIED HEALTH SCIENCES

UNIVERSITY OF JAFFNA

Proceedings of the

7th Undergraduate Research Symposium 2025

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10th October 2025

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Faculty of Allied Health Sciences,
University of Jaffna,
Sri Lanka.

Published by

Faculty of Allied Health Sciences,
University of Jaffna,
Sri Lanka.

Printed by

Guru Printers
Kondavil Road,
Irupalai Junction,
Kopai.

ISBN 978-624-6150-70-9

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ISBN 978-624-6150-70-9

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ISBN 978-624-6150-70-9

MESSAGE FROM THE VICE CHANCELLOR

With great pleasure, I extend my greetings and best wishes for the 7th Undergraduate Research Symposium hosted by the Faculty of Allied Health Sciences (FAHS), University of Jaffna to fulfill its vision. University of Jaffna envisions becoming a leading centre of excellence in teaching, learning, research, and innovation. The University of Jaffna, as a shrine of knowledge, promotes and fosters knowledge creation and dissemination.

I expect this symposium to serve as an excellent scientific forum for young graduates, providing them with exposure and an opportunity to make their research visible to the wider scientific community. I foresee this event as a pathway to foster a strong undergraduate research culture within the faculty, which in turn will promote research among future undergraduates and encourage young academics to engage more actively in research and innovation. This symposium will no doubt be an enriching experience for all participating undergraduates.

Facilitating the advancement of innovative research skills among undergraduates through continuous encouragement and opportunities for scientific communication is vital to producing competent graduates. In this regard, the theme of the symposium, *"Better Health Through Research"*, underscores the significance of research in expanding the frontiers of healthcare for comprehensive well-being. It also highlights the importance of enhancing the wisdom and energy of the younger generation to effectively confront the emerging challenges of population aging.

I take this opportunity to appreciate the dedication and efforts of the Dean and staff of the FAHS, as well as the members of the organizing committee, in making this event a success. I also extend my heartfelt congratulations to the young researchers who are presenting their valuable findings at this forum. I wish this symposium great success, and glory be to God.

Prof. Sivakolundu Srisatkunarajah
Vice Chancellor, University of Jaffna.

ISBN 978-624-6150-70-9

MESSAGE FROM THE DEAN

It is with great pleasure that I provide this message as the Dean of the Faculty of Allied Health Sciences for the 7th Undergraduate Research Symposium. This symposium, themed *"Better Health Through Research"* holds an important place in our academic calendar and serves as a vital platform for undergraduate students to showcase their scholarly work. It also reinforces our collective commitment to advancing knowledge in the field of Allied Health Sciences.

The symposium offers students a unique opportunity to present their research in Nursing, Pharmacy, and Medical Laboratory Sciences. Their contributions will enrich our understanding of key health-related issues and inspire innovative solutions to promote well-being and longevity. I strongly believe that such research symposiums help students to develop their writing and presentation skills, strengthen their teamwork, and build confidence in scientific communication. I am truly delighted to see the enthusiasm of our student researchers who have embraced this opportunity to improve their knowledge and skills. The valuable findings presented here will also contribute to shaping future generations to engage more actively in research.

I extend my sincere appreciation to the organizing committee and supporters whose dedication and hard work have made this event possible. My special gratitude goes to our keynote speaker, Professor M. H. F. Sakeena, and plenary speaker, Dr. P. Maheswaran, for graciously accepting our invitation to share their expertise. I also thank all the reviewers of the Undergraduate Research Symposium for their valuable time and effort in ensuring the quality of the submissions. I am confident that this symposium will serve as a successful stepping stone for all participants. Thank you, and best wishes for a fruitful symposium!

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

ISBN 978-624-6150-70-9

MESSAGE FROM THE CHAIR, 7TH URS 2025

It gives me great pleasure to convey the message to the proceedings of the 7th Undergraduate Research Symposium - 2025 hosted by the Faculty of Allied Health Sciences at the University of Jaffna**.** This annual event has become a significant platform for our undergraduates to showcase their scholarly work, exchange ideas, and engage in constructive dialogue that enriches both academic and professional growth.

Undergraduate research plays a vital role in developing critical thinking, problem-solving skills, and evidence-based practice among future healthcare professionals. Its primary objective is to develop a research culture among undergraduates and encourage and engross them by giving the best presenter award for presenters in each discipline: Nursing, MLS and Pharmacy.

The theme of the 7th URS 2025 is "Better Health through Research", that emphasizes the importance of research to build a better health- a step forward toward improved patient care that conveys the idea that continuous scientific inquiry is essential for creating healthier individuals and communities.

On behalf of the 7th URS 2025 Committee, I extend heartfelt gratitude to the Vice Chancellor of the University of Jaffna and the Dean of the Faculty of Allied Health Sciences for their unwavering support to make this symposium a success. I would like to express my appreciation to our esteemed keynote speaker, Professor H. M. F. Sakeena, whose expertise in antimicrobial stewardship is an essential part in patient safety that aligns perfectly with our theme. Her contributions to the Pharmacy are invaluable, and we are honored by her acceptance of our invitation to deliver the keynote address. Furthermore, I wish to acknowledge the dedication of the organizing committee, academics, administrative and supportive staff whose collective efforts have ensured the success of the 7th URS 2025. Furthermore, I would like to convey my best wishes to all the presenters and participants for making this symposium a success.

Ms. Sathya Sambavathas
Symposium Chair, 7th Undergraduate Research Symposium,
Department of Pharmacy, Faculty of Allied Health Sciences,
University of Jaffna.

ISBN 978-624-6150-70-9

MESSAGE FROM THE EDITOR, 7TH URS 2025

The 7th Undergraduate Research Symposium 2025 is organized by the Faculty of Allied Health Sciences (FAHS), University of Jaffna, under the theme of 'Better Health Through Research". This symposium provides platforms for undergraduates of the FAHS to present their undergraduate research projects to the scientific community and gain experience. There were 21 abstracts from the AHS students, among which 06 were from Medical Laboratory Sciences, 10 were from Nursing, and 05 were from Pharmacy, submitted to this symposium. All the abstracts were subjected to a blind review process by experts in relevant fields, and according to their comments, they were revised before acceptance to the symposium.

The editorial team would like to thank the authors who have submitted their research to this symposium, as well as the internal and external reviewers who contributed to the vigorous review of the abstracts. Furthermore, as an editor, I would like to express to everyone who gave their insightful comments and suggestions to bring these symposium proceedings to the scientific standard.

Mr.S.Thuvaragan
Editor, 7th Undergraduate Research Symposium,
Department of Pharmacy,
Faculty of Allied Health Sciences,
University of Jaffna.

ISBN 978-624-6150-70-9

ABSTRACT OF THE KEYNOTE SPEECH

Antimicrobial resistance (AMR) is one of the most urgent global health challenges, demanding coordinated and sustained action across healthcare systems. This talk will explore AMR from both a global perspective and within the Sri Lankan context, underscoring its growing threat to effective treatment and public health. Antimicrobial stewardship (AMS) will be introduced as a collaborative, multi-professional strategy to combat AMR, with a particular focus on the pivotal role of pharmacists. Drawing on Sri Lankan studies, the session will illustrate how establishing AMS programmes—integrated with clinical pharmacy services—offers a practical pathway to reducing inappropriate antibiotic use. It will highlight national initiatives to strengthen AMS capacity, ensure responsible access to antibiotics, and align stewardship practices across hospital and community care. Participants will gain insight into how clinical pharmacists can drive stewardship efforts, improve patient outcomes, and bridge the gap between policy and practice in resource-limited settings.

Prof.M.H.F.Sakeena
Keynote Speech, 7th Undergraduate Research Symposium,
Department of Pharmacy,
Faculty of Allied Health Sciences,
University of Peradeniya.

ISBN 978-624-6150-70-9

ABSTRACT OF THE PLENARY SPEECH

Shaping the Future of Allied Health through Research, Innovation, and Policy Impact

The plenary address explored the evolving role of Allied Health professionals in strengthening Sri Lanka's healthcare system through the synergy of research, innovation, and policy reform. Globally, Allied Health workers deliver over half of all healthcare services, compared to 10–15% by doctors. Evidence from international systems demonstrates their transformative potential: pharmacist-led medication reviews reduce prescribing errors by up to 71%, physiotherapy-led rehabilitation shortens recovery and decreases hospital readmissions, and radiographer-led screening enables earlier diagnosis of chronic diseases, improving survival outcomes.

Aligned with the World Health Organization's goals of Universal Health Coverage (UHC) and the Sustainable Development Goals (SDGs), the address underscored that Allied Health professionals are essential to equitable, efficient, and people-centred healthcare systems. Yet, their roles remain under-recognised in health planning and policy across low- and middle-income countries, including Sri Lanka.

In Sri Lanka, the system remains heavily dependent on Allied Health professionals due to persistent workforce shortages due to many reasons including staff migration to foreign countries and uneven distribution of medical personnel. Under these conditions, Allied Health professionals such as nurses, pharmacists, physiotherapists, medical laboratory scientists, and radiographers assume extended responsibilities in diagnostics, prevention, and patient management, ensuring service continuity where physician access is limited.

The growing burden of non-communicable diseases (NCDs), with hypertension affecting 28% under JNC7 and over 50% under ACC/AHA definitions, and diabetes prevalence reaching 28–36% in the Western Province, demands stronger Allied Health engagement in screening and disease management. Meanwhile, health spending patterns show 41% on inpatient care and only 19% on outpatient services, reflecting limited investment in preventive and community-based care.

ISBN 978-624-6150-70-9

The address concluded that Sri Lanka's Allied Health sector must be strengthened through three key pillars: research capacity-building, innovation, and policy empowerment. By embracing these domains, Allied Health professionals can become catalysts for evidence-based transformation, leading the shift toward a more equitable and sustainable healthcare system for Sri Lanka.

Dr. Maheswaran Pratheesh
Plenary Speech, 7th Undergraduate Research Symposium,
Department of Pharmacy,
Faculty of Allied Health Sciences,
University of Jaffna.

ISBN 978-624-6150-70-9

LISTS OF ABSTRACTS

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ISBN 978-624-6150-70-9

OP 01

Assessment of sociodemographic and work-related determinants of pharmacists and nurses on their knowledge, attitude, and practice on Triple whammy drug interaction at the Base and Teaching Hospitals in Jaffna

Vogini[1*], Shanthi[1], Aathana[1], Kalki P[1], Sathiyamoorthy K[2]
[1]*Department of Pharmacy, Faculty of Allied Health Sciences, UoJ*
[2]*Consultant Physician, Base Hospital Point Pedro*
[*]voginit@gmail.com

Background: The "Triple Whammy" (TW) drug interaction, simultaneous use of diuretics, Renin-Angiotensin-Aldosterone System inhibitors (ACEIs/ARBs), and NSAIDs, increases the risk of acute kidney injury (AKI), especially in vulnerable groups. In Sri Lanka, where hypertension is common, pharmacists and nurses are key to identifying and managing TW risks.

Objectives: To evaluate their knowledge, attitude, and practice regarding TW interaction and explore how sociodemographic and work factors influence these aspects among healthcare professionals in Jaffna hospitals.

Methodology: A descriptive cross-sectional survey was conducted from August 2024 to August 2025 among all pharmacists and nurses in Jaffna District teaching and four base hospitals (Tellipalai, Manthikai, Kytes, Chavakacheri) without sampling. A validated self-administered questionnaire collected data on sociodemographic, work-related factors, and knowledge, attitude, and practice about TW interaction. Descriptive and inferential statistics (Kruskal-Wallis, Mann-Whitney, Spearman's rank correlation) were used for analysis.

Results: Among 130 participants (83 nurses, 47 pharmacists), most were aged 25–36 (55.4%), female (77.7%), and diploma holders (85.4%). Nurses comprised 63.8%, with 54.6% in teaching hospitals and 56.2% working in general wards. Most had ≤20 years' experience (84.6%), and only 33.8% participated in continuing professional development (CPD). Pharmacists scored significantly higher than nurses in knowledge ($p < 0.01$) and attitude ($p < 0.01$). Degree holders outperformed diploma holders in knowledge ($p < 0.01$) and attitude ($p < 0.01$). CPD participation correlated positively with knowledge ($p < 0.01$) and attitude ($p < 0.01$). Practice scores moderately correlated with education ($p = 0.035$) and CPD ($p < 0.01$), but not with age, profession, or experience ($p > 0.05$).

Conclusion: KAP regarding TW interaction among pharmacists and nurses in Jaffna is influenced mainly by education, professional role, and CPD participation. Enhancing CPD and targeted training is vital to close knowledge gaps, improve practice, and ensure patient safety by reducing adverse drug interactions.

Keywords: Acute kidney injury, Jaffna district, Nurses, Pharmacists, Triple whammy

Proceedings of the 7th Undergraduate Research Symposium 2025
Faculty of Allied Health Sciences, University of Jaffna
ISBN 978-624-6150-70-9

OP 02

Evaluation of the effectiveness of the glass wool column filtration method in sperm processing

Thilakarathna BS*[1], Prathapage MC[1], Wickramaarachchige DAM[1], Losana K[1], Raguraman S[2]

[1]*Department of Medical Laboratory Sciences, Faculty of Allied Health Sciences,UoJ*
[2]*Department of Obstetrics and Gynaecology, Faculty of Medicine, UoJ*
*buddhika.suranjan962@gmail.com

Introduction: Sperm preparation is essential in Assisted Reproductive Technology (ART) to enrich motile spermatozoa and eliminate contaminants such as white blood cells (WBC). The density gradient centrifugation method is widely used in clinical practice. Glass wool column filtration (GWCF) has been proposed as an alternative that selectively removes immotile sperm and leukocytes while being more cost-effective compared to conventional methods. This study evaluates the effectiveness of GWCF by comparing outcomes with unprocessed semen.

Objective: To evaluate the effectiveness of the GWCF method in sperm processing

Methodology: This laboratory-based cross-sectional study was conducted at the Andrology laboratory, Faculty of Medicine, University of Jaffna. Forty-two leftover semen samples of normozoospermic men were collected within fifteen minutes for processing after obtaining their written informed consent. Sperm concentration, sperm motility, and WBC count were obtained from both unprocessed whole semen and processed semen using the GWCF method. Paired t-test and Wilcoxon signed-rank test were applied to compare mean values of the parameters before and after processing. Data analysis was performed using SPSS version 27.

Results: Sperm concentration was decreased significantly from 95.95 ± 64.46 million/ml (Mean±SD) in unprocessed semen to 7.52 ± 7.67 million/ml following the GWCF method ($p<0.001$). In contrast, sperm motility was increased significantly, rising from 61.61 ± 17.31% in unprocessed semen to 72.65 ± 17.30% following the GWCF method ($p<0.001$). WBC count showed a significant reduction, dropping from 4.48 ± 2.99 cells/HPF in unprocessed semen to 1.01 ± 0.89 cells/HPF following the GWCF method ($p<0.001$). Overall, the GWCF method yielded samples with reduced sperm concentration, improved motility, and lower WBC counts compared to unprocessed semen.

Conclusions: The GWCF method enhances sperm motility and reduces WBC contamination while resulting in a lower sperm concentration. This method demonstrates potential for enhancing sperm quality after processing for ART, while representing a cost-effective alternative to conventional techniques. Assessment of additional parameters, such as sperm vitality and morphology, would further strengthen the confirmation of semen quality outcomes.

Keywords: Assisted Reproductive Technology (ART), Glass wool column filtration, Sperm processing, Sperm motility, Sperm concentration

Proceedings of the 7th Undergraduate Research Symposium 2025
Faculty of Allied Health Sciences, University of Jaffna
ISBN 978-624-6150-70-9

OP 03

Antifungal activity of methanolic extracts of *Abelmoschus esculentus* pods and *Salvia hispanica L.* seeds against *Candida albicans*

Faseeha MFF[1], Mafrina MIF[1], Mufees KRM[1], Gnanakarunyan TJ[2], Dilakshana K[1], Sathya S[*1]

[1]*Department of Pharmacy, Faculty of Allied Health Sciences, UoJ*
[2]*Department of Medical Laboratory Sciences, Faculty of Allied Health Sciences, UoJ*
[*]sathyas@univ.jfn.ac.lk

Introduction: Candidiasis, which is caused by *Candida albicans*, is becoming a global health concern due to the emergence of resistant strains to antifungal drugs. It led to the need for alternative treatment approaches. Nowadays, herbal plant extracts that contain various bioactive constituents serve as promising antifungal agents. *Abelmoschus esculentus* (okra) pods and *Salvia hispanica L.* (Chia) seeds possess various biological properties. Despite these activities, the antifungal activity of methanolic extracts of *A. esculentus* pods and *S. hispanica L.* seeds against *C. albicans* has not been investigated so far.

Objectives: This study aimed to determine the minimum inhibitory concentrations (MIC) of methanolic extracts of pods of *A. esculentus* and seeds of *S. hispanica L.* to assess their antifungal activity against standard *C. albicans* ATCC 10231^T.

Methodology: Methanolic extracts of *A. esculentus* pods and *S. hispanica L.* seeds were prepared by maceration and tested for the antifungal activity against the standard strain of *C. albicans* ATCC 10231^T using Sabouraud Dextrose Broth microdilution assay. Serial two-fold dilutions of *A. esculentus* (40 mg/mL–0.019 mg/mL) and *S. hispanica L* (2.5 mg/mL–1.22 µg/mL) extracts were tested in duplicate to determine the MIC, where miconazole was used as the positive control.

Results: Both methanolic plant extracts exhibited detectable antifungal activity against *C. albicans*, with the MIC values of 312.5 µg/mL for *S. hispanica L.* seed extract and 2.5 mg/mL for *A. esculentus* pod extract, which were higher than that of the standard drug miconazole with an MIC of 0.5 µg/mL.

Conclusion/s: This study provides the first report on the MIC of methanolic extracts of *A. esculentus* pods and *S. hispanica L.* seeds against *C. albicans*. Although their antifungal activity is lower than that of standard antifungal drug, the findings offer preliminary evidence supporting the potential role of these plant extracts in antifungal phytotherapy research.

Keywords: *Abelmoschus esculentus*, Antifungal activity, *Candida albicans*, Minimum Inhibitory Concentration, *Salvia hispanica L.*

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Faculty of Allied Health Sciences, University of Jaffna
ISBN 978-624-6150-70-9

OP 04

Prevalence of asymptomatic bacteriuria and associated factors in type 2 diabetes patients attending the diabetic center, Teaching Hospital, Jaffna

Kalaiagan S*[1], Priyanthan J[1], Dhilukshan N[1], Losana.K[1], Gnanakarunyan TJ[1]
[1]*Department of Medical Laboratory Science, Faculty of Allied Health Sciences,UoJ*
*sivanesathuraikalaiagan27@gmail.com

Introduction: Type 2 diabetes mellitus (T2DM) is a chronic disease characterized by insulin resistance and hyperglycemia, leading to a high infection risk. Urinary tract infections (UTIs) may impair renal function. Asymptomatic bacteriuria (ASB) is commonly observed in diabetics and may contribute to complications if undetected. This study is important as there is a lack of data in northern Sri Lanka.

Objective: To determine the prevalence of asymptomatic bacteriuria and associated factors in type 2 diabetes patients attending the diabetic center, Teaching Hospital Jaffna.

Methodology: A descriptive cross-sectional study was conducted among 244 T2DM patients without symptoms of UTI, selected through systematic random sampling. Clean-catch midstream urine samples were processed using routine microbiological methods for culture and identification of isolates. Data were analyzed using SPSS version 20, and the chi-square test was used. ($p < 0.05$ is significant).

Results: Out of 244 patients, 63.1% were female and 36.9% male. ASB was detected in 10.7% (26/244), predominantly in females (65.4%). Median diabetes duration was 6.5 years; mean eGFR was 81.6 ml/min/1.73m². The mean age of the participants was 58 years. Out of 26 bacteria isolated, Coliform species (12) were the most common isolates, followed by coagulase-negative *Staphylococcus* (5), *Streptococcus* (3), *Acinetobacter* (3), *Pseudomonas* (1), *Enterococcus* (1), and *Proteus spp* (1). Significant associations were observed between ASB and reduced eGFR ($p =0.004$) and diabetic nephropathy ($p =0.036$). No significant associations were found with age ($p=0.346$), sex ($p=0.800$), duration of diabetes ($p=0.973$), HbA1c ($p=0.513$), fasting glucose ($p=0.442$), BMI ($p=0.995$), hypertension ($p=0.533$), and urine microalbumin ($p=0.095$).

Conclusion: ASB prevalence was 10.7% and was significantly associated with reduced eGFR and diabetic nephropathy. Findings highlight the need for further studies.

Keywords: Asymptomatic bacteriuria, Type 2 diabetes mellitus, Urinary tract infection

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ISBN 978-624-6150-70-9

OP 05

Antibacterial activity of Ulvan from *Ulva fasciata*, Sri Lanka

Thenushika J[1], Thenusha J[1], Mayurika M[1], Sivasinthujah S[1*], Tharmila J[2], Malathy P[3]
[1]*Department of Pharmacy, Faculty of Allied Health Sciences, UoJ*
[2]*Department of Botany, Faculty of Science, UoJ*
[3]*Department of Chemistry, Faculty of Science, UoJ*
*ssinthujah@univ.jfn.ac.lk

Introduction: In recent years, ulvan, a sulfated water-soluble polysaccharide derived from algae, has received considerable attention for its potent antibacterial activity for wound healing. However, the antibacterial potential of *Ulva fasciata* from Sri Lanka has not been extensively explored, leaving a significant research gap.

Objective: To extract ulvan polysaccharide from *Ulva fasciata* and evaluate its antimicrobial activity against *Staphylococcus aureus* (ATCC 25923) and *Escherichia coli* (ATCC 25922).

Methodology: *Ulva fasciata* was collected from Matara, Sri Lanka. Dried *Ulva fasciata* powder was depigmented with hexane, followed by ethanol to remove small molecules, then heated in distilled water (1:20 w/v) at 85–90 °C for 6 h. The extract was filtered, concentrated under vacuum, and precipitated with cold ethanol to obtain crude ulvan, confirmed by FTIR-ATR. Antibacterial activity was assessed using agar well diffusion assays at concentrations of 50 mg/mL and 100 mg/mL against *S. aureus* and *E. coli*. Whereas ciprofloxacin (0.5 mg/mL) and distilled water were used as positive and negative controls, respectively. The test was replicated.

Results: The yield in percentage of ulvan polysaccharide from *Ulva fasciata* powder was 14.032%. The appearance of stretching bands of sulfate ester at 843.74 cm^{-1}, sulfate group at 1219.81 $cm^{-1,}$ and polysaccharide band at 1073.53 $cm^{-1,}$ along with –OH stretch at 3253.11 cm^{-1} in the FTIR confirmed the presence of sulfated polysaccharide. Ulvan polysaccharide demonstrated antibacterial activity in a concentration-dependent manner, with 50 mg/mL producing a zone of inhibition of 13.75 mm and 22.75 mm against *S. aureus* and *E. coli,* respectively, while 100 mg/mL produced 15.75 mm and 27.75 mm, whereas the standard showed 34 mm and 38 mm, respectively.

Conclusion: The extracted ulvan polysaccharide from *Ulva fasciata* was confirmed by FTIR analysis as a sulfated polysaccharide. It exhibited notable antibacterial activity against both *S. aureus* and *E. coli* in a concentration-dependent manner. Although its activity was lower than the standard, the results highlight its potential as a natural antibacterial agent. Further purification of the crude ulvan and determination of the MIC are recommended to validate this study.

Keywords: Antimicrobial activity, Polysaccharide extraction, *Ulva fasciata*, Ulvan.

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ISBN 978-624-6150-70-9

OP 06

Emotional health issues faced by the working mothers after returning to work following maternity leave at Nallur and Jaffna MOH

Afna A*[1], Suwarna S[1], Kamalarupan L[1], Niruba U[2]
[1] *Department of Nursing, Faculty of Allied Health Sciences, UoJ*
[2]*Department of pediatric,Faculty of Medicine,UoJ*
*fathimaafna0424@gmail.com

Introduction: Postpartum health issues are often prolonged, and some physical and emotional issues arise after return to work; some are persistent for a long time, which can impact mothers' well-being and work-life balance. Therefore, it is necessary to enhance their quality of life through identifying these issues and supporting them to overcome these issues.

Objective: To describe the self-reported emotional health issues faced by working mothers after return to work following maternity leave in their six to twelve-month extended postpartum period.

Methodology: A descriptive cross-sectional study was conducted among working mothers in Nallur, Jaffna MOH. A total of 157 consented participants were enrolled. Data was collected using a pretested self-administered questionnaire. Data analysis was performed using IBM SPSS 26. Univariate analysis was used to describe emotional issues, without using any sampling techniques; all participants were recruited for the study. Ethical clearance obtained from the Ethical Review Committee, Faculty of Medicine, University of Jaffna.

Results: 170 working mothers recruited for this study; respondent rate was 92.2%. Age varies from 24 to 42 years. The majority (73.9%) of the participants received 84 days of maternity leave. The majority (66.2%) were in the mid to extended postpartum period. Among the reported emotional health issues, feeling depressed (14%), dissatisfaction in role performance (15.3%), increased stress (15.9%), mental exhaustion (16.6%), and identity crisis (19.7%) were significantly notable during the initial one month after return to work. Anxious about leaving baby (36.3%), feeling guilt about leaving baby at work (38.8%), anxious about child's wellbeing (43.3%), sadness about inadequate time spent with baby (50.3%) were significantly reported as continuing emotional health issues.

Conclusion: The findings show that return to work after maternity leave significantly impacts mothers' emotional well-being. These findings suggest a need for extended postpartum support, workplace adjustments, and counselling are essential to promote mental well-being among working mothers.

Keywords: Emotional health issues, Extended postpartum period, Maternity leave, Working mothers

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ISBN 978-624-6150-70-9

OP 07

Formulation and evaluation of an orally disintegrating metformin tablet using natural superdisintegrants

Jayawardhane SW[1]*, Thuvaragan S[1], Ishara Madhushani KG[1], Ranasinghe GGH[1], Rajitha Ranasingha RM[2]
[1]*Department of Pharmacy, Faculty of Allied Health Sciences, UoJ*
[2]*State Pharmaceutical Manufacturing Corporation, Rathmalana, Sri Lanka*
*swjayawardhane123@gmail.com

Introduction: Orally Disintegrating Tablets (ODTs) provide a solution, rapidly dissolving in the mouth to improve bioavailability and compliance. Metformin is an oral hypoglycemic agent and is widely prescribed among patients with Type II Diabetes mellitus. Natural superdisintegrants: jackfruit seed starch (*Artocarpus heterophyllus*) and banana powder (*Musa paradisiaca*) are cost-effective, sustainable alternatives to synthetic superdisintegrants.

Objectives: The objective of the study was to develop and evaluate orally disintegrating metformin tablets using natural superdisintegrants.

Methodology: Metformin ODTs were prepared using the wet granulation method. Three formulations were developed, each containing 5% of a superdisintegrant: alkali-extracted *Artocarpus heterophyllus* seed starch, dehydrated *Musa paradisiaca* powder, and sodium starch glycolate (SSG). Tablet properties were evaluated using pre- and post-compression tests such as hardness, friability, wetting time, water absorption, disintegration, and dissolution. Drug-excipient compatibility was confirmed using Fourier Transform Infrared Spectroscopy (FTIR). Based on the post-compression tests, the best formulation will be selected and subjected to a stability study at 30°C/65% RH. A t-test was used to compare the formulations.

Results: All three formulations met pharmacopeial specifications for both pre- and post-compression properties. FTIR spectroscopy confirmed the absence of any significant drug-excipient interactions in all formulations. The orally disintegrating tablet containing 5% *Musa paradisiaca* powder was the best formulation, exhibiting the lowest wetting time (76.33±7.77 s), disintegration time (78.00±3.6 s), and the highest water absorption ratio (106.47%±2.65%). Also, this formulation achieved a high drug release rate of 95.8% in five minutes. Statistical analysis revealed a significant difference ($p<0.05$) between the formulations for wetting time, water absorption ratio, and disintegration time. A three-month stability study showed that the drug content remained within pharmacopeial limits at 95.79%, confirming the formulation's stability.

Conclusion: Dehydrated *Musa paradisiaca* powder is a potential super disintegrant for orally disintegrating metformin tablets, offering a promising and cost-effective alternative to synthetic disintegrants.

Keywords: *Artocarpus heterophyllus* Seed Starch, *Musa paradisiaca* powder, Metformin, Natural Super Disintegrants, Orally Disintegrating Tablets

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ISBN 978-624-6150-70-9

OP 08

Detection of *Helicobacter pylori* using stool PCR and associated factors among patients with gastroduodenal disorders at Teaching Hospital, Jaffna

Sinthuja S[1], Kaarunya P[1], Amaya GP[1], Saseevan S*[1,] Gnanakarunyan TJ[1], Kajendran A[2], Ramachchandran R[3], Mark Mithulan FJ[3]
[1]*Department of Medical Laboratory Sciences, Faculty of Allied Health Sciences, UoJ*
[2]*Gastroenterology Unit, Teaching Hospital, Jaffna*
[3]*Department of Clinical Virology and Molecular Biology, Teaching Hospital, Jaffna*
*ssumana@univ.jfn.ac.lk

Introduction: *Helicobacter pylori* infection remains a significant health concern in developing countries, with considerable variation in prevalence according to various risk factors. There is a need to develop a non-invasive diagnostic method for detecting Helicobacter pylori infection, as current routine diagnostic methods often involve invasive procedures.

Objectives: To determine the prevalence of *Helicobacter pylori* infection in the stool sample using molecular technique, PCR, and associated factors among patients with gastroduodenal disorders at the Gastroenterology unit, Teaching Hospital, Jaffna.

Methodology: A cross-sectional study was conducted on fifty-two stool samples obtained from patients having gastroduodenal disorders with a mean age of 56.31±14.59 years. Genomic DNA extraction from stool samples was performed using the silica-based spin column technique. Extracted DNA was subjected to real-time PCR targeting *Helicobacter pylori-specific* primer, the *ureA* gene. The socio-demographic factors such as age, gender, geographical location and MOH division, clinical factors such as the history of gastroduodenal and extra-gastroduodenal disorders, life style factors such as consumption of main meals on time, habit of fasting, smoking, alcohol consumption and handling animals and environmental factors such as source of drinking water, hand hygiene and household crowding index were analyzed using bivariate analysis such as chi-square test and Fischer's exact test.

Results: About 7.7% (4/52) were found to be positive for *Helicobacter pylori* infection. A significant association was found between *Helicobacter pylori* infection and family history of gastritis (p<0.001) and peptic ulcers (p=0.022), and hand hygiene (p=0.022).

Conclusions: Our findings highlight that there was a 7.7% prevalence of *Helicobacter pylori* infection in patients with gastroduodenal disorders attending the Gastroenterology Unit, Teaching Hospital, Jaffna, and a significant association was found between *Helicobacter pylori* infection and family history of gastritis and peptic ulcers, and hand hygiene practices. but comparison of the findings with the gold standard method will be required for further confirmation.

Keywords: Gastroduodenal disorders, *Helicobacter pylori*, Real-time PCR, Stool samples, *ureA*

Proceedings of the 7th Undergraduate Research Symposium 2025
Faculty of Allied Health Sciences, University of Jaffna
ISBN 978-624-6150-70-9

OP 09

Practices influencing weight reduction among adults participating at Gym centers in Jaffna District

Mathangan S*[1], Aarabi M[1], Kamalarupan L[1], Sabaananth S[2]
[1]*Department of Nursing, Faculty of Allied Health Sciences, UoJ*
[2]*Sports Science Unit, Faculty of Allied Health Sciences, UoJ*
*mathangansivakumaran@gmail.com

Introduction: Weight loss is a decrease in body weight achieved either through diet and exercise or due to involuntary circumstances such as illness. Previous studies in different settings have shown that dietary changes, such as ketogenic and vegetarian diets, together with physical activity, are widely used strategies for weight management. In South Asian contexts, traditional practices such as Ayurvedic medicine have also been linked to weight reduction. However, limited information is available on the specific practices followed by gym participants in the Jaffna district.

Objective: To assess the practices for weight reduction by adults who participated in the gym centers in the Jaffna district.

Methodology: A descriptive cross-sectional study was conducted among gym participants in the Jaffna district aged between 18 and 60 years. A total of 298 participants were selected, and the required number of samples from each gym was calculated on the basis of population proportion. The required number of participants was recruited for the study by using convenience sampling methods, as it allowed easy access to gym participants within the study area during the data collection period. Data were collected through a validated, interview-administered questionnaire consisting of four sections. Analysis was performed using SPSS version 27. Ethical clearance was obtained from the Ethical Review Committee, Faculty of Medicine, University of Jaffna.

Results: A total of 298 participants (age 18–60 years) were included, with a 100% response rate. The ketogenic diet (56.0%) and the vegetarian diet (53.4%) were the most common dietary practices. Flexibility and balanced exercises (69.1%) and cardiovascular/aerobic exercises (50.0%) were the most frequently performed. Evidence from Korea suggests that these exercise types are linked to lower cardiovascular mortality. Most participants reported not using any medications for weight reduction, while 11.7% indicated the use of Ayurvedic medicines.

Conclusion: The study shows that a lot of participants choose healthy practices to overcome weight reduction, like choosing a ketogenic diet, flexibility and balanced exercise, and Ayurvedic medication for weight reduction. These practices not only support effective weight management but also suggest the importance of integrating cultural perspectives into weight loss interventions. The findings provide baseline evidence to guide future health promotion programs in the region.

Keywords: Ayurvedic medication, dietary pattern, Exercise, Gym participants, Weight reduction practices

ISBN 978-624-6150-70-9

OP 10

Prevalence of associated medical-related risk factors among the patients with chronic liver disease attending the Gastroenterology clinic, Teaching Hospital, Jaffna

Sujeevan A*[1], Epsiba L[1], Jegapragash V[1], Anuradha A[2]
[1]*Department of Nursing, Faculty of Allied Health Sciences, UoJ*
[2]*Teaching Hospital, Jaffna*
*sujeevanarumugam98@gmailcom

Introduction: Chronic Liver Disease (CLD) is the end-stage manifestation of every chronic progressive liver disease. In Sri Lanka previous study represents that Diabetic mellitus, Hypertension, Hyperlipidemia, and Hypothyroidism are the significant associated medical risk factors, identifying these associated risk factors significantly helps in the prevention and effective management of CLD.

Objectives: To assess the prevalence of the associated medical-related factors associated with chronic liver disease among patients of the gastroenterology clinic at Teaching Hospital Jaffna.

Methodology: A descriptive cross-sectional study was conducted among chronic liver disease patients attending the gastroenterology clinic at the Teaching Hospital Jaffna. A total of 99 patients who consented to participate were enrolled. Ethical approval was obtained from the Ethics Review Committee of the Faculty of Medicine, University of Jaffna. Data were collected using a structured questionnaire, and variables such as Diabetic mellitus, Hypertension, Hyperlipidemia, Hypothyroidism, and methotrexate use were analyzed by univariate analysis using SPSS 27.

Results: The mean age of the participants was 49.86 years (range 12-78), and the majority (52.5%) of them were male. According to this study, for Non-Alcoholic Fatty Liver Disease (NAFLD), diabetes mellitus was highly prevalent (45.5%). Hypertension & hyperlipidemia were both found in 31.3% of participants. Methotrexate use was reported in 14.1% of participants, 15.2% of participants had hypothyroidism, and Rheumatoid Arthritis was seen in 12.1% of participants. Only 2% reported a family history of liver disease.

Conclusions: Several medical-related risk factors are associated with CLD among participants attending the gastroenterology clinic in Jaffna; among them, diabetic mellitus, hypertension, hyperlipidemia, and hypothyroidism are the significant contributors to CLD. To improve the outcome of the patients, early diagnosis through the liver function test and risk-based management protocols should be implemented.

Keywords: Chronic Liver Disease, Medical-related risk factor, Non-Alcoholic Fatty Liver Disease, Teaching Hospital Jaffna

ISBN 978-624-6150-70-9

OP 11

Factors influencing the decision of tubal sterilization among women who underwent tubectomy in Nallur MOH Area

Virgini Varshika J[*1], Thanusan K[1], Kamalarupan L[1], Pushpakanthan E [2]
[1]*Department of Nursing, Faculty of Allied Health Sciences, UoJ*
[2]*District General Hospital, Mannar*
*Virginivarshika01@gmail.com

Introduction: Tubal Sterilization, which is a relatively straightforward surgical procedure in which the fallopian tubes are permanently occluded to prevent conception. Tubal Sterilization would be the 4th most used contraceptive method and only accounts for 50% of total use worldwide.

Objectives: To describe the factors influencing the decision of tubal sterilization among women who underwent tubal sterilization in the Nallur MOH area.

Methodology: A descriptive cross-sectional study was conducted in the Nallur MOH area in Jaffna. The total number of women who underwent Tubectomy from 2021 to 2023 in the Nallur MOH area is 117. The estimated required sample size is 427 women; therefore, without using any sampling technique, all the women who underwent tubectomy during this period were recruited for the study. Data were collected using a pretested interviewer-administered questionnaire. Ethical clearance was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna. SPSS version 27 was used to analyze the data.

Results: Women who underwent tubectomy in the Nallur MOH area were approached, and the response rate was 90.5% (N=106). The age range was from 27 to 48 years, and the mean age of the participants was 33.73 years (SD±4.437). Majority of participants (90.5%) responded that tubectomy was long term permanent contraception method was most influencing the decision of tubectomy and completion of desired family size (80%), partner prefers this method (56.2%), economic limitation (53.3%) were notable factors and recommendations of health care provider (1.9%), peer pressure (2.6%), male partner's fear of vasectomy(0.9%) played negligible role in most cases Nearly 43% responded underwent tubectomy for health-related reasons.

Conclusion: Study findings emphasize the factors influencing the decision of tubectomy. Based on these insights, it's recommended to strengthen awareness programs aimed at educating women about tubectomy, ensuring informed and voluntary decision-making.

Keywords: Contraception, Factors, Tubal sterilization, Tubectomy, Nallur MOH

Proceedings of the 7th Undergraduate Research Symposium 2025
Faculty of Allied Health Sciences, University of Jaffna
ISBN 978-624-6150-70-9

OP 12

Sex-specific full blood count reference intervals in the Jaffna population using *refineR*

Dohidha P[1], Kishamini V[1], Mauran S[1], Nilmini H[2], Karunaithas R[1*]
[1]*Faculty of Allied Health Sciences, UoJ, Sri Lanka*
[2]*Regional Blood Bank, Teaching Hospital Jaffna, Sri Lanka*
*karunaithas@univ.jfn.ac.lk

Introduction: Reference intervals(RIs) are vital for interpreting clinical laboratory results and guiding patient management. As RIs vary with demographic, genetic, and environmental factors, population-specific establishment is necessary for clinical accuracy. Refining hematological RIs is complex, requiring careful data selection, statistical analysis, and validation, typically achieved via the direct method. Indirect methods offer a cost-effective alternative, but their applicability in the Jaffna population remains unclear.

Objectives: This study aimed to establish sex-specific RIs for Full Blood Count (FBC) parameters in the Jaffna population using the indirect *refineR* algorithm.

Methodology: A retrospective cross-sectional study was conducted from July 2023 to July 2024 using routine FBC data from the Laboratory Information Systems of Base Hospitals in Thellipalai and Point Pedro. Data were curated to exclude pathological values and stratified by sex. RIs were estimated using *refineR*, an open-source R package that uses inverse modelling to identify non-pathological distributions within mixed datasets. Established RIs were compared with direct-method RIs using the bias ratio, with values ≥0.375 indicating significant differences.

Results: During the study period, 43,638 FBC records were collected, of which 15,844 (6,537 male and 9,307 female) non-pathological data met the criteria for RI calculation. Sex-specific RIs for 13 FBC parameters were established for the Jaffna population, with 95% inclusion: WBC (3.61–10.7 vs 4.06–10.8 $\times 10^9$/L), neutrophils (1.53–7.44 vs 1.46–7.46 $\times 10^9$/L), lymphocytes (0.97–3.67 vs 1.00–3.78 $\times 10^9$/L), monocytes (0.19–0.72 vs 0.15–0.69 $\times 10^9$/L), eosinophils (0.16–0.63 vs 0.03–0.60 $\times 10^9$/L), basophils (0–0.05 vs 0–0.05 $\times 10^9$/L), RBC (3.94–5.64 vs 3.46–5.01 $\times 10^{12}$/L), hemoglobin (11.3–16.7 vs 9.78–14.2 g/dL), hematocrit (34.8–47.8 vs 28.9–42.0%), platelets (130–399 vs 146–408 $\times 10^9$/L), MCV (75.9–97.2 vs 74.2–95.3 fL), MCH (27.0–32.2 vs 24.2–32.6 pg), and MCHC (32.3–35.7 vs 31.9–35.3 g/dL) for males and females, respectively. Furthermore, bias ratio comparison with the direct method showed comparable results in 8 parameters for males and 9 for females.

Conclusions: Sex-specific RIs for 13 FBC parameters were established for the selected Jaffna population using *refineR*, with most parameters showing good agreement with direct-method RIs, supporting its utility for accurate clinical interpretation.

Keywords: Full Blood Count, Jaffna, Reference intervals, *refineR*, Population-specific, Sex

Proceedings of the 7th Undergraduate Research Symposium 2025
Faculty of Allied Health Sciences, University of Jaffna
ISBN 978-624-6150-70-9

OP 13

Retention intention of nurses in government hospitals of the Jaffna district, Sri Lanka

Wijethunga WMCC.[1*], Thenuwara THTN[1], Gopalamoorthy Rajeev[2], Kamalarupan L[1]
1 Department of Nursing, Faculty of Allied Health Sciences, UoJ
2Department of Community Medicine, Faculty of Medicine, UoJ
*chamikachathurangi1999@gmail.com

Introduction: Nurses form the backbone of health care systems, and their intention to stay directly affects care quality. Despite many nurses leaving the profession, local literature has paid little attention to this issue.

Objective: This study aimed to assess the retention intention of nurses working at government hospitals in the Jaffna District.

Methods: A descriptive cross-sectional study was conducted among 282 nurses selected through stratified sampling from secondary and tertiary hospitals in Jaffna District. Data was collected using a self-administered questionnaire. Retention Intention was assessed with a Dichotomous (Yes/No) question, and its association with participant sociodemographic characteristics was analysed with SPSS version 26. Descriptive statistics, Chi-square tests, and t-tests were applied. Ethical approval was obtained from the Ethics Review Committee of the Faculty of Medicine, University of Jaffna.

Results: The mean age of nurses intending to stay (35.8 ± 8.0 years) was significantly higher than those intending to leave (29.9 ± 3.4 years), $p < 0.001$. Among participants, 38.8% (n=109) were female, 53.9%(n=152) were Tamil, 57.4%(n=162) were married, 69.1%(n=195) worked in tertiary hospitals, and 50.7% (n=143) were from outside Jaffna District. Overall, 57.1%(n=161) intended to stay, while 42.9%(n=121) preferred to leave. Main reasons for staying included job satisfaction (45.96%, n=127) and financial stability (24.8%, n=70), while most intending to leave sought overseas employment (89.25%, n=252). Factors significantly associated with retention included ethnicity, nursing grade, previous experience, civil status, having children, hometown, accommodation, and transport ($p < 0.05$). Sex was not significant. A chi-square test showed a significant association between hospital type and retention (p=0.030), with tertiary hospital nurses more likely to remain.

Conclusion: Nurses in tertiary hospitals were more likely to remain compared to those in secondary hospitals. Strategies targeting workplace conditions, career development, and supportive policies are essential to improve nurse retention in secondary hospitals.

Keywords: Nurse, Retention Intention, Secondary Hospital, Tertiary Hospital

Proceedings of the 7th Undergraduate Research Symposium 2025
Faculty of Allied Health Sciences, University of Jaffna
ISBN 978-624-6150-70-9

OP 14

Prevalence of anaemia among patients with rheumatoid arthritis attending Polonnaruwa Teaching Hospital, Sri Lanka

Amanjani BAVN[1], Rathnayake RMHT[1], Dilha HGR[1], Sanjeewani JAP[2], Karunaithas R[1*]
[1]*Faculty of Allied Health Sciences, UoJ, Sri Lanka*
[2]*Teaching Hospital Polonnaruwa, Sri Lanka*
*karunaithas@univ.jfn.ac.lk

Introduction: Rheumatoid Arthritis (RA) is a chronic inflammatory joint disease often accompanied by systemic symptoms. Anaemia is a common extra-articular manifestation that worsens quality of life and disease outcomes in RA patients. However, evidence on its prevalence and determinants among RA patients attending the Sri Lankan hospitals is limited.

Objectives: This study aimed to assess the prevalence of anaemia and its associated factors among RA patients attending the RA clinic at the Teaching Hospital in Polonnaruwa, Sri Lanka.

Methodology: A cross-sectional study was conducted among patients diagnosed with RA. Participants were recruited using systematic random sampling, and informed written consent was obtained. Venous blood was taken into EDTA tubes for full blood count with the Sysmex XN-1000 haematology analyzer, and into plain tubes for serum ferritin measurement with the Dirui CM-180 biochemistry analyzer. Anaemia was defined using World Health Organization (WHO) reference values (Hb <13 g/dL in men and <12 g/dL in women). An interviewer-administered questionnaire was used to collect data on demographic, clinical, and lifestyle characteristics. The data were analyzed using SPSS version 20.

Results: A total of 275 RA patients were enrolled, of whom 68.7% were female. Overall, 68.4% were anaemic, with a mean haemoglobin concentration of 11.62 ± 1.54 g/dL. Among anaemic patients, mild anaemia predominated (58.5%), followed by moderate (41.0%) and severe (0.5%). Anaemia was more frequent among females (68.6%, n=129) than males. Iron-deficiency anaemia was identified in 1.55% of patients, with a mean ferritin level of 87.25 µg/L. Statistical analysis revealed no significant associations between anaemia and demographic, clinical, lifestyle, or treatment-related variables ($p > 0.005$).

Conclusions: Anaemia is highly prevalent among RA patients, particularly in women, underscoring the need for routine screening. The lack of strong associations indicates a multifactorial etiology, highlighting the importance of further research to identify additional contributing factors.

Keywords: Anaemia, Prevalence, Polonnaruwa Teaching Hospital, Rheumatoid Arthritis

Proceedings of the 7th Undergraduate Research Symposium 2025
Faculty of Allied Health Sciences, University of Jaffna
ISBN 978-624-6150-70-9

OP 15

Alpha-amylase inhibitory activity of partially purified glycoproteins from *Gymnema sylvestre*

Diluxiya S[1], Adsaya K[1], Aroshiya J[1], Sivasinthujah S[*1], Srikaran R[2]
[1]*Department of Pharmacy, Faculty of Allied Health Sciences, UoJ*
[2]*Department of Chemistry, Faculty of Science, UoJ*
*ssinthujah@univ,jfn.ac.lk

Introduction: Diabetes mellitus is a leading non-communicable disease worldwide, and its management remains a major healthcare challenge. *Gymnema sylvestre* (Sirukurinjan) is a well-known antidiabetic plant in traditional medicine. In recent years, glycoproteins have attained considerable attention as potent antidiabetic agents, but no studies have been reported on the antidiabetic activity of glycoproteins from *G. sylvestre*.

Objective: To evaluate the α-amylase inhibitory activity of partially purified glycoproteins extracted from *G. sylvestre*.

Methodology: Partially purified glycoproteins were extracted from *G. sylvestre* leaves using ammonium sulfate precipitation followed by dialysis. Total sugar content was measured, and structural characterisation was performed using FT-IR analysis. The α-amylase inhibitory activity of glycoprotein was evaluated using the DNSA assay with acarbose as a standard. Statistically, IC_{50} of standard and glycoproteins were analysed using one-way ANOVA followed by Tukey's test, with significance set at $p < 0.05$.

Results: The *G. sylvestre* extraction yielded 0.97% partially purified glycoproteins with a sugar content of 158.67 µg/mL. FTIR analysis confirmed the presence of characteristic O–H stretching and prominent amide bands. In α-amylase inhibition assays, acarbose exhibited the strongest effect (IC_{50}: 42.10 ± 2.97 µg/mL), while *G. sylvestre* partially purified glycoproteins demonstrated moderate activity (IC_{50}: 388.45 ± 0.81 µg/mL), with a significant difference between them. ($p < 0.05$).

Conclusion: This study highlights that partially purified glycoproteins from *G. sylvestre* possess measurable α-amylase inhibitory activity, supporting their potential role in diabetes management. Further structural characterisation, following the completion of purification of glycoproteins and in vivo validation, is needed.

Keywords: α-Amylase inhibition, Diabetes mellitus, Glycoprotein, *Gymnema sylvestre*

ISBN 978-624-6150-70-9

OP 16

Knowledge on occupational hazards and associated socio-demographic factors among nurses at Teaching Hospital Jaffna

Seruba G[*1], Perera WDW[1], Thabotharan D[1], Kamalarupan L[1]
[1]*Department of Nursing, Faculty of Allied Health Sciences, University of Jaffna*
*seruba6@gmail.com

Introduction: Nurses are the front line of risks and victims of occupational hazards among healthcare professionals. These hazards may affect the well-being of the nurses. A thorough understanding of occupational hazards helps promote a safer workplace among nurses.

Objectives: This study assesses the knowledge of occupational hazards and associated socio-demographic factors among nurses at Teaching Hospital Jaffna.

Methodology: This hospital-based cross-sectional study was carried out among 370 nurses at Teaching Hospital Jaffna. Ethical clearance was obtained from the Ethical Review Committee, Faculty of Medicine, University of Jaffna. A stratified random sampling method was used to select samples based on the population proportion of the nurses in wards/units/clinics. A pre-tested and validated self-administered questionnaire was used to collect the data regarding five types of occupational hazards. The data were analyzed, and the Pearson chi-square test was used to find the association between the level of knowledge and socio-demographic factors by using IBM SPSS 20.

Results: The response rate was 90.24%. The age range of the participants was 25-46 years. The mean age of the participants was 31.65 (SD±4.943) years. More than half of them were single (67.3%). Three-fourths of the participants completed a diploma in nursing (75.4%); meanwhile, 24.3% of them got BSc in nursing. The majority had working experience of less than five years (61.6%). Nearly half of them are working in units (51.1%).

Around 84.3% of them had good knowledge, respectively moderate and poor knowledge percentages were 14.3% and 1.4%. The mean score for the knowledge was 18.24 (SD ±2.952) out of a total score of 20. Age (0.001), working experience (0.031), marital status (0.009), and educational qualification (0.044) showed a statistically significant association with the level of knowledge regarding occupational hazards.

Conclusion: Even though, majority of them have a good knowledge level, providing an in-service training program regarding occupational hazards can improve the knowledge level further.

Keywords: Hospital, Jaffna, Knowledge, Nurses, Occupational hazards

Proceedings of the 7th Undergraduate Research Symposium 2025
Faculty of Allied Health Sciences, University of Jaffna
ISBN 978-624-6150-70-9

OP 17

Prevalence of *Candida* species in urinary tract infections among hospitalized patients in medical wards at Teaching Hospital, Jaffna

Mahinsha J[*1], Elaxchiya A[1], Akalya T[1] Gnankaruniyan TJ[1]
[1]*Department of Medical Laboratory Science, Faculty of Allied Health Sciences, UoJ*
*mahijega23@gmail.com

Introduction: Urinary tract infections (UTIs) are common, but *Candida* species are increasingly identified among hospitalized patients with risk factors such as prolonged stay, antibiotic use, catheterization, and immunosuppression. Antifungal resistance in *Candida* species has complicated patient management. A limited number of studies have been conducted in Sri Lanka related to this study.

Objectives: This study determines the prevalence of *Candida* species causing UTIs among patients admitted to the Medical wards of the Teaching Hospital, Jaffna.

Methodology: A descriptive, cross-sectional study was conducted among 271 patients suspected of UTIs. Based on a convenient sampling technique, participants were selected. Mid-stream urine and catheterized urine samples were processed in the Microbiology Laboratory. Data were analyzed by using SPSS version 20 by chi-square tests ($p < 0.05$).

Results: The results revealed a prevalence of 12.2%. Out of 271 participants, 33 (12.2%) were positive for *Candida* species. *Candida albicans* (48.5%) is the most predominant species, which is consistent with other studies. Followed by *Candida glabrata* (24.2%), *Candida krusei* (21.2%), and *Candida tropicalis* (6.1%). Females had a significantly higher prevalence compared to males ($p=0.005$), and prevalence was higher among patients above 60 years ($p=0.082$).

Conclusions: While *Candida albicans* is still predominant, the increasing presence of non-albicans species highlights the importance of routine species–level identification.

Keywords: Candiduria, *Candida* species, Catheterization, Urinary tract infection, Prevalence

Proceedings of the 7th Undergraduate Research Symposium 2025
Faculty of Allied Health Sciences, University of Jaffna
ISBN 978-624-6150-70-9

OP 18

Attitude on patients' rights among nurses working at the Teaching Hospital Jaffna

Rahavi S[*1], Hanustiya V[1], Kamalarupan L[1] Namessevayam G[2]
[1]*Department of Nursing, Faculty of Allied Health Sciences, University of Jaffna*
[2]*Department of Supplementary Health Sciences, Faculty of Health Care Sciences, Eastern University, Sri Lanka*
*rahavi.satha@outlook.com

Introduction: Patients' rights are one of the major aspects of human rights. As a member of the multidisciplinary healthcare team, nurses have a responsibility to preserve patients' rights.

Objective: To assess the attitude on patients' rights among nurses working at Teaching Hospital Jaffna.

Methodology: This was a hospital-based descriptive cross-sectional study carried out among 684 nurses working in all wards, clinics, and units of the Teaching Hospital, Jaffna. By using a simple random proportionate sampling technique, 421 participants were required for the study. Ethical clearance was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna. A pretested and validated self-administered questionnaire was used to collect the data. Data were analyzed using descriptive and analytical statistics using SPSS version 27. The results were presented as mean, standard deviation (SD), frequency, and percentage.

Results: The response rate was 88.2%. The age of participants varied from 25 to 57 years old. The majority of them were female (70.4%). Participants were categorized into positive attitude (77.8%) and negative attitude (22.2%) by using a 50% pre-determined cut-off value, and the mean attitude score was 29.46. The majority have a good attitude toward treating patients with dignity and comfort (98.9%). Half of the participants emphasized the right to patient decision and the right to appoint a healthcare proxy. Patient's safety and security (99.2%), confidentiality (84.1%) are positively consistent with Turkish and Egyptian studies.

Conclusion: The study concludes, nearly two-thirds of nurses have a positive attitude towards patients' rights. However, a significant proportion still held negative attitudes, particularly regarding autonomy. In-service programs are recommended to strengthen awareness and foster more comprehensive protection of patient rights.

Keywords: Attitude, Nurses, Patients' rights, Teaching Hospital Jaffna

ISBN 978-624-6150-70-9

OP 19

Association of socio-demographic factors on attitudes of nurses toward caring for older adults at Teaching Hospital Jaffna

Hazeem AM[*1], Mathusnka MKI[1], Kamalarupan L[1], Thanujanan K[2]
[1]*Department of Nursing, Faculty of Allied Health Sciences, UoJ*
[2]*CANE Hospice, Uduvil, Chunakam, Jaffna*
*amermhazem@gmail.com

Introduction: Population ageing is increasing globally; hence, it's crucial to give more focus to caring for them. Nurses are one of the key players among the multidisciplinary team who work with older adult patients. A nurse's attitude towards the elderly affects their compassionate care.

Objectives: To assess the association of socio-demographic factors with the attitude of nurses toward caring for older adults at Teaching Hospital Jaffna.

Methodology: This was a hospital-based descriptive, cross-sectional study, conducted among 216 nurses working in Teaching Hospital Jaffna from May 2023 to August 2024. Ethical clearance was obtained from the Ethics Review Committee of the Faculty of Medicine, University of Jaffna. Data collection was done by a simple random sampling technique. A pre-designed and validated self-administered questionnaire was used to collect the data. SPSS 25 software was used to analyze the data. Univariate analysis was used to assess the attitude of nurses, and a Chi-Squared test was performed to identify the association of socio-demographic factors.

Results: The response rate was 93.1%. The age range was 25 to 57 years old. The majority of them were female (70.4%). Nearly half were Sri Lankan Tamil (52.8%) and Hindus (47.7%). The majority were in medical wards (18.1%). Nearly more than half were below 05 years of working experience (63.9%). More than three-quarters were diploma holders (78.2%). The majority had a positive attitude (90.3%) based on considering 50% as the pre-determined cut-off value. A statistically significant relationship was found between attitude and currently working ward/unit ($p=0.033$) and higher education qualification ($p=0.011$).

Conclusion: The Majority of the nurses had a positive attitude towards caring for older adults. Relevant wards and units take appropriate measures to ensure that nurses have the appropriate attitude toward caring for older adults.

Keywords: Attitude, Nurses, Older adults, Socio-demographic factors, Teaching Hospital Jaffna

ISBN 978-624-6150-70-9

OP 20

Knowledge regarding the prevention of maternal death among public health midwives in the MOH areas of Kegalle district

Pathirana KPPD[1*], Premadasa KUK[1], Kamalarupan L[1], Prashanthan N[1]
[1]*Department of Nursing, Faculty of Allied Health Sciences, UoJ*
*pavithrapathirana2025@gmail.com

Introduction: Maternal mortality remains a significant public health concern globally. Most of the maternal deaths are preventable with proper knowledge, care, and practices. In many developing countries, including Sri Lanka, maternal mortality is a critical issue and requires effort to reduce.

Objective: To assess the knowledge regarding the prevention of maternal death among public health midwives in the MOH areas of Kegalle district.

Methodology: A descriptive cross-sectional study was conducted at 11 MOH areas of the Kegalle district. There were 244 midwives in the study area, and all of them were recruited to the study. The mean value of the knowledge score was 74.58. So, 75 was considered as cutoff value. There after more than 75% were considered as adequate knowledge, a percentage between 50% - 74% considered as moderate knowledge, and less than 49% were considered as inadequate knowledge. The data was collected in May 2025 by using a self-administered questionnaire. Ethical clearance was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna. SPSS 20 software was used to analyze the data.

Results: Among the public health midwives in the MOH areas of the Kegalle district, Midwives who responded to the study were 228. The knowledge of midwives regarding the prevention of maternal death was found to be moderate (52.2%). Among the midwives, 46.9% midwives had adequate knowledge and 0.9% midwives had inadequate knowledge. Among the participants, 85.5% know the difference between primary postpartum hemorrhage and secondary postpartum hemorrhage. In our study, 66.7% participants knew high-risk conditions for pregnancy. Only 53.5% participants know that lactic alkalosis is not a consequence of obstructed labor.

Conclusion: Only half of the population had moderate to adequate knowledge on the prevention of maternal death. Continuous in-service programs should be focused on the prevention of maternal death.

Keywords: Kegalle district MOH areas, Maternal death, Public health midwives

ISBN 978-624-6150-70-9

OP 21

Health literacy and associated factors among the patients attending the medical clinics, Teaching Hospital, Jaffna

Yuvaraj P[*1], Dineshkaran K[1], Jegapragash V[1], Sujanitha V[2]
[1]*Department of Nursing, Faculty of Allied Health Sciences, UoJ*
[2]*Teaching Hospital Jaffna*
*yuvanyuvaraj43@gmail.com

Introduction: Health literacy plays an important role in determining each and every person's ability to make informed health decisions and manage their health effectively. Understanding the factors associated with health literacy is essential for improving health outcomes.

Objective: To identify the associated factors of health literacy among the patients attending the medical clinics Teaching Hospital Jaffna.

Methodology: A hospital-based descriptive cross-sectional study was conducted among 402 patients attending the medical clinics at Teaching Hospital Jaffna in 2025 using simple random sampling. A pre-tested HLS-EU 47 standard questionnaire was used to collect the data. Ethical clearance was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna. Data were analyzed using SPSS 27, and the chi-square test was used to find the factors associated with health literacy.

Results: - The response rate was 100%. The mean age of the participants was 63.44 years (SD=±12.282), and 68.9% (n=277) were females. According to the HLS-EU scoring scale, the findings revealed that the mean score of overall health literacy level was 65.85% (SD=±8.26), and 50.2% (n=202) of participants had limited health literacy. Significant associations were observed between health literacy and socio-demographic factors, including age (p=0.040), marital status (p=0.009), education level (p=0.03), occupation (p=0.003), monthly income (p=0.001), family type (p=0.025), and family member in a health-related profession (p=0.003). Behavioural factors such as participation in health-related awareness programs (p=0.002), doing a health-related special course (p=0.031), use of the internet for health information (p=0.001), mass media exposure to health-related information (p=0.001), and multilingual capability (p = 0.001) were also significantly associated with health literacy.

Conclusion: Half of the respondents had limited health literacy, indicating challenges in accessing, understanding, evaluating, and applying health information necessary for making appropriate health decisions. Targeted health education interventions, multilingual communication, and improved access to digital resources are recommended to enhance health literacy, particularly among low-income and less-educated populations.

Keywords: - Associated factors, Health literacy, HLS-EU47 Questionnaire, Patients

ISBN 978-624-6150-70-9

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