



CONFERENCE PROCEEDINGS

1ST INTERNATIONAL RESEARCH CONFERENCE
ON HEALTHY DELIGHTS - ஆரோக்கியம் - 2022

"Hark back in Shaping Health Futures"

Faculty of Allied Health Sciences
University of Jaffna

24th August 2022



**FACULTY OF ALLIED HEALTH SCIENCES
UNIVERSITY OF JAFFNA
SRI LANKA**

“Hark back in Shaping Health Futures”

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HEALTHY DELIGHTS - ஆரோக்கியம் - 2022**

ICHD 2022

24th AUGUST 2022

**Organised by the Faculty of Allied Health Sciences
University of Jaffna**

**Conference proceedings of 1st International Research Conference
on Healthy Delights - ஆரோக்கியம் - 2022 (ICHD 2022)**

24th August 2022

ISBN 978-624-6150-08-2

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Published by

Faculty of Allied Health Sciences,
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Printed by

Andra Printers,
356A, Kasthuriyar Road,
Jaffna.

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MESSAGE FROM THE VICE CHANCELLOR



Prof. Sivakolundu Srisatkunarajah
General Chair, JUICe - 2022
The Vice Chancellor,
University of Jaffna.

International Research Conference on Healthy Delights (ICHHD) – ஆரோக்கியம் – 2022 is the first research conference organised by the Faculty of Allied Health Sciences as one of the satellite conferences of JUICe-2022 with the theme of “Hark back in Shaping Health Futures” which emphasizes the value of recalling the health practices of our ancestors in the past in relation to over coming the COVID-19 pandemic.

Our Faculty of Allied Health Sciences started its journey as a unit under the Faculty of Medicine in 2006. Since then it is facing immense challenges with limited resources but, it has never failed to establish its growth step by step. So far Faculty of Allied Health Sciences has successfully produced 450 graduates in Bachelor of Science Honours in Nursing, Bachelor of Science Honours in Medical Laboratory Sciences and Bachelor in Pharmacy Honours who have been the asset to the health service of the nation. Recently the Sports Sciences Unit has been incorporated in the Faculty and first batch of students have been admitted to read for Bachelor of Science Honours in the Sports Science.

It gives me great pleasure to see the academics of the Faculty of Allied Health Sciences taking the maximum benefits and experiences out this maiden conference as it of these opportunities. This platform will provide an excellent opportunity for academics, researchers and students to discuss their valuable research findings in relation to the above theme. I wish to thank the speakers and authors for sharing their valuable experiences in research and dedicating their valuable time and effort to join us in the International Research Conference on Healthy Delights 2022. I would like to extend my sincere thanks to the Dean and the staff of the Faculty of Allied Health Sciences for their huge contribution to make this academic event a great success. I heartily congratulate the Conference Chair and the members of the Faculty of Allied Health Sciences for their dedication and commitment in organizing this event and I hope that all the participants will make the best out of this wonderful opportunity.

MESSAGE FROM THE DEAN



Mrs Deivy Thabotharan
General Chair, ICHD - 2022,
The Dean,
Faculty of Allied Health Sciences,
University of Jaffna.

I am very much delighted to give this message to the proceedings of the International Research Conference on Healthy Delights – ஆரோக்கியம் - 2022 (ICHD) under the sphere of JUICe 2022. This is our first International Research Conference focused on the theme of “Hark back in Shaping Health Futures”. The conference theme is very much needed for the present situation of our Country. When the JUICe 2018 was organized by the Faculty of Medicine in 2018, the Unit of Allied Health Sciences jointly worked with them and gave its immense support. This experience found a platform for us to conduct this International Research Conference.

The main drive for the success of this conference is the cooperation and coordination of the academic and non-academic staff of the Faculty. Unity is the strength of our Faculty. I hope that this research conference provides a strong research forum for the young researchers to publish their research findings and innovations. I believe this conference covers all the aspects of health related tracks.

As the Dean of the Faculty I would like to express my sincere gratitude to our Vice Chancellor who gave us huge support and encouragement to initiate this conference at the Faculty level. And, I congratulate and thank the Conference Chair who accepted to take the responsibility for organizing this conference when others refused. I would like to give the Conference Chair a special mention for her hard work and dedication to make this event happening. And, I thank all the members of the organizing committee for their effort to make this conference a success. I also would like to thank the keynote speaker Prof. Nithushi Samaranyake and the Guest speaker Mrs Emylet Sheema Samuel Phillips for their inspiring addresses which made this conference a special occasion.

I believe that this conference will be a successful stepping stone for all the participants and I wish them all success.

MESSAGE FROM THE CONFERENCE CHAIR



Mrs Luxmi Kamalarupan

Conference Chair, ICHD-2022,
Faculty of Allied Health Sciences,
University of Jaffna.

It is a great pleasure that I set forth this message as the Conference Chair of the first International Research Conference of the Faculty of Allied Health Sciences, University of Jaffna. We are delighted to host the first International Research Conference on Healthy Delights- “ஆரோக்கியம்” - 2022 (ICHD 2022). It is intended to provide a platform for national and international researchers. The conference theme of ICHD-2022 is “Hark back in Shaping Health Futures”.

Now, we are facing global threats of infectious diseases and non-communicable diseases. Hence, there is an emerging need to reduce the burden of these diseases and to improve the strength of the health care system. It can be achieved through developing innovative culture by considering multidimensional aspects of health. Health innovations can be achieved through researches. Health research is one of the powerful forces of evidence-based practice, which ensures quality patient care. And the research forums provide a good opportunity to interact between all disciplines related to the public and give a good network among regional and international health professionals.

The University of Jaffna has identified the importance of developing a research culture among the health care professionals and has initiated the maiden steps towards an International Research Conference. This is the first conference at the University of Jaffna that creates the pathway for all multidisciplinary Allied Health professionals. I appreciate the effort made by the Faculty of Allied Health Sciences, University of Jaffna for this good initiative, and I hope this will be expanded further in the future.

Also, I would like to express my gratitude and sincere appreciation for all distinguished speakers, reviewers, track chairs, presenters, participants, and all staff members of the Faculty of Allied Health Sciences who have contributed to the success of this conference in many ways. I hope you will enjoy this conference and look forward to seeing you all again at the next conference.

MESSAGE FROM THE CHIEF EDITOR



Dr. (Mrs) Srikokulan Sivasinthujah
Chief Editor, ICHD-2022,
Faculty of Allied Health Sciences,
University of Jaffna.

Faculty of Allied Health Sciences, University of Jaffna has organised the 1st International Research Conference on Healthy Delights - ஆரோக்கியம் - 2022 which is one of the satellite conferences of JUICe-2022 under the theme of “Hark Back in shaping Health Futures” as a one-day conference. This conference provides an opportunity for researchers from diverse health disciplines to explore and disseminate unique, innovative ideas, research findings and promotes healthy interaction between the researchers. This year, twenty-seven abstracts were submitted to the conference in seven different tracts named as Communicable & Noncommunicable Diseases, COVID-19 Life challenges, Maternal and child health, Psychosocial wellbeing, Clinical Laboratory diagnosis, Pharmaceuticals and therapeutics and Sports, yoga, and Physical health. Initially, the submitted abstracts were screened to check whether they align with the conference guidelines. Then each of the abstract was sent to two reviewers comprising one internal (University of Jaffna) and one external reviewer in the relevant field in-line with a double-blind review process. Following the blind peer review process 22 abstracts have been accepted for the publication. This unbiased review process has ensured high quality and standard in the publication of the proceedings.

I take this opportunity to thank all the authors for submitting their research findings in our forum and the reviewers for their valuable contribution in the peer review process. I am pleased to acknowledge Dr. S. Saba Ananth, Associate Editor, ICHD 2022, for his valuable input in the preparation of the conference proceedings. I am greatly indebted to thank everyone who pointed out errors and made suggestions for the improvement of the conference proceedings.

Abstract of Keynote Speaker

Tackling challenges in transition of care: Is Human factor a redundant solution?

Samaranayake N.

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Faculty of Allied Health Sciences, University of Sri Jaywardenepura.*

Sri Lanka is made of a diverse community with various health and cultural beliefs. They are open to a wide choice of treatment options including Allopathic, Ayurveda, Siddha, and Unani. Although Primary, Secondary and Tertiary level healthcare services are established by the State, a formal referral system does not exist. Therefore, a Sri Lankan patient can choose to select any one or more of the treatment options available at any desired level of care. It is common to find patients using allopathic and complimentary/traditional/herbal medicines concomitantly. An average Sri Lankan, during their lifetime, would, receive medicines at a hospital clinic, get admitted to hospital, get transferred to different units within a hospital or between hospitals, be discharged from hospital to home, receive medicines at the community pharmacy, receive complimentary medicines at a care point, and receive medicines from friends or family. Such 'movements of patients between home, hospital, residential care settings and consultations with different health care providers' is termed as 'transition of care'. Transition of care is complex. Especially in a country like Sri Lanka, healthcare professionals at different points of care standalone and lack collaboration. Poor communication at transition of care, among healthcare providers, and with patient, result in potentially harmful medication discrepancies. Lack of medication reconciliation and review, lack of access to health records, and lack of patient engagement and education are also known to result in medication related harm at transition of care. As it appears, a lapse in the human factor is a major contributor towards the challenges in transition of care. Perhaps strengthening the human factor, itself is the prudent solution at hand to tackle this problem.



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Practice on the herbal usage and associated factors among hypertensive patients at the Teaching hospital, Jaffna, Sri Lanka

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Herbs are used in the complementary and alternative medicines and they are used by patients having non-communicable diseases such as hypertension. The objective of the study was to describe the practice of herbal usage and assess the associated factors on herbal usage among hypertensive patients attending the medical clinic at Teaching Hospital, Jaffna. It is a hospital-based cross-sectional analytical study conducted from November 2020 to October 2021. A systematic sampling method was used to select 427 hypertensive patients. The data were collected using a pre-tested and validated interviewer-administered questionnaire and data extraction form. Data were analysed using SPSS software. Chi-square test was used to assess the association between socio-economic and disease related factors and herbal usage. Mann-Whitney U test was used to assess the association between the knowledge on hypertension and practice of herbal usage. The response rate of patients was 99.52% (n=415). The mean age of patients was 53.73±8.33 years. The majority of the patients were female (65.5%, n=272) and completed secondary education only (47%, n=195). The prevalence of herbal usage among the hypertensive patients was 68% (n=282). Garlic, passion leaves, ginger, and polyherbal mixture were the most commonly used herbs among the patients. Three-fourths of the patients (76.2%) were consuming more than one herbs. The majority of the patients used herbs once in a week (39.7%) and for more than five years (46.8%). Also, most of the patients (59.2%) used herbs due to their uncontrolled blood pressure. Only 30.9% of patients disclosed their herbal usage to their physician. Among the socio-economic factors and other disease related factors, age ($p=0.000$), employment status ($p=0.039$), duration of hypertension ($p=0.000$), and family history of hypertension ($p=0.000$) had a significant association with herbal usage. Further, hypertension knowledge of patients ($p=0.003$) also was significantly associated with herbal usage. The majority of hypertension patients used herbs. Herbal usage is more prevalent among patients of older age, having hypertension for more than six years, having a family history of hypertension, patients with unemployment and self-works and patients having knowledge on hypertension. However, patients should disclose to physicians regarding their herbal usage for effective management of hypertension.

Keywords: Herbal usage, Hypertensive patients, Associated factor

Prevalence and severity of premenstrual symptoms among female academic staff of University of Jaffna

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Premenstrual symptoms are recurrent, cyclic disorder in women at reproductive age. There are wide spectrums of physical and emotional symptoms that occur regularly during one to two weeks before the start of each menstrual cycle. The study aimed to assess the prevalence and severity of premenstrual symptoms among female academic staff of the University of Jaffna. The institutional based descriptive cross-sectional study was carried out among female academic staffs after receiving ethical clearance from the Ethical Review Committee, Faculty of Medicine, University of Jaffna. Data were collected using a self-administered questionnaire via google forms in sinhala, tamil and english and analysed by SPSS version 25. Among 245 study participants, only 207 participants were eligible for the assessment of premenstrual symptoms, since they were experiencing at least one cycle of menstruation within the last three months. Among them, 93.2% (n=193) reported at least one premenstrual symptom, while 6.8% (n=14) did not experience any of the premenstrual symptoms. The most “severe” symptoms reported by the participants during their premenstrual days were irritability or getting angry for small things (24.2%), mood swings (23.2%), feeling sad (19.3%), extreme tiredness (16.9%) and heaviness of breast (15.9%). The most common “moderate” symptom was bloating (21.7%). The least reported “mild” premenstrual symptom was facial puffiness (9.2%). Premenstrual symptoms were a common problem among female academic staffs of University of Jaffna (93.2%). For the majority of participants, emotional symptoms were more severe than the physical symptoms during their premenstrual days. It is recommended to increase awareness among the female academic staffs and colleagues about premenstrual symptoms.

Keywords: Premenstrual symptoms, Prevalence, Severity, Jaffna

Practices on oral rehydration solution among the caregivers of inpatient children in two tertiary paediatric units, Kandy district

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Oral rehydration solution plays a major role in the management of diarrhoea at the home setting. Though the effectiveness of oral rehydration solution is proven, the benefit depends on proper usage. This in turn depends on the practices of caregivers. The study aimed to assess the prevalence and the practices of oral rehydration solution usage among caregivers of inpatient children. This is a descriptive cross-sectional study conducted among 316 caregivers of children in the paediatric medical wards of Sirimavo Bandaranayke Specialized Children Hospital and professorial paediatric ward of Teaching Hospital Peradeniya, Sri Lanka. A pre tested self-administered questionnaire in preferred language was used to collect data. Data were analysed using IBM SPSS version 25.0. Chi-square test and frequency tables were used to describe the findings. The prevalence of oral rehydration solution usage during the past six months was 62.04%. Out of all, 29.4% had poor while 70.6 % had good practices in oral rehydration solution usage. Among all caregivers, 51.3% had never used oral rehydration solution without getting medical prescriptions. The majority had always used boiled cooled water to prepare oral rehydration solution (68%), stored it at room temperature (53.5%), discarded it after 24 hours of its preparation (63.9%), and washed hands before preparing the oral rehydration solution (67.4%). Nearly 30% had always initiated Oral rehydration solution administration after the passage of loose stools >2 times and had oral rehydration solution packets at home although their children did not have diarrhoea. 81.6% of the caregivers had never prepared home-made oral rehydration solution when an oral rehydration solution sachet was not available. The practices of the caregivers were associated with relationship to the child, educational qualifications, and ethnicity ($p < 0.05$). Although more than 70% had good practices in oral rehydration solution usage, there is a misconception that medical prescriptions are needed to take oral rehydration solution. Education about homemade oral rehydration solution, and initiation of oral rehydration solution is recommended. Having an oral rehydration solution sachet at home should be encouraged among caregivers although their children don't have diarrhoea.

Keywords: Caregivers, Dehydration, Oral rehydration solution, Practices

Attitudes and practices of young adults related to blood donation during the COVID-19 pandemic in Sri Lanka

Fazla M.M.F.¹, Dileka K.T.S.¹, Wickramasekara K.M.H.M.¹, Oshana B.V.¹, Piyumantha B.V.D.¹, Wijekumar P.J.¹, Nayanathara R.K.A.B¹. and Ranadeva N.D.K.^{1*}

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Blood donation can save a million lives. A reduction in the numbers of potential donors was observed during the COVID 19 pandemic in Sri Lanka, where the need for an accelerated process of blood collection has been a concern of the health sector. This study aimed to determine the attitudes and practices of young adults related to blood donation during the COVID-19 pandemic in Sri Lanka. A cross-sectional study was conducted with 388 young adults in Sri Lanka, using a convenient sampling technique and an online structured self-administered questionnaire. There were three sections in the questionnaire: socio-demographic (Q-05), attitude (Q-05), and practice (Q-06). Data were analysed using IBM SPSS version 28.0. Among the total participants, there were 274 (71%) females and 114 (29%) males. Of 388 young adults, 26.5% (n=103) were previous donors and 73.45% (n=285) were non-donors. 33.5% of the study participants (n=130) claimed that it is safe to donate blood during the COVID-19 pandemic while the rest 66.5% (n=258) claimed it's not safe. Out of the donor population (n=103), 44.7% (n=46) donated blood during the COVID-19 pandemic where it was noted that more than half of regular donors 55.3% (n=57) refrained from donating blood during COVID 19 pandemic. Further, no statistically significant associations were found between the positive attitudes of donors and blood donation during the pandemic situation. (p= 0.114). There was a statistically significant (p=0.003) association observed between donors and non-donors with their preference for donating blood during the pandemic in a safe environment. Also, 10.86 % of donors got the COVID-19 infection after visiting a donation camp. This study concluded that there was an overall negative attitude toward blood donation during COVID-19 and also observed a reduction in the regular practice of blood donation.

Keywords: Blood Donation, COVID 19, Attitude, Practices, Young adults

The mental stress crisis and coping strategies among the first-year female undergraduates at the selected departments of Faculty of Applied Sciences in Sabaragamuwa University of Sri Lanka during the outbreak of Covid-19

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With the outbreak of Covid-19, university students had a heightened risk of experiencing mental stress. The study aims to elaborate female students views and their coping strategies with the mental stress status prior, during the outbreak of Covid-19 among the selected first year female undergraduates in Faculty of Applied Sciences, Sabaragamuwa University. The simple random sampling method was utilized and involved 30 number of first year female undergraduates of age between 20- 23 years. A web-based survey was carried out using the google forms, included Depression, Anxiety and Stress Scale (DASS-21). DASS-21 scoring standard questions have a four point scale system starting from 0 to 3. The level of depression, anxiety, stress, were categorized as normal, mild, moderate, severe, and extremely severe based on the mean scores. Students' stressors and coping strategies were assessed with open- ended questions. The data were analysed by Microsoft Excel 2013. Among the 30 participants, a total of 100% (n=30) of the undergraduates reported that they were more stressed during the outbreak of Covid-19. Regarding DASS21, 3 (10%), 18 (60%), 4 (13%), 3 (10%), 2 (6%) displayed signs subsequently, normal, mild, moderate, severe, and extremely severe stress conditions. For DASS21, mean scores were calculated for depression, anxiety and stress and had mean scores of 8.1, 5.06 and 9.8 points respectively. The majority of students (76.7%) mentioned "academic pressure" as the primary reason. Among the respondents, only 11 (36.7%) were able to cope with the stress personally. High proportion of respondents indicated experiencing mild to severe levels of stress which alarms to planning prevention programs that are more tailored to the needs of the students and anticipating their needs. It may be possible to increase the number of universities involved in this study and to compare and contrast both gender differences under specific circumstances.

Keywords: Covid-19, University Students, Psychology, Mental Stress, Coping Strategies

Challenges faced by estate school students in online education during the COVID -19 pandemic

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Education is one of the most fundamental human activities and is an essential social institution. Durkheims viewpoints of education as the socialization of the next generation. The COVID-19 pandemic has an impact on all aspects of society as a biological disaster, and it has a global impact on education. The traditional face-to-face teaching classroom system was replaced with an online system to protect the students from COVID-19 infections. This study aims to explore the challenges faced by estate school students during online education. The study was carried out using a qualitative research method in lower Cranley estate which is located in Nuwaraeliya district of Sri Lanka. Total of 30 people selected through a purposive sampling method, including 20 students, 5 parents, and 5 teachers. Primary data were gathered through 10 case studies, 20 interviews, and field observation. The thematic method was used to obtain the results. Students from working-class backgrounds do not have adequate economic, infrastructure, and study facilities to study on an online platform. In the online study system, they faced numerous social and psychological challenges and issues, including frustration, anger, anxiety, low self-esteem, lack of interest in education, and school dropouts. The cultural habits, social, and cultural capital of working-class communities have a detrimental impact on their children's education. Therefore, online education is increasing social reproduction in society. Poor people were unable to access the online education. It has provided numerous benefits to people in the middle and upper classes. It will have an impact on the future educational achievement of the community, so there is a strong need to ensure free educational rights in Sri Lanka. Government and non-governmental organizations are needed to work on poor working-class children's education during the COVID-19 pandemic because it affects not only their education but also their social mobility.

Keywords: COVID-19, Culture capital, Education, Pandemic and Estate

Knowledge and practices on prevention of COVID-19 among nursing students in the Jaffna district

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COVID-19 has been started to spread worldwide since December 2019. It was severely affected all countries including Sri Lanka. Nurses play a major role in caring the COVID-19 patients. As future nurses, nursing students are expected to have adequate knowledge and practices in the prevention of COVID-19. The study aimed to assess the knowledge and practices on prevention of Covid-19 among the nursing students in the Jaffna district. It is an institutional based descriptive cross-sectional study carried out among 318 nursing students at the Faculty of Allied Health Sciences, University of Jaffna and the College of Nursing, Jaffna. The data were collected with a self-administered questionnaire in google form and analysed in descriptive statistics such as frequency, percentage, mean, median and standard deviation. Bivariate correlation with Pearson product moment correlation was used to the assess correlation between knowledge and practices related to COVID-19 prevention. The mean age of the participants was 24.53 years (SD=1.30). Around three forth of the of participants (75.2 %) were female. Most of the participants (40.3%) reported that they stayed at the hostel for the last three months and the majority of the participants (66.9 %) were reported that they attended to the clinical posting. Overall results of the study indicated that majority of the nursing students were having good knowledge on COVID-19 prevention (84.1 %). There were 72.4 % of participants who had practice score above the median practice score (MPS=6). Majority of the nursing students were having good knowledge and better practices related to COVID-19 prevention. But there was no statistical significant relationship between knowledge and practices related to COVID-19 prevention among nursing students in the Jaffna district ($p=0.432$, $r=0.046$).

Keywords: Knowledge, Practices, COVID-19, Nursing students

Leadership styles of Nurse Managers and Supervisors in Capacity Management Department, Al- Wakra Hospital

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Leadership is an art and discipline of guiding, directing, motivating, and inspiring a group or organization toward the achievement of common goals. There are several different leadership styles exhibited by the leaders in a healthcare setting. Nurse managers should observe their own leadership styles and its effects on the work environment, they can adjust to a better leadership style. The study aimed to explore the nurse manager's perceptions on leadership styles among the nurse managers at Al- Wakra Hospital. An observational, cross-sectional survey was conducted among eight nursing supervisors, five bed managers and seven case managers at the capacity management department of Al- wakra Hospital. The samples were selected by convenience sampling. The multifactor leadership questionnaire was used to assess the leadership styles. It was a 45-item self-report questionnaire that measures a full range of leadership behaviors and three outcomes through its 12 subscales. The collected data were tabulated and analysed using Statistical Package for Social Scientists-23. In terms of transformational leadership, results indicate that nursing supervisors frequently influenced their subordinates through the employment of all five critical strategies of transformational leadership: attributed idealized influence; behavioral idealized influence; inspirational motivation; intellectual stimulation and individualized consideration (mean 3.80). Also bed managers (mean 3.42) and case managers fairly often influenced their subordinates (mean 3.26) respectively. The results showed that nursing supervisors (mean 3.11), bed managers (mean 3.21) and case managers (mean 3.15) all perceived themselves to fairly often demonstrate transactional leadership factors - contingent reward and active management by perceptions respectively. Overall, the data showed that the nurse managers perceived that they frequently and fairly often displayed transformational leadership styles. The finding of the study is providing information about the nurse manager's perceptions of self, will provide direction for future leadership continuing education offerings and professional development.

Keywords: Leadership Styles, Nurse Managers, Supervisors

X-ray Dosimetry for cervical spine on adults: A case study in a Provincial Hospital in Sri Lanka

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The cervical spine X-ray is the most commonly performed projection X-ray examination in patients for the initial diagnosis of spinal complaints, tumours, fractures, and degenerative pathologies. The radiosensitive organs are exposed to significant radiation doses, which imposes radiation-induced risks to the patients. The Diagnostic Reference Levels (DRLs) can be used as an effective optimisation tool in such instances. This study aimed to estimate the kerma-area product (KAP) of adult patients for the cervical spine (anteroposterior-AP and lateral-LAT) examinations and to compare the obtained patient doses with the DRLs published in countries: United Kingdom (UK), Ireland, France, Greece, India, Iran, and Australia. This descriptive cross-sectional study was conducted in a provincial hospital in Sri Lanka with 63 adult patients weighing between 38 and 78 kg. The patient characteristics (age, weight, height) and corresponding exposure parameters (tube voltage, tube current-exposure time product) were obtained. The KAP values were measured, and descriptive statistics were utilised for data analysis. The median KAP values were 0.23 and 0.19 Gy.cm² for the cervical spine AP and LAT examinations, respectively. Compared to published DRLs, the percentage difference in median KAP for cervical spine AP examinations was 109% higher than Australia's local DRLs (LDRLs), but 43% lower than France's national DRLs (NDRLs). Also, the median KAP for LAT examinations was 27% higher than the NDRLs of the UK and the LDRLs of Australia but 53% lower than the NDRLs of France. The median KAP values for cervical spine LAT examinations were comparable with Ireland's NDRLs and significantly lower than the DRLs of France, Greece, India, and Iran. The overall results show that the cervical spine LAT examinations were more comparable to those of other countries than the AP examinations. This recommends further dose optimisation for the cervical spine AP examination.

Keywords: Kerma-area product, X-ray examination, Diagnostic reference levels, Cervical spine, Patient dosimetry

Prevalence, clinical and demographic features of scrub typhus among clinically suspected typhus patients attending the District General Hospital Kilinochchi

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Scrub typhus is a mite-borne acute febrile illness caused by *Orientia tsutsugamushi*. It is an emerging infectious disease in the northern region of Sri Lanka. Kilinochchi district is predominantly an agriculture-based area, which is in the dry zone of Sri Lanka, most of the area is considered as a rural area and scrub vegetation are plentiful, such nature of these area is favorable to acquiring scrub typhus infections. Kilinochchi district in the northern region was not included in the previous study. This study aims to determine the prevalence, clinical and demographic features of scrub typhus among clinically suspected typhus patients attending the District General Hospital Kilinochchi. Blood samples were collected from all the clinically suspected typhus patients attending the District General Hospital Kilinochchi from June 2021 to August 2021. All these patients rapidly responded within 2-3 hours to doxycycline. Testing for anti-scrub typhus IgM was performed in serum using an anti-scrub typhus IgM ELISA kit (AccuDiag™, USA) A total 39 patients were recruited for this study. Thirteen (33.3%) patients were positive for anti-scrub typhus IgM, of whom 8 were males and 5 were females with a mean age of 40.6 years. All the positive cases were from rural areas and 46.2% of them were farmers. The major clinical presentations in these patients were fever (100%), chills (69.2%), headache (69.2%), nausea (53.8%), vomiting (53.8%) and abdominal pain (46.8%) while an eschar was found in only 23.1%. Nearly two thirds of the patients had thrombocytopenia and a normal WBC count. Only 33.3% of acute febrile illnesses in this study were attributed to scrub typhus. Patients with negative results must be investigated for other possible infectious diseases, especially leptospirosis, which also responds to doxycycline and is prevalent in the geographical area of Kilinochchi.

Keywords: Scrub typhus, Prevalence, ELISA

Sero-prevalence for past HEV infection among patients attending the medical wards of District General Hospital, Kilinochchi

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Hepatitis E virus (HEV) is a common cause of enterically transmitted acute viral hepatitis in humans and it remains as a major public health issue in developing countries. There is no published study on the prevalence on hepatitis E in Sri Lanka. Therefore, this study was designed to determine the prevalence and influencing risk factors of HEV infection among the patients attending medical wards of District General Hospital, Kilinochchi. A descriptive cross-sectional study was performed among patients (randomly selected) attending the medical wards of District General Hospital, Kilinochchi. Blood samples were collected from 90 patients aged 16-93 years, from July 2021 to August 2021 and an interview-administered questionnaire was used to collect the data on risk factors for acquiring HEV infection such as exposure to hepatitis E prevalent country, source of drinking water, types of toilet and pits, past medical history of liver disease or other serious illnesses, history of blood transfusion. Serum samples were qualitatively analysed for anti-HEV IgG using an ELISA kit (AccuDiag™, USA) and the results were reported as positive for anti-HEV IgG and negative for anti-HEV IgG. The study included 53 (58.9%) males and 37 (41.1%) females. Out of 90 samples, 5 (5.56%) were positive for anti-HEV IgG. This is the first report regarding the seroprevalence of HEV infection among patients attending the medical wards of District General Hospital, Kilinochchi in the Northern Province of Sri Lanka and 5.56% had been exposed to HEV in the past. However, the influencing factors are not determined as clinically significant because of the low seropositivity. Further studies in a larger population are required to describe the factors associated with past HEV infection in Sri Lanka. In addition, efforts have to be taken to improve the general sanitary facilities as they have a substantial effect on the HEV infection in a population.

Keywords: Past exposure, HEV infection, Sero-prevalence, ELISA, Sri Lanka

Knowledge and practice on self-medication with prescription-only medicines among Allied Health Sciences students at the University of Jaffna

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Self-medication refers to use of medicines to treat self-diagnosed diseases. Self-medication of prescription-only medicines may lead to serious adverse effects on health. Allied Health Sciences students were included in this study since they are relatively familiar with medicines. The objectives of the study were to assess the knowledge and practice of self-medication with prescription-only medicines and the association of selected socio-demographic factors among Allied Health Sciences students at the University of Jaffna. It is an institutional-based analytical cross-sectional study. A pre-tested and validated self-administered questionnaire was used to collect data from students. A total score given for knowledge of self-medication was 22. Students who scored above 16 were considered to have good knowledge. SPSS statistical software was used to analyse data and the association of factors was analysed by the chi-squared test at 95 % confidence interval. Ethical approval was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna. Among the 539 participants, the response rate was 92.39% (n=498). The mean age of participants was 24.39±1.30 years. Most of the students were female (62.4%). Only 26.1 % of participants had good knowledge of self-medication and 56.4 % of participants were used prescription-only medicines as self-usage. The commonly used prescription-only medicines were cetirizine (25.6 %), followed by omeprazole (16.9 %), and antibiotics (8.6 %). Most of them (74.4 %) got medicines from pharmacies and 72.8 % of participants selected the drug for self-medication by previous experience. Gender (p=0.012), course of study (p<0.001), and year of study (p=0.039) had statistically significant associations with self-medication. However, knowledge of self-medication was not significantly associated with self-medication practice. Prevalence of self-medication practice was more among female, pharmacy and third-year students. Even though self-medication practice with prescription-only medicines among Allied Health Sciences Students was high, they have poor knowledge of self-medication.

Keywords: Self-medication, Prescription-only medicines, Knowledge, Practice, Allied Health Sciences students

Physico-chemical properties and phytochemistry of the eight plant materials of *Amurthashtaka kwatha*

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Amurthashtaka kwatha, is an Ayurvedic polyherbal formulation used in the treatment of fever associated with inflammation. It is made up of eight plants including the bark of *Azadirachta indica*, seeds of *Holarrhena antidysenterica*, heart wood of *Santalum album*, stem of *Tinospora cordifolia*, whole plant of *Trichosanthes cucumerina* and rhizomes of *Zingiber officinale*, *Picrorhiza scrophulariiflora* and *Cyperus rotundus*. This study is aimed in evaluation of physicochemical properties and phytochemistry of individual plant constituents of *Amurthashtaka kwatha* to establish the standardization parameters of the kwatha. Plant samples were obtained from three markets in western province, Sri Lanka and evaluated as per standard protocols. Aqueous extracts of individual plants were qualitatively evaluated for the presence of chemical constituents. Phenolics, flavonoids, tannins and terpenoids were detected in all eight plants. Cardiac glycosides were only detected in *H. antidysenterica* while carbohydrates and saponins were absent only in *S. album*. Alkaloids were absent in *A. indica* and *S. album*. Steroids were absent in *C. rotundus*, *H. antidysenterica* and *S. album*. Phytosterols were absent in *H. antidysenterica* and *Z. officinale*, proteins were absent in *A. indica*, *P. scrophulariiflora* and *S. album*. Dry powders of plant materials were used for physico-chemical assays. *T.cucumerina* had the highest mean total ash (20.7 %) and water soluble ash (9.7 %) contents. *C. rotundus* had the highest mean acid insoluble ash (9.8 %) content. *P. scrophulariiflora* had the highest mean water-soluble extractable matter (9.3 %) and the ethanol soluble extractable matter (6.9 %). *Z. Officinale* had the highest mean moisture content (14.8 %). Reported physicochemical and phytochemical data under the present study will help in establishing the standardization parameters of the kwatha and the development of High-performance Liquid Chromatography profiling will be recommended for future studies.

Keywords: Amurthashtaka kwatha, Decoction, Physico-chemical, Phytochemical, Extractable matter

Knowledge and dispensing practice on over the counter drugs and associated factors on them among the superintendent pharmacists in Jaffna

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Over the counter or non-prescription drugs are defined as a group of medicines which can be obtained without a valid prescription. Superintend pharmacists are the healthcare professionals who are often approached by patients for their health illnesses. Therefore, they should have proper knowledge and practice on dispensing over the counter. The study aimed to assess the knowledge and dispensing practice on over the counter use and influence of selected socio demographic factors on them among the superintend pharmacists in Jaffna district. This study was carried out as a descriptive cross-sectional study from October 2020 to July 2021 among 67 superintend pharmacists. A self-administered questionnaire was used as a study instrument and validated by supervisors, pharmacologists, and the chief pharmacist. Ethical clearance was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna. The data were analysed by using SPSS (version 23). The knowledge was assessed according to the mean value of the knowledge score. The relationship between the knowledge and the categorical variables were determined by using chi-square test. The response rate was 89.55 % (n=60). Among the participants 43.3 % had good knowledge on over the counter. Most of the participants (83.3%) were able to define over the counter. Age (p=0.026), working experience (p=0.046) and the highest education level (p=0.033) showed statistically significant association on knowledge. The dispensing practice of the over the counter were very good among the superintend pharmacists. The reasons for the good practice were the age, education level and working experience of the superintend pharmacists. The majority of superintend pharmacists had poor knowledge. The awareness program among superintend pharmacists may reduce the abuse and misuses of the over the counter.

Keywords: Over the counter drugs, Knowledge, Dispensing practice, Pharmacists, Jaffna district.

Recreational sports activity on gross motor skill among grassroot level children – A pilot study

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Grassroots sport teaches how youths to lead healthy lifestyles early in their life and how to continue participating in recreational activities throughout their life. The aim of this pilot study focuses to develop fundamental gross motor skills through the influence of recreational sports activity from the grass root level. To achieve the purpose forty (n=40) Grassroot level children were randomly selected from Sacred Heart higher secondary school, Tiruchirappalli, Tamil Nadu, India. The participants' age ranged from five to six years. The selected participants were divided into two groups of twenty participants each namely the experimental and control group. The experimental group underwent six weeks of recreational sports activity program and the control group underwent regular activity. The Gross Motor skills (Such as Locomotor and object control skills) were selected as dependent variables. To test the Gross motor skill the Gross motor quotient score was taken from the Test for Gross motor development – 2 test (TGMD-2) were used. The collected data on the selected variables were treated with paired sample “t” test to find the improvement between the pre and post-test and ANCOVA to find out the improvement difference between the groups at 0.05 level of significance. The result of the study revealed that the experimental group significantly improve gross motor skills ($t=10.23$) than the control group. Hence it was concluded that the experimental group had a significant improvement difference in gross motor skills ($F=88.81$) among Grassroot level children than the control group.

Keywords: Recreational Sports activity, Gross Motor Skill, Grassroot level children.

Anthropometric variables among Sri Lankan elite male athletes of team games

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The modern trend in the preparation of elite sportsmen is to proceed scientifically and take the help of allied sciences to achieve top-level performance in respective sports and games. The objective of the study was to compare the differences among selected anthropometric measurements of Sri Lankan elite male athletes who belonged to basketball, football, handball, and volleyball team games. To achieve the purpose of the study eighty (N=80, age 18-32 years) elite male athletes were selected from Colombo, Sri Lanka (basketball (n=20), football (n=20), handball (n=20), and volleyball (n=20) on purposive sampling. The data were collected on anthropometric variables such as standing height, body weight, arm length, thigh girth and leg length. Collected data were statistically analysed by using One-way ANOVA. And Scheffe's post hoc test was applied wherever the F-ratio (sig=0.05) was found to be significant. The results of the study revealed that there were significant differences existed in all the selected anthropometric measurements [standing height (F=6.901), body weight (F=15.475), Arm length (F=3.783), Thigh Grith (F=4.251), Leg Length (F=12.756)]. Hence it was concluded the volleyball players were taller, heavier and have greater arm and leg lengths than other players in standing height, body weight, arm length, and leg length. And football players were found to be greater in thigh girth.

Keywords: Anthropometric, Elite athletes, Team Games, Arm length, Body Weight

Effects of callisthenic exercise programme on coordinative ability and agility of university sports players

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Calisthenics exercises range from very simple movements (like squats) to advanced movements such as muscle-ups and more complex exercises similar to gymnastics. It is proven to provide the benefits of muscular and aerobic conditioning. Hence the objective of the study was to investigate the effects of the callisthenic exercise programme on the coordination and agility of University of Jaffna sports players. To achieve this purpose, thirty (N=30) male subjects within the age range from 19 to 26 years were randomly selected from University of Jaffna sports players and were randomly assigned to two groups (n=15). Group I underwent six (06) weeks of a callisthenic exercise training programme and group II acted as the control. The data were collected on coordination (wall toss test) and agility (shuttle run test) before and after the callisthenic exercise training programme. The collected data were analysed by computing the mean and standard deviation and paired sample t- test ($p < 0.05$) was used to find out whether there was any significant improvement in the tested variables due to callisthenic training. The results obtained indicated that there was a significant improvement in the coordinative ability ($t=12.56$) and agility ($t=10.12$). From the result, it was concluded that the six weeks of calisthenics exercise is adequate to improve the bio motor variable.

Keywords: *Callisthenic exercise, Coordination, Agility*

State of Mental Health of the Children in Child Welfare Centers in Batticaloa District

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Children under institutionalised care are vulnerable to develop mental health abnormalities. This study aimed to assess the mental health of the children in child welfare centers and identify the influencing factors. A cross-sectional descriptive study was conducted in 30 child welfare centers in Batticaloa district from January 2017 to December 2019. A total of 647 children aged from 11 to 17 years were recruited. The self-reported youth version of strengths and difficulties questionnaire was used to assess the children's mental health. Multiple linear regression stepwise method analyses were employed to identify the factors influencing the children's mental health. The mean scores of the total difficulties, emotional problems, conduct problems, hyperactivity, peer problems and prosocial behaviour were 12.22±5.18, 4.14±2.09, 2.45±1.67, 3.27±1.77, 2.36±1.76 and 8.43±1.51, respectively. Fifty-two (8.0%) children had an abnormality in total difficulties, 73 (11.3%) had emotional problems, 89 (13.8%) had conduct problems, 22 (3.4%) had hyperactivity, 34 (5.3%) had peer problems, and 7 (1.1%) had abnormal prosocial concerns. Poor mental health was statistically associated with the presence of feeling of distress ($p<0.001$), family history of mental illness ($p=0.001$), female gender ($p=0.002$), poor satisfaction of family interaction ($p=0.008$), and poor academic performances ($p=0.034$). Forty-five children found with abnormal mental health in the screening were referred to the child mental health clinic at Teaching Hospital Batticaloa; only sixteen attended the clinic, and six were diagnosed with Childhood psychiatric disorders. The majority of the children in child welfare centers are mentally healthy, and few children exhibit abnormal mental health. Therefore, approaches to support the children in maintaining optimum mental health are valuable in their development. Further, early screening and referrals must be enhanced to prevent adversities

Keywords: Mental health, Children, Child Welfare Centers, Institutionalised care, strengths and difficulties questionnaire

Attitude and socio-demographic factors influencing on using social media responsibly among students at Faculty of Allied Health Sciences, University of Jaffna

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In the modern era, social media have a potential impact on the student community, and it is essential that every student uses the social media responsibly as future health professionals. Lack of social media literacy can result in unethical behaviors in their professionalism. The study aimed to assess attitude, practice and socio-demographic factors influencing on responsible use of social media. An institution-based descriptive cross-sectional study was conducted among Allied Health Sciences students at the University of Jaffna. A sample of 426 participants were randomly selected and the data were collected via a validated self-administered questionnaire through google forms. Collected data were analyzed using Statistical Package of Social Sciences version 23. The responses were received from 411 students. (response rate=96.47%). The majority of participants, (n=281, 68.4%) were in the age group of 23 – 25 years. The mean age was 24.00 (SD= 1.43). Participants were categorized into positive attitude (65.2%) and negative attitude (34.8%) by using a 50% pre-determined cut-off value. Age, study programme, and academic year were statistically significant ($p < 0.05$) on the level of attitude. A positive attitude of 73.7% and 72.5% were observed among the participants of age group 23 to 25 and 26 to 28 respectively, which was relatively higher compared to age group 20 to 22. The study revealed that, more than half of the total study participants had a positive attitude towards using social media responsibly (65.2%). In certain categories, more percentage of participants exhibited negative attitudes regarding the use of social media responsibly. Those categories were participants from the first academic year (47.7%), male students (38.1%), and age group 20-22 (82.0%). According to these findings, attention has to be given to further improving their attitude of them towards responsible use of social media.

Keywords: Attitudes, Social media

Job satisfaction and associated factors among female nurses in Killinochchi General Hospital

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Nursing profession plays a significant role in treating the patient at hospitals. They are expected to play several roles such as educator, counselor, health care facilitator and patient advocator. Currently, several nurses have been felt dissatisfaction in their jobs due to various factors including the Covid 19 pandemic. The aim of this study was to assess the job satisfaction levels and associated factors of female nurses at Killinochchi General Hospital. A cross sectional study was conducted among the female nurses from the Killinochchi general hospital. A sample of 103 female nurses was selected by using a simple random sampling technique. Self-administered questionnaire and Dawit tatek employee's satisfaction scale were used to measure the job satisfaction levels and associated factors among the nurses. The data were analysed through the SPSS 21 and statistical techniques T-test, ANOVA and regression analysis were used to present the findings. This study revealed that the mean score of female nurses' job satisfaction was 3.26. It showed female nurses expressed dissatisfaction with their profession. Further regression analysis showed that psychological factors (R^2 value, 0.163), personal factors (R^2 value, 0.099), working environment (R^2 value, 0.556) and monthly income (R^2 value, 0.112) were impact female nurses job satisfaction. Hospital management should take necessary steps to improve the female nurses' job satisfaction. Future researchers are necessary to consider and examine other variables, factors and indicators related to female nurses' job satisfaction.

Keywords: Job Satisfaction, Nurses, Associated factors.

Knowledge on school bullying and its prevention among secondary school teachers in Jaffna education zone

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Bullying among children and adolescents is recognized as a significant global public health problem, as it has serious health consequences and behavioural changes. The prevalence of bullying among school-going adolescents is high (37%) in Sri Lanka according to the global school-based student health survey. Adequate knowledge on school bullying and its prevention helps to identify the risk population early and minimize the severe health consequences. The study aimed to assess the knowledge on school bullying and its prevention among secondary school teachers in the Jaffna education zone. School-based descriptive cross-sectional study was carried out among 425 teachers in the Jaffna education zone from October 2020 to November 2021. Ethical approval was obtained from ERC, Faculty of Medicine, University of Jaffna. Two stage random sampling method was used to select the participants. A self-administered questionnaire was used as google form to collect the data. SPSS (Statistical Package of Social Sciences) version 21 is used to analyze the data and the results were presented in percentages. Among the 376 responses (response rate- 88.9%), age range was from 26 to 59 years with a mean of 42. Majority of them were degree holders (57.5%) and having 6-12 years teaching experience (42%). About 61.7% of them had good knowledge of the prevention of school bullying. However, only 26.6% had overall good knowledge on school bullying. And more than half of the participants (61.2%) had moderate knowledge. Few participants had poor knowledge of school bullying (12.2%) and its prevention (7%). To prevent bullying in schools, most participants recommended conducting programs to develop communication and coping skills among students (98.9%) and encouraging all the students to utilize counselling services (97.9%). The present study revealed that more than half of the teachers have good knowledge on bullying prevention than school bullying; therefore, training/education regarding school bullying should be given to improve their knowledge.

Keywords: School Bullying, Prevention, Teachers, Knowledge, Jaffna.

Knowledge on road traffic regulations and influence of selected socio-demographic and personal factors on the knowledge among the A/L students in Jaffna educational division

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Road traffic accident is considered as one of the common public health problems around the world and it leads to fatal or non-fatal injuries. Especially younger generation gets affected to a greater extent due to the inadequate knowledge regarding road traffic regulation. This study aimed to assess the knowledge on road traffic regulations and the influence of selected socio-demographic and personal factors on the knowledge among the A/L students in Jaffna educational division. A descriptive, cross-sectional school-based study was conducted among 612 A/L students in the Jaffna education Division. Ethical approval was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna. A pre-tested questionnaire in google form was used to collect data from the sample of 766 students and cluster sampling was used. Data were analysed by using SPSS version 25 and chi-squared test was used to describe the findings. The response rate was 79.89 %. Mean age of the study participants was 17.89 (± 0.567). The majority of them were male (57.4 %) and studying in grade 13 (66.3 %). Nearly half (50.5 %) of the participants were attending school by bicycle. Around 70 % of students were known about correct side for overtaking. Most of the students were able to identify the road signs correctly. Among them 48.5% had good knowledge, 38.9 % had moderate knowledge and 12.6 % had poor knowledge on road traffic regulations. Knowledge had statistical significance with age ($p < 0.001$), grade ($p < 0.001$), able to ride ($p < 0.001$), having an own vehicle ($p < 0.001$) and having driving license ($p < 0.001$). The majority of the participants had good knowledge on road traffic regulations. However some students are unaware of road traffic rules and regulations and they require an educational program to improve the knowledge to reduce the chance of road traffic accident.

Keywords: Road traffic regulations, A/L Students, Knowledge, Jaffna educational division.

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Published by
Faculty of Allied Health Sciences
University of Jaffna.

ISBN 978-624-6150-08-2



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