



Multidisciplinary Research Conference 2022

Proceedings MRC 2022

Achieving excellence through research
and innovation 17th December 2022

Organized by **KIU, Sri Lanka**



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Table of Contents

Organizing Committee of the Multidisciplinary Research Conference 2022	03
Message from the Vice-Chancellor	04
Message from the Conference Chairperson	05
Message from the Keynote Speaker	06
Thank you Note from the Conference Secretary	07
Programme Outline	08
Schedule of the Technical Sessions	09
Oration	14
Abstracts of Oral Presentations	16
Abstracts of Poster Presentations	40
List of reviewers	51



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Message from the Honorary Vice Chancellor KIU



It is indeed a great pleasure to issue a message for the very first Multi-Disciplinary Research Conference of KIU to be held on 17th December 2022. While warmly inviting all the participants, I believe that this multi-disciplinary conference will boost the quality of the research and collaborations in future. It is indeed evident that research plays a crucial role in the development of a country. As such this platform will enable the young researchers of KIU and other investigators from outside to discuss research outcomes and provide effective solutions while establishing collaborations for the future.

The theme of the conference “Achieving Excellence through Research and Innovation” is a much-needed topic for Sri Lanka to focus on increasing productivity internally with view to minimize spending foreign currency. The broader motive being to uplift human life standards while preserving them for future in Sri Lanka. It is my sincere hope that these sessions will augment knowledge and awareness of scientific matters of contemporary significance to Sri Lanka enabling solutions which are within the reach of our scientific community.

Finally, I would like to thank distinguished keynote speakers, guest speakers, orator, reviewers, judges, and participants. A conference of this nature is not possible without the contribution of the organizing committee of the conference to whom I extend a thank you. My heartfelt gratitude is extended to Professor S.S.P. Warnakulasuriya - Chairman of the conference and Ms. Anusha Sewwandi - Secretary of the conference for the dedicated committed work in bringing this conference to fruition.

Senior Professor Neluka Fernando
Honorary Vice-Chancellor
KIU



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Message from the Conference Chairperson



It is a great pleasure to write this message on the occasion of the Multidisciplinary Research Conference (MRC), 2022 of KIU Sri Lanka under the theme of “Achieving Excellence Through Research and Innovations”. Few research conferences organized by different faculties of KIU during the past have been very successful with high-quality research presentations and participation of academics, undergraduates, and scientists from different universities and research institutions. The MRC 2022 has a special significance as the theme of the symposium is very relevant to the vision and Mission of the KIU.

I strongly believe that MRC 2022 would be a very successful event as this time we have organized five technical sessions as we have received more than 40 abstracts and therefore more scientific dialogues are expected to occur. The quality of the abstracts has been maintained by reviewing thoroughly and assessed by a well-experienced panel of academics. I am sure, Integrative approach of multidisciplinary research at this conference would add glamour to this conference. I would like to express my sincere gratitude to the organizing committee of the MRC 2022 coordinated by MS Anusha Sewandi, Conference secretary of the INC 2022, and her active team for their commitment and hard work and all efforts to make this event a reality under my supervision.

As the conference Chair, I also wish to convey my sincere gratitude to the Chairman, KIU, and all the deans and heads of the departments, academic staff, nonacademic staff in all the faculties, and registrar of KIU for extending their fullest support and cooperation to show up the MRC 2022. I also congratulate all the presenters who are presenting their research at the conference. Special thanks to Dr. Mark Orme, Keynote speaker, and all the guest speakers of the MRC 2022. I would like to place a special remark on Senior Professor Neluka Fernando, Vice Chancellor of KIU for her leadership, correct guidance, and inspiration to make this event a success. I hope all the participants enjoy the glamor of the MRC 2022. I wish the International MRC 2022 would be a great success!

Professor S. S. P. Warnakulasuriya
Honorary Dean
Faculty of Nursing
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Message from the Keynote Speaker



In our quest to address complex questions and challenges, we must bring together ideas and expertise from a wide range of perspectives. This is the beauty of multidisciplinary research. By looking at problems through a variety of lenses, we can more clearly see how to develop solutions. By having a research team comprising individuals specializing in different fields, a multidisciplinary approach can be applied to obtain a more comprehensive picture about a particular phenomenon. Multidisciplinary research team members should have various but complementary skills, backgrounds, and lived experiences. In the Multi-Disciplinary Research Conference of KIU, you will hear innovative and exciting examples of good practice and advancements in scientific understanding through high-quality multidisciplinary approaches. I am excited to play a small part in this exciting conference and I wish everyone an enjoyable day of learning and sharing experiences.

Dr. Mark Orme
Lecturer, Respiratory Sciences
University of Leicester
United Kingdom



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Thank you note from the secretary of the Multidisciplinary Research Conference (MRC) 2022



The Multidisciplinary Research Conference (MRC) 2022 was organized with the aim of enhancing the research culture of KIU. The conference will be enriched with publications from multiple disciplines such as Nursing, Health Science, Management, English, and Computer Science. It is with great pleasure that I extend my warmest acknowledgment towards the authors whose contribution added value to the conference. On behalf of KIU, I would like to wish all the authors greater courage to conquer obstacles to reap more opportunities for the future.

The esteemed invitees also catered towards the success of the conference. With immense pleasure, I extend my heartfelt gratitude on behalf of KIU to Dr. Mark Orme Lecturer, Respiratory Sciences, University of Leicester, United Kingdom for accepting our invitation to participate as the Keynote Speaker of the conference and sharing his valuable experiences in research with the conference participants. I would also like to thank Professor S.S.P. Warnakulasuriya, the chairperson of the conference for sharing his expertise towards the success of the conference. I take this opportunity to thank one very special person who has always been a pillar of strength to KIU. It's none other than our Honorary Vice chancellor, Senior Professor Neluka Fernando, for being the role model and driving us forward. I would also like to thank the respected reviewers and panel members who contributed towards the success of the conference with their expertise in respective disciplines. The KIU management, all Deans, Heads of academic and non-academic and the staff of KIU I owe you all a big thank you for the contribution towards the conference. Last but not least I would like to thank the organizing committee who was a great strength to me during organizing activities of the conference.

I wish the conference great success

Ms. K. P. Anusha Sewwandi
The Conference Secretary
Multidisciplinary Research Conference (MRC) 2022



Programme Outline Programme of the Inaugural Ceremony

8.00 am - 8.10 am	Inauguration of the MRC 2022
8.10 am - 8.15 am	The lighting of the oil lamp
8.15 am - 8.30 am	Welcome Address Prof. S. S. P. Warnakulasuriya, Chairperson - MRC 2022
8.30 am - 9.00 am	Keynote Speech Dr. Mark Orme, Senior Lecturer, University of Leicester
9.00 am - 9.05 am	Introduction to the Orator Prof. S. S. P. Warnakulasuriya, Chairperson - MRC 2022
9.05 am - 9.15 am	Awarding Orator medal
9.15 am - 9.45 am	Oration Mr. Akila Jayamaha, Dean Faculty of Graduate Studies, KIU
9.45 am - 10.00 am	Vote of Thanks Ms. Anusha Sewwandi, Secretary - MRC 2022
10.15 am - 12.30 pm	Technical sessions I, II, and III
12.30 pm - 1.30 pm	Lunch Break
1.30 pm - 4.15 pm	Technical sessions IV and V
4.15 pm - 5.00 pm	Awards Ceremony

Schedule of the Technical Session

ORAL PRESENTATIONS - Technical Session 01		
SN	Paper ID	Title and author/s of the paper
OP 1.1	MRC_N_006	Psychological Stress among Nursing Undergraduates at a selected higher education institute during COVID-19 Pandemic in Sri Lanka. <i>Priyadarshani TMD, Damayanthi DHS, Jayawardhana KTKW, Gunawardhana PATU, Sandakumari HHHS, Kanchana KTG</i>
OP 1.2	MRC_N_007	Twenty four hour physical behavior of nursing officers during COVID – 19 pandemic: A descriptive study done at National Hospital Sri Lanka. <i>Dimuthu WN, Wijewardana SDSG, Disanayaka NK, Kumari KGCT, Madhuwanthi EAN, Weerasinghe T, Madhuwanthi RM, Dharmarathna HHND, Jayamaha AR</i>
OP 1.3	MRC_N_008	Families' perception of support from Intensive Care Unit nurses in a selected hospital, Sri Lanka. <i>Dilhani MGT, Premathilaka AWA, Piumali KJP, Athukoorala AACD, De Silva WIC , Kariyawasam KHAY, Nisansala MWN, Amarasekara AATD</i>
OP 1.4	MRC_N_010	Acute poisoning among children who were admitted to the pediatric unit, Teaching Hospital, Kurunegala Sri Lanka <i>Shanaz SF, Amarapala HYNNU, Ariyasingha GAKP, Chathuranga KG, Madhushanka KPS, Dharmarathna HHND, Jayamaha AR</i>
OP 1.5	MRC_N_011	Factors affecting the disease management among patients with Diabetes Mellitus during COVID-19 lockdown in Sri Lanka. <i>Gunathilaka HDS, Prabhashani MKGM, Hewawitharana DSOA , Hansamali MJP , Rathnayaka YGRMCM, Ranaweera DN, Sewwandi KPA, Perera ACH</i>
OP 1.6	MRC_N_012	Assessment of awareness, practices, and associated factors of thriposha supplementation among pregnant women in Dehiowita MOH area in Kegalle district in Sri Lanka <i>Wickramarathne WSYUK, Premachandra GWDK, Jayasinghe AGUM, Ranathunga KLNL, Pathirana HPMP, Sewwandi KPA, Perera ACH</i>

OP 1.7	MRC_N_013	Social media addiction and its impact on academic events among General Certificate of Examination Advanced Level students of Southern Province, Sri Lanka <i>Muthupana MMSD, Menike UGHM, Senevirathna PGKP, Herath HMCM, Lenadora HMIGKK, Sewwandi KPA, Perera ACH</i>
OP 1.8	MRC_N_014	Awareness of cancer risk factors among Sri Lankan residents <i>Jayathissa IWGAS, Withanage WRN, De Silva DTKK, Mallawathanthrige TNA, Jayathilake TN, Nisansala MWN, Edirisuriya MD, Senarath NSASN</i>
OP 1.9	MRC_N_015	Nurses' attitudes and practice towards promotion of patients' health: A cross-sectional study among nurses at National Hospital of Sri Lanka <i>Solaman LAGS, Kalpana WA, Jazeel MLM, Irshad AM, Kodithuwakku KAA, Senarath NSASN, Nisansala MWN</i>

ORAL PRESENTATIONS - Technical Session 02

SN	Paper ID	Title and author/s of the paper
OP 2.1	MRC_HS_001	Determination of toxicity of <i>Phyllanthus embelica</i> using Brine Shrimp Lethality Assay <i>Mohamed MUU, Rathugamage DSS, Samarakoon DNAW</i>
OP 2.2	MRC_HS_004	The current state of Leprosy in Gampaha district, Sri Lanka: Analysis of registered patient data <i>Hasini P.M</i>
OP 2.3	MRC_HS_007	Determination of toxicity of <i>Evolvulus alsinoides</i> (Convolvulaceae) using Brine Shrimp Asssay <i>Madhuranga HDT, Samarakoon DNAW</i>
OP 2.4	MRC_HS_008	Perceived stress, anxiety, and depression among undergraduates in KIU due to the COVID-19 pandemic <i>Somathilaka MTM, Ahinsa PAL, Safna RMF, Muzniya AF, Sampath MKA, Arachchi AMPS</i>
OP 2.5	MRC_HS_009	The impact of leisure activity type on self- esteem among university students in selected universities in Colombo District in Sri Lanka <i>Jayaweera BKDC, Fernando DNP</i>

OP 2.6	MRC_E_002	Teaching English as a second language: the role of a teacher as perceived by learners <i><u>Karunanayake KS</u></i>
OP 2.7	MRC_E_004	An analytical insight into the structure of the Brechtian theatre based on the plays ‘Mother Courage and Her Children’ and ‘Chalk Circle’ <i><u>Amarasooriya DNP</u></i>

ORAL PRESENTATIONS - Technical Session 03

SN	Paper ID	Title and author/s of the paper
OP 3.1	MRC_M_002	Impact of e-service quality on e-satisfaction and e-loyalty of online shoppers: with special reference to online shoppers in Colombo District <i><u>Gunarathna AAD, Gamage TC</u></i>
OP 3.2	MRC_M_003	Impact of financial development on the environmental pollution in South Asia <i><u>Wijerathna WAID, Palihakkara HMPGRA, Udawatte UATN, Dhananjana KAS, Ranasinghe IMJG</u></i>
OP 3.3	MRC_M_004	Impact of economic factors on profitability of listed commercial banks in Sri Lanka <i><u>Arachchi BSSA, Wijerathna WAID, Dushyanthi PKT</u></i>
OP 3.4	MRC_M_005	The impact of celebrity trustworthiness and expertise on female consumer’s self-esteem: with special reference to beauty care advertisements in Sri Lanka <i><u>Edirisooriya BT, Sajeewanie LAC</u></i>
OP 3.5	MRC_M_006	Impact of religiosity and spirituality towards green fast moving consumer goods purchasing behavior: with special reference to the western province, Sri Lanka <i><u>Buddika HAM, Hettiarachchi WN</u></i>
OP 3.6	MRC_M_007	Impact of market orientation on organizational performance with special reference to licensed commercial banks in Kurunegala Divisional Secretariat <i><u>Karunaratne PHMS</u></i>
OP 3.7	MRC_IT_001	eParam : The development of parameterized online practice quizzes for undergraduate students <i><u>Perera ANC</u></i>
OP 3.8	MRC_IT_004	Identifications of factors needed to establish a monitoring and evaluation/ management information system for the rural water supply sector in Sri Lanka <i><u>Dissanayake DMGB</u></i>

POSTER PRESENTATIONS - Technical Session 04

SN	Paper ID	Title and author/s of the paper
PP 4.1	MRC_N_002	An overview of water quality within the Colombo Municipal Council area, a retrospective report analysis <i>Ayomi AA, Weerasinghe VT, Priyadarshani KSS, Chulanganie PAS, Damayanthi WLA, Sewwandi, KPA, Perera ACH</i>
PP 4.2	MRC_N_003	Assessment of dietary pattern changes and their associated factors among nursing officers in Teaching Hospital Rathnapura, Sri Lanka during the COVID-19 pandemic <i>Wijesena KAT, Meghawarna HGMHE, Gunarathna SLA, Shashikala SMDD, Nawarathna PWNK, Sewwandi KPA, and Perera ACH</i>
PP 4.3	MRC_N_005	Knowledge, attitude, and practice on hospital waste management among healthcare workers at Teaching Hospital Karapitiya, Sri Lanka <i>Vittahachchi BC, Amarajeewa MJL, Udayangani RAL, Subasinghe HMCDD, Nisansala KAB, Sandakumari HHHS, Kanchana KTG</i>
PP 4.4	MRC_N_009	Knowledge and attitudes regarding sexually transmitted diseases among undergraduates at a selected private university, in Sri Lanka <i>Jayasundara UWPM, Karunathilaka TTM, Abeykoon ARWMMWDS, Wickramasinghe BGSS Weerasinghe MHN, Dharmarathna HHND, Jayamaha AR</i>
PP 4.5	MRC_N_016	A systematic review on depression and associated factors among patients with Diabetes Mellitus <i>Dinushika GJ, Niroshani AKAT, Sathsara PT, Lakmali HGN, Dissanayaka CTK, Abeysekera NWBY, Sandakumari HHHS, Kanchana KTG</i>
PP 4.6	MRC_N_017	The impact of the COVID-19 pandemic on healthcare utilization among the patients who seek treatment from Sri Jayewardenepura General Hospital, Sri Lanka <i>Haththella NU, Pathirathna CJ, Danapala DM, Jayasinghe DA, Seneviratha KPAT, Dharmarathna HHND, Jayamaha AR</i>



POSTER PRESENTATIONS - Technical Session 05

SN	Paper ID	Title and author/s of the paper
PP 5.1	MRC_HS_002	Insight to consumer practices towards genetically modified food: A descriptive cross-sectional study <i>Pathirage DC, Dhananjani MA, Wickramasinghe WTR, Ransika EAM, Yuwanthika BAS, Ubhayawardene HN, Kulathunga KMHH</i>
PP 5.2	MRC_HS_003	An evaluation of parenting styles, and academic motivation among university students in selected universities in Colombo district of Sri Lanka <i>Godage MMJ, Hettiarachchi A</i>
PP 5.3	MRC_HS_005	Knowledge, attitudes, and practices regarding Human papillomavirus vaccination among the undergraduates of Western Province, Sri Lanka <i>Afra MAF, Sewwandi JPW, Hasna MHF, Karunasena KSM, Nawanjana PGH, Walpola LH, Perera PDVM</i>
PP 5.4	MRC_M_008	Impact of working environment on employee job satisfaction in a selected group of hotels <i>Dissanayake DMMA, Mahawithana MLM, De Alwis G</i>
PP 5.5	MRC_M_001	The impact of employee work related psychological risks on employee job satisfaction during COVID 19 pandemic period – with special reference to hotel sector employees of Colombo District, Sri Lanka <i>Ushara SAI</i>



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Multidisciplinary Research Conference Oration Breaking Free



I am honoured and delighted to convey this message as the orator of KIU Multidisciplinary Research Conference 2022.

Illustrating the perspectives in Sri Lanka over the years on medical and social effects of misuse substances, harmonize with the multidisciplinary nature of the KIU Research Symposium. During past three years, KIU investigators have extensively studied individuals with substance use disorder and recognized the paucity of empirical evidence. Further promising interventions to battle effectively against the pandemic of substance use is been evaluated.

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), Substance Use Disorder (SUD) is a chronic relapsing disorder, characterized by compulsive use of substances despite adverse consequences to the individuals, their families and society. Individuals keep using substances, even with the awareness, that it is causing or may cause problems. Globally, 1 in 10 people who use illicit substances is identified as suffering from substance use disorder. According to the global health risk report, drug addiction is among the top 20 risk factors for death and disability. Nearly, 11.8 million individuals died each year due to drug use, which is more than the number of deaths attributed to all cancers.

Substance use is a critical dilemma even in Sri Lanka and 16% of Sri Lankan adolescents had used at least one illegal substance during their life and lifetime prevalence of cigarette, alcohol, marijuana, and other drug use were: 6.1%, 13.6%, 2%, and 1%, respectively. In the context of a huge economic crisis, 172.1 million Sri Lankan Rupees, is spent as the total cost for institutionalized individuals with SUD per annum. The actual, economic loss can be much higher considering the various limitations reported in the studies and scarcity of data on drug trafficking. The effect of drug addiction is massive and is associated with depression, health issues, impairment of education, transmission of sexually transmitted infections and teenage pregnancy, increasing tendency toward delinquency, violence and serious crimes, job instability and employment issues. Most of the serious crimes reported were committed with the influence of illicit drugs. SUD is influenced by several biopsychosocial factors. Personal factors, family factors, and environmental factors contribute to an individual's vulnerability in developing SUD.



A large number of adolescents and school children are at a high risk of inclining towards substance abuse. Past reports where allegations are made against some school cafeterias for promoting and selling various forms of substances in the forms of toffies, lozenges and pills is reported. This high level of vulnerability indicates a greater need for substance-use prevention services among Sri Lankan youth and school children. School-based education for substance use prevention is an appropriate and convenient platform to access vulnerable adolescence. Further, it will be instrumental in empowering school children against substance use.

According to recent estimates, most of the Sri Lankan individuals with SUD were poly-drug users and had initiated substance use at 15-18 years of age or earlier. Cannabis was the most commonly used illicit drug followed by heroin, methamphetamine, tramadol and cocaine. Most of them used cigarettes as the first substance, whereas Alcohol, Cannabis, and other substances such as Tramadol, Cough syrup, Beetle with Tobacco and Diazepam were also used as the first substance. Recent evidence suggests delayed onset of substance use greatly reduces the risk of drug abuse or dependence in late adulthood. While the rest of the world thrive to delay the onset of substance use and prevent early exposure to gateway substances, Sri Lankan parliamentarians dispute legalizing cannabis cultivation, given the illegally cultivated cannabis and availability considered as the reasons for using cannabis by majority of the individuals with SUD. Sri Lanka has a national policy set for the prevention and control of illicit substance use, that foster a legal framework for several acts and regulations. However, the drastic increment of the number of individuals who abuse substances in Sri Lanka blow the whistle and may raise a concern regarding the gaps in existing legal framework. Considering the substance use as a medical condition not as a crime will be instrumental for supporting better recovery of the individuals with SUD.

Commitment is needed from all members of society, especially from policymakers to battle effectively against the pandemic of substance use. With this oration, I intend to provoke your thoughts and discussions on substance use as scholars and researchers need to work hand in hand for drug free youth and for a better Sri Lanka.

Akila Randika Jayamaha
Dean, Faculty of Graduate Studies, KIU



OP 1.1: MRC_N_006

Psychological stress among nursing undergraduates at a selected higher education institute during COVID-19 pandemic in Sri Lanka

Priyadarshani TMD^{1,2}, Damayanthi DHS^{1,3}, Jayawardhana KTKW^{1,2}, Gunawardhana PATU^{1,2}, Sandakumari HHHS[#], Kanchana KTG¹

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Background: An additional burden on the healthcare workers developed during the Public Health Emergency of COVID-19. As front-line healthcare professionals, the nurses have displayed a critical part against COVID 19 and that may have led to profound stress among healthcare workers in Sri Lanka.

Objective: To assess the level and factors associated with psychological stress among nursing undergraduates during the COVID-19 pandemic at a selected higher education institute in Sri Lanka.

Methodology: A descriptive cross-sectional study was conducted among 350 undergraduate nurses by using the snowball sampling method from September to December 2021. Data was collected by using a pre-tested self-administered, web-based questionnaire that was developed by the researchers. Data analysis was done using the SPSS-25 version. Ethical approval was obtained from the Ethics Review Committee of KIU. (KIU_ERC_22_002).

Results: Most of the participants were female (n=280, 79.5%), and the majority (n=130, 36.9%) reported under the age of 30-35 years while (n=236) 67% were married. Of them (n=146) 41.5% had working experience for 5-10 years while (n=234) 66.5% performed 6 - 12 hours of duties daily. The majority (n=312, 89%) agreed that the COVID-19 pandemic affected the continuation of education while time limitation was identified as the prevalent perceived main barrier (n=195, 56%). Among the participants, (n=352), 92.3% had a moderate level of stress while (n=15), 4.3%, and (n= 12), 3.4% had high-stress levels and low-stress levels respectively. Perceived stress was significantly associated with age (p=0.004), marital state (p=0.004), need to support continuing children's online education (p<0.01), and lack of time for undergraduate education (p<0.004).

Conclusion- Most of the participants had moderate stress levels while age, marital status, support need for continuing children's online education, lack of time, and lack of family support were significantly associated with perceived stress levels.

Keywords- COVID-19, Stress, Nursing undergraduates



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OP 1.2: MRC_N_007

Twenty four hour physical behavior of nursing officers during COVID – 19 pandemic: A descriptive study done at National Hospital Sri Lanka

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Introduction: COVID-19 caused dramatical changes in 24-hour physical behavior (physical activity, sedentary behavior and sleep) of health care professionals, which directly affect their health.

Objectives: To evaluate the impact of COVID-19 on 24-hour physical behavior among Sri Lankan nursing officers.

Methods: A descriptive cross-sectional study was conducted among 103 nursing officers, using a pre-tested online questionnaire by a google form which consisted of basic demographics, International Physical Activity Questionnaire, and Pittsburg Sleep Quality Index (PSQI). Physical activity was categorized based on Metabolic Equivalent of Task (MET) minutes/week as inactive (<600 METs), minimally active (600-2999 METs) and health enhancing physically active (>3000 METs) while >4hrs sitting/day categorized sedentary and 4hrs sitting/day as non-sedentary. Sleep quality was categorized using PSQI scores as good sleep (5) and poor sleep (>5). Descriptive and inferential statistics were performed using SPSS version 25 to analyze data. Ethical approval was obtained from the Ethics Review Committee (KIU_ERC_22_66), KIU.

Results: The majority were unmarried (70%, n=72) females (84%, n=87) with a mean age of 33±7 years. The average physical activity was 1428±1003 MET minutes per week, while 65% (n=67) were minimally active and 21% (n=22) were inactive. The average time spent seated per day was 183 ±104 minutes and 21% (n=22) were categorized as sedentary. The average duration of sleep was 5.5±1 hours and a majority (67%, n=69) were categorized as having poor sleep.

Conclusion: The majority of the nursing officers were not engaged in the recommended level of physical activity and also did not have adequate sleep during the COVID-19 pandemic. Interventions and further research are recommended for improving the physical activity and sleep quality of Sri Lankan nursing officers.

Keywords: Physical Activity, Sleep Quality, Sedentary behavior



Families' perception of support from Intensive Care Unit nurses in a selected hospital, Sri Lanka

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Introduction: Admission of a loved one to the Intensive Care Unit (ICU) is a stressful experience for families. In this situation, the needs of family members are often overlooked by nurses because they focus on the immediate needs of critically ill patients. Family-centered care provided by the nurses can be measured through the family members' cognitive and emotional perception of the support provided by the nurses.

Objective: The purpose of the study was to determine the families' perception of support from ICU nurses in a selected hospital in Southern province, Sri Lanka.

Design and methods: Quantitative, descriptive cross-sectional study was conducted among 104 family members of patients who are treated in eight ICUs in Teaching Hospital, Karapitiya. The consecutive sampling method was used. A self-administered questionnaire consisting of baseline information and Ice land - family perceived support scale was used to collect data. The scale consisted of 14 statements divided into two subscales: cognitive support (5 statements) and emotional support (9 statements). Data analysis was done using descriptive statistics such as frequencies and percentages. Mean scores were calculated for the cognitive and emotional support subscales. Ethical approval was obtained from Ethics Review Committee, KIU(KIU_ERC_21_194).

Results: The majority of the participants were Sinhalese (n=96, 92.3%) and belong to the 35-54 age category (n=64, 61.5%). When the relationship with the patient is considered the majority (n=34, 33.6%) were the spouse. In this population, the mean value of cognitive perception was 21.27, in the subscale with a maximum value of 25. The mean value of emotional perception was 38.40, in the subscale with a maximum value of 45.

Conclusion: Families' perception of support from ICU nurses was relatively high as indicated by the mean values of the cognitive and emotional subscales.

Keywords: ICU Nurses, family-centered care, emotional support, cognitive support



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OP 1.4: MRC_N_010

Acute poisoning among children who were admitted to the pediatric unit, Teaching Hospital, Kurunegala Sri Lanka

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Introduction: Acute pediatric poisoning is a common public health concern in both developed and developing countries. It is the most prevalent cause of mortality among children accounting for more than one million cases which were annually reported due to the toxic exposure.

Objective: To determine the prevalence and characteristics of acute poisoning among children who were admitted to the pediatric unit, Teaching Hospital, Kurunegala Sri Lanka.

Methods: Descriptive cross-sectional study was conducted with a sample of 125 children admitted to the Teaching Hospital Kurunegala due to poisoning. The sample was selected by using the purposive sampling method. Data were collected from the parents of the selected children using a pretested interviewer-administered questionnaire. Ethical approval was obtained from the Ethical Review Committee of the Teaching Hospital Kurunegala and KIU(KIU_ERC_21_223). Descriptive statistics were performed for analysis. Statistical Package for Social Sciences version 23 was used as an analytical tool.

Results: Of the children (n=42, 33.6%) belonged to the toddler age category (1 year – 3 years). Above half of the children (n=63, 52%) were girls. The majority of the cases (n=119, 95.2%) were reported at home. Most of the cases were due to accidental poisoning (n=98, 78.4%). Oral administration was the prevalent route to the occurrence of the poisoning (n=114, 91.2%). Medication was the most common agent causing the poisoning (n=64, 51.2%). Household chemicals (n=8, 6.4%), sanitizers (n=8, 6.4%), pesticides (n=4, 3.2%), and insecticides (n=3, 2.4%) were other prevalent types of poisoning.

Conclusion: The incidence of pharmaceutical poisoning was significantly higher among children compared to other types of poisoning.

Keywords: Acute poisoning, children, pediatric unit



OP 1.5: MRC_N_011

Factors affecting the disease management among patients with Diabetes Mellitus during COVID-19 lockdown in Sri Lanka

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Background: The extravagant nature of COVID-19 caused numerous lockdowns in Sri Lanka which gravely affected patients with multiple comorbidities. Disease management of the patients with diabetes mellitus had both positive and negative impacts of lockdown sessions which influences the signs, symptoms and disease complications.

Objective: To assess factors affecting disease management among patients with diabetes mellitus during the COVID-19 lockdown in Sri Lanka.

Method: Descriptive cross-sectional study was conducted among 115 patients with diabetes mellitus selected from social media platforms specified for patients with diabetes mellitus and data was collected by network sampling. A pretested self-administered questionnaire was shared as a google form link with the ethical approval of KIU ERC (KIU_ERC_21_209) and informed consent was obtained prior to the data collection. Data analysis was done with SPSS version 25 with descriptive statistics.

Results: The majority of the patients were between the ages of 48 -63 years (n=75, 65.2%), while there were (n=65, 56.5%) females. The majority (n=36, 31%) of the sample were educated up to the degree level. During the COVID-19 lockdown period (n=71, 62%) experienced difficulties in disease management. The most abundant difficulties of disease management were due to lifestyle changers (n=50, 44%), transport difficulties in attending to the treatments (n=53, 46.5%) economic issues (n=49, 43.7%), and psychological fear (n=31, 27%). Interestingly it was found that (n=79, 68.7%) of the patients had taken a balanced diet during the lockdown period.

Conclusion: The study showcases that diabetes control was lower during the period of the COVID-19 pandemic lockdown. This may be explained by patient responses to reduced physical activity levels and medication mismanagement. More awareness has to be delivered to patients via mass media and health education programs in terms of enduring similar future encounters.

Keywords: COVID-19, lockdown, diabetes mellitus management



OP 1.6: MRC_N_012

Assessment of awareness, practices, and associated factors of thriposha supplementation among pregnant women in Dehiowita MOH area in Kegalle district in Sri Lanka

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Background: Improving maternal nutrition is considered a crucial element to combat poverty and a global scale to reducing maternal and new-born mortality and achieving universal access to reproductive health services. Thriposha program was designed to provide a supplementary food which is providing all the required nutrients especially during the vulnerable periods as pregnancy and lactation.

Objective: This study explored the assessment of awareness, practices, and associated factors of Thriposha supplementation among pregnant women in the Dehiowita Medical Officer of Health area (MOH) in the Kegalle district in Sri Lanka.

Methodology: A descriptive cross-sectional study was conducted with the participation of randomly selected 113 pregnant women who were attending the antenatal clinic in Dehiowita MOH area in Kegalle district by using a researcher administered pretested questionnaire. Descriptive statistics such as frequencies, means, and standard deviations were used to describe the characteristics of the sample and associations were found with the “Pearson Chi-Square test” using SPSS Version 24.

Results: Most of the pregnant women were Sinhala 75.2%(n=87), Buddhists 74.3%(n=85), and within the age of 25-34 (mean 30 ± 6.31) years. Forty five percent (n=52) had education up to ordinary level and only 27% (n=31) had advance level. Most of the participants were prime mothers (n=43, 37%) and 6.5% (n=8) participants suffered from gestational diabetes mellitus. Further 6.5% (n=8) were low weight and 4.5% (n=5) had anaemia. Knowledge (n=69, 60%) and practices (n=90, 78%) regarding Thriposha supplements was at a low level. There was a statistically significant association between knowledge and race (P=0.036), educational level (P=0.003), employment (P=0.043), the period of amenorrhea (P=0.030) and practices were significant associated with occupation P=0.031 and number of pregnancy (P=0.043).

Conclusion: Both knowledge and the practices on Thriposha supplementation were poor among pregnant mothers and awareness sessions need to be conducted on empathizing the importance of this supplementation both during pregnancy and lactation period.

Keywords: Pregnant women, Thriposha



OP 1.7: MRC_N_013

Social media addiction and its impact on academic events among General Certificate of Examination Advanced Level students of Southern Province, Sri Lanka

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Introduction: Social media addiction is a common behavioural disorder which can be observed in teens or young adults. They have become enthralled by social media and are unable to reduce their consumption despite obvious drawbacks. The nature of using social media directly affects the education of students.

Objectives: To investigate social media usage patterns, addiction level, and student's perceptions about the impact of social media on their education.

Methods: A convenient sampling technique was used to gather a sample of 415 General Certificate of Examination Advance Level (GCE AL) students from Southern province, Sri Lanka. An online questionnaire that included the Bergen Social Media Addiction Scale (BSMAS) was used and further questions were also included regarding the impact of social media on education. Data were analysed using Statistical Package of Social Sciences (SPSS V. 25.0). Ethical approval was obtained from the Ethics Review Committee of KIU (ERC_KIU_21_135), and informed consent was obtained prior to data collection.

Findings: WhatsApp was the most frequently used social media among students (n=381, 92%). Smartphones were the most used device (n=303, 73%). Although the majority of the students (n=266, 64%) claimed that they are not addicted to social media, according to BSMAS, 93.7% (n=389) of students were addicted to social media with 45.5% (n=189) having moderate addiction. The majority of the students accepted that social media improves skills, abilities, and attitudes (n=270, 65%), is an effective tool in teaching and learning (n=249, 60%), decreases time devoted to study (n=187, 45%), and is not effective in communicating with teachers than in actual class (n=228, 55%).

Conclusion: social media has both positive and negative impacts on learning. Although participants knew the positive and negative effects of social media, they can't manage their desire to use social media.

Keywords: social media, addiction, academic events



OP 1.8: MRC_N_014

Awareness of cancer risk factors among Sri Lankan residents

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Background: Cancer acts as the second leading cause of global deaths and the incidence is rapidly increasing with multifactorial causes. Lung, breast, colorectal, prostate, and stomach cancers are common worldwide. Early detection of cancer improves survival rates and better health outcomes. Exploration of cancer risk factors is vital for early detection and public awareness of its risk factors plays a key role in it.

Objectives: The current study aimed to assess the awareness of cancer-risk factors among Sri Lankan residents

Methodology: A descriptive cross-sectional study was carried out among 150 adult residents in Sri Lanka. A pre-tested, researcher-developed questionnaire was distributed via the online platform (E-mail, WhatsApp, Facebook etc.) using an author-based network sampling method. The study was approved by the Ethics Review Committee (KIU_ERC_21_226) of KIU. Data were analysed using descriptive statistics and SPSS version 25 was used as the analysis tool.

Results: The majority (n=105,70.9%) were female who were educated above the secondary education level (n=124, 83.8%), married (n=60, 40.5%), and employed (n=129, 88.4%). Also,89.5% (n=128) did not suffer from any chronic disease. However, in the sample, 10.7%, (n=16) of family members had suffered from cancers. More than half of the participants were aware of cancer risk factors such as sudden unexpected weight loss (n=93, 62.8%), unusual fatigue (n=86, 58.9%), lack of appetite (n=88, 60.3%), body pain (n=86, 59.7%), skin changes (n=86, 59.7%), changes in bowel habits (n=137, 58.9%), chronic cough (n=65, 44.8%), abnormal changes in the blood tests (n=52, 56.6%), unusual bleeding (n=84, 57.9%) and swelling of lymph nodes (n=84, 56.6%).

Conclusions: Awareness of cancer risk factors within the study sample is satisfactory. It may be due to the application of the author's-based network sampling method. Therefore, further studies are recommended to assess the prevalence and awareness of cancer risk factors and their associated associations among the general population.

Key Words: Cancer, Risk factors, Awareness



OP 1.9: MRC_N_015

Nurses' attitudes and practice towards promotion of patient's health: A cross-sectional study at National Hospital of Sri Lanka

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Introduction: Health promotion is a process of enabling people to increase control over and improve their health. Nurses play an important role in promoting public health by focusing on health promotion related to disease prevention and changing the behaviour of individuals with respect to their health.

Objective: This study aimed to assess attitudes and practices towards the promotion of patient health among nurses at National Hospital Sri Lanka.

Design and methods: A descriptive cross-sectional study was conducted among 344 nurses at the National Hospital of Sri Lanka using the simple random sampling method. A researcher developed pretested self-administered questionnaire consisting of socio-demographic information, attitudes and practices towards health promotion was used to collect data. Data were analyzed using descriptive statistics in SPSS version 25. Attitudes and practices were categorized as poor (score of < 50), moderate (score of 50-75) and good (score of >75). Ethical approval was obtained from the Ethics Review Committee of KIU (KIU_ERC_22_003).

Results: The majority were females (n=283,82.3%) and the majority belongs to the age group of \leq 30 years (n=189,54.9%). Most participants were Buddhists (n=289,84%). Most Of the nurses had completed their education up to diploma level (n=188,54.7%). Among the nurses (n=158, 46%) had good attitudes and (n=151,44%) had a moderate level of attitudes towards health promotion. Considering the practices towards the health promotion of patients (n=248, 72%) of nurses had a moderate level of practice while only (n=14, 4%) had good practices. However, the majority (n=175, 51%,) of nurses had participated in training programs on health promotion.

Conclusions: The majority of nurses had good attitudes and a moderate level of practice towards the promotion of patient health. However, it is necessary to implement more training opportunities for nurses focusing on health promotion practices since it improves the effectivity of patient care.

Keywords: Health promotion, Nurses, Attitude, Practice



OP 2.1: MRC_HS_001

Determination of toxicity of *Phyllanthus embelica* using Brine Shrimp Lethality Assay

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Introduction: *Phyllanthus embelica* known as “Beheth Nelli” belongs to the family *Euphorbiaceae*. *P.embelica* has shown many medicinal and pharmacological properties in previous studies with a lack of evidence for its bark regarding its toxicological properties. Therefore, it is important to identify the toxicity in dosage determination and formulation.

Objective: This study aimed to identify the minimum toxic concentration of the crude extraction of the *P. embelica* using a Brine Shrimp Lethality Assay.

Method: The air-dried plant material (bark) was powdered and extracted into distilled water in a ratio of 1:3 using the maceration technique. Then the two-fold dilution series was made as follows. One gram of bark aqueous extract powder was dissolved in 5ml of distilled water, starting from 0.2 g/ml to 3.9×10^{-4} g/ml concentration. *P.embelica* was dissolved in distilled water for the study, and its ability to kill cultured larvae (nauplii) was observed. Ten larvae were exposed to plant extract for 24 hours and the number of live larvae was observed using the naked eye. The experiment was triplicated. The mortality percentage LC_{50} (the median lethality concentration) was calculated using the Graph Pad Prism software according to a log concentration, and the mortality percentage graph was compared with previous literature study results. Further, it was compared with Meyer’s and Clarkson’s toxicity scale (if $LC_{50} < 1000 \mu\text{g/ml}$ is considered as toxic if $LC_{50} > 1000 \mu\text{g/ml}$ is considered as non-toxic).

Results: Based on the results, LC_{50} was equal to 0.0035 g/ml for the aqueous extract.

Conclusion: The studies show that the minimum toxic concentration of *P. embelica* is 0.0035 g/ml. Thus, the results indicate that the extract had toxic effects. This further supports the idea that it is crucial to assess the cytotoxic compounds found in the bark of this specific species of plant for future research.

Keywords: Brine Shrimp Lethality Assay, *Phyllanthus embelica*, toxicity studies



OP 2.2: MRC_HS_004

The current state of Leprosy in Gampaha district, Sri Lanka: Analysis of registered patient data

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Introduction: Leprosy is a chronic infectious and neglected tropical disease caused by *Mycobacterium leprae* which can be classified into two groups, as Paucibacillary (PB) and Multibacillary (MB). About 2000 new cases have been reported annually in Sri Lanka. Out of the total case load, 13% is from Gampaha District. There is a dearth of empirical evidence on the pattern of Leprosy in the Gampaha district.

Objectives: To describe the pattern of Leprosy in the Gampaha district from 2014-2020

Methods: A quantitative analysis of data of all registered Leprosy patients during 2014-2020 included in the office of the Regional Director of Health Services, Gampaha was performed by using descriptive statistical methods by SPSS data extracting tool. Data were categorized according to the frequency of Leprosy in children and adults based on their sex, disability grade, MOH area and types of clinical manifestation using the WHO classification of Leprosy. Further, the incidence rate of Leprosy was determined.

Results: During the 7 years studied, 1448 Leprosy patients have been registered in the Gampaha district. Incidence was slightly higher among males, and the male-to-female ratio was 1.1:1. The leading type of Leprosy was MB Leprosy and Negombo was reported as the highest endemic MOH area. Patients in the MB Leprosy category accounted for 58.21% (n=843), followed by PB patient category (n=600; 41.43%). Leprosy cases among children were seen to be fluctuating around 10 percent from 2014 to 2020. Over the past 7 years, the new case detection rate has stagnated around 8-10 per 100,000 population.

Conclusion: Leprosy incidence rates are decreasing in the Gampaha district in parallel with national statistics. A significant increase in Leprosy was observed in the Negombo MOH area. There is a slight male preponderance in Leprosy infection.

Keywords: Leprosy, Gampaha, Multibacillary



OP 2.3: MRC_HS_007

Determination of toxicity of *Evolvulus alsinoides* (*Convolvulaceae*) using Brine Shrimp Assay

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Introduction: *Evolvulus alsinoides* L. (Nil vishnukranthi) belongs to the family *Convolvulaceae*. The plant has shown many medicinal and antimicrobial properties in previous studies. Even though the medicinal value of the plant has been extensively studied, its toxicity has not yet been studied. It is important to identify the toxicity in dosage determination in the formulation process. The brine shrimp lethality assay is an inexpensive and alternative generic bioassay that can identify the toxicity of the plant extract. Many researchers have tested the lethality of several test sample in a basic zoological organism like the brine shrimp (*Artemia salina*) and has found it to be a beneficial tool because of their quick response, in screening numerous chemical components discovered in various bioactivities.

Objective: This study aimed to identify the minimum toxic concentration of the crude extract of *E. alsinoides* using a brine shrimp assay.

Methods: The air-dried plant material was powdered and extracted into distilled water in a 1:3 ratio using maceration and the extract was dried to collect a powder. The dilution series was prepared with two-fold dilution, starting from 1g ml⁻¹ to 1.9 × 10⁻³ g ml⁻¹ from the dried extract. Ten larvae were exposed to plant extract for 24 hours. The number of live larvae was observed using the naked eye, and the mortality percentage and LC₅₀ (The median lethal concentration) were calculated using GraphPad Prism software. A control test series was done with distilled water without adding plant extract and exposing ten shrimps for each concentration which revealed that all of the shrimps were alive after 24 hours. The study was triplicated. The mortality percentage and LC₅₀ were calculated using GraphPad prism according to a log concentration, and percentage mortality graph, and compared with Meyer's or Clarkson's toxicity scale (if LC₅₀ < 1000 µg ml⁻¹ considered as toxic, if LC₅₀ > 1000µg ml⁻¹ considered as non-toxic).

Results: The LC₅₀ was = 0.00041 g ml⁻¹ (410 µg ml⁻¹) for the aqueous extract. The results confirmed that the plant extract has toxic properties.

Conclusion: In conclusion, the minimum toxic concentration of *E. alsinoides* in the brine shrimp assay is 0.00041 g ml⁻¹ (410 µg ml⁻¹). Therefore, it is recommended to determine further by an activity-guided fractionation to identify less toxic, active compounds present in the plant extract.

Keywords: Brine shrimp assay, *Evolvulus alsinoides*, Toxicity.



OP 2.4: MRC_HS_008

Perceived stress, anxiety, and depression among undergraduates in KIU due to the COVID-19 pandemic

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Introduction: The COVID-19 pandemic and its far-reaching implications continue to unfold globally leading to depression, anxiety, and stress among undergraduates. The inability to identify and address these emotional disorders will lead to increased psychological morbidity with undesirable impacts. These problems may interfere with the learning process and limit the academic performance of students and lower their productivity.

Objective: To assess the perceived stress, anxiety, and depression among undergraduates in KIU due to the COVID-19 pandemic.

Methodology: A descriptive cross-sectional study was conducted from March to September 2021. A self-administered online questionnaire was shared among undergraduate students (n=260) to collect data on demographic details, social association with COVID-19, depression, anxiety, and stress using DASS 21 and the perceived stress scale. SPSS(v25) was used to analyze the data by performing Chi-square and Mann-Whitney tests. P<0.05 was considered statistically significant. Ethical approval was obtained from the Ethics Review Committee (ERC) of KIU (KIU_ERC_21_83)

Results: From a total of 260 undergraduates, the majority (n=221, 85%) had moderate perceived stress (PS) while (n=10, 3.8%) had high levels of PS, and (n=29, 11.2%) had low levels of PS. There was no significant association between PS level and sociodemographic data such as age, gender, marital status, ethnicity, religion, degree program, or academic year. According to the DASS-21 scale, (n=145, 55.7%) undergraduates showed signs of depression, (n=154, 59.3%) suffered from anxiety, while (n=79, 30.5%) showed signs of stress. There was a significant association between gender and stress (p=0.010). However, gender had no significant association with depression or anxiety. No other factors have been found to be significantly associated with these indices.

Conclusion: Most students, regardless of their gender or other socio-demographic variables, encountered moderate perceived stress. Depression, anxiety, and stress levels in students should be addressed early through intervention to initiate preventive strategies since they would diminish self-efficacy and lead to increased stress.

Keywords: COVID-19, Perceived Stress, Anxiety



OP 2.5: MRC_HS_009

The impact of leisure activity type on self-esteem among university students in selected universities in Colombo District in Sri Lanka

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Introduction: As university students, it's important for them to have a leisure activity which impacts positively on their psychological and physiological well-being. Self-esteem is one of the most important factors of mental health that impact on the successful development of individual's life. Leisure activities and well-being may vary depending on the type of leisure. Leisure may or may not increase self-esteem depending on the type. Leisure activities can be classified in different ways and this research focuses on the artistic and non-artistic leisure activity types.

Objective: This research examines the impact of leisure activity type on self-esteem among university students in selected universities in the Colombo District in Sri Lanka

Methods: The design of the study is a cross-sectional descriptive survey. The data was collected through an online survey from 174 undergraduates via a convenience sampling method from KAATSU International University, SLIT, the University of Colombo, and the University of Jayewardenepura. A chi-square test was performed to examine the association between leisure activities and self-esteem; SPSS version 26 software was used. The questionnaire consisted of demographic questions and Rosenberg self-esteem scale. Ethical clearance was obtained from the Ethics Review Committee of KIU (ERC number)

Results: The results showed that there was a significant association between self-esteem and leisure activity type ($\chi^2 (2) = 9.848, p < 0.05$). Undergraduates who are doing artistic leisure activities (n=45.8%) have moderate self-esteem compared to (n=25.7%) that of non- artistic people.

Conclusion: The findings from the current study highlighted that undergraduates who are doing artistic leisure activities have moderate self-esteem compared to the other two groups. This finding is consistent with previous literature which reports that leisure activities positively affected self-esteem.

Keywords: self-esteem, leisure activity type



Teaching English as a second language: the role of a teacher as perceived by learners

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Introduction: Both the process of teaching English and the role of a teacher in English as a Second Language classroom (ESL) have been changing during the last two decades. In fact, the teacher's role can be affected by the lesson, the students, and the circumstances that might arise during a classroom session. Therefore, it is crucial for a teacher to perform many different roles in the classroom in order to attain the best learning outcomes. This leads to the question what an English teacher can and has to do, in order to teach students successfully.

Objective: Thus, it was decided to undertake research on this circumstance with the aim of investigating the role of teacher in the ESL classroom as it was necessary to reveal how the role of a teacher is seen in the stance of the learners.

Methodology: A total of 60 undergraduates participated in the study. A questionnaire was utilized as the primary source of data collection consisting of closed ended questions and open-ended questions. A semi structured interview was administered as another instrument of the data collection process in order to prospect the profiles of an effective teacher. With regard to the method of data analysis, both quantitative and qualitative data analyzing methods were utilized.

Results: The responses revealed some intriguing findings and seven roles performed by the teacher in the ESL classroom. Among the respondents, (n=54, 90%) of the participants, agreed that the teacher should facilitate the students in overcoming the difficulties they might encounter in the process of learning. Besides, (n=36, 61 %) were of the view that, the teacher should assess students by giving them constructive feedback during the class activities. In particular, the study unfolded the fact that the teachers serve many other different roles in the classroom such as Controller (n=14, 24%), Prompter (n=41, 69%), Participant (72.5%, n=44), Resource (n=54, 90.5%) and Observer (n=31, 52%) Most importantly, the responses of the participants were predominant to comprehend that the students perceived the role of teacher as a facilitator as the most preferred role while the role of the teacher as a controller the least preferred one. On the other hand, the study paves the way for the teachers to be aware of the variety of roles they might play in their classrooms and make them comprehend why they do what they do.

Key words: English as a Second Language, Learner, Role of a teacher



OP 2.7: MRC_E_004

An analytical insight into the structure of the Brechtian theatre based on the plays ‘Mother Courage and Her Children’ and ‘Chalk Circle’.

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Introduction: Bertolt Brecht developed the form of the ‘epic theatre’ which can be defined as the foundation of the logical diversion of the direction of the conventional theatre. Brecht through this route of the epic theatre utilizes the theatre as a social and innovative logical instrument with the motive of creating a social change which will have an impact on the existing social texture and the mentality of the social beings.

Objectives: The research focuses on analyzing how Brecht pursued a rationalistic route deviating from the core of the conventional theatrical structure, in establishing the form of the ‘epic theatre’ which can be defined as the foundation of the logical diversion of the direction of the conventional theatre. The foremost Brechtian plays, ‘Mother Courage and Her Children and ‘The Chalk Circle’ were analyzed to examine to which extent Brecht portrays the inner conflicts which social beings undergo in identifying their survival in relation to the discipline of emotion and reason.

Methods: The data collecting procedure was conducted utilizing secondary data collection methods. Accordingly, content analysis (conceptual analysis, relational analysis), discourse analysis and structural analysis were used in collecting and analyzing the relevant data. The study focused on analyzing the two plays ‘Mother Courage and Her Children and ‘The Chalk Circle’ based on Marxist ideological perspectives.

Results: The plays, ‘Mother Courage and Her Children, and ‘The Chalk Circle’, induce the spectator to contemplate and reflect on the Brechtian thematic perspectives such as ‘Victimization of the human being through the insatiable desire for material comfort, human incapability to confront the social evils, the dichotomy between emotion and reason etc. Thus, approaching the irrational social symptoms from a communist political point of view, Brecht within his plays portrays the inner conflicts which social beings undergo in identifying their survival in relation to the discipline of emotion and reason. ‘Grusha’ in ‘The Chalk Circle’ and ‘Kattrin’ in ‘Mother Courage and Her Children’ pursue the route of the universal principle of humanity which functions as the instinctive element in contrast to the rationally moulded sphere of reason.

Conclusion: Brecht can be identified as a rebel whose intention is to move the social structure towards a new sphere in persuading the people to perceive through the obscured social veil. Along with the ideologies such as Marxism and the influence of the political theatre of Erwin Piscator, Brecht got an effort to transform the theatre into a source of social revival, thought inspiration and a foundation for social discourse.

Keywords: Brechtian plays, epic theatre, social reality, rationality, revolutionary approach



OP 3.1: MRC_M_002

Impact of e-service quality on e-satisfaction and e-loyalty of online shoppers: with special reference to online shoppers in Colombo District

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Introduction: Underperformance in digital quality across all industries and the lack of understanding regarding the impact of e-service quality on customer e-satisfaction and e-loyalty towards online shopping has posed a future threat of bringing losses to online businesses.

Objectives: To examine the impact of overall e-service quality on customer e-loyalty via e-satisfaction in online shopping in Sri Lanka.

Methods: Following the positivistic research paradigm and deductive research approach, the researcher adopted the survey research method. Kaiser – Meyer – Olkin sample adequacy metric and Bartlett’s test (KMO & Bartlett’s test) were used to ensure the content validity while Cronbach’s Alpha was used to ensure the consistency of measurement. A self-administered questionnaire survey was conducted among 301 online shoppers aged 25 to 40 who were from Colombo. Multiple linear regression analysis and hierarchical regression analysis were employed to evaluate the hypothesis.

Results: The results show that website design ($\beta=0.462$) and customer service ($\beta=0.191$) as the most influential factor impacting customer e-satisfaction while overall service quality has a significant direct impact on e-satisfaction as well as e-loyalty. Further, the adjusted R-square value of the final model (0.696) indicated 69.6% of the variation of e-satisfaction toward online shopping is explained by website design, customer service, privacy/security, and fulfillment in this study. However, results stemmed from the hierarchical regression analysis indicated, there is no mediating role for e-satisfaction between e-service quality and e-loyalty as the p-value of the independent variable in the multiple regression has not turned into insignificant or greater than 0.05.

Conclusion: This research establishes the impact of e-service quality elements on customer e-satisfaction, which in turn has been found to have a significant influence on e-loyalty. Also, it is found that e-service quality has a direct impact on e-loyalty rather than an indirect impact via an e-satisfaction mediator. Similarly, these findings will enable realizing how e-service quality affects fostering consumer pleasure and loyalty in this digital era will enable conventional retailers to grow their companies into virtual platforms.

Keywords: E-loyalty, E-satisfaction, E-service quality



OP 3.2: MRC_M_003

Impact of financial development on the environmental pollution in South Asia

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Introduction: Environmental consideration is substantial in the contemporary world today due to the frequent and severe catastrophes which interrupt the survival of human beings. The increasing competition and development target achievements of the nations lead the people to a business world where environmental pollution is considerable. Along with all the regions worldwide, South Asia has been able to catch the eyes of people due to its natural biodiversity over decades even though most multidisciplinary researchers revealed that environmental degradation is significant in this region currently.

Objectives: To examine the impact of financial development on environmental pollution in the South Asian region.

Methods: This study investigates the impact of financial development on environmental pollution by taking the financial development, financial institutions, and financial market indicators and Carbon emissions from 1980-2021 for seven countries i.e., Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. Using panel unit root tests, cointegration tests, and cointegrating regressors as Fully Modified Ordinary Least Square and Dynamic Ordinary Least Square researchers conducted the investigation.

Results: The Levin, Lin & Chu panel unit root tests confirmed the long-term effect of the financial development while the Pedroni residual cointegration test assured the cointegration of the selected variables. Further, the researcher confirmed the data set is free from multicollinearity issues by Variance Inflation Factor. Thereafter, cointegrating regressors revealed a significant positive relationship between financial development on environmental pollution.

Conclusion: Research findings assured that the increasing financial development caused higher environmental pollution in the South Asian region. Therefore, financial and environmental policy coherence should be enabled, and moving forward with environmentally friendly financial operations is highlighted. The countries are having higher pollution rates significantly impact on the nearby countries as their atmospheric changes directly affect those neighboring countries. As the substantial effect of the financial institutions is higher than the effect of financial markets introducing eco footprints to the financial systems is highly appreciated as the developed nations also enable eco footprints to lower the environmental pollution in their economies.

Keywords: Environmental pollution, financial development, South Asia



OP 3.3: MRC_M_004

Impact of economic factors on profitability of listed commercial banks in Sri Lanka

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Introduction: The development of any nation depends on its economic condition which is a backbone for the overall development of a nation. The banking sector is one of the most important sectors of the Sri Lankan economy. Bank profitability is dependent upon microeconomic variables and macroeconomic variables and investigation of the impact of economic factors on the profitability of the banks are significant in the current scenario.

Objective: To examine the impact of economic factors on profitability in listed commercial banks (LCBs) in Sri Lanka.

Methods: This descriptive research study is consisting of a sample of 13 LCBs listed in the Colombo Stock Exchange (CSE) Sri Lanka. The data was obtained from the published annual reports of the sampled banks for the years 2011 to 2020. As a dependent variable, Return on Asset (ROA), and as independent variables, microeconomic variables including bank size, liquidity ratio, operating efficiency, capital adequacy, and macroeconomic variables including GDP growth rate, inflation, and interest rate were used. The panel data regression method was incorporated as the main regressing tool in the study.

Results: Panel data regression outputs ensure that all the independent variables indicated a positively significant relationship with ROA except the liquidity which indicated an inverse relationship. Therefore, enabling a robust gap analysis in the LCBs is identified as a critical factor in Sri Lanka which is still a developing country.

Conclusion: The research findings are significant in the banking sector's decision-making process in Sri Lanka. For instance, the analysis can offer a precise forecast of bank profitability to bank-specific and macroeconomic data and the research findings have complied with the empirical evidence in the researching field. The bank-level decision-makers may boost their profitability by focusing on bank size, liquidity, operational efficiency, and capital adequacy. Further, substantial measures on enhancing the significant microeconomic variables and taking measures to ensure resilience in front of the significant macroeconomic factors to improve the profitability of the LCBs are highlighted.

Keywords: Economic Factors, Listed Commercial Banks, Colombo Stock Exchange



OP 3.4: MRC_M_005

The impact of celebrity trustworthiness and expertise on female consumer's self-esteem: with special reference to beauty care advertisements in Sri Lanka

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Introduction: Celebrity Endorsement has emerged as one of the most popular marketing tools, with most major corporations utilizing it these days. Since celebrity endorsement is so widespread all over the world, Sri Lanka is also utilizing it in the beauty care market, where the majority of female consumers have a favorable impression of celebrities and enthuses about their beauty care routines.

Objectives: The current study was carried out to find the impact of celebrity trustworthiness and expertise on female consumers' self-esteem with special reference to beauty care advertisements in Sri Lanka.

Methods: The study was conducted by using the quantitative approach to conduct the study. In addition, the researcher utilized a deductive research strategy and an explanatory research design. To evaluate the hypothesis, multiple linear regression analysis was utilized as the primary inferential analysis technique.

Results: The results of the current study have been verified by the prior literature. The results of the study confirmed that celebrity trustworthiness and expertise have a significant positive impact on the female consumer's self-esteem. Also, the results of the study prove that celebrity trustworthiness has the highest impact on female consumers' self-esteem.

Conclusion: Despite extensive research in other countries, no significant number of studies have been conducted on the impact of celebrity trustworthiness and expertise on female consumers' self-esteem. Contingent on the prior literature, the celebrity endorsement context utilizes the TEARS model as the theoretical base. Even though the TEARS model plays a vital role it has not been used sufficiently to determine the impact of celebrity trustworthiness and expertise on female consumers' self-esteem, the study significantly closes a theoretical gap in the literature.

Keywords: Celebrity Endorsement, Trustworthiness, Expertise.



OP 3.5: MRC_M_006

Impact of religiosity and spirituality towards green fast moving consumer goods purchasing behavior: with special reference to the western province, Sri Lanka

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Introduction: The entire world is facing numerous environmental disputes due to the massive increase in the use of fast moving consumer goods (FMCG) products. Thus, the act of purchasing green FMCG is deemed important. But consumers' internal behaviors have not yet been formed to consistently purchase green FMCG products. Moreover, having noted the paucity of literature explaining how both religiosity and spirituality internally encourage consumers to buy green FMCGs.

Objective(s): This paper endeavors to investigate the impact of religiosity and spirituality on green FMCG purchasing behavior, with special reference to the Western province, of Sri Lanka.

Methods: This conceptualization is framed based on the functional theory of attitude and this study follows a quantitative research design. A total of 307 usable responses were collected from the Western province who were aged above 18 years through a self-administered structured questionnaire using the convenience sampling technique. Data were analyzed by using multiple regression techniques.

Results: The findings verified with prior studies, which revealed that intrinsic religiosity, relatedness, self-actualization, transcendental, and sacredness spirituality have significant impacts on green FMCG purchasing behavior and among these factors, intrinsic religiosity is the most significant influencer on green FMCG purchase behavior. Unexpectedly, extrinsic religiosity has not been shown to have any impact on green FMCG purchasing behavior.

Conclusion: Though a limited number of studies have concerned spirituality and religiosity related to ecological behaviors, there was a dearth in theorizing and empirically validating both constructs simultaneously, especially in Sri Lanka. This study attempts to create an immense contribution to the existing body of knowledge and can also serve as a significant contribution to green FMCG marketers to achieve competitive advantage by designing long-term relationship strategies highlighting customers' inner spirit. Further, it will provide green FMCG marketers to add more green, ethical ideas to emphasize their products, promotions, and advertising ideas to differentiation their brands.

Keywords: Green FMCG Purchasing behavior, Religiosity, Spirituality



OP 3.6: MRC_M_007

Impact of market orientation on organizational performance with special reference to licensed commercial banks in Kurunegala Divisional Secretariat

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Introduction: Due to the prompt change in consumer taste, swift technological advancement, and highest competition, market orientation becomes compulsory for companies to expand structures. It is crucial for banks to understand and compute the influence of market orientation on organizational performance. Therefore, this paper provides a strong foundation for a better understanding of the dynamics in banking and facilitates exploring future business opportunities for sustainable competitive advantage in banking, which is particularly significant for this sector.

Objectives: To examine the impact of market orientation on organizational performance with special reference to licensed commercial banks in Kurunegala Divisional Secretariat Division.

Methods: For the study purpose, the quantitative technique is used to assess how market orientation impacts organizational performance in licensed commercial banks in Kurunegala divisional secretariat division. According to the feasibility of the samples, the total population was selected as the sample size. The sample size was considered a total of 306 managerial and executive level personnel working in licensed commercial banks in the Kurunegala divisional secretariat division. In this study, data were collected through primary data. The data relating to the selected sample was collected using the questionnaire method. The collected data has been analyzed using descriptive statistics, correlation, and regression analysis.

Results: Findings identified that there is a strong positive correlation between market orientation and organizational performance. Therefore, it can be concluded that 56.3% of the variability in the organizational performance of licensed commercial banks is explained by market orientation at the 0.05 significant level. Findings confirmed that market orientation positively impacts the banks' organizational performance. Further previous researchers suggested that there was a positive impact of market orientation on organizational performance.

Conclusion: The modern banking sector in Sri Lanka improves organizational performance through numerous changes fostering increased market-oriented activities. As this study selects, Licensed Commercial Banks are more competitive within the service sector. So, they are highly concerned about the concept of market orientation to accomplish financial and non-financial goals. Findings implied that market orientation positively impacts organizational performance. The study was conducted with 285 managerial and executive level personnel in licensed commercial banks in the Kurunegala divisional secretariat division.

Keywords: Market Orientation, Organizational Performance, Licensed Commercial Banks



OP 3.7: MRC_IT_001

eParam : The development of parameterized online practice quizzes for undergraduate students

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Introduction: Online quizzes are popular ways of using web for educational purposes. However, all the major web courseware management system, support authoring and delivery of on-line quizzes, made of static questions having disadvantages of same question being displayed to adjoining students at the one quiz time. Web-based parameterized questions are one of the most promising kinds of web knowledge assessment to overcome the deficiency. Further in self-assessment context, the same question can be used again and again with different parameters allowing every student to achieve mastery.

Objective: To analyze shortcomings of using static questions on online quiz and design a parameterized model to generate the unique questions on the system by using the ADDIE model.

Methodology: A total of 22 online quiz programmes been used by 14 state and non-state educational institutes were studied. A questionnaire with closed ended questions and open-ended questions was used to collect data. Further a semi structured interview was administered as another instrument for the data collection to get the design view from content developers. After analyzing the current online quiz programmes, the system was developed for computer numbering system related areas with initial question, and it was changed with parameterized value for each question. eParam was then tested with the first-year students of state and non-state university who are following Computer Science related degree programmes. Further eParam design were evaluated by lecturers.

Results: The newly developed eParam when used in an undergraduate computer systems module and was positively evaluated by the 74 students, 16 lecturers and 2 content developers. Among the respondents, 100% (n=74) of the students got unique questions when they logged to system, 4 times. 100% of the students strongly agree or agree that the on-line self-assessment quizzes were relevant to subject. 87.5% of the students found that the questions presented to them in eParam were helpful and contribute to their learning in the class. 100 % (n=16) of the lecturers were happy with the design of the system and requested to design the parameterized quizzes for other modules.

Conclusion: The results show that parameterized questions as served by eParam web application provide an exceptional learning tool.

Keywords: parameterized quiz, self-assessment



Identifications of factors needed to establish a monitoring and evaluation/ management information system for the rural water supply sector in Sri Lanka

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Introduction: Over the last three decades, there have been many interventions/attempts to establish Monitoring and Evaluation (M&E) Systems and Management information system (MIS) in the Rural water supply (RWS) sector in Sri Lanka. It is understood that a comprehensive review of the historical facts related to the aspects of sustainability, monitoring & evaluation of Community Based Organization (CBO) managed ventures is important. Accordingly, the study will determine the requirements and data needed to propose a National M&E/MIS System based on the lessons learned from the past.

Objective: To determine issues related to water supply with a view to planning & develop a useful MIS and to monitor & evaluate the system through an effective M&E System.

Methodology: Using a questionnaire data & information were collected from Stakeholders (End users at the village level, water board, etc.). These requirements & data collected, were fed to the MIS System. Using the collected data and requirements necessary components/ modules will be designed in the MIS system to facilitate the stakeholders. The proposed MIS System will contain the components regarding monitoring & evaluation of the system.

Results: Data & information were collected through 200 villages within Sri Lanka & summarized below. When inquired regarding minor maintenance of water supply if handled within Community Based Organization (CBO) (62%, n=123) replied yes while (39%, n=77) replied no. Availability of technicians within CBO and other CBO (41%, n=82) has a positive response while (64%, n=128) had a negative response. When queried if the department answers call (32%, n=64) had a positive response while (68%, n=136) had a negative response. On inquiry, if satisfied with handling issues related to water supply by the department only (18%, n=36) had a positive response while a majority (82%, n=164) had a negative response. For the question, of whether the water source is regularly monitored (33%, n=66) responded positively while (67%, n=134) responded negatively. On inquiry into satisfaction with the water quality (39%, n=77) responded positively, while (62%, n=123) were not satisfied. Based on this survey the factors needed for information systems related to rural water supply (RWS) were identified.

Conclusion: Components/modules needed to establish sustainable Monitoring & Evaluation system using MIS for Rural Water Supply (RWS) were identified.

Keywords: Monitoring, Evaluation, System



PP4.1: MRC_N_002

An overview of water quality within the Colombo Municipal Council area, a retrospective report analysis

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Introduction: Access to safe and quality drinking water is a fundamental requirement and a basic human right. Water quality is determined by its biological, physical, and chemical properties. It is important to assess the quality of drinking water within Colombo Municipal Council (CMC) area as it consists of the largest population who utilize pipe-borne water supplied by the National Water Supply and Drainage Board (NWS&DB) Sri Lanka.

Objective: To assess the quality of drinking water within the CMC area by obtaining quantitative information on the physical and biological parameters of the water.

Methods: In this quantitative, retrospective, cross-sectional study, 268 water analysis reports were considered from 1st July to 30th November 2021 with permission from relevant authorities of NWS&DB. Data were extracted on selected parameters such as Color, Turbidity, pH, Total Dissolved Solids (TDS), Free Residual Chlorine (FRC), the total number of Coliform bacteria, and the total number of *Esherichia-coli*. Data analysis was done by SPSS (Version 25) software. All values were considered based on reference ranges of Sri Lanka Standards (SLS 614: 2013).

Results: Reports indicated that, among 9 water schemes and 4 water reservoirs, the highest contributions were from the Maligakanda water reservoir (51.6%) and Maligakanda water scheme (15.9%). All the samples were fully treated water and the mean for color was 4.035 Hazen Units within the permissible level though, 3.7 % of samples exceeded the range. The mean value of the turbidity was 0.4911NTU which was within the permissible level and only one sample deviated from the maximum permissible level. The mean pH value was 7.3332, except for one, all other samples were within the permissible level. The mean value of the TDS was 24.5103mg/L and the majority of FRC values varied between 0.6-0.8mg/L which was within the permissible level and 11 samples had 0 mg/L. All samples were free from total coliform bacteria and E-Coli.

Conclusion: Most of the samples were within the permissible range of color, pH, turbidity, TDS, FRC and free from total Coliform bacteria and E-Coli which could be recommended for use.

Keywords: Water quality, Safe drinking water



KIU



PP4.2: MRC_N_003

Assessment of dietary pattern changes and their associated factors among nursing officers in Teaching Hospital Rathnapura, Sri Lanka during the COVID-19 pandemic

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Introduction: COVID-19 is a respiratory infection that was declared a pandemic by WHO. Healthcare workers throughout the world had fought the disease risking their lives for the betterment of patients. Nurses play an important role in the battle against COVID-19. Due to health concerns and regulations declared by governments regarding COVID-19, the lifestyle of nurses changed. Dietary pattern is a major area of lifestyle that was influenced to a great extent.

Objective: To assess the dietary pattern changes and their associated factors among nursing officers in Teaching Hospital Rathnapura, Sri Lanka during the COVID-19 pandemic.

Methods: A descriptive cross-sectional study was conducted among nursing officers working at Teaching Hospital, Rathnapura, Sri Lanka. Systematic random sampling method was used to select participants for the study. Data were collected using a researcher-developed, pre-tested self-administered questionnaire. Ethical clearance was obtained from the ethics review committee of KIU (KIU_ERC_22_036). SPSS version 25 was used for data analysis.

Results: A total number of 271 nurses participated in the study. The mean age of 40 years and most of the participants (n=192, 71%) were in the young adult age group with a female predominance (n=245, 90.4%). Considerable dietary pattern changes occurred in 20.7% (n=56) while 47.6% (n=129) reported moderate changes. No considerable dietary pattern change was reported by 31.7% (n=86). Among the participants, 12.9% (n=35) had gained weight and 5.9% (n=16) had lost weight. Age ($P < 0.001$) was significantly associated with dietary pattern changes, while gender, civil status, place of living, and education level showed no statistically significant association with dietary pattern changes.

Conclusions: COVID-19 has caused dietary pattern changes among the majority of the population where weight gain and weight loss were evident in moderate proportions as outcomes of dietary pattern changes. Age has a significant impact on dietary pattern changes. The study highlights the importance of dietary modifications among nurses during pandemic periods like COVID-19.

Keywords: COVID-19, dietary pattern changes, Nursing officers



Knowledge, attitude, and practice on hospital waste management among healthcare workers at Teaching Hospital Karapitiya, Sri Lanka

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Background: Hospital Waste Management (HWM) is a concern of the medical and general community. It represents a significant health risk and environmental pollution due to its hazardous characteristics. Adequate knowledge regarding the management of hospital waste is an important precursor for the synthesis of appropriate attitudes and practices for proper handling and disposal of hospital waste.

Objective: To assess knowledge, attitude, and practice in hospital waste management among healthcare workers at Karapitiya Teaching Hospital.

Methodology: Descriptive cross-sectional study was conducted among 400 Health Care Workers (HCW) using a convenience sampling method. A pretested self-administered questionnaire was used to collect data developed by the researchers. Ethical approval was obtained from the Ethics Review Committee of KIU (KIU/ERC/22/213) Data were analyzed in the statistical package for social science (SPSS) version 25 using descriptive statistical analysis.

Results: The proposition of the respondents were nurses (n=279, 69.7%), doctors (n=41, 10.3%), and health aid staff (n=80, 20%) while (n=303), 75.8% were females. Most of them (n=167, 41.75%) were aged (31-39) and (n=281), 70.25% had 1-10 years of working experience. The highest proportion (n=236, 58.8%) was diploma holders among the nurses, and of them, n=72, 28.0% worked in surgical wards. The study revealed overall knowledge, practice, and attitude levels of (n=299), 74.7%, (n=323), 82.2%, and (n=299) 74.7% respectively while nurses' knowledge and practice score of HWM was high (n=324, 81.17%, n= 339, 84.68%) respectively than in the other categories. Meanwhile, the health aid staff attitude level was high (n=369), 92.34% than in the other categories.

Conclusion: The study revealed an adequate level of overall knowledge, practice, and attitude levels among HCWs.

Keywords- Knowledge, Attitude, Practice, Hospital Waste Management, Healthcare Workers



PP4.4: MRC_N_009

Knowledge and attitudes on sexually transmitted diseases among undergraduates in a selected private university, in Sri Lanka

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Introduction: Sexually Transmitted Diseases (STDs) are common infectious diseases caused by bacteria, viruses, or parasites. It is mainly transmitted through sexual intercourse. Young adults are considered to be at more risk for STDs compared to adults.

Objective: To assess knowledge and attitudes on sexually transmitted diseases among undergraduates in a selected private university, in Sri Lanka.

Methods: A Descriptive cross-sectional study was conducted among 151 undergraduates at KAATSU International University (KIU), Sri Lanka. The study sample was selected by using the convenient sampling method. Data were collected using a pretested interviewer-administered questionnaire which was shared through online platforms among the undergraduates. Ethical approval was obtained from the Ethics Review Committee at KIU (KIU_ERC_21_184). Descriptive statistics and a chi-square test were performed for analysis. The knowledge score of the participants was categorized as low (0–20%), average (21–40%), moderate (41–60%), and high (61–100%). Statistical Package for Social Sciences version 23 is used as an analytical tool.

Results: The majority of undergraduates were females (n=113, 74.8%) and age between 20 -30 years (n =132, 87.4%). Only 24.5% (n=37) of undergraduates were married. Respectively, 27.8% (n= 42), 33.1%(n=50), 16.6%(n=25), and 22.5% (n=34) reported low, average, moderate, and high knowledge levels of STDs. There was a statistically significant association between age and knowledge levels (p=0.03). Of the undergraduates, 8.6% (n=13) reported that people with STDs should be isolated from society and 77.5% (n=117) reported that educational sessions on sexual health should be implemented at school.

Conclusion: Knowledge of STDs and the attitudes of the young generation towards sexual health and STDs should be improved.

Keywords: Knowledge, attitudes, sexually transmitted diseases, undergraduates



PP4.5: MRC_N_016

A systematic review on depression and associated factors among patients with Diabetes Mellitus

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Introduction: Diabetes Mellitus is a metabolic disorder characterized by hyperglycemia and has become a significant non-communicable disease globally. Many people who suffer from diabetes have poor mental health. Therefore, identifying factors associated with depression among diabetes patients is vital to enhance their quality of life.

Objectives: To identify the factors associated with depression among patients with diabetes mellitus.

Methods: Pico analysis and Prisma guidelines were used to determine the related research. Initially, hundred papers were reviewed and after removing eighty articles through duplication, screened records and full-text articles were assessed for eligibility, remaining studies (n=08) were included in qualitative synthesis and analysis. The review consists of studies published in English between 2015 to 2022 in electronic databases such as PubMed and Google Scholar.

Results: According to the findings of this review, when compared to the general population prevalence of higher levels of depression was reported among the patients with diabetes mellitus. Furthermore, findings of the review reveal that age, ethnicity, highest education level, unemployment, monthly income, and comorbidities were the most common associated factors with depression and poor adherence to dietary recommendations, hyperglycemia, poor metabolic control, complications of diabetes were the factors which lead to poor quality of life, increased healthcare usage and expenses among the patients with Diabetes Mellitus.

Conclusion: Depression is widely prevalent among patients with diabetes mellitus. Therefore, prior assessment of mental health status is vital among patients with diabetes mellitus.

Keywords: Diabetes Mellitus, Depression, Associated Factors



PP4.6: MRC_N_017

The impact of the COVID-19 pandemic on healthcare utilization among the patients who seek treatment from Sri Jayewardenepura General Hospital, Sri Lanka

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Introduction: Healthcare utilization can be measured based on the patient's experience and satisfaction regarding the care that they received from the hospital. The Coronavirus disease (COVID-19) is an infectious disease caused by the newly discovered SARS-CoV-2 virus. Global healthcare utilization was disturbed during COVID-19 and disruption to healthcare services was greatest among lower-income countries.

Objective: This study aimed to evaluate the impact of healthcare utilization when seeking treatments from Sri Jayewardenepura General Hospital, Sri Lanka.

Methods: Descriptive cross-sectional study was conducted among 384 patients who sought treatment from Sri Jayewardenepura General Hospital, Sri Lanka. The sample was selected by using the convenient sampling method. Data were collected from the participants using a pretested interviewer-administered questionnaire. Healthcare utilization among the participants was evaluated by using the tool PREM-CCH, a psychometrically validated instrument that includes 8 subcomponents. Ethical approval was obtained from the Ethical Review Committee of KIU (ERC_KIU_21_220). Descriptive statistics were performed for analysis. Statistical Package for Social Sciences version 23 is used as an analytical tool.

Results: Of the 384 above half of the participants were females (n=227, 59.15%) and nearly half of the participants (n=179, 46.6%) belonged to the 20-39 years age category. Majority of the participants were Buddhists (n=299, 77.8%) and Sinhalese (n=340, 88.5%) whereas the highest number of participants were married (n=278, 72.4%). The reported positive experience for components of health care utilization by the participants was 97.1% (n=373), 97.9%(n=376), 96.9%(n=372), 82.0%(n=315), 99.0%(n=380), 95.3%(n=366), and 94.8% (n=364) respectively for Communication and Information, Professional Competence, Medical Costs, Efficiency, Hospital Recommendation, General Satisfaction, and Health Outcomes.

Conclusion: More than 80% of the respondents viewed their care experiences as positive for all the components of healthcare utilization during the period of the COVID-19 pandemic.

Keywords: COVID-19 pandemic, healthcare, utilization, patients



PP5.1: MRC_HS_002

Insight to consumer practices towards genetically modified food: A descriptive cross-sectional study

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Introduction: Genetically modified (GM) foods include animal and plant-based products that have undergone genetic manipulations. Often, people buy GM foods as they are readily available and rich in nutrients and flavors, while some consumers have no idea that their food has been modified. Food allergies and malignancies in the colon, breast, and lungs have been reported as the negative results of the consumption of GM foods hence the focus on the right practices.

Objective: To determine the consumer practices towards the GM foods of a selected community in Kalutara, Sri Lanka.

Methods: This study was conducted as a descriptive cross-sectional study enrolling 250 participants (females=153, males=97). Participants were selected using systematic random sampling. Data were collected using a pre-tested self-administered questionnaire which specifically demanded information on socio-demographic data and consumer practices towards GM foods. SPSS version 25.0 was used for the analysis while percentages, frequencies, and chi-square tests were used to assess the association between variables. Practices were graded high, low, and moderate using Bloom's cut-off points.

Results: Most participants had low practices on GM foods (n=94, 37.6%) while n=78, 31.2% had high and moderate levels equally. Potato, Tomato and Corn were recognized as highly consumed GM foods. The overall consumption of GM foods significantly differed with the disease conditions and gender of the population (p value<0.05). Age was not been an important factor in consumer decisions.

Conclusion: With no difference to the past studies, consumer practices on GM foods were low in Sri Lanka. Gender played a significant role in the purchasing decision contradicting previous studies. Females being more than half of the survey population can be a reason for that. While GM foods were barely accepted by the population, checking food labels has not been a regular practice either. Further studies are necessary to confirm the above findings.

Keywords: Genetically modified (GM) foods, Consumer Practices



KIU



PP5.2: MRC_HS_003

An evaluation of parenting styles, and academic motivation among university students in selected universities in the Colombo district of Sri Lanka

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Introduction: Family is a primary foundation where humans begin to develop themselves. Baumrind referred concept of parenting styles, these styles are based on two dimensions, demandingness, and responsiveness. There are commonly accepted parenting styles that are authoritative, authoritarian, permissive, and uninvolved (Baumrind, 1991).

Objective: The impact of authoritative and authoritarian parenting styles on academic motivation among university students in selected universities in the Colombo district.

Methods: The study is a cross-sectional descriptive survey. It assessed parenting styles (Authoritative, Authoritarian) on academic motivation. The data was collected through an online survey from the samples of 109 undergraduates selected via a convenience sampling method from selected universities in the Colombo district, Sri Lanka. Preliminary analysis of the data consists of multiple regression; SPSS version 26 software was used. The questionnaire consists of demographic questions, Parenting Authority Questionnaire, and The Academic Motivation Scale. Ethical clearance was obtained from Ethics Review Committee (KIU_ERC_21_18), KIU.

Results: Authoritarian Parenting style has a positive and significant direct effect on the academic motivation of undergraduates ($\beta = .238, p < 0.05$). Authoritative parenting doesn't have a significant effect but a positive effect on academic motivation ($\beta = .036, p > 0.05$). Therefore, students who have authoritarian and authoritative were found to have higher academic motivation.

Conclusion: The study findings have a theoretical and practical contribution to policymakers and academic institutions that can gain knowledge and develop techniques for interventions regarding improving academic success.

Keywords: Academic motivation, Parenting Styles, Academic Performance, Authoritative parenting, Authoritarian parenting styles



PP5.3: MRC_HS_005

Knowledge, attitudes, and practices regarding Human papillomavirus vaccination among the undergraduates of Western Province, Sri Lanka

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Introduction: The Human papillomavirus (HPV) vaccine is safe and effective in preventing cervical cancer and HPV infections when administered in the early stages. Lack of appropriate knowledge and negative attitudes towards HPV vaccination are considered major reasons for poor acceptance of the vaccine.

Objective: To determine the knowledge, attitudes, and practices regarding HPV vaccination among the undergraduates of Western Province, Sri Lanka.

Methods: A cross-sectional study was conducted, among randomly selected undergraduates of Western Province, Sri Lanka. Ethical approval was obtained from the Ethics Review Committee of KIU (KIU_ERC_21_114). Data were collected using a pre-tested, questionnaire developed by the researchers.

Results: The mean age was 23.9, the majority were female (n=311,79.7%), from Health Science (n=219,56.2%). Mother's educational status showed that 60% of mothers completed secondary schooling. 0.8% had reported a family history of HPV-related malignancy. Of 390 participants, 27.43% displayed good knowledge and 14.4% received HPV vaccination. A significant association was found between total knowledge (about both HPV vaccination and infection) and demographic factors like gender (p=0.006), course of study (p=0.000), year of study (p=0.000), and HPV-related cancer history among family (p=0.043). A significant association was observed between poor knowledge regarding the HPV vaccine and poor attitude towards HPV vaccination (p=0.000). Though the vaccinated population is low (14.4%), among them 34.6% of students responded they are willing to get the vaccine. 83.8% of students were willing to know more details about HPV

Conclusion: Knowledge, attitudes, and practices regarding HPV vaccination among undergraduates were poor. The study also found that undergraduates are willing to know more about HPV infection and HPV vaccination. Targeted health education interventions may have a huge positive impact not only on the acceptance of vaccination among them but also on their intention to recommend the vaccine in the future.

Keywords: HPV vaccination, Western province undergraduates, Sri Lanka



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PP5.4: MRC_M_008

Impact of working environment on employee job satisfaction in a selected group of hotels

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Introduction: Today business organizations are facing several obstacles as a result of the changing nature of the environment. One of a company's numerous tasks is to please its employees to manage an ever-changing and evolving environment, achieve success, and stay competitive. The business must meet the needs of its employees by providing ideal working circumstances to promote efficiency, effectiveness, productivity, and job dedication. This study is conducted to investigate the impact of the work environment on employee job satisfaction in Sri Lanka's hotel industry. The psychological, physical, and social environments in the workplace all have the potential to influence job satisfaction.

Objective: The purpose of this article is to investigate the relationship between the working environment on employee job satisfaction. The research used a quantitative approach.

Methods: The target populations consist of two selected hotels operating in Maho and Kurunagala, Sri Lanka. A simple random sampling method is used to collect data from 132 employees. A structured survey questionnaire was used to collect data. The survey questionnaire was based on a previously validated survey. The nominal and interval data were used for the analysis.

Results: Based on the result of the correlation analysis, positive relationship between the working environment and employee job satisfaction. The correlation between the work environment and employee job satisfaction was statistical significance at the 0.05 level with a Pearson correlation coefficient of +0.924.

Conclusion: The research concludes the importance of a better working environment to enhance the level of job satisfaction in the selected organization. This research can be effective to enhance their skill level.

Keywords: Work environment, Job satisfaction, Positive relationship



PP5.5: MRC_M_001

The impact of employee work related psychological risks on employee job satisfaction during COVID 19 pandemic period – with special reference to hotel sector employees of Colombo District, Sri Lanka

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Introduction: The Covid-19 pandemic has created various challenges in the organizational context to determine the well-being of the employees. The hospitality industry was the most affected industry during the Covid-19 pandemic situation because of its close human interaction and the labor-intensive service-providing industry. In the current pandemic, organizations have not given favorable attention to managing psychological risk factors. Research studies have found that businesses were not concerned about managing psychological risks, which increased the psychological issues that led to low job performance and job satisfaction among employees.

Objectives: The main objective is to determine the examine the impact of employee work-related psychological risks on employee job satisfaction during Covid 19 pandemic period referring to hotel sector employees.

Methods: The sample of 100 hotel sector workers who were employed in the Colombo district of Sri Lanka were included in this study. Data was gathered using a closed-ended questionnaire with the use of a survey technique. Data were analyzed using SPSS software using techniques of correlation and regression.

Results A statistical significance was seen between psychological risk and employee psychological problems (Pearson value of 0.592 and P-value of 0.00). Further, a significant positive relationship was seen between employee psychological issues and job satisfaction (Pearson value of 0.615 and a p-value of 0.00). A significant positive impact was seen between psychological risk and employee psychological problems ($b = 0.590$) and further, a significant negative impact was seen between employee psychological issues and job satisfaction ($b=-0.779$).

Conclusion A positive correlation and impact were seen between psychological risk and employee psychological issues and further, a positive relationship was seen between employee psychological issues and job satisfaction and a negative impact was seen between employee psychological issues and job satisfaction.

Key Words: Psychological risks, psychological issues, Job satisfaction



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