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(IIHS Academic Sessions 2020: Conference Proceedings)

Editor in Chief- Dr. E. A. K. K. Edirisinghe

Managing Editor- Dr. Dinusha Kanatiwela Niriella

Co-Editors- Mr. Damith Rajakulathunga

Mr. Nuwan Weerakoon



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From the Managing Editor

Welcome to the Proceedings of IIHS, 18th BioInquirer - Annual Academic Sessions, 2020, on the topic of **“Transform and Collaborate”**. It has been a real honor and privilege to serve as the Managing Editor of the conference.

This year, the BioInquirer research conference mainly aims at encouraging researchers to consider multidisciplinary approach in healthcare and education as an area for a wide scope of research. Since multidisciplinary approach in healthcare is considered to be a significant component, this gives a widespread opening for everyone who is interested in. Therefore, as a result, we all benefit from new and creative approaches.

The BioInquirer - Annual Academic Sessions are conducted aligning with Sustainable Development Goals (SDGs). For this year's Annual Academic Sessions, it has been decided to base the conference on the following SDGs.

Goal 3 – Good health and wellbeing

Goal 4 – Quality education

Goal 10 – Reduced inequalities

Goal 16 – Peace, justice and strong institutions

The event will be delighted by a keynote speech and seven plenary speeches by internationally recognized researchers from Australia, Scotland and Sri Lanka.

18th BioInquirer, was fortunate to attract a high interest among the community and received over 200 abstracts. We would like to express our deepest appreciation to the authors whose technical contributions are presented in these proceedings. It is because of their excellent contributions and hard work that we have been able to prepare these proceedings. We thank the editorial committee, for their careful reviews to make an outstanding technical program.

We look forward to an exciting day of insightful presentations, discussions, and sharing of technical ideas with colleagues from around the world at the 18th BioInquirer - Annual Academic Sessions, 2020.

Dr. Dinusha Kanatiwela Niriella
Managing Editor
BioInquirer Journal

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Future of Healthcare

DR. AMAL HARSHA DE SILVA

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The technology used in the diagnosis and treatment procedures has been immensely evolved within the last century. This rapid growth has enabled patients to reach an effective and a consistent recovery compared to early days. Observing the current status of the healthcare sector, it will leave us on the conclusion that there is a requirement for improvement and advancement. That is also reassured by the existence of diseases with higher mortality rate and that are still incurable. The development in fields of science has given us advanced technologies such as artificial intelligence, 3D-printing, robotics and nanotechnology. Implementation of such technologies into the fields of healthcare will support in achieving the desired outcome effectively and efficiently. Apart from the advancement of technology, the effective contribution of professionals is valued the most. Therefore, the transformation of healthcare into multidisciplinary collaboration is considered as an important milestone in the future of healthcare.

Multidisciplinary collaboration includes participation of individuals with different professional disciplines in achieving a shared goal. A multidisciplinary team in healthcare would consist of professionals such as physicians, surgeons, nurses, psychiatrists, occupational therapists, physiotherapists, and nutritionists, who are determined to provide comprehensive care for the patient. This collaborative approach will maximize clinical effectiveness with the contribution of many competent professionals. Therefore, the application of a multidisciplinary approach, instead of a disease-based approach, has proved to provide patients a holistic care, which considers physical, emotional, social, economic, and spiritual requirements of a person. Another aspect that is coming forward in the healthcare sector is 'virtual healthcare', which is defined as the utilization of digital interventions as the means of communication between healthcare professionals and patients. Digital interventions such as telephones, mobile apps, short messaging services and websites enable virtual visits to take place between medical professionals and patients through videoconferences or audio consultations. This advancement will open up healthcare to millions nationwide and beyond. This is proven to be helpful, especially during the Covid-19 pandemic, where social distancing is considered the most important prevention method. Therefore, the virtual healthcare has contributed in providing best of care to patients amidst all the hardships. These improvements display that healthcare is growing rapidly promising us of a better future in healthcare.

PLENARY – OP 01

National inclusivism

PROFESSOR RIZVI HASAN

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Societies that have uplifted the standards of living for its inhabitants by achieving substantial economic development were able to accomplish that by enabling the individual freedom to pursue their objectives without having constraints due to immutable human differences. Therefore, all people in a society must have equal access to opportunities, irrespective of their differences in race, ethnicity, gender, sexual orientation, age, social class, physical ability or attributes, religious or ethical values, or political beliefs. This results in the creation of a society with people who respect and value individual characters over a person's affiliation to a particular group. Such societies will be of great service to the entire world.

Sri Lanka consists of people who are mainly diverse in racial and religious beliefs. These differences were primarily formulated and highlighted negatively by foreign involvements, which led Sri Lanka through brutal and gruesome periods in its history, even recently. These differences have also resulted in the existence of unique cultures in different communities in Sri Lanka. The differences of people from these different communities are manifested in customary behaviors, cultural assumptions and values, patterns of thinking, and communicative styles that constitute a person's way of life. These differences could be used to advance and improve institutions and organizations to reach their desired outcomes if provided the necessary conditions.

Considering an individual's character and qualities to be primary and racial, religious or cultural differences to be secondary will provide incentive for people to be more inclusive. These kinds of inclusive societies will provide everyone the most freedom to live their lives without being subject to discrimination. That will create a sense of belonging to a particular society, amidst all the differences they share.

**A study on the perception of secularism amongst the youth in the Gampaha district,
Sri Lanka**

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Introduction: Secularism is a set of beliefs that rejects religion, or the belief that religion should not be part of state affairs or part of public education. Secularism aims at ensuring and preserving freedom of religious belief and practice for all people. In certain parts of the world, the distinction between the religious and the secular realms of existence is contested. Purpose of this study was to understand the perspectives on secularism among young adults in Gampaha district.

Methods: Qualitative research design was applied. Eight participants between the age range of 18-24 years from Gampaha district were included in the study. A question guide with open-ended questions was used to interview the participants. Interview responses were thematically analyzed.

Results and Discussion: Most of the participants explained positive aspects of secularism with many preferring Sri Lanka to become a secular country. Six participants pointed out that even though Sri Lanka is known as a secular country, religion influences the country's political decision making. Certain religious groups/heads have an indirect influence on the Government propaganda. All participants believed that secularism is very important not only for their freedom but, as an essential human right. In addition to these, secularism is important for harmonious growth and not secluding groups or communities, giving equal opportunities and mutual respect regardless of one's religious belief.

Conclusion: Most of the youth are aware of the phenomena secularism and secular state; secularism plays a vital role in the development of Sri Lanka. From this study, it is evident that secularism is essential for a multiethnic and multireligious country. Secularism prevents religious conflicts and aids in developing nationalistic attitudes. The socio-political aspects highlighted were that when there are no laws to confine people based on their beliefs, a society can be built on mutual respect and understanding and will help create a better society. At the same time, the government should not dismiss religious institutions or religious beliefs, but allow the citizens to follow and practice their religious faith without promoting nihilism among citizens.

Key Words: *Secularism, Perception, Government, Freedom, Religion*

A study on the perception of nationalism among migrants of Sri Lanka

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Introduction: Nationalism is an ideology that promotes the interests of a particular nation, especially, with a view to gain and preserve the sovereignty of the country. The term "nationalism" is used to describe two phenomena: the mentality that a nation's members have when they think for their national identity, and the actions that a nation's members take while attempting to sustain self-determination. In a broader sense, nationalism is any complex of attitudes, claims and directives for action that attaches a fundamental political, moral and cultural value to a particular country and the nationality and derived responsibilities. Purpose of this study was to understand the perception of nationalism among migrants of Sri Lanka.

Methods: A study sample consisted of eight young, non-resident Sri Lankan adults. These participants were Sri Lankans who migrated abroad for educational purposes. In-depth interviews were conducted to collect data. Interview responses were thematically analysed.

Results and Discussion: All the participants were extremely emotional and displayed a positive attitude towards nationalism. They believed that, 'racism is not good' as Sri Lanka is a multi-ethnic and multicultural country. Almost all the participants had an average idea on, national preference. Majority of the participants preferred Sri Lankan citizenship since they preferred to reside in their own country rather than residing in a foreign country. Yet, a minority of the participants feel embarrassed being a Sri Lankan at times and they love being a resident in a foreign country, since it is less stressful. Majority of the participants think that being too nationalistic can either be harmful or beneficial and some think that it is all about the mindset of people. They went onto say that if people respect each other's nationality, being too nationalistic will not cause any harmful effects.

Conclusion: A positive perception of the participants towards being nationalistic can be observed and they believed that being nationalistic is really important. Participants also think that being nationalistic is for the good sake of a nation to step forward in the modern world.

Key Words: *Nationalism, Patriotism, Ethnicity, Socio-economic marginalization, Collective narcissism*

OP 04

Attitudes towards nationalism among a cross section of professional youth in Sri Lanka

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Introduction: The term nationalism is often confused with patriotism. John Plamenatz described nationalism as "the desire to preserve or enhance a people's national or cultural identity when that identity is threatened, or the desire to transform or even create it when it is felt to be inadequate or lacking." The rise of nationalism is commonly observed starting from Donald Trump to Brexit. Sri Lanka is composed of people with varying ethnicities. In 2018, Ivarsson pointed out that the use of social media for political purposes and for advancing ethno-nationalist agendas is a recent feature of Sri Lankan public and political life. Therefore, this study empirically researched on nationalistic attitude among young people with different ethnic backgrounds in Sri Lanka.

Methods: A mixed method evaluative design was used. Young adults of different ethnic groups within the age range 20-30 years included in the study. A questionnaire was used to quantitatively estimate nationalistic attitude among young Sri Lankans with different ethnic backgrounds. Conversational interviews were conducted among twelve adults to understand the perception of nationalism.

Results and Discussion: A total of 123 adults participated in the quantitative part of the study; each ethnic group contained 21 participants. Quantitative study sample consisted of 48% females and 52% males; 71.5% of the participants' educational status was diploma or above. More than half (65%) of the participants displayed national feelings towards Sri Lanka, whereas this did not transpire to the statements on national pride. Only 45.5% of adults strongly agreed to the statement 'proud to be a Sri Lankan'. Four themes that best reflected the views of participants were; sense of belonging, togetherness, ethnocentrism, and xenophobia. All participants had similar few points about nationalism and agreed that it is essential to have nationalistic feelings. Participants also explained the negativity related to extreme nationalistic feelings and its impact on economic growth.

Conclusion: This study explored the perception of nationalism among young Sri Lankans. Participants expressed strong feelings and attitudes towards nationalism. They also acknowledged that having superior thoughts would isolate Sri Lankans from the rest of the world. Young adults also displayed a better understanding about the negativity of nationalism such as internal fragmentation and feeling of superiority. Young Sri Lankans exhibited a right balance between positive and negative nationalistic attitude. From this study, it is evident that the level of education has played a major role in shaping one's perspective on nationalism.

Key Words: *Nationalism, Ethnicity, Ethnocentrism*

The role of politics in nationalism among general public in Gampaha district, Sri Lanka: Perspectives of general public

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Introduction: Nationalism is an ideology based on the premise that the individual's loyalty and devotion to the nation surpass other individuals in the system. Politics can be defined as a set of actions that are linked with the governance of a country. Politics and nationalism go together with their own ups and downs. The study aimed to identify the public perception on the role of politics in nationalism and its positive and negative impacts on the society.

Methods: A qualitative, phenomenological study was conducted among the public in Gampaha district, Sri Lanka. Politicians were not included. In-depth, semi-structured interviews were carried out among a convenience sample of 10 participants, in either Sinhala or English language, depending on their preference. All the interviews were audio recorded and converted into transcripts, and then analyzed using thematic analysis approach.

Results and Discussion: Six participants were females. Most of the participants had a general idea about nationalism, based on the factors such as favouritism, supporting their own interests, respect, loyalty/devotion to one's own nation and discriminating against the other nations. The findings of the study indicated that there is a strong association between politics and nationalism. Results showed that the most prominent type of nationalism in Sri Lanka is ethnic nationalism. Out of the interviewed sample, most of them stated that politicians convert nationalism into racism to fulfill their own propagandas, and work only for the betterment of their ethnic group. Most participants stated that they have not experienced any positive outcome due to the influence of politics on nationalism.

Conclusion: According to the perception of the public, politics has a vital role in nationalism. The results of the study show that the positive outcomes experienced by the public due to politics on nationalism is outweighed by the negative consequences. Government should take necessary actions to ensure equality among every citizen of Sri Lanka, regardless of their religious and ethnic backgrounds.

Key Words: *Nationalism, Politics, Discrimination, Perception, Public*

Equal opportunity: Exploring perspectives among different ethnicities in Gampaha district, Sri Lanka

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Introduction: Sri Lanka is a home to 21 million individuals. Four main ethnic groups in Sri Lanka are: Sinhalese, Tamils, Muslims, and Burghers. After the end of a nearly three-decade civil war, emphasis on the importance of equality between different ethnicities is vital. Empirical analysis suggests that ethnic diversity has a direct effect on economic growth. The main objective of this study was to explore the perception of equal opportunity in general and perception of equal opportunity at the workplace, among employed persons with different ethnic backgrounds.

Methods: A descriptive, phenomenological qualitative research was carried out among a sample of 21 participants from Gampaha district. Three major ethnicities, Sinhalese, Tamil and Muslim, were represented equally in the sample. In depth experiential interviews in semi-structured format were conducted using a question guide. Participants were permanent residents of Gampaha district, between 30 and 40 years of age and employed at either government or private establishments. Consent was obtained prior to conducting interviews along and all interviews were transcribed, coded and analysed in order to conduct a thematic analysis.

Results and Discussion: Three core themes emerged on collation of the initial codes: ethnicity should not shroud equality, mixed negative emotions, social connections and support. All 21 participants agreed unanimously that all ethnicities in the country should be treated equally. Two thirds of the participants had faced some form of discrimination with regard to their ethnicity, if not at work either at school, an education institute, or even in the local transportation system.

Conclusion: Findings reveal that inequality among ethnicities in Sri Lanka does exist, and these experiences are subjective to the ethnicity of the individual, environment and sometimes social status. Participants commented on finding solutions for this disparity through the implementation of policies and long-term plans. This phenomenon cannot be changed overnight. Protocols, policies and goals should be developed statewide. Information obtained through this research will be of value to understand the prevailing concerns due to equality of opportunity among persons of various ethnicities.

Key Words: *Equal opportunity, Workplace equality, Multiple ethnicities, Perspectives*

Influence of learning social studies and history subjects in schools in developing nationalistic attitudes: Perspectives of undergraduate students

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Introduction: History is the study of the past and focuses on human contributions that lead to historical events. Social studies focus on human society and human behavior. Nationalism is loyalty and devotion to one's country or nation. With a historical and sociological perspective, students will improve the understanding of themselves and the way they fit into the world. This study aimed to explore the views and experiences of undergraduate students on learning social studies and history in schools and its influence on nationalism.

Methods: A qualitative research was conducted using one-to-one, in-depth, semi-structured interviews using a question guide including open-ended questions. A purposive sample of 13 undergraduate students who had learned history and social studies in school were included in the study. The data collected was analysed using thematic analysis.

Results and Discussion: Most students stated that history is the study of the past and social studies is the study of the society and how people interact with one another. Some showed lack of interest in both subjects but most students accepted that learning these subjects are important. In addition, they mentioned that the content of both subjects learnt at school was sufficient but some could not recall what was learnt at school. Nationalism was described as being loyal to one's nation and was pointed out to be important by all students. Most students were able to adequately relate learning the subjects, history and social studies in schools to the development of a nationalistic attitude.

Conclusion: This study clearly highlighted that learning History and Social studies contributed to the development of nationalistic attitudes. However, based on the responses provided, how learning history and social studies aids in nationalism is not very clear.

Key Words: *History, Social studies, Nationalism, Perception, Attitude*

Role of constitutional law in developing nationalistic attitudes among Sri Lankans

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Introduction: Law is a norm of conduct with appropriate guidelines and order upon the actions of the entire nation to sustain the justice of the government. Law is an important part of a civilized world. Thus, this study was conducted to understand the influences of constitutional laws in developing nationalistic attitudes among Sri Lankans.

Methods: This is a qualitative study done using a phenomenological research design. Data was collected from nine individuals in Gampaha district, who were between the ages of 35 and 55 years, who could understand and speak either English or Sinhala. Convenience-based sampling method was used to select a sample of at least two well-educated individuals from each ethnic group. In-depth interviews were conducted and responses were thematically analysed.

Results and Discussion: Participants had moderate knowledge about constitutional laws in Sri Lanka. According to them, it is a combination of all the laws in the country where all the citizens must adhere. Most of the participants believed that instead of several laws like Udarata Law, Muslim Law, Thesawalami Law, there should be one law to the whole country, while some go forth with the present law as it gives equal religious rights. In spite of a small fraction of people having knowledge about the constitutional laws gained by education, media and life experience, most of the citizens were not aware about the constitutional laws. In addition to these, participants believed that even though the laws are documented, there are differences when practicing. All the respondents agreed that constitutional law gives ethnic and religious freedom, but it may be affected by the lack of equality and attitudes of people. Everyone believed that proper understanding about the laws related to one's own religious and ethnic rights would reduce conflicts among the ethnic and religious groups. In the view of the participants, new alternations should be made but the other laws should be practiced in an appropriate manner.

Conclusion: This study results emphasize the concept of one country one law. At the same time, if there is freedom to adhere to one's own religious laws, it should not affect the rights of the other citizens. Adequate knowledge on the constitutional laws would reduce the conflicts among the ethnic groups.

Key Words: *Constitutional law, Ethnicity, Nationalism, Religion*

OP 09

A study to assess the prevalence of smartphone internet addiction among students of selected tuition centers

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Introduction: Technology is booming rapidly from year to year, and the younger generations are the ones caught in the rapid change. Smartphones are becoming increasingly indispensable in everyday life and offer a substantial variety of mobile applications for information, communication, education, and entertainment purposes. Smartphone addiction is defined as a state that one experiences physical, psychological or social maladjustment or deviation due to excessive smartphone use. Specifically, adolescents are a high risk group for smartphone addiction. The aim of this study was to find out the correlation of smartphone internet addiction among students with selected demographic variables.

Methods: In the present study, 200 students from selected tuition centers were selected as the sample. To attain the objectives of the study, a non-experimental design was used in this study. A general profile and a self-structured Likert scale was used to collect information. The collected data were analyzed using descriptive and inferential statistics.

Results and Discussion: In the study, 80 students were having severe internet addiction, 75 students were having moderate internet addiction and 45 students were having mild internet addiction. The study found that there is a significant correlation between gender and income, gender and availability of smartphones and income and type of family at 0.05 level of significance. There was a significant difference in the smartphone addiction score with respect to gender, type of family, duration of internet usage, availability of smartphones and source of internet recharge.

Conclusion: It was evident that many students are addicted to smartphone internet. More attention should be paid towards finding ways of overcoming this issue. Further research is warranted on behaviors related to smartphone internet addiction and other negative impacts, such as on education and personality.

Key Words: *Prevalence, Smartphone internet addiction, Students, Tuition centers*

Perspectives on inclusivity of different religions and ethnicities among individuals of Gampaha district, Sri Lanka

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Introduction: Religion refers to an organized collection of beliefs, cultural systems, and world views that relate humanity to an order of existence. An identity based upon a presumption of shared history and common cultural inheritance is known as ethnicity. Currently, it has been identified that among individuals of the community, there are diverse perspectives on the inclusiveness of different religions and ethnicities. Hence, this study explored the perspectives on the inclusiveness of different religions and ethnicity among Sri Lankans.

Methods: This was a qualitative study based on a phenomenological research design. Males and females within the age range 30 to 50 years from Gampaha district in Sri Lanka were included in the study. Purposive quota sampling method was used where for each religious group (Buddhist, Hindu, Islam and Roman Catholic) six participants per quota were included in the study. In addition to this, from each ethnic group (Sinhala, Tamil and Sri Lankan moor) eight participants per quota were also recruited in this study. Interviews were conducted.

Results and Discussion: Most individuals related inclusivism into religious discourse and theories. Most participants explained their understanding on ethnic inclusivism as all ethnic groups gathering, living and interacting together in the society. An interesting finding of this study was that Sri Lankan moor participants explained that they practice inclusivism in their day-to-day life and they make sure no one would feel isolated or segregated just because of belonging of a different ethnicity. Out of a variety of participants who responded, from various groups of both religion and ethnicity categorizations, the theme encapsulated were ideologies and morals that influences developing attitudes on inclusivism, which are related to the religious and ethnic background one represents.

Conclusion: The outlook on inclusiveness of various religions and ethnicities in Sri Lanka is studied under three themes. They are attitudes towards inclusivism, inclusive practices and theories of diversity approaches, ideologies and morals. In terms of attitudes, the concept of inclusivism was identified by both religious groups and ethnic groups as a way of living together in society through a good relationship and healthy interactions between them, which is essential to prevent religious and ethnic conflicts.

Key Words: *Perspectives, Inclusiveness, Religion, Ethnicity*

A study on perception of caste system among the general public in Gampaha district, Sri Lanka

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Introduction: The caste system has been in existence for decades and has been suggested to be the longest surviving form of social hierarchy. Its involvement with the educational, marriage and other social institutions have brought on the concept of caste-based discrimination. The aim of this study was to investigate the public's view on the effects of the caste system observed in the society.

Methods: A qualitative study was conducted among the Sri Lankan citizens of the Gampaha district who were 20 years or older. Convenience sampling method was used to select the participants. Data was collected through audio recording of the semi-structured interviews until the point of saturation. The data was analyzed using thematic analysis.

Results and Discussion: Altogether 20 people were interviewed before reaching the point of saturation. Majority of respondents agreed that caste discrimination still exists, but all participants agreed that it is less severe compared to the past. Majority stated that equal opportunity is provided for education and it is not done based on caste preferences, whereas a few disagreed completely claiming that caste affected educational opportunities as well. In addition, a few participants claimed that caste discrimination existed in workplaces, with majority disagreeing on this point and further added that decisions were dependent on the employer, educational qualifications, geographical locations and skills. Also, caste discrimination has commonly been observed during inter-caste marriage. Further, the majority of the respondents answered that caste is not considered in politics and that violence can be attributed to other traits such as regions and nationality as well.

Conclusion: Individuals stated that caste discrimination does exist. However, its dominance over societal norms and institutions is not as severe as the past, and its prominence has been subsiding and individuals are less keen to include it in their daily decision making.

Key Words: *Caste, Discrimination, Gampaha district, Public, Social institutions*

A study on challenges encountered by Sinhala-speaking community in learning Tamil as a second language in Gampaha district, Sri Lanka

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Introduction: In Sri Lanka, Sinhala language is spoken by more than 15 million people as their mother language. Tamil is the mother tongue of one in every four Sri Lankans. Through the 13th Amendment to the Constitution in 1987, Tamil has joined Sinhala de jure as an official language. However, outside of the Northern and Eastern provinces, Tamil speakers continue to be discriminated against in their access to, treatment within, and experience of public services such as government departments, police stations, courts, public transport, and health services – through non-compliance of state agencies with the official languages law, thus denying them de facto equality. This study aims to understand the challenges faced by the Sinhala-speaking community in learning Tamil as a second language and how it promotes the concept of nationalism among the Sinhala community.

Methods: A qualitative research design was applied. One to one, in-depth interviews were conducted, particularly focusing on the challenges encountered by the Sinhala-speaking community in learning Tamil. Individuals between the age range 18 and 40 years, in Gampaha district were included in the study.

Results and Discussion: Sinhalese who participated in the study were satisfied with their knowledge on Tamil language. Almost all the participants had learned Tamil as a second language since schooldays. Majority of the participants believed that learning Tamil as a second language gave them an advantage at some point in their life, but they all had certain difficulties learning Tamil. Majority of the participants expressed their difficulty in adopting the accent and the speed of communicating in Tamil language. Most of the participants believed that learning Tamil would aid in developing nationalistic attitude and mitigate any racist thoughts. From the responses, a few common themes were identified among individuals such as pronunciation, confidence, the dialects used by different Tamil speaking communities, career prospects and stronger relationship bonds between the two communities.

Conclusion: This study indicated the importance of being proficient in the Tamil language despite all the challenges faced by the Sinhala speaking community. This is especially important when living in a diverse and multinational country like Sri Lanka.

Key Words: *Sinhala, Tamil, Language, Mother tongue, Community*

Teachers' perception on using English as a medium of instruction: A study conducted among government school teachers in Gampaha district, Sri Lanka

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Introduction: In the 19th century, the nations whose native language is not English, began to present English as a medium of instruction (EMI) into their scholastic program at both optional and tertiary levels. In Sri Lanka, English is broadly utilized as a mechanism of guidance at tertiary level aside from the courses in humanities and expressive arts. Purpose of this study was to understand the perceptions among teachers who are teaching for English medium classes on converting the education system to English medium all around Sri Lanka.

Methods: A qualitative study was carried out among teachers who were teaching in EMI at government schools in Gampaha district, Sri Lanka. Semi-structured interviews were conducted. Audio recordings were taken upon participants' consent and collected data was thematically analyzed.

Results and Discussion: Teachers stated that it is a good idea to follow the government school curriculum in English medium. They also explained the difficulties personally experienced such as lack of teachers with English knowledge, poor English language competency among students and lack of resources. They believed that learning another language will not affect nationalism. Teachers also stated that they need special training as they have been taught in Sinhala and pointed out that they are not competent to teach in English. The teachers think that parents will play an active role in teaching English language as the children would be spending most of the time with their parents. They further mentioned that most parents do not have at least the basic knowledge of English and as a result, this will cause them to withdraw from their children's education and send children for tuition. When asked about the nationalistic attitudes, they said that educationalists should do the transition wisely and also mentioned that it does not solely depend on a language or medium but also on attitudes passed on from elders to younger generation.

Conclusion: This research, conducted in the Gampaha district educational region, is an attempt to highlight the adverse impact of politically-influenced language policy on the medium of instruction on children as well as on the country's educational growth. The authorities should make real efforts to establish a feasible instructional policy that will close the urban-rural gap in English language competence.

Key Words: *EMI, Teachers, Perception, Sri Lanka, Nationalism*

Need of religious involvement in overcoming racism: Perspectives of catholic priests in Katuwapitiya, Negombo division, Sri Lanka – 2020

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Introduction: Preaching has a major role in eliminating racism from society and helps reconstructing it. Delivering accurate information regarding the faith to the society is an important part in the process of eliminating misunderstandings which could lead to social issues. Purpose of this study was to understand how preaching methods used in Catholic institutions to overcome racism and promote nationalism are of great importance. The study also explored the views of preachers on their role in reconstructing nationalism.

Methods: A qualitative research using phenomenological study design was done. In-depth interviews were conducted with Catholic religious leaders/preachers residing in churches in the Katuwapitiya area, Gampaha district, Sri Lanka. Interviews were conducted based on a topic guide containing four main questions, which were later analyzed thematically.

Results and Discussion: A total of six Catholic religious leaders/preachers participated in interviews. Study participants informed that respecting the other religions and cultures and treating everyone equally were the core of teachings. Few preachers explained that the mass preaching is effective in terms of neutralizing the extreme ideologies and promoting equality. Learning the philosophy of other religions and cultures, in most of their perspectives, would enhance union and mutual understanding. Thereby, people would learn how to respect others' traditions. In their points of view, achieving this would be possible through culturally-shared activities, inviting other religious teachers to deliver lectures during religion classes (ex: Sunday schools), and evidencing the consequences of racism in different forms such as physical and psychological harassment evident in today's world. This would help everyone in a country to work together without biases, in turn, promoting inclusive nationalism.

Conclusion: The findings of this research has led to the understanding that the religious leaders in Catholicism are already addressing racism in their preaching and that promoting equality through teaching the values of other religions and cultures could be one of the solutions. There is a need of further research in the area of racism to accurately understand the issues and to find solutions to these critical problems.

Key Words: *Racism, Priests, Religion, Culture, Inclusive Nationalism*

A study of the issues in inter-religious marriages, among inter-faith married couples, in Colombo district, Sri Lanka

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Introduction: Interfaith marriage refers to marital union wherein the partners belong to a different faith or religion. Religious and ethnic intermarriages are sub groupings under intercultural marriage. Intercultural marriage refers to the marriage between persons of two altered cultural backgrounds. It may include differences in country, language, religion, race, ethnicity, political ideology, dressing styles, food customs, living styles, etc. Parents in Sri Lanka have reported concerns about the potential loss of traditional customs, language and culture when their children married people of different faiths or nationalities. Objective of this study was to understand the challenges of interreligious marriages in Sri Lanka.

Methods: Qualitative research design was used in this study. In-depth interviews were conducted among interreligious married couples, using a question guide containing open-ended questions. Audio recordings were taken from 20 participants who married a person from a different religion from Dehiwala, Homagama, Kaduwela, and Maharagama areas in the Colombo district. The collected data was thematically analysed.

Results and Discussion: The majority of married couples spent more than 20 years of married life together. Most of the participants explained about the social challenges they had to face from their families, relatives and their respective religious places (church, temple, mosque, or Hindu kovil) due to their differences in religious beliefs. It was also noted that the emotional stress caused by negative opinions from the family and relatives had a great impact on their mental well-being. Most couples explained that they were able to lead a happy life, because they respected each other's differences and learned each other's cultural variances. However, some participants stated that the psychological and emotional stress felt upon them was tremendous due to external pressure from the family and relatives.

Conclusion: The majority of the problems have arisen due to lack of support from the families, relatives, and society. Furthermore, research findings show the impact of negative opinions of the society has caused greater emotional stress among interfaith married couples

Key Words: *Inter-religious marriages, Inter-faith married couples, Colombo district, Inter-faith problems*

A study on the influence of culture on nationalistic attitudes among young adults in Gampaha district, Sri Lanka - 2020

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Introduction: Nationalism is defined as one's identification with their own nation and support for its interests, especially to the exclusion of the interests of other nations. Culture generally refers to customary beliefs, material traits, and social forms of racial, religious, or social groups. While nationalism and culture seem to be interconnected, there can be contrasting views and opinions on various cultures and their influence on nationalistic attitudes. Hence, this study explored the perception and attitudes on nationalism among young adults of different cultures in Gampaha district, Sri Lanka.

Methods: Qualitative study design was used. Young adults between the ages 18 and 29, living in Gampaha district, who represented different cultural backgrounds were included in the study. In-depth interviews were conducted among 17 adults from different races (Sinhalese, Tamil, Muslim and Burgher) where the number of participants from each race was proportional to their population in the district. A question guide was used during the semi-structured interviews. Interview answers were thematically analyzed.

Results and Discussion: Results showed that one's family, religion and school influences their cultural background. Most of the participants, with the exception of two, stated that they follow cultural practices and traditions. Participants also explained that following the cultural practices freely made them feel as if they were born into the environment, the participants also mentioned that they coexist in harmony with people of other cultures. Participants also explained that cultural conflicts exist, and it has been magnified by politicians and social media. They further explained that globalization merges cultures. Lastly, it was observed through this study that participants believed that cultural freedom, cultural conflicts such as the exclusion of minorities and other aspects of culture influence one's perception on nationalism.

Conclusion: Most of the participants' cultural background is influenced by family and these participants followed practicing their traditions inherited to them. Moreover, the urban setting of all the participants allowed them to practice their culture freely. This might have resulted in forming their common opinion that culture does affect one's nationalistic attitude.

Key Words: *Culture, Nationalism, Ethnicity, Nationalistic attitudes, Cultural conflicts*

PLENARY – OP 17

Covid-19 and the Future of Nursing

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As we approach the end of 2020, we reflect on events that have characterised the last 12 months from a perspective that, when the year began, we could not have imagined. This year has been unlike any other in living memory. As the Covid-19 pandemic was unfolding, the world waited to see the full extent of the impact of this disease. No one could have anticipated the effect that this unprecedented disaster would have on each and every individual across the globe. Nurses represent the largest professional group in healthcare and were, therefore, destined to be front and centre as the crisis grew. This presentation will explore how perceptions of nurses and nursing have changed as a result of the Covid-19 pandemic, and the implications this has for the future of the nursing profession.

A quantitative study on determining the knowledge and practices towards care and maintenance of peripherally-inserted intravenous catheters among nurses in Sri Lanka, for future enhancement of nursing practices

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Introduction: Nursing is a unique profession, encompasses autonomous and collaborative care of individuals of all ages, families, groups and communities, sick or well. Undoubtedly, Nurses' need a high level of competencies in the care tasks assigned to have successful patient outcomes. Aim of this study to determine the nurses' knowledge & practices towards care and maintenance of PIVCs, one of the most common invasive procedures performed by nurses worldwide.

Methods: A Descriptive Cross-sectional survey used to assess nurses' knowledge and practices towards care and maintenance of PIVCs, including demographic data. 163 nurses responded to the Self-administered questionnaire, consists of 45 questions & the questionnaire was validated by a pre-test. Data were analyzed by using SPSS-25 statistical software package and findings were presented in an inferential and descriptive manner based on the objectives while reliability and validity were assured.

Results and Discussion: Among 163 participants' majority 95% female nurses with 65% bearing Diploma in nursing where 43% were having 1-5 years working experiences in nursing while 65% respondents were nurses from government sector hospitals. When analyzing the nurses' knowledge & practices on PIVCs revealed 75.9% nurses with good knowledge and 87.7% follows good practices & hypothesis were tested & revealed moderately positive relationship between knowledge & practices on care and maintenance towards PIVCs, varying with the gender, educational qualifications, working experiences & the different health sectors or settings the nurses' work for. Reliability assessed by using t-Test and the p value is 0.05.

Conclusion: Good knowledge and practices towards care and maintenance of PIVCs is crucial for better patient outcome. Therefore, establishment of monitoring and supervising mechanisms with regard to nursing care on PIVCs is mandatory. Furthermore, CPD activities for enhancing the knowledge and determining the standard policies and practices towards PIVC care is necessary for nurses to be autonomous in rendering competence care.

Key Words: Nurses, PIVCs, Knowledge and practices, CPD

Patients' perception on communication between nurses and patients in Colombo district, Sri Lanka

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Introduction: Communication is the exchange of information via verbal and nonverbal communication methods between people. Effective communication is essential in enhancing the quality of nursing care, and patients' satisfaction. However, nurses are frequently described as poor communicators in most of the accredited literature. The study was conducted to understand the patients' views on communication between them and nurses, and how it affects the effectiveness of nursing care provided during the hospital stay.

Methods: A quantitative, cross-sectional study was conducted with a sample of 100 general public who had been hospitalized before using the convenience sampling method. Data collection was done by a self-administered questionnaire. Statistical analysis was done by using SPSS version 25.

Results and discussion: Out of the surveyed sample of 103, majority was between the age of 18 - 45 (53.5%, n=55) and males (51.5%, n=53). A great number of participants have studied up to Advanced Level (40.8%, n=42). Almost all the respondents had been hospitalized for over 3 days (99%, n=102) from which 41% (n=42) had been hospitalized for 3-7 days. From the sample, 92.2% (n=95) of the participants complained that their cultural needs were not inquired adequately and 56% (n=58) of the participant stated nurses do not use a friendly manner in communication. Lack of eye contact of nurses during communication had been observed by 60.2% (n=62) of the participants and 64.1% (n=66) of the sample stated that the nurses did neither update them regarding their medical condition frequently nor with enough details. The majority of the study participants (82.5%, n=85) believed there were no gender discriminations done by the nurses; however, a higher number from the rest of the participants, who believed there is discrimination, were males (78%, n=14).

Conclusion: The nurses need to be further aware and require more knowledge and training on developing and maintaining better communications with patients in order to deliver an effective, patient-centered nursing care. Nurses should be given proper training on the usage of both verbal and non-verbal communication techniques to decrease the barriers in communication.

Key Words: *Effective communication, Nursing care, Patients, Nurses, Communication barriers*

OP 20

A study on the burn out of ward nurses during the Covid-19 pandemic in the Western province, Sri Lanka

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Introduction: Burnout is the physical, behavioral, and emotional condition stemming from constant overwork and a continual loss of career satisfaction. Higher nurse workload is associated with burnout and job dissatisfaction, indications to voluntary turnover that contribute to the understaffing of nurses in hospitals, and poorer patient outcomes. Nurses can be vulnerable to burnout especially during this Covid-19 pandemic. In addition to this, a study also revealed that if necessary measures on the burnout and stress on healthcare workers is not taken, it could affect the productivity of the nurses at hospitals. Hence, providing psychological support is very much essential for the healthcare industry. This study was carried out to examine the burnout of usual ward nurses related to Covid-19.

Methods: A descriptive, cross-sectional study was conducted on the study sample, selected through convenience sampling. Self-administered online questionnaires in both English and Sinhala medium, with closed-ended questions were distributed among nurses in the Western province. The data collected were statistically analysed by using Microsoft Excel and SPSS (Statistical Package for Social Sciences) version 25.

Results and Discussion: According to the data collected, the number of days the nurses worked during the weekend has increased. In addition to that, 42% of the participants were more worried about their family and friends getting infected by the virus than themselves. A considerable proportion of 37.3% and 28.7% of the participants were in good and fairly good health respectively. Most respondents (50.7%) were unhappy with the shift hours after the Covid outbreak compared with before. Despite the difficulties, most participants were neither intending to leave the profession before the outbreak (77.5%) nor after (84.1%). Although the results suggest that there is no significant level of burnout, it indicates that the female nurses could be at a greater risk of burnout than male nurses.

Conclusion: The collected data suggests that there is no significant level of burnout among the nurses with regard to Covid-19 outbreak. It is also evident that any prior training to such disease outbreaks could have improved the nurses' performance during the emergency situations such as pandemics.

Key Words: Nurses' burnout, Covid-19, Job performance, Impacts, Patient care

Study on the knowledge about postpartum psychosis among nursing officers in Sri Lanka

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Introduction: Postpartum psychosis (PP) is an important health problem that influences the well-being, quality, and security of both postpartum mothers and the new born baby. It has an adverse influence on self-esteem, skills, childcare, familial responsibilities, and the role of the mother. Nursing officers (NOs) must have enough knowledge regarding signs and symptoms, care, and follow up care of PP. If they do not have adequate knowledge regarding those, they may also lead to infanticides. Therefore, this research aimed to assess nurses' knowledge regarding PP to provide better care for affected mothers, their new born babies, and family members.

Methods: This is a descriptive, cross-sectional study. Convenience sampling method was used to recruit 54 NOs working at maternity units of General Hospital Kalutara, Kethumathi Hospital Panadura, and Base Hospital Horana. Level of knowledge was calculated based on the number of correct answers given.

Results and Discussion: Response rate was 100%. Majority of the NOs had only a diploma in nursing (83.3%, n=45) whereas 16.7% (n=9) had bachelors in nursing. Majority of the respondents had more than five years of experience (90.7%, n=49) and the other 9.3% (5) had less than 5 years' experience. Only a minority of NOs (3.8%, n=2) have had a six-month psychiatric training. Therefore, the majority of the NOs were found not to have adequate knowledge regarding PP signs and symptoms (88.8%, n=48), knowledge regarding PP care (87.0%, n=47). However, the knowledge regarding PP follow-up care was better with 74.0% scoring above-average (n=40). Graduate nurses scored better, with 75% scoring 50-75 marks and 25% scoring more than 75 marks. Respondents with only a diploma scored lower, with 37.77% scoring 25-50 marks and 60% scoring 50-75 marks. None of the diploma holders have scored more than 75 marks.

Conclusion: According to the results, most of the NOs had below-average levels of knowledge on PP. Higher level of knowledge and understanding regarding the condition is required to properly care for any patient. It is required that specialized courses are conducted for nurses to improve their knowledge in order to improve the quality of patient care.

Key Words: *Postpartum psychosis, Nursing officers, Nurses' knowledge, Diploma in general nursing*

Influence of senior students on first-year nursing students' clinical performances at school of nursing Kalutara

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Introduction: Nursing training is a combination of theoretical and practical experiences. A large part of nursing education is carried out in a clinical environment. Nursing students who follow a diploma would train for three years. Senior nursing students (SNS) play an important role in enhancing first-year nursing students' (FYNS) clinical self-efficacy. FYNS gain many skills by observing what their peers do and this helps them achieve their clinical esteem. It is necessary to define the role of the SNS in order to develop clear models for FYNS to follow and define their own role in clinical practice. This study would describe how the involvement of SNS affects FYNS' eagerness to learn during their clinical practice.

Methods: This was a cross-sectional, descriptive study done among a conveniently-selected 200 first-year nursing students of school of nursing Kalutara. Data were collected through a self-administered questionnaire distributed as a Google form and descriptively analyzed.

Results and Discussion: All of the approached nursing students responded to the questionnaire (100%). Majority of the respondents (73.5%) were in the age group of 20-23 years and were females (97%). Over half of the respondents (55.5%) agreed that SNS guided them in their clinical practice and 63.5% of FYNS have always been helped by SNS to gain their knowledge. Majority of the FYNS (70.5%) learned from SNS while they studied bedhead tickets; however, 7.5% mentioned that it happened rarely to them. Majority of FYNS stated SNS are flexible when handling the inventory (77.5%), that they like to follow their SNS' guidance (80.5%) and that they have trust on their SNS' guidance (82%). Most of the FYNS (75.5%) perceived they should respect their SNS. Majority of the FYNS (67.9%) considered their SNS as role models.

Conclusion: FYNS trust their SNS guidance and are willing to follow them. FYNS are satisfied with their SNS involvement in clinical practice and have a good image towards behavior of SNS. SNS could be utilized more in developing their juniors to become better nurses.

Key Words: *Senior nursing students, First-year nursing students, Clinical performances*

A study on the impact of sleep deprivation among nurses working at the intensive care units of Western province, Sri Lanka

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Introduction: Sleep deprivation is a condition or situation of lack of sleep. The sleep loss may be significant enough to impair decision making, initiative, integration of information, planning and plan execution, and vigilance. The effects of sleep loss are not usually recognized by the sleep-deprived individual. Sleep deprivation can negatively impact the social and family life of a nurse. The aim of this study was to study on the impact of lack of sleep on nurses working in intensive care units.

Methods: A descriptive, cross-sectional study was conducted among the 116 nurses recruited through convenience sampling. Self-administered questionnaire was used for the data collection and the collected data was analyzed using SPSS software.

Results and Discussion: Majority (51.7%) stated that they got a total sleep of about 30 to 60 hours within the past seven days. Most of the respondents (70.7%) have worked for an average of 6 to 12 hours in a shift and 56.9% felt that they were deprived of a good sleep and would be able to perform better if they had more sleep. Furthermore, 43.1% stated that their health status has been affected by sleep deprivation. Regarding the main causes of sleep deprivation, 48.8% stated as workplace stress, 34.5% as shortage of staff and 10.3% as extended work shifts. Another 55.2% stated that the overall quality of sleep they received during the past month was bad. Many respondents (72.1%) agreed that sleep deprivation has affected them psychologically out of which the majority (62.1%) were females. In addition to that, 66.4% agreed that sleep deprivation has affected their social lives, out of which 55.2% were females. From the participants who stated that sleep deprivation affected their health, 74.1% believed that their increased body weight was a result of lack of sleep.

Conclusion: It can be concluded that there was a significant sleep deprivation among ICU nurses in Western province and it had negatively affected their physical, psychological and social well-being. Therefore the hospital authorities should be involved in preventing the impacts and causes for sleep deprivation and the nurses should be informed regarding alternative methods of alleviating those impacts.

Key Words: *Sleep deprivation, Impacts, ICU nurses*

OP 24

A reflection on community-based nursing

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Community-based nursing is one of the most interesting and interactive roles of nurses. This reflection was described according to Gibbs reflective cycle.

Description: There are 205 nursing students divided into seven groups, supervised by two tutors. As the principal, I engage with students in their community level practices. One day, when I was discussing case studies with a student, she mentioned a 71-year-old lady, with a long history of diabetes mellitus (DM), who had undergone an amputation. She further mentioned a small wound on the other leg which was dressed a few days ago in a private clinic in her area. When I asked further questions regarding the wound and her follow up history such as FBS, diet and condition of the wound, the student was not very sure about the assessment. I instructed her to open the wound and reassess. The second visit after 3 days, the patient had complained of severe pain and while opening the wound. There were maggots in the wound. Her son had told that maggots would heal the wound.

Feeling: I was very sad about the old lady and her family's misconceptions and knowledge about wound management. I was very unsatisfied with my student's poor nursing practicing skills.

Evaluation: The good aspects of this incident are that it had taught many lessons to not only students but also for tutors on what components in nursing practices should be prioritised. Nevertheless, a poor quality care had been given for the patient, which had further caused harm. However, the patient was arranged for proper follow-up care after the incident and educated on the long-term management of wound and DM.

Analysis: Major causes of this issue are lack of propositional knowledge and critical thinking skills of students regarding the observations and management of patients with DM. Student supervision also plays a vital role in developing these skills in students as the guidance also lacks for students in addition to the lack of time spent on case study discussions.

Conclusion: Students need to develop appropriate propositional knowledge along with clinical reasoning and critical thinking skills with regards to handling patients. At novice level, experiencing these types of cases would prepare them and train them to be better professionals.

Action plan: Number of supervisors and hours of case study discussion was increased. Theory on DM and management was revised to students and reflection reports were advised to be submitted weekly.

PLENARY – OP 25

Public Health - Then and now, ancient and modern

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Health was a private family affair till the appearance of communities. Communities had built-in hierarchical systems, the richer being advantaged and the poor being disadvantaged or ignored. The wrath of the Gods was considered the reason for illness. Some believe this even today.

History tells us that whole or large parts of communities were decimated without a known cause, which later found to be due to illnesses. Those illnesses could spread, then became accepted, and resulted in isolation or expulsion from family or community. This changed the dynamics of society with concepts like untouchables, outcasts, uncleanliness, low education and marriage opportunities, lack of upward social mobility and permanent poverty. That this was unfair from a humanitarian perspective, was soon recognized by progressive societies. Public Health became important.

Concurrently, medical knowledge expanded and the Germ Theory of some major illnesses was demonstrated, making communicable (infectious) diseases a special category of illnesses. Today, most of them are curable or controllable, the greatest tools for this being improved hygiene, cleaner water and medicines. New infections keep appearing, as the global environment changes, mass travel becomes rapid, and population density keeps increasing. Covid-19 is a good contemporary example.

What about non-communicable diseases? These are generally seen in the more affluent and longer living segments of society, and include obesity, diabetes, hypertension, alcoholism, tobacco, dementia, drug abuse, etc. These are more due to irresponsible life styles, poor health education, poor nutrition, poor motivation, poor role modelling, and peer pressure. Identifying, tracking, treating, monitoring, educating and rehabilitation are present day aspects of Public Health. Tools for managing these are better healthcare management, better education, computer literacy, distance learning, information technology, telemedicine, artificial intelligence and informatics. These non-clinical aspects of modern Public Health are great employment opportunities for the younger generation.

Visual function of patients attending the diabetic clinic of the Colombo South teaching hospital

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Introduction: Diabetic Retinopathy is one of the main complications of diabetes mellitus. It is a major preventable cause of blindness. However, the frequency of diabetic retinopathy in Sri Lanka is not known. The aim of this study was to determine the proportion of diabetic retinopathy among patients attending the diabetic clinic at Colombo South teaching hospital.

Methods: A descriptive, cross sectional study was conducted among 384 diagnosed, type-II diabetic patients attending the diabetic clinic of Colombo South teaching hospital. Baseline data such as age, ethnicity, religion, educational level, average monthly income, marital status, social history, duration of diabetes, family history, and current treatment methods were collected through a questionnaire. Fasting blood glucose (FBS) levels, postprandial blood glucose (PPBS) levels, glycated haemoglobin (HbA1c) levels and ophthalmic examination results were obtained from the clinic records. Height, weight, blood pressure, visual acuity and colour vision of the patients were measured. Data was analyzed using SPSS version 16 statistical software.

Results and Discussion: Diabetic retinopathy was observed in 36% of diabetic patients. Background retinopathy (18.8%), non-proliferative retinopathy (16.9%), proliferative retinopathy (0.8%) and maculopathy (11.2%) were also observed among them.

Conclusion: Nearly one third of type-II diabetic patients attending the diabetic clinic of Colombo South teaching hospital has diabetic retinopathy. All diabetes-mellitus patients should be screened annually for retinopathy. Early diagnosis of the disease, regular monitoring, follow up of glycaemic control and greater awareness among patients are essential to prevent / decrease the progression of retinopathy.

Key Words: *Diabetes mellitus, Diabetic retinopathy, Prevalence, Sri Lanka, Glycaemic control*

A study on parents' awareness on identifying high-risk adolescent behaviors leading to non-suicidal self-harm in Gampaha district, Sri Lanka

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Introduction: Causing deliberate harm to one's own body by cutting, burning, abusing drugs, alcohol or other substances without suicidal ideations is defined as non-suicidal self-harm. Individuals at risk are 14+ year-old adolescents who are depressed, have low self-esteem or have been sexually abused. The study was conducted to understand the parent's level of awareness and assess their attitudes, practices and communication skills for an effective therapeutic care of a child indicating non-suicidal self-harm behaviors.

Methods: A descriptive, cross-sectional study was conducted with a sample of 271 using a convenience sampling method. Data was collected through a self-made, self-administered questionnaire distributed as a Google Form. Data was descriptively analyzed using SPSS version 25.

Results and discussion: Out of the surveyed sample, 15% were unaware of self-harm, 24.39% identified self-harm as an attention-seeking mode and 63.91% believed it was a coping mechanism or a disorder. Majority haven't heard of (66.8%) or attended (91.9%) to an awareness program. When presented with an indication that a child may show such a behavioral pattern, 33.51% believed that the child would manage it on their own and 54.77% believed there should be further investigations. However, 70.58% of the participants talked and made their spouse aware of the physical and mental fluctuations that are being observed in the child. Majority of the parents maintained contacts with the child's friends (92%) and friends' parents (71%). Results indicate that 53.25% knew how to communicate appropriately and 75.83% knew to take correct measures in the occurrence of self-harm.

Conclusion: Parents require further awareness on how to communicate, address a child showing self-harm behaviors and the importance of having contacts and a good relationship with both the child's friends and their parents. Awareness programs should be carried out to educate on how to identify and correctly address the situations in the event of a self-harming behavior.

Key Words: *High-risk behaviors, Adolescents, Non-suicidal self-harm, Awareness*

Sleep quality and wellness among students in private universities in the Colombo district, Sri Lanka

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Introduction: A student often experiences the stress of their academic path and this affects certain factors such as their sleep quality. Poor quality of sleep can affect their physique, psychology and lifestyle and eventually can be a contributory factor for other ailments. The aim of this study was to examine the relationship between sleep quality and wellness among students in Sri Lanka.

Methods: A descriptive, cross-sectional study was conducted among 120, English or Sinhala speaking, university students, recruited through convenience sampling from four private universities in Sri Lanka. Data was collected using an interviewer-administered questionnaire. Questionnaire contained two scales, the Pittsburgh Sleep Quality Index (PSQI) and Perceived Wellness Scale (PWS). A descriptive analysis of the data was carried out using SPSS.

Results and Discussion: The sample consisted of a majority of female respondents (68.2%) and individuals between the ages of 20 and 25 (85.5%). Only 4.6% of the participants were married. Most of the participants were found to have a very good (10.9%) or fairly good (66.4%) sleep quality. Duration of sleep among the majority of the participants was found to be less than 5 hours (64.5%). Majority of the respondents who experienced troubled sleep were females (31.4%) who also stated medication contributed to a better sleep. In relation to physical wellness, 21.6% of the respondents claimed that they are more prone to illnesses. Only 40% of the participants did not have any trouble staying awake during meals, commuting and socialising.

Conclusion: The study demonstrates that a considerable number of students experienced poor sleep quality which resulted in poor wellness among them. Therefore, education on sleep regulation is essential to enhance sleep quality and wellness among university students.

Key Words: *Health, Perceived Wellness Scale, Pittsburgh Sleep Quality Index, Private university students, Sri Lanka*

Prevalence of and reasons for self-medication with antibiotics among the students in a private educational institute, Sri Lanka

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Introduction: Dealing with disorder or illness is a common human experience. However, the person's response to such a condition is based on specific individual values and some other underlying factors that lead to self-care or self-medication. As a result of a rise in antibiotic self-medication activities, it has turned out to be fatal in terms of antibiotic resistance, which has contributed to an increased awareness of the reasons for self-medication. This study was aimed to find the prevalence of self-medication with antibiotics (SMA) and the reasons for self-medication.

Methods: The research was carried out as a descriptive, cross-sectional study using a self-administered questionnaire. Data was collected among students in a private institution in Sri Lanka. The research sample consisted of 110 undergraduate students. The sample was collected using a simple random sampling technique and analyzed by using SPSS software.

Results and Discussion: The prevalence of SMA was significantly higher (n=93, 84.5%) among the respondents and they were rarely visiting a qualified medical practitioner (n=25, 22.7%). The reasons in favor of SMA were not needing to visit the doctor for minor illnesses (n=41, 37.3%), quick reliefs (n=28, 25.5%), and convenience (n=18, 16.4%). Moreover, easy accessibility to medical stores (n=56, 50.9%) and availability at home (n=31, 28.2%) were seen as factors. Majority of the study participants (60.9%) had good knowledge regarding SMA, which included knowing what antibiotic resistance is and whether antibiotics can be used in the recovery of viral infections or to speed recovery of cold and cough.

Conclusion: While most students have good SMA knowledge, there is a high prevalence of SMA among students. Strict policies on the selling of medicines must be placed to avoid this problem.

Key Words: *Self-medication, Antibiotics, Antibiotic resistance*

Knowledge, attitudes and behavioural changes towards Covid-19 among general public: A cross sectional study from Sri Lanka

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Introduction: COVID-19 is an infectious disease caused by a large family of zoonotic viruses that affect the respiratory system which was first reported in December 2019, in Wuhan, China. The epidemic has spread quickly, resulting in numerous deaths globally and worldwide spread was unstoppable. At the moment, exact transmission and dynamics of the virus have not been clearly understood. Purpose of this study was to examine the knowledge, attitudes and behavioral changes towards COVID-19 among the general public in Sri Lanka.

Methods: A mixed methods design was used. Online questionnaire was circulated among the general public. Eleven participants were interviewed to understand the behavioural changes during COVID-19 outbreak. The quantitative data collected were analysed using Microsoft Excel and SPSS (statistical package for social sciences) version 25. The qualitative data were thematically analyzed.

Results and Discussion: A total of 166 participants completed the survey. Educational level of the majority (77.1%) in the study was diploma level or above. Most of the participants (77.1%) knew that the first COVID-19 diagnosis was in Wuhan. About 76.5% knew the symptoms of coronavirus disease and 94.0% knew that it spreads through respiratory droplets. Nevertheless, 68.1% did not know that COVID-19 was caused by SARS-CoV-2 virus. Some believed that the virus transmitted through food and water (36.1%) and insects (3.6%). Majority (71.1%) displayed a negative attitude towards infected patients. Most respondents stated that the infected should be legally separated (82.5%) and separately treated (93.4%). From the participants, 76.5% strongly agreed that they are willing to do their part to protect the health of the community. Many stated that they exhibit behavioral changes like wearing a mask, hand washing and social distancing at public places, while others stated they would prefer to stay at home.

Conclusion: The findings revealed an adequate level of knowledge and satisfactory behavioural changes towards COVID-19. Attitudes towards COVID-19 were a mixture of both positive and negative viewpoints. Although the study participants displayed significant knowledge about COVID-19, the results cannot be generalized due to inadequate sample size and setting of the study. Further studies need to be conducted in suburban and rural areas in Sri Lanka to understand the level of knowledge, attitudes and behavioural changes towards COVID-19.

Key Words: COVID-19, Knowledge, Attitudes, Behaviors, Coronavirus

Knowledge, attitudes and practices on their condition among patients with spinal cord injuries at rehabilitation hospital, Ragama, Sri Lanka

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Introduction: Spinal cord injury (SCI) is any injury of the spinal cord from foramen magnum to cauda equina, occurred as a result of compulsion, incision or contusion. Besides causing paralysis, spinal cord injuries lead to chronic medical conditions, adjustments in employment or educational goals, changes to personal and sexual relationships and more. The psychological, social, financial, and economic effects are as devastating as medical effects, affecting the family members and the community in general. Aim of this study was to assess knowledge, attitudes and practices of patients with SCIs regarding their disease which may have a great impact on successful management and positive outcomes.

Methods: A descriptive, cross-sectional study was conducted among randomly selected 207 paraplegic and tetraplegic patients with complete or incomplete injuries who received treatments at the rehabilitation hospital Ragama. A self-administered questionnaire was distributed and data was descriptively analysed using SPSS version 20.0.

Results and Discussion: Majority in the sample were males (67.4%, n=134), were people in 31-45 year age group (45.8%, n=95), had studied up to G.C.E. A/L (73.4%, n=152), were laborers (47.8%, n=99). Majority (54.1%, n=112) were identified to have good knowledge regarding their disease condition and there was a significant association between knowledge and educational level ($p=0.0000$). Most of the participants (68.6%, n=142) were identified to have good practices and there was a significant association between practice and gender ($p=0.011$) where male participants had scored more compared to females. Although the knowledge and practices were at a satisfactory level, the majority (59.9%, n=124) had negative attitudes regarding their disease condition and there was a significant association between attitudes and gender ($p=0.000$). Female participants exhibited more negative attitudes compared to males.

Conclusion: According to the findings of this study, majority of the respondents had optimal knowledge and good practices. Yet, there were negative attitudes towards their condition which can have a negative impact on psychological well-being of the clients. The demand for further advanced educational programs has also become a need to address emotional and psychological well-being.

Key Words: *Spinal cord injury, Knowledge, Attitudes, Practices*

A study on assessing the awareness of risk factors causing cervical cancers among women in Gampaha district, Sri Lanka 2020

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Introduction: Cervical cancers are a type of cancer that takes place in the cells of the cervix, which is the lower part of the uterus that connects to the vagina. Most of the time, cervical cancers are caused by the sexually-transmitted infectious agent, known as Human Papillomavirus (HPV). Risk factors would include: having multiple sexual partners, unsafe sexual practices, usage of oral contraceptive pills, spread of sexually transmitted infections, and suppressed immune system. Smoking, obesity, a family history of cervical cancer, and more than three full-term pregnancies would increase the chances of developing cervical cancer. The purpose of this study was to assess the awareness of risk factors causing cervical cancers among women in Gampaha district, Sri Lanka.

Methods: A descriptive, cross-sectional study was conducted among 150 women aged between 18 and 50 years. A convenience sampling method was used. Data was collected using an online survey and collected data was analyzed using Microsoft Excel and SPSS version 25.

Results and Discussion: From the study results, it was evident that 84% of the female participants were aware of cervical cancers. A minority (5.3%) of women agreed that there is no method for early detection of cervical cancers. Most of the study participants (56%) were aware of the risk factors of cervical cancers and 76% of the women identified unsafe sexual practices as one of the major risk factors for cervical cancers. Some respondents further agreed that preventing smoking (2.7%), avoiding unsafe sexual activities (10.7%), HPV vaccination (32.7%), and conducting Pap smear tests (19.3%) could greatly reduce the chance of developing cervical cancer or increase the chances of early detection and early treatment.

Conclusion: Women require more awareness and knowledge on cervical cancers and their associated risk factors, symptoms, and treatments. Therefore, awareness programs should be conducted for women to educate further on several aspects of cervical cancer including the severity of the disease condition. Hence, this will aid in taking necessary precautions in the future, to prevent being a victim of cervical cancer.

Key Words: *Women, Risk factors, Cervical cancer, Awareness, Sri Lanka*

PLENARY – OP 33

Shared Leadership: The key to effectiveness

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Shared leadership is maximizing all of the human resources in an organization by empowering individuals and giving them an opportunity to take leadership positions in their areas of expertise. In shared leadership, a group of individuals would lead each other to achieve successful outcomes.

Shared leadership is most effective when organizations are utilizing teams to achieve organizational objectives. Sharing leadership is not easy, but it is definitely possible, and in many cases, highly successful.

This paper compares the classical and shared leadership and further discusses the factors enabling shared leadership, barriers to developing shared leadership as well as the advantages and disadvantages.

Medical record internal auditing of hospital admission clerking: A comparative analysis pre-and-post National Accreditation Board for Hospitals (NABH) accreditation

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Introduction: The systematic appraisal of the quality of medical records is crucial and plays an important role in providing accurate and efficient documentation for any healthcare organization. Medical auditing is the process of examining the medical records to make sure that the facilities offered in a hospital comply with the standard rules and regulations of the medical field. Hence, the aim and objective were to evaluate accuracy and completeness of the content of admission clerking of the medical records pre and post National Accreditation Board for Hospitals (NABH) accreditation of the National Institute of Unani Medicine hospital, the first NABH accredited Unani hospital.

Methods: This pre-and-post, retrospective, medical data audit was conducted for the month of April 2017 and the month of January 2020 respectively. Systematic sampling was done after initially drawing a random number and 30 patients were selected. Further, from these 30 patients, 10 patients were selected again by systematic sampling. The data was collected by following the software of hospital discharge summary audit of Royal College of Physicians with few modifications as per our Institute. The data was entered in an excel sheet.

Results and Discussion: The pre-and-post medical audit of hospital admission clerking showed completeness of medical records was 71% and 88.42% before and after the NABH accreditation respectively. For strategic and measurement improvement, after the pre-medical audit, staff of the hospital was informed to check the medical records for completeness and a checklist was displayed in all inpatient department (IPD) units. Further, the NABH coordinator rigorously trained and conducted workshops to the postgraduate scholars to fill the medical record as per the checklist. In the training programme, scholars were given medical records to evaluate the gaps in the medical mark in the checklist. In the post-medical audit, an improvement in the percentage of completeness of medical records was observed. NABH accreditation has helped the hospital in quality care and quality assurance by maintaining a proper documentation process. Training programs in NABH with training evaluation forms have helped us in maintaining a quality care system. Feedback system in NABH also plays a vital role in quality assurance. This has impacted the documentation work and prevented errors in medical records in the healthcare system.

Conclusion: From our experience of the work outlined here, frequent training and workshops should be conducted to prevent medical record errors while writing discharges. Displaying a checklist in IPD has also aided in improving the score.

Key Words: *Admission clerking, Healthcare system, Medical record audit*

A phenomenological study of Maldivian patients travelling internationally for medical care

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Introduction: The phenomenon of travelling internationally to obtain healthcare is becoming increasingly common due to the ease and affordability of global travel. Woodman (2007), estimates that one million people worldwide travel for healthcare purposes every year. Medical travel is the practice of patients leaving their country of residence and going abroad to get access to medical care; this can be diagnostic, consultancy, or surgery. There are, however, risks associated with medical travel. Thus, the study aim was to assess the affordability, continuity and quality of care from the perspective of a medical traveller.

Methods: Firstly, existing literature was reviewed to create the research model. The model proved that a mixed-method approach was preferred. Data was then collected using a survey alongside face-to-face interviews with the participants. Participants included 48 Maldivian travellers who have returned from medical treatment abroad and were selected using a purposive non-random sampling method.

Results and Discussion: Majority of the study participants were civil servants (43.8%) by occupation, between 28-30 years of age (41.7%) and were males (75%). Likewise, 77.1% had a household income of below 1,305 USD per month. The main motivation among participants seeking globalised care was to do with the quality of care (62.5%), influenced by previous service users (66.7%), seeking diagnosis purposes (45.8%). Most participants invested through private means of funding (66.7%) and 60.4% did not seek to follow up care within the Maldives. Overall, 56.3% were satisfied with the service they received but 35.4% experienced complications with their procedure. Moreover, the relationship between satisfaction and experience resulted in a deviation of 0.68. Furthermore, 37.5% were neutral concerning care continuity

Conclusion: The findings of the research, thorough analysis of the participants' responses, presented that the main motivation to travel abroad to seek medical care is because of quality of care and was influenced by previous service users. The main purpose of these medical visits was disease diagnosis. Likewise, it is recommended that data gathered from studies by academic researchers be combined with those of tourism agencies and hospitals to gain a better understanding of medical tourism.

Key Words: Medical tourism, Maldives, Healthcare

Factors influencing job satisfaction among private-sector nurses of a well-renowned hospital in Western province, Sri Lanka

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Introduction: The widespread shortage of nurses is of concern not only in Sri Lanka but globally. Factors influencing increased mobility of the nursing workforce and their contribution to the nurses' turnover requires attention. Therefore, this research study focuses on understanding the nurses' level of job satisfaction.

Methods: A cross-sectional study design was used and a conveniently-chosen, 150 nurses of the ages 23 to 55, working in a well-renown hospital, completed a self-administered questionnaire. The data was descriptively analyzed using Microsoft Excel 2010.

Results and Discussion: More than half of the respondents (61.5%, n=92) were either highly satisfied or satisfied with their profession as a nurse, whereas 57 of the nurses (28.5%) were dissatisfied or highly dissatisfied. Over one third of the respondents (38.5%, n=58) were neutral in their responses. The majority of the respondents, (77.3%, n=116) reported high levels of satisfaction with working conditions and environment and 114 nurses (76%) showed satisfaction with relationships with co-workers. A total of 107 participants (71.7%) expressed their satisfaction of relationships with the supervisors. However, 64% (n=96) showed dissatisfaction with benefits and compensations. Nearly half, (53.2%, n=80) were dissatisfied regarding their work in the hospital and out of them, 95% 50.6% demonstrated their intentions to leave their hospital.

Conclusion: From the findings of this study, it can be concluded that the nurses were moderately satisfied with their jobs. However, there were high levels of satisfaction among nurses on factors such as relationships with co-workers, working conditions and environment and relationships with supervisors. Nevertheless, the majority demonstrated their intention to leave their hospital. There is a need for further research to be done. In addition to that, this study should also be repeated with a much larger sample to improve the likelihood of achieving statistically significant results that could be generalized to a larger and more diverse population.

Key Words: *Job satisfaction, Nurses, Working conditions*

Withstanding Covid-19 with realigned key business performance indicators in an academic institute

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Introduction: International Institute of Health Sciences (IIHS) conducts training programs from Diplomas to Doctorates in the areas of Nursing, Physiotherapy, Biomedical Sciences, Business Management and Education. Being a quality-driven organization, aiming for excellence in performance, IIHS follows an ISO 9001:2015 based quality management system with numerically defined key business performance indicators (KPIs). In March 2020, Sri Lanka announced curfew due to the spread of Covid-19. Due to physical distancing (lockdown of the country) and socioeconomic problems, IIHS had to move to new strategies to meet ISO indicators by providing quality service to students and staff.

Methods: The organizational KPIs were realigned using a scientific strategic approach. The KPIs were first lowered using statistical methods. Then they were evaluated via a series of management meetings and some were improved to an operationally acceptable norm. Thereafter, strategies were developed by each department to meet the cutoffs.

Results and Discussion: With the sudden lockdown of the country due to Covid-19, IIHS managed to continue operations of each department smoothly by realigning KPIs statistically using acceptable norms and with new strategies. Most of the departments of IIHS functioned to provide the high-quality service for customers while meeting ISO standards during Covid-19, such as Academic (90%), Academic Administration (100%), Information Technology (100%), Finance (60%) and Operation (90%) departments. Few departments such as Marketing Department (30%) and Facility Department (50%) were not able to meet expected targets, however, managed to operate while meeting few indicators.

Conclusion: Operational standards can be maintained to ensure business and missionary viability of an academic organization at an acceptable level, though prompt realignment of quality indices and by developing interim strategies to meet them.

Key Words: *Academic institute, Covid-19, Key performance indicators*

A study on nurses' level of job satisfaction in teaching hospital Batticaloa, Sri Lanka

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Introduction: Nursing is a demanding profession and due to high workload, most of the nursing officers get stressed and dissatisfied. Job satisfaction of nurses can be defined as their satisfaction with the attitude and behaviour of health care providers and patients, their contentment with the work environment and income and teaching opportunities in their respective organizations. The aim of this study was to understand the reasons and the factors which affect the nurse's level of job satisfaction in teaching hospital Batticaloa.

Methods: This institutional-based, cross-sectional, descriptive study was done in the teaching hospital Batticaloa. A total of 312 nurses were included in this study by convenience sampling. Data was collected by means of structured questionnaires with both open and close ended questions.

Results and Discussion: Out of the 312 respondents, over 70% were dissatisfied with the profession due to some factors such as nurses' shortage and high workload, where 62% of the nurses agreed with the statement 'nurses do not have a personal life due to workload'. All of the participants agreed that high workload is due to the shortage of nurses and that the nurses have to do overtime duties due to this. Majority (67%) of the nurses noted that the nurses are more stressed due to low basic salary, which is why they do more overtime duties, making them more stressed at the end.

Conclusion: According to the study conducted, it can be concluded that the majority of the nurses were dissatisfied with their work experience and lack personal time. Furthermore, more motivation, salary or otherwise, and more recruitment for nursing staff to bridge the stressing workloads is required. Therefore, this study results recommend the dire need for stress management campaigns and taking actions to motivate nurses.

Key Words: *Nursing, Shortage, Satisfaction, Workload, Stress*

Assessment of the factors affecting attitudes of healthcare professionals towards the transition from manual health records to electronic health records

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Introduction: Currently the world, including Sri Lanka, is in the process of switching from manual health record documentation to an information and communication technology based automated system, the electronic health records (EHR).

Methods: A correlational research study was done at Sri Jayawardenapura general hospital to assess the factors affecting attitudes of healthcare professionals towards the transition from manual health records to EHR. An interviewer-administered questionnaire with closed-ended questions was done among 369 randomly selected respondents, after obtaining informed written consent. The attitudes were assessed using a Likert scale and marks were awarded for the responses according to the positivity or negativity of the response giving a final score. Computer literacy was measured through a series of statements under the headings of basic computer vocabulary knowledge, basic computer skills and basic communication and internet skills. Previous formal computer training and typing ability, presence of previous experience and previous training in EHR was also recorded.

Results and Discussion: Out of 369 respondents, 309 had positive attitudes while 60 had negative attitudes towards EHR. The participants displayed very good computer literacy. There was a significant correlation ($p < 0.05$) in the Pearson chi square test between positive attitudes of healthcare professionals towards the transition from manual documentation to EHR and younger age group, male gender, occupation as a doctor, higher education level, working in ward setup, good basic computer vocabulary knowledge, good basic computer skills, good basic communication and internet skills, previous formal computer training and good typing skills. No significant correlation was noted with previous experience or training in EHR. When doctors and nurses were compared using independent sample t-test on the mean values obtained, there was a statistically significant increase ($p < 0.05$) in positive attitudes towards EHR, computer literacy, previous formal computer training and typing ability in doctors compared with nurses.

Conclusion: It is important to improve computer literacy, typing skills, and computer training to foster positive attitudes towards EHR in healthcare professionals. Demographic data should be considered when organizing pilot projects for introducing EHR. Extensive research in different settings is needed before generalizing the findings for the whole island.

Key Words: *Electronic health records, Manual health records, Healthcare professionals*

PLENARY – OP 40

Bad drugs turned good? Rehabilitating ketamine and cannabis

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Drugs cannot be inherently good or bad, but their reputations do cloud the enthusiasm with which they are embraced into therapeutic use.

Ketamine was first used as a general anaesthetic in the 1960s but then gained greater public attention as a drug of abuse in the 1980s. A period of intense research in the 1980's identified the blockade of the NMDA subtype of the glutamate receptor as the likely mechanism by which it caused these effects. Ketamine then made a quiet comeback in the 2000s when it was suggested to have an incredibly fast acting and powerful effect on depression. However, its past reputation has limited the enthusiasm with which this effect has been exploited.

Similarly, cannabis, a cocktail of active compounds, is mostly widely known as a drug of abuse. A series of breakthroughs in the 1990s identified tetrahydrocannabinol (THC) acting on cannabinoid receptors as the mechanism that caused the psychotomimetic properties of cannabis. Inactive components of cannabis such as cannabidiol have, based on flimsy evidence, been enthusiastically promoted for all sorts of therapeutic purposes. In contrast, despite much better evidence that THC appears to be very effective in some forms of epilepsy, it has not yet been embraced in the therapeutic world.

The development and uptake of both ketamine and cannabis as therapeutic drugs has been hampered by their past reputations. The talk will review how our understanding of the mechanisms of action of ketamine and THC has developed, address whether the newfound applications of these drugs could have been predicted, and explore how their previous reputations have influenced their uptake.

A review on substantial benefits of nano liquid crystal materials as drug delivery system, nutrients, peptides and proteins

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Introduction: Nano liquid crystals gain importance due to their efficiency in the field of medicine. This efficacy is obtained from the lipid nature of these materials. Lipids are the best class of organic compounds such as oils, waxes, hormones which have multiple benefits for living cells. They act along with proteins and carbohydrates to provide necessary energy for sustainability of living cells. Some of the lipids act as self-assembly supra molecules. There are so many applications of lipids that include nanotechnology. A revolutionary change in the medical field is taking place due to the introduction of nano technology into the biological environment. This review paper presents the latest ongoing trends in the lipid nature of nano crystalline materials.

Methods: The nano structured materials have controlled release of drug with less toxicity and bioavailability. These materials are used to overcome some of the problems in drug design and improve the effectiveness of drugs on particular targets. Nanostructured lyotropic liquid crystals have been used as impending carriers for the loading and realizing of therapeutic nutrients, proteins, peptides and nucleic acids into living cells, so that the cells get activated and much energized in hierarchical manner into the inner organizations.

Results and Discussions: Nano liquid crystalline materials are showing substantial impact in development of nanomedicine and nutrient supplement. This review focuses on the (1) advantages in the use of nano liquid crystalline materials as drug delivery carriers (2) principles in making these materials (3) discussed in vivo methods, preclinical studies on the activeness of nano liquid crystalline systems (4) in view of current pandemic situation a prediction for the nano drug delivery using this system is induced.

Conclusion: A need for focus on the importance of nano liquid crystals in the present day perspective is discussed. Because of health issues, so many people are unable to lead a healthy life. To conquer that situation, we need to impart the nanotechnology in drug delivery systems and their usage in promoting essential nutrients, proteins, etc. into the living cells so easily in order to improve the immunity.

Key Words: *Nano liquid crystalline materials, Drug delivery, Nutrients, Peptides and proteins*

Evaluating the half-life of a scombroid fish; yellowfin tuna

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Introduction: Yellowfin tuna (YFT) (*Thunnus albacares*) is the most popular fish in the seafood industry all over the world. YFY is highly priced in their fresh and frozen forms. Quality of the fish is the most important factor for the health of individuals. Scombroid poisoning is a common disease among tuna species. Moreover, shelf life depends on the microbial count and the histamine level. This study was conducted to determine the shelf life of YFT flesh stored at cold temperatures (0-2 °C).

Methods: Microbial, chemical and physical parameters, such as changes in microbial total plate count (TPC) and histamine levels and flesh colour change within 15 days were used in the study to determine shelf life. Twenty-five YFT samples collected from seafood processing factories on the same day after receiving from the multi day boat were used in the study. In each visit, five samples were collected and tagged with the same catching date, vacuum packed and stored under 0-2 °C. All experiments were conducted for 1st, 4th, 7th, 11th, 14th and 15th days of storage. Pour plate method was conducted to get total microbial plate count. One ml of 10⁻¹ dilution of fish extract was inoculated to nutrient agar plates and plate count was taken after 24 hours' incubation. Histamine content of each sample was determined daily using competitive Enzyme-linked immunosorbent assay (ELISA) method. Photographs of each fish sample were taken daily and flesh colour changes were calculated using RGB (Red Green Blue) colour detector.

Results and Discussion: Results have shown that the histamine level was increased during storage period but did not exceed more than 20 ppm. Highest microbial count was exhibited on the 7th day of storage time period and did not exceed more than 10⁵ CFUg⁻¹.

Conclusion: It can be concluded that the storage of fresh YFT in between 0-2 °C is good enough to increase the shelf life of YFT up to 15 days.

Key Words: *Yellowfin tuna, Shelf life, Microbial count, Histamine, ELISA*

Healing potential of sea cucumbers: *Bohadschia vitiensis* extracts against inflammation

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Introduction: Sea cucumbers (Echinodermata, Holothuroidea) are placed at the top of the hierarchy of all marine invertebrates due to the healing potential against numerous human ailments, including inflammation. Genus *Bohadschia* is one of the popular genus of sea cucumbers, which is used to cure arthritic-related pains by many communities in Asia including Sri Lanka. However, scientific validation of these still remains veiled. To bridge this knowledge gap, an *in vitro* study was conducted to evaluate the *in vitro* anti-inflammatory activity and toxicity of *Bohadschia vitiensis* water extract along with nutrition tests.

Methods: *In vitro* anti-inflammatory activity was evaluated for *B. vitiensis* water extract (WE) by means of egg albumin denaturation, hydrogen peroxide scavenging activity, erythrocyte membrane stability and nitric oxide scavenging activity. The cytotoxicity level and genotoxicity level of the extract were also tested using standard toxicity assays.

Results and Discussion: The results indicated that WE was more potent than the reference drug, diclofenac sodium, with respect to egg albumin denaturation assay. The inhibition of egg albumin denaturation by WE was approximately three times higher than the reference drug. Though *B. vitiensis* water extract exhibited low levels of hydrogen peroxide scavenging activity, erythrocyte membrane stability, nitric oxide scavenging activity when compared with the reference drugs, high concentrations of the extract showed higher activity against inflammation. However, it did not express significant cytotoxicity level and genotoxicity according to the results of the toxicity tests.

Conclusion: The present study, for the first time, scientifically confirmed that water extract of *B. vitiensis* serves as a potential anti-inflammatory agent. These findings warrant the use of this sea cucumber extract against arthritic-related pains by the local community. Absence of reducing sugars indicates that the oral use of the extract is further safe. Further studies based on animal models are highly recommended to validate these findings. Isolation and chemical characterization of the bioactive pharmacophore, which are responsible for the said activity are also considered important.

Key Words: Sea cucumbers, *Bohadschia vitiensis*, *In vitro* assay, Anti-inflammatory activity

**Biochemical characterization of the highly thermostable β -xylosidase from
*Caldicellulosiruptor saccharolyticus***

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Introduction: There has recently been an increasing focus on the conversion of lignocellulosic biomass to biofuel as an alternative to petroleum. The current bottleneck for the process is efficient hydrolysis of lignocellulose into simple sugar molecules for fermentation to ethanol. Xylan represents the major hemicellulose in plants and is identified as the second most abundant polysaccharide on earth. The complete degradation of xylan requires several enzymes working synergistically, including endoxylanases and β -xylosidases. β -xylosidases are capable of hydrolyzing xylo-oligosaccharides to xylose. Thermostable β -xylosidases are more desirable in biofuel production due to their ability to withstand harsh process conditions. This research characterizes glycoside hydrolase enzymes from the extreme thermophilic bacterium *Caldicellulosiruptor saccharolyticus*, which are predicted to possess the ability to degrade xylan into the fermentable sugar xylose.

Methods: Thermostable β -xylosidase encoded by Csac_2409 of GH39 from *C. saccharolyticus* was recombinantly expressed by GenScript and the protein purified to 75% purity. The protein was then characterized to determine the substrate preference, optimal temperature, pH value, thermal stability, and kinetic constants.

Results and Discussion: Thermostable β -xylosidase showed activity over a wide range of pH and temperature with optimal pH of 6.5 and temperature of 80 °C. The enzyme indicated high thermal stability at 70 °C with half-life close to 3 hours. Michaelis-Menten kinetic parameters, K_M , V_{max} , k_{cat} , and k_{cat}/K_M were determined to be 0.918 mM, 0.251 mM/min, 13.6 s⁻¹, and 14.75 s⁻¹mM⁻¹, respectively.

Conclusion: The putative β -xylosidase derived from thermophilic bacterium shows greater activity in hydrolyzing of xylo-oligosaccharides to xylose under harsh processing conditions. In addition, enzyme indicates activity over a range of pH and temperature with a high thermal stability compared to other thermophilic enzymes. Understanding the function and optimal conditions of the enzyme could help the advancement of the lignocellulosic ethanol process, which would ultimately lead to less fossil fuel usage and more environmentally friendly transportation fuels.

Key Words: Biofuel, Lignocellulose, Thermostable, Xylosidase

Awareness of general public on contamination caused by laboratory disposed waste within Gampaha district

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Introduction: Laboratory disposed waste could be a combination of a number of wastes including general, cytotoxic, radioactive and infectious waste, which includes microorganisms. The frequent spread of diseases among Sri Lankan citizens are a visible phenomenon, which can raise the thought of individuals as to why this problem occurs compared to other countries. This research aims to assess up to what extent the general public is aware of the laboratory disposed waste contamination and if there is a correlation between their levels of education or age with the awareness of the individuals.

Methods: This research was carried out among a conveniently-selected 150 participants from the general public. Data was collected through both printed and online survey (Google forms) methods. Quantitative analysis and cross tabulation of the gathered data was done.

Results and Discussion: The results indicated that the age range of 18-25 years (25.4%) and 45-55 years (22.6%) had low awareness, while the age range of 35-45 years (22%) had good awareness about the laboratory disposed waste and its consequences, where individuals in the age range of 25-35 (30%) had considerable awareness. Based on the results, a noticeable difference was shown according to the participant's educational level, indicating that the level of education would affect the public awareness of laboratory disposed waste and its consequences ($p < 0.05$). The participants who are having a higher education level and the age range between the age 35-45 years individuals had foremost awareness and a better knowledge regarding laboratory disposed waste and its consequences ($p < 0.05$). According to the answers obtained, it was evident that the expected answers of an individual with awareness of wastes and pollution were given by 90% from 35-45 age group, 60% from the 25-35 age group, 58% from 45-55 age group and 52% from the 18-25 age group. Almost all of the participants in the 35-45 age group were educated people, apart from a few exceptions.

Conclusion: It can be concluded that there is a clear correlation between level of education and the knowledge regarding laboratory disposed wastes. It is also found that age does matter when considering the knowledge and that up-to-date education can have an effect on that. The best recommendation would be to give relevant knowledge to the school children so that future generations will have more awareness regarding consequences of exposure to improperly managed waste.

Key Words: *Contamination, Laboratory disposed waste, Awareness, General public, Sri Lanka*

PLENARY – OP 46

The emerging challenges of online learning in the post Covid-19 new academia

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The internet has revolutionised our way of doing things and conducting our lives. It has changed our everyday living, working, and even the way we learn. Studies have shown that the internet has become the favourite place to learn. Learning as a whole has gradually advanced and become more popular than ever. Numerous learning websites, courses, and pages have replaced conventional classroom learning to a large extent. Post Covid-19 has set a new normal for university learning and has drastically changed the way universities conduct their teaching and learning approaches. Many universities around the world have embarked into online teaching platforms for their learners. Higher education providers are becoming increasingly aware of the diversity of their current and potential learners and are moving to provide a range of options for their engagement. Online learning has instantly gained its popularity and offered a flexible way of university learning specifically to adult learners. The increasingly flexible delivery modes available for university learners provide multiple pathways and opportunities for those seeking further education and career advancement. Online learning is widely regarded as an approach that combines the benefits afforded by face-to-face and online learning components. In fact, microlearning is the latest trend in the education world. It combines the thing we love the most – relevant and exciting information in small portions. Most adult learners are not able to pay attention to anything for long hours. Microlearning is shaking the education world and revolutionising the way we process information. However, this approach of combining online with face-to-face instructional components have raised concerns over the years. Several studies have highlighted some challenges of online learning mode of instruction as a whole. This article addresses five key challenges learners faced using learning technology for online learning, despite its popularity and emerging trend in the new academia.

Attitudes and practices of undergraduates in learning English as a second language in state universities in Sri Lanka

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Introduction: The English language is taught in state universities as a compulsory course with a duration of three months, based on the performance of students on the placement test. Although a commonly used language, students still fail to provide English courses an equal weight in comparison to academic courses. Likewise, this may be detrimental to a student as proficiency in English is required during both student (university applications) and professional (job applications) periods. When analyzing the job market in Sri Lanka, Rama (1994), puts forth the ‘skills mismatch’ hypothesis as the most influential cause for unemployment. The mismatch hypothesis indicates that the skills, particularly, English language/communication skills expected by the employers are not met by newly qualified graduates. The situation is aggravated further as private sectors, with English spoken as the main language, is expanding and becoming the main source of employment. Therefore, there was a need to find out undergraduates’ attitudes and practices concerning learning English by following English language teaching unit’s (ELTU) classes and other facilities provided by the state universities in Sri Lanka. One of the objectives of the study was to identify classroom practices with regard to teaching speaking skills.

Methods: The methodology selected to be used in this study was a mixed-method using inductive and deductive reasoning. It adopted multiple data collection instruments such as questionnaires, observations and in-depth interviews with lecturers, all in all, to gain a better perception of the current scenario. To examine the participants’ attitudes and practices, several analytical techniques have been used. The researcher applied reliability analysis to determine the internal consistency of the Likert scale data and descriptive statistics was used to observe the nature of responses. Likewise, multiple regression models were used to determine the most influencing factors.

Results and Discussion: In the data analysis, the researcher identified cognitive, behavioural and emotional aspects alongside classroom practices the lecturers utilize in English learning.

Conclusion: Although, students show an interest in practising the speaking skill in the classroom, the methodology used in lectures does not fulfil their expectations. Therefore, the methods of lectures need to be revised so that students could be attracted to English learning.

Key Words: *Attitudes, Practices, ESL*

An action research on internal and external factors influencing ESL writing-learning of post-Advanced Level student

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Introduction: The ESL education system in Sri Lanka has been implemented years ago, but the point is that although language learners spend a long time in school or language classrooms, they do not achieve a desirable level in English language skills, especially in English speaking writing. The general objective of this particular study was aimed to identify and analyze the internal and external factors that influence English writing development, and whether these factors are a barrier to learners to develop their writing skills.

Methods: A descriptive study by using a combination of both qualitative and quantitative study designs. A study sample of 20 students were selected among Pre-foundation, Foundation and Diploma level students of International Institute of Health Sciences by using convenience sampling method. Data was obtained by using questionnaires, interviews and pre-and post-testing and data analysis was done in the form of comparison of the percentages of the three groups of students.

Results and Discussion: Out of 20 students, there were 18 students who strongly agreed that their school English education was not pleasurable. All 20 students presented a positive manner of their thinking styles as well as most of the students were well-comprehended about their internal factors that influence their writing performances. Overall, 90% of the students demonstrated a development of their writing skills as well as cognitive skills after the post-test. There were only 10% of students that needed extra guidance and elaborations.

Conclusion: The study concludes that an encouraging classroom setting, optimistic student-teacher relationship, regular feedback and persistent motivation are the key ingredients that will enable students to develop English writing skills in both academic and professional settings. Besides, it is revealed the factors that influence internally and externally are very closely interlinked.

Key Words: *Internal, External, ESL (English as second language), Post-advanced level*

Internationalization of higher education in Sri Lanka and Japan: A comparative analysis

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Introduction: Internationalization of higher education is “the process of integrating an international, intellectual, or global dimension into the purpose, function or delivery of post-secondary education”. This desktop-based research aimed and consisted of a document and database review of available information, statistics, and other data from private, federal, provincial, regional, and local sources related to the internationalization of higher education in Sri Lanka and Japan.

Methods: This was an online desk research which included studies from online databases including PubMed and Google Scholar. Moreover, the search included internationalization, higher education, Japan, Sri Lanka and lastly, Asia as keywords. From the database search, 20 studies were retrieved, out of which 15 being of qualitative study design. Analyzed data was taken into consideration and a comparison was conducted. Also, the studies have been used to compare and contrast both Japan and Sri Lanka to identify means of internationalization of higher education.

Results and Discussion: The educational structure of a country is greatly based on its history. Likewise, countries colonized by Britain, including Sri Lanka have the educational structure developed similar to that of Britain. On the other hand, non-colonized countries such as Japan adapted to a westernized education model. Further, the study findings put forth Sri Lanka as a country needing to choose the path to internationalize a locally-developed policy and funding framework. The first stance of a government targeting internationalization came when Japan commenced a plan to invite 100,000 international students in 1983. At the time, the only goal the Japanese government had was to establish an English education and study abroad program through immigrated international students. As the goal was limited, it resulted in Japan failing to produce globally-competitive students and further citizens.

Conclusion: Research is needed to be conducted on globalization and providing opportunities for foreign students to learn in English, a very well globalized language or their native language. Furthermore, Sri Lanka must familiarize with educational development in other similar-stage countries in order to establish a successful education system. It is vital that the government implements this change compared to the private educational sectors alone.

Key Words: *Internationalization, Higher education, Desk research, Sri Lanka, Japan*

An action research on enhancing speaking skills and attitudes to ESL through cooperative learning among nursing students

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Introduction: Teaching English in Sri Lanka is mostly teacher-centred and probably this impedes students' speaking skills and attitudes. Little communication and interaction between students and teachers in the classroom are insufficient to enhance students' English speaking, and also seldom satisfies Sri Lankans workforce needs. The objective of this action research was to identify the difficulties faced by nursing students in speaking in ESL and to implement strategies to improve the speaking skills in ESL among nursing students in a private international nurse training institute in Sri Lanka in the academic year of 2019/2020 through the use of cooperative learning (CL).

Methods: Initially, through pre-testing, several difficulties were identified and interventions were planned. This action research was conducted involving CL methods such as interviews, role plays, brainstorming, picture describing as main activities. The data was obtained by observing the teaching and learning process, interviewing the students and collaborators, holding discussions with collaborators, and giving questionnaires to the students. This action research used observation guidelines, interview guidelines and questionnaires as instruments. Data reduction, data display and conclusion drawing and verification will be used to analyse the data.

Results and Discussion: The performance of the students, after being exposed to CL activities showed a significant difference or improvement after the CL method was introduced as a teaching technique in classrooms. This could be attributed to the fact that the traditional learning method in Sri Lanka is teacher based in which less opportunity is given to students to practice their speaking skills in the classroom. The results had proven that CL is essential for maximizing speaking proficiency. The study signifies the possibility of implementing CL methods in classrooms. Significant differences were found between the students' attitudes before and after CL technique. The participants in the CL classroom have gained a more positive attitude towards speaking skills compared to before. The results in this study support the findings of Sühendan & Bengü (2014) who found that CL method enhances students' attitudes. It could be noticed that there are many positive outcomes as a result of using CL approach as reported in numerous research studies which concluded that students who completed CL tend to have higher academic test scores and greater comprehension of the skills they are studying (Johnson, 1993).

Conclusion: This research suggests that CL may have an important role to play in tertiary English teaching in Sri Lanka because of the findings that CL was better than traditional teaching in improving learners' intrinsic motivation.

Key Words: *Cooperative learning, Teacher centred, Traditional teaching*

Assessing the problems related to writing skills among grade 05 English as a second language (ESL) learners in a semi-government school in Minuwangoda education division Sri Lanka: Action research

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Introduction: Writing skill is a component of language skills with an important role in human life. Writing skill can be an issue for the learners who learn a foreign language. This research investigated the writing strategies of students, to investigate measures that can be taken to avoid the weaknesses of the learning process in writing in ESL and make it more effective.

Methods: Initially, through pre-testing, several difficulties were identified and interventions were planned. This research was conducted in two cycles involving cooperative learning methods such as model paragraph writing, picture description, comprehension writing activities, essay writing and role-play writing. Conducting model paragraph writing, giving feedback, brushing up activities or materials, asking students to bring dictionaries, giving handouts and rewards were the complements of the main activities.

Results and Discussion: The data collected by the researcher in pre-test and post-test were analysed. The scores were compared to obtain the difference between the two tests. The data analysis of pre-test and post-test, revealed that the children improved their overall writing strategies by 41%. Such a result was obtained because the teacher had focused on a regular intervention and children when given vocabulary. Such interventions seemed to have shown prominent progress. Scores of these two tests were compared and the difference was clearly visible. In content quality, the post-test increased by 28%.

Conclusion: Intervention and writing skill support strategies were carried out. The findings of the present work suggest that writing skills of the students have been increased up to a satisfactory level. The creativity in writing skills was also improved. The cooperative learning methods are an effective strategy to improve writing skills of the children.

Key Words: *ESL, Writing Skills, Grade 05 learners*

PLENARY – OP 52

How Covid-19 has shaped physiotherapy education and practice

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The Covid-19 pandemic has challenged the world in terms of healthcare, the way that society interacts, and how education is provided. While there have been many challenges for the physiotherapy profession, there have also been some positives. These positives include highlighting the role that physiotherapy plays in the healthcare system such as the use of positioning to optimise oxygenation, early ICU rehabilitation to minimise ICU-acquired weakness and post-ICU care syndrome, post-acute rehabilitation for survivors of critical illness, and the use of telehealth to provide services while physical distancing and lockdowns have limited face-to-face services. Positive changes in physiotherapy education include increased development of online learning resources, including synchronous and asynchronous lectures, videos and case studies to support clinical reasoning, and different assessment strategies to enable graduate physiotherapy students to adapt to challenges they may face in a changed healthcare system.

Adherence to evidence-based clinical guidelines for the management of low back pain in primary care

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Introduction: Low back pain (LBP) is the leading cause of disability worldwide and affects approximately four million Australians (16% of the population). Evidence from primary care outside of Australia showed that LBP managed according to evidence-based clinical guidelines resulted in higher quality care and better patient outcomes. Despite these benefits, guideline adherence is suboptimal in these settings. We aimed to examine guideline adherence in Australian primary care.

Methods: In a retrospective chart audit pilot of 99 patients presenting to a public emergency department (ED) for acute low back pain, evidence-based clinical guidelines for diagnosis and treatment were examined. For diagnosis, we assessed documentation of: (1) red flags, (2) radicular syndrome, (3) current and historic pain, and (4) yellow flags. For treatment, we assessed documentation of: (1) treatment provided at the ED, and (2) treatment advice and referral at discharge.

Results and Discussion: Examination of red flags (98%) or radicular syndrome (93%) were documented in the majority of cases. Specific documentation of red flags varied: fracture (84%), cauda equina (77%), infection (62%), malignancy (33%) and spondyloarthritis (4.3%). Assessment for radicular pain (80%) and radiculopathy (94%), yet not spinal stenosis (0%), were common. Yellow flags were only documented in 2.1% of cases. Diagnostic imaging was overused within the ED (21%) and at discharge (8.4%). Patients commonly received opioids within the ED (57%) and at discharge (42%). Treatment advice was only provided in 48% of cases, with education (25%) and suggestions to return to activity (11%) poorly delivered. Referral to physiotherapy at discharge was low (38%).

Conclusion: These pilot data suggest that evidence-based clinical guideline adherence for the management of LBP may be suboptimal in Australian primary care. Generalisability is limited by sample size and poor chart documentation. The implication of these observations on guideline implementation within the ED setting will be discussed.

Key Words: Low back pain, Spine, Clinical guidelines, Diagnosis, Treatment

Devising alternative models of care for physiotherapists to ensure continuous patient care using remote patient management platforms

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Introduction: The unexpected crisis situation created by Covid-19 pandemic, disengaged patients from their physicians and therapists all over the world. It is important for physiotherapists to identify means to provide continuous care to patients throughout the pandemic period. This involves attending to as many patients as possible and meeting their rehabilitation needs as much as possible whilst avoiding physical contact. The main purpose of this study was to identify an alternative model of care where a set of prioritized disease conditions can be managed remotely using suitable combinations of home-based treatment methods and modalities that can be demonstrated and monitored using low-cost commonly available online audiovisual platforms.

Methods: A focus group discussion with four senior physiotherapists from the Impulse Rehabilitation Centre, two external physiotherapists and a medical doctor was conducted using an online video conferencing platform. The discussion points were mainly the disease conditions to focus on as a rehabilitation clinic operating in a crisis time using remote care methods and different treatment methods and modalities that can be used for continuity of care. The discussion was recorded, transcribed and then thematically analysed.

Results and Discussion: The main themes and examples were identified as follows. Firstly, categorizing patients into common groups according to their condition (ex: osteoarthritis), requirement of common exercises (ex: back exercise group for patients with scoliosis, mechanical back pain and sciatica). In addition to that, replacing therapist-based treatments with home-based exercises (ex: soft tissue release techniques done by the patients themselves) and equipment-based treatments can be innovatively prescribed using home-based alternative measures (ex: water bottles to replace dumbbells).

Conclusions: Novel patient care models can be devised to ensure continuous patient care during a physical isolation period of a global pandemic or during any other emergency. The findings of this study implies the importance of continuing patient care during a global crisis and a restricted environment even with the use of compromised and substituted care models and methods.

Key Words: *Remote patient care, Home-based rehabilitation, Models of rehabilitation*

Principles for integrating exercise training into the management of chronic low back pain by general practitioners

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Introduction: Low back pain is the leading cause of disability worldwide. The management of patients with non-specific chronic low back pain (NSCLBP) is difficult due to the complexity and heterogeneity of the condition. Evidence supports the use of exercise training as part of a multidisciplinary treatment plan in general practice, yet a range of considerations should be evaluated to facilitate safety and efficacy. We aimed to provide general practitioners with evidence-based principles for incorporating exercise training into multidisciplinary treatment plans for patients with NSCLBP.

Methods: Narrative review.

Results and Discussion: The following principles should be considered: (1) diagnostic triage is required to confirm NSCLBP; (2) comorbidities should be assessed when NSCLBP is diagnosed; (3) first-line therapy should consider conservative non-pharmacological approaches, such as exercise training; (4) for patients at low risk of poor prognosis, exercise training may be complemented by manual therapy; (5) depending on the outcome of interest, exercise programs should include Pilates exercises for reducing pain intensity, resistance or stabilisation/motor control exercises for reducing disability, and resistance or aerobic exercises for improving mental health; (6) no treatment, therapist hands-off treatment (e.g. education or psychological interventions alone) and therapist hands-on treatment (e.g. manual therapy, chiropractic or passive physiotherapy alone) are likely to be ineffective compared to exercise training; (7) a biopsychosocial approach should be incorporated into exercise-based pain management programs to improve outcomes; and (8) referral to tertiary trained allied health professionals proficient with exercise prescription is warranted.

Conclusion: Exercise training is a viable intervention as part of a multidisciplinary treatment plan to reduce pain intensity and disability and improve mental health in patients with NSCLBP. Prior to referral, general practitioners should implement diagnostic triage and assess for comorbidities.

Key Words: *Physical activity, Spine, rehabilitation, Physical therapy, General practitioner*

Level of physical activity among professionals: A cross-sectional study using International Physical Activity Questionnaire

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Introduction: Physical activity refers to any body movement by the skeletal muscles that causes energy expense (Abu Saad et al., 2020). Advantages of regular physical exercises are reduced disability and mortality due to coronary heart disease, diabetes, hypertension, and colon cancer; improve control of the joint swelling and pain associated with osteoarthritis. In the recent years, there is a significant decline in physical activity globally and 28%, or 1 in 4, adults are physically inactive which is stated in the WHO report (2018) on non-communicable diseases and their risk factors. This study examined physical activity levels and sedentary behaviours among professionals in Gampaha district, Sri Lanka.

Methods: A descriptive, cross-sectional study was conducted and 40 adults within the age range 20-40 years old were included in this single-centred study. Setting of the study was a private educational institute. The short version of the International Physical Activity Questionnaire was used. Data obtained was then analysed using Microsoft Excel.

Results and Discussion: The participants of this study consisted of 11 males and 29 females with the majority working within the academic department. With regards to levels of intensity, only 2 participants had a good level of physical engagement. Individuals who had other commitments apart from work, engaged in physical activity less frequently (38%). Individuals who had no other commitments, engaged in moderate (20%) levels of physical activity with the minority having had good engagement (5%). Likewise, staff who had experienced a stressful event in the past 2 weeks had low (20%) and moderate (10%) levels of physical engagement. In addition, staff who have not experienced such a dilemma, most had low levels of physical activity (35%), whilst minority had good levels of activity (5%).

Conclusion: The study results identified that only 5% of adults displayed higher physical activity, which is in line with the WHO report. From this study, it is evident that work and other commitments are barriers of physical fitness. In addition to this, adults without any other commitments are able to engage in physical activity. Thereby, one could conclude that time is an important factor. As the study focus was not on barriers of exercise engagement, it is further recommended that studies should be conducted to identify causes of physical inactivity.

Key Words: *Physical activity, Exercise, Engagement, Professionals, IPAQ*

Assessment of physical activities and wellness habits among residents who engage in walking in walking pathways of Gampaha district, Sri Lanka

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Introduction: According to the world health organization, 41 million people die each year due to non-communicable diseases (NCDs), equivalent to 71% of all deaths globally. Physical activity and wellness habits play a vital role towards development and prevention of NCDs. Therefore, this study aimed to assess the physical activities and the wellness habits among the general public.

Methods: A descriptive, cross-sectional study was conducted among the residents of Gampaha district, Sri Lanka, who walk in the walking pathways. A sample of 110 adults of age 20 - 60 years was targeted to be recruited using convenience sampling. An interviewer-administered questionnaire was used to collect data and analysed using SPSS.

Results and Discussion: Altogether, 107 responses were collected out of which majority were males (67.3%) and in ages between 40 and 50 years (27.9%) or 30 to 40 years (26%), with only a few over 60 years (14.4%) or below 20 years (1.9%). The main reasons given for walking or jogging were, for fitness (45.2%), to reduce weight (38.5%) or due to medical advice (16.3%). Of those who jog due to medical reasons, 54.2% suffered from diabetes while 42.4% were diagnosed with unhealthy cholesterol levels. Majority walked or jogged minimum twice a week (41.3%) or every other day (39.4%). Out of all, 85.8% walked usually for 20 minutes or more. The participants who had walked for less than 20 minutes (14.1%) mentioned fatigueness (60.7%), pain (39.3%) or medical condition (10.7%) as the reason. Most importantly, 68.9% of the participants had coupled a diet plan with exercises.

Conclusion: It is clear that the perception among the participants towards physical activity is positive since the majority believed walking is good for health. Future research should focus on people who do not engage in regular walking habits.

Key Words: Walking, Jogging, Wellness habits, Noncommunicable diseases

A case series on assessing the cardiovascular fitness among young adults in Sri Lanka

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Introduction: Evidence indicates the amount of physical activities among Sri Lankan young adults are diminishing and it leads to decreased level of cardiovascular fitness. The main aim of this research was to assess cardiovascular fitness among young adults.

Methodology: An informal case series was conducted between the ages 18 and 35, among 22 participants without cardiorespiratory dysfunctions who were selected using convenience sampling. The level of sedentary lifestyle and behaviours were evaluated via self-administered questionnaire and cardiovascular fitness was assessed through beep test. The cases were analysed against their sedentary behaviours and cardiovascular fitness.

Results and Discussion: Out of all, 54.5% were males and 45.5% were females. Over half of the respondents (54.4%) did not engage in any sports, but 13.6% were involved in netball and badminton, 18.2% played cricket, 4.5% engaged in football, 9.1% did swimming, and 4.5% played rugby and basketball. In terms of moderate-to-vigorous exercises, 13.6% worked out 3-5 times a week, 18.2% less than 3 times a week, and the remaining 68.2% did not engage in any sort of physical activities. With regards to sitting for lectures and official work, 13.6% sit less than 3 hours, 36.4% sit 3-5 hours, 36.4% sit 6-8 hours and 13.6% sit more than 8 hours per day. In terms of being seated for leisure time activities, 72.7% spend less than 3 hours and 27.3% from 3-5 hours per day. Most of the participants (63.6%) consumed junk food less than 5 times a month, 9.1% consumed 10-15 times, while the remaining 22.7% had fast food 15-20 times per month. After analysing the beep test results, it was clear that 86.4% of the subjects' VO₂ max was categorized as very poor, while 13.6% were poor, and only 4.6% were average.

Conclusion: This research indicates that although few of them engaged in some sort of physical activities, most of the young adults have inadequate cardiovascular fitness levels, which means that they had been practicing a sedentary lifestyle. Therefore, awareness programs and lifestyle changes of such people should be taken into consideration.

Key Words: *Beep test, Sedentary lifestyle, Young adults, VO₂ max*

Assessing the utilization of investigations and interventions for neck pain by physiotherapists in Sri Lanka

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Introduction: The investigation and treatment options used in physiotherapy, with regards to treating neck pains, vary subjectively and objectively from patient to patient. Yet, there is no current evidence about the preferences of interventions and investigations used for neck pain among physiotherapists in Sri Lanka. The objective of this study was to investigate physiotherapists' treatment and investigative tool preferences in the management of patients with acute and chronic neck pain.

Methods: A descriptive, cross-sectional survey was conducted by selecting a small sample of 60 physiotherapists who were approached through convenience sampling method. A self-administered, closed-ended questionnaire was circulated as a Google form. The collected data was analyzed using Microsoft Excel.

Results and Discussion: The questionnaire was distributed among working physiotherapists where the majority were females (61.7%, n=37), worked in a hospital setting (56.7%, n=40) and mostly handled musculoskeletal conditions (88.3%, n=53). These participants had an average of 2.7 years of working experience. In terms of investigations, most physiotherapists used x-rays (90%, n=54), general physical examinations (83.3%, n=50) and special tests (80%, n=48). In addition to these, 55% of the physiotherapists used MRIs (n=33). Most of the physiotherapists prescribed strengthening (98%) and stretching (92%) exercises for neck muscles, but were less likely to recommend cardiovascular (12%) or general strengthening exercises (40%). Majority of the physiotherapists used ultrasound (75%) or TENS (58%) to treat neck pains but were less likely to use mechanical traction (25%). In terms of manual therapy, the majority used deep tissue releasing of neck muscles (88%) and back muscles (78%) and passive stretching of neck muscles (90%). Most of the physiotherapists spent more than 15 minutes on patient's clinical education (60%) also recommended ergonomic interventions (92%).

Conclusion: When considering the diagnostic approaches used to identify neck pain conditions x-ray, general physical examination and special tests are commonly being used. Most of the physiotherapists use various exercises to strengthen and stretch neck muscles, and modalities such as ultrasound, TENS and manual therapy techniques. A study should be conducted in a larger sample size. Further research is required to assess the implementation of evidence based practice among physiotherapists in Sri Lanka.

Key Words: Neck pain, Investigations, Treatments, Physiotherapy, Sri Lanka

A study on level of knowledge on handling accidental dental traumas among nurses in Sri Lanka

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Introduction: Traumatic dental injuries occur frequently in children and young adults, comprising about 5% of all injuries. Only by undergoing recommended procedures, the chances of a favorable outcome can be maximized. The purpose of this study was to assess the level of knowledge on accidental dental traumas and relevant procedures among nurses in Sri Lanka.

Methods: A descriptive, cross-sectional survey research was done among 163 randomly selected nurses who worked in a government hospital. A self-administered questionnaire was used to collect data and analyzed using Microsoft excel.

Results and Discussion: It could be identified from the results that 51% of the nurses were confident in handling dental trauma in their working places, noting that they have handled many cases. On the other hand, 41% of nurses had only rarely handled any dental trauma, whereas 8% had never come across any case. Out of all the participants, majority of the nurses (88%) knew what tooth replantation was; whereas, only 31% of the nurses were aware of the importance of time taken before the replantation for the final prognosis and even less number of nurses (18%) knew the optimal transportation method of an avulsed tooth. However, all the nurses who participated in the survey were interested in receiving further education in the management of dental trauma.

Conclusion: This study indicates that there is a gap in the knowledge of handling dental trauma among Sri Lankan nurses. It has also been noticed, however, that nurses have an abundant enthusiasm towards further learning and there is a need for combining emergency management of dental injuries into their curriculum. An educational campaign dedicated to this matter is recommended for nursing students and in-service programmes for the staff nurses. Dental trauma emergency management is recommended to be added to first-aid publications. Collaborative activities between dental and nursing professionals are required and they should be posted in adjacent dental hospitals as part of their routine postings to facilitate detection and to proceed correctly in rendering better treatment at the primary levels.

Key Words: *Dental trauma, Tooth replantation, Accidents*

A study on psychological distress and depression among patients with chronic kidney disease

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Introduction: Chronic kidney disease (CKD) is a public health problem that tends to take serious dimensions of an epidemic and has a serious impact on the quality of patients' lives. Psychiatric disorders commonly coexist with CKD, which is a major burden on the healthcare system of Sri Lanka. The aim of this study was to assess the level of depression of the CKD patients undergoing regular dialysis.

Methods: The study was designed as a descriptive, cross-sectional survey carried out among 100 participants. Data was collected using a structured, self-administered questionnaire which contained 20 items. Level of depression was assessed according to the Beck's Depression Inventory (BDI) which included four key factors, namely, physical problems, family problems, emotional problems and depression level. Gathered data was descriptively analyzed using MS Excel 2010.

Results and Discussion: Among the 100 participants, the majority were in the age group of below 50 years (81%) with an average of 33.3 years. A little over half of the respondents (52%) were males. The majority (92%) were married, whereas 5% were single and 3% were divorced. According to the responses on the BDI, the majority of the respondents (62%) had symptoms of depression, ranging from borderline to extreme. Out of all the respondents, 7% were considered to be normal or to only have mild mood disturbances (31%). More than one third of the participants showed either borderline clinical depression (6%) or moderate depression (29%), whereas another over quarter of the respondents were severely (24%) or extremely (3%) depressed.

Conclusion: According to the results, both males and females have similarly been diagnosed with CKD and mostly the below-50-year-old patients had many problems during their daily activities with physical problems and emotional problems. Complexity and chronic nature of CKD seems to have affected the quality of life of the patients which might be further worsened due to regular dialysis they undergo. There needs to be programmes implemented to support the patients and their families psychologically.

Key Words: *Chronic kidney disease, CKD, Dialysis, Psychological distress, Depression*

Prevalence of obesity and overweight among nurses in a selected private hospital in Western province, Sri Lanka

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Introduction: Increasing prevalence of overweight and obesity denotes a global epidemic. In particular, overweight and obesity are most common among shift-based workers due to the imbalanced sedentary lifestyle. Nursing is a shift-based profession and Nurses are the major health care workforce. Therefore, the study will investigate the dimension of Nurses health in the aspect of obesity and overweight. The objective of this research was to determine the factors affecting obesity and overweight and its prevalence among the nurses in a selected private hospital.

Methods: A descriptive, cross-sectional survey was performed among nurses who were working in a private hospital in Wattala area in 2019. A self-administered questionnaire was used to collect data among a conveniently selected sample. WHO Asian guideline was used to classify the body mass index (BMI). Descriptive statistics and chi-square tests were employed in the data analysis.

Results and Discussion: Altogether, 93 nurses participated in the survey. The mean BMI of the subjects was 27.16 Kg/m². Overall, 25% (n=23) of all the participants were obese and 47% (n=44) were overweight. Prevalence of obesity and overweight was significantly low among unmarried nurses (16.13%, $\chi^2=8.26$, $p=0.02$). Further, obesity and overweight have risen with the number of children ($\chi^2=9.502$, $p=0.04$). The occupational factors such as the unit working in and average hours of work were not significantly associated with the prevalence of obesity and overweight among nurses. In addition to that, the nurses who went to sleep soon after the meal had a high prevalence of obesity and overweight (34.41%).

Conclusion: Seven out of every ten nurses working in the private hospital, the study was conducted, were overweight or obese. Despite this, their marital status and parity has influenced the prevalence of obesity and overweight.

Key Words: *Obesity, Overweight, Nurses, Body mass index, Sri Lanka*

Knowledge and practices on infection control among intensive care unit nurses in national hospital Colombo, Sri Lanka

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Introduction: Infection control is the discipline concerned with preventing nosocomial or healthcare-associated infections which may affect anyone receiving their medical treatments in a healthcare facility. Failure to control infections may lead to usage of more antibiotics, further investigations, and many other complications and also a massive additional financial burden to the Government and/or the person. Recent studies reveal that healthcare workers practice infection control methods and that the prevention practices may lead to 70% reduction of hospital-associated infections. The aim of this study was to assess the level of knowledge and practices on infection control among Intensive Care Unit (ICU) Nurses in the National Hospital Sri Lanka (NHSL).

Methods: A descriptive, cross-sectional study was done using a closed-ended, self-administered questionnaire. The survey was done among 149 conveniently-selected ICU nurses in NHSL Colombo.

Results and Discussion: Out of the 149 participants, 51.7% (n=77) of the respondents had above-average levels of knowledge according to the responses given. Over half of the respondents (53.7%, n=80) had below-average levels of score on the practices section of the questionnaire. However, a majority of the participants (80.5%, n=120), aged 25-35, had a good level of knowledge and a good level of practices. There is a positive correlation of knowledge on infection control with age ($p=0.0000$) and working experience as an ICU nurse ($p=0.0000$), while there is no correlation of level of education with the level of knowledge on infection control ($p=0.292$). Furthermore, there is a positive correlation between practices on infection control with age ($p=0.041$), gender ($p=0.020$) and working experience as an ICU nurse ($p=0.016$).

Conclusion: Overall, knowledge regarding infection control was fairly good whereas the level of practices were comparatively poor. Therefore, training programs should be carried out in order to train the nurses and to improve the practices.

Key Words: *Infection control, Knowledge, Practices*

**Relationship between overweight, obesity and lifestyle in school-age children
between 7-16 years in Th. Veymandoo, Maldives**

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Introduction: Regardless of countries being rich or poor, childhood obesity has become one of the serious public health concerns across the globe. This has been a case in the Maldives as well. The consequences associated with this non-communicable disease, among those that are affected, are massive. As such, the fatality rate has been increasing at an alarming rate that nobody has ever thought of before. Overweight and obesity not only affects the health and well-being of those affected but also the socio-economic status of the country. The aim of this study was to determine the relationship between overweight, obesity and lifestyle among the students of Th. Veymandoo School, Maldives. To assess the situation, the researcher compared and contrasted various previous literatures that had been undertaken in this respect by the different scholars.

Methods: This was a descriptive, cross-sectional survey study done using random sampling by selecting participants using random sample generator software. A total of 150 questionnaires were distributed. A self-administered questionnaire was used to collect data. The instrument was designed encompassing factors related to overweight, obesity and certain demographic characteristics of students. The researcher then used SPSS version 23 to analyse the gathered data.

Results and Discussion: The general findings revealed that 28.7% students were found to be either overweight or obese. Besides this, it was also observed that some of the variables were positively correlated ($p < 0.05$) with the body mass index status of the students. However, the researcher believed it was not realistic to make any other conclusions about these relationships, based on these numbers. Moreover, the outcome of this study was limited to only students who participated in this study and therefore, may not reflect the big picture among others elsewhere.

Conclusion: Overweight and obesity was quite evident among the tested students. Therefore, it is suggested to implement awareness programs in this respect through different mediums so as to prevent future occurrence of overweight and obesity among the students.

Key Words: *Obesity and overweight, Health and well-being, Socio-economic status, Non-communicable diseases*

Nurses' perception towards medication administration errors

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Introduction: Medication error analysis can only lead to improvements in the system and decrease in risks if errors are detected, notified and used to design better patient care practices and systems. The aim of this study was to identify and assess nurses' perception towards medication administration errors in Gadhdhoo Health Centre (GHC).

Methods: A descriptive, cross-sectional study was done exactly among 100 nurses working in GHC with a working experience of more than three months that allowed the nurses to recognize rules and regulation and policies at the hospital. Online survey questionnaires were used as the data collection instrument. The data from open-ended questions was descriptively analysed and the data from closed-ended questions was thematically analysed.

Results and Discussion: One quarter of the participants mentioned that drug errors occur when the nurse fails to check the patient's name tag with the medication records. From the participants, 15% noted that drug errors occur due to the illegibility of the doctor's handwriting, whereas, 12% of them stated it was due to the damages in medical packaging labels and 10% of the participant nurses stated that errors could happen when several drugs had similar names. From the gathered information, it was clear that the participants were having some difficulties with reporting error incidents. They were able to identify errors according to their knowledge, but still they had difficulties with reporting error incidents. Hence, it would be suitable to build an error reporting system which would help to report medication errors conveniently. The majority of developed countries have formed cooperative, transparent, confidential electronic systems for patient safety reporting, allowing a group of experts to monitor and evaluate accidents and adverse events.

Conclusion: The researcher was able to conduct comprehensive research on the nurse's perspective on medical administration errors. Electronic accident-monitoring mechanisms can reduce notification period, shorten correction time for unsafe working conditions and warn suppliers regarding unsafe trends that are developing. Some technologies can also promote measures to increase the quality via improved mistake-monitoring systems.

Key Words: *Medication error, Medical organizations, Quality improvement program*

Knowledge, attitudes and practices of infection control among healthcare workers in a tertiary care hospital in Southern province of Sri Lanka

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Introduction: Healthcare-acquired infections (HCAIs) are associated with increased morbidity and mortality among hospitalized patients and predispose healthcare workers (HCWs) to an increased risk of infections. Therefore, all staff categories need knowledge improvement to prevent increased risk of HCAIs. The study explored the knowledge, attitudes and practices of infection control and prevention among HCWs in a tertiary hospital in the Southern province of Sri Lanka.

Methods: A descriptive, cross-sectional study was done using a self-administered, pre-tested questionnaire among a randomly selected study group of nursing staff (146) in a tertiary hospital. Gathered data was descriptively analysed.

Results and Discussion: From a total of 146 respondents, 43.24% (62) identified biohazard sign correctly, 80.82% (116) of the participants knew the abbreviation MRSA, and 28.38% (40) of the respondents had knowledge about decolonization. Furthermore, most of the respondents (83.78%, 122) correctly identified hand washing as the most effective method to prevent MRSA as a HCAI. Majority of the participants (89.19%, 130) believed that standard precautions are designed to reduce HCAIs, while 95.95% (140) believed standard precautions are indicated only in special care units. Only 89.19% (130) of the participants knew that after removing the gloves, hand washing is essential and 80.82% (116) of the participants knew that using clean gloves when giving bed baths to MRSA-positive patients is adequate. Knowledge about Chlorinated lime as a general-purpose disinfectant was not adequate (27.03%, 38) even though the knowledge about importance of daily preparation was good (95.95%, 140).

Conclusion: Majority of the healthcare workers' knowledge, attitudes and practices regarding standard precautions were not sufficient, favourable or safe enough compared to the expected standards. Training programs and monitoring the infection control practices is recommended.

Key Words: *Infection control, Knowledge, Healthcare workers, Attitudes, Practices*

Knowledge and practices on maintenance of peripheral intravenous cannulation among nurses working at Castle Street hospital, Colombo, Sri Lanka

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Introduction: Cannulation is a vital procedure in the health sector. Nurses must have good knowledge and practices towards caring and maintaining intravenous (IV) cannulation, as its complications could endanger the patient's life. This study was carried out to assess the nurses' knowledge and practices on maintenance of peripheral IV cannulation among nurses.

Methods: A descriptive, cross-sectional study was conducted among the nurses working at Castle Street Hospital, Colombo, Sri Lanka. A self-developed, self-administered questionnaire was used to collect data from a conveniently-selected sample of nurses working in the hospital.

Results and Discussion: Out of the total of 120 nurses, only 16 (13%) knew all the correct answers for the knowledge based questions. Majority (45%, n=54) of the nurses didn't know the correct answer for some knowledge-based questions while another 50 of them (42%) had a poor level of knowledge regarding maintenance of peripheral IV cannulation. In terms of the practice-based section of the questionnaire, practices of the majority of the nurses (48.3%, n=58) was average whereas only 12.5% of the nurses (n=15) were following the procedures perfectly. Another 39.1% of the nurses (n=47) showed poor practices regarding maintenance of peripheral IV cannulation.

Conclusion: This study shows that most of the nurses had less than good knowledge and practices on correct procedures of maintaining IV cannula. Only a very few had excellent knowledge and good practices. As IV cannulation is an invasive procedure and because of the risks of complications associated with it, it is recommended that there should be special training on maintenance of peripheral IV cannula.

Key Words: *Peripheral intravenous cannulation, Knowledge, Practices*

Awareness and practices on childhood pneumonia among mothers with children below five years in Wattegama, Kandy, Sri Lanka

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Introduction: Pneumonia is an inflammatory condition of the lungs, affecting primarily the microscopic air sacs known as alveoli. Pneumonia remains the leading cause of death in children below five years. Mothers' awareness and practices towards pneumonia may have a great impact on reducing the risk of mortality of children due to pneumonia. Therefore, the aim of this study was to evaluate awareness and practices on childhood pneumonia among mothers with children below five years and to study on the factors affecting awareness and practices.

Methods: A community-based, descriptive, cross-sectional study was conducted, in which 150 mothers with children below five years were assessed by using a self-administered questionnaire. Convenience sampling method was used and SPSS version 20.0 was used for the analysis of data.

Results and Discussion: From the study sample, which was composed of 150 participants, the highest number of participants was represented by the age category of 25-30 years, which were 100 (66.6%). Majority were housewives (66%, n=99) and had studied only up to G.C.E O/L (80%, n=120). Majority (74.6%, n=112) were identified as having good awareness regarding their disease condition and there was a significant association between awareness and educational level ($p=0.0011$). Most of the participants (83.3%, n=125) were identified as having good practices and there was a significant association between practices and gender ($p=0.011$) and a positive correlation between participants' awareness and practices ($r=0.334$, $n=60$, $p=0.009$).

Conclusion: According to the findings of this study, majority of the respondents had good awareness and practices related to pneumonia. Increase in awareness regarding pneumonia was correlated with increase in good practices. As awareness and good practices can be a key strategy in preventing and managing pneumonia in children, the demand for more advanced educational programs has become a need.

Key Words: *Pneumonia, Mothers, Awareness, Practices, Behaviours*

Assessing the awareness of diabetes mellitus among people aged 25 to 55 years living in Ragama, Sri Lanka

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Introduction: Diabetes Mellitus (DM) is a complex metabolic disorder that can adversely affect the normal human physiology. It is one of the commonest non communicable diseases that have escalated to an epidemic level worldwide. Due to the lack of awareness regarding many aspects of DM, the prevalence of DM is increasing rapidly in the urban areas of Sri Lanka, than the rural suburbs. Awareness of the disease is pivotal for the prevention and minimization of DM-related complications. The purpose of the study was to evaluate the level of awareness regarding DM among people aged between 25 and 55 years living in Ragama Grama Niladhari Division, Sri Lanka.

Methods: This was a descriptive, cross-sectional study, conducted among 278 people in the relevant age group through convenience sampling. A self-administered questionnaire including demographic information and information regarding symptoms, risk factors, complication, lifestyle modifications, treatments and prevention of the disease was used to collect data. Gathered data was descriptively analysed.

Results and Discussion: Out of 278 distributed questionnaires, 265 have responded to the questionnaire (95.32%). Majority of the respondents (93.20%, n=247) were from the age group of 46-55 years. Majority of the females, (56.95%, n=86) were in the age group of 25–35 years and majority of the males were in the age group of 45–55 (47.36%, n=54). From the respondents, 35.84% (n=95) were already diagnosed with DM and 39.62% (n=105) had prior education on DM. The highest scored percentage for individual questions varied in each section, ranging from 11% to 43% on the condition, 21% to 70% on risk factors, 31% to 62% on symptoms, 22% to 54% on complications, 35% to 87% on prevention and treatment, and 16% to 67% on monitoring of condition.

Conclusion: Awareness regarding DM has been found to be inadequate among the general public in Ragama Grama Niladhari Division. Urgent focus and better action plans are needed to create awareness on DM with the aim of overcoming the diabetes burden in the future.

Key Words: *Diabetes mellitus, Awareness, General public*

Prevalence and associated factors of lower back pain among nurses in Weligama district hospital

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Introduction: Low back pain (LBP) is a significant issue among the nursing staff worldwide. Manual lifting and shifting of heavy objects and patients are primary contributing factors. Nurses are supposed to be knowledgeable about the risk factors and preventive measures and effectively apply it into practice to prevent them from sustaining back injuries. Aim of this study was to describe the occupational physical activities and the prevalence of LBP among the clinical nurses at Weligama district hospital.

Methods: A descriptive, cross-sectional study was conducted among registered nurses working in Weligama district hospital. Convenience sampling technique was used to select 100 nurses. Data was collected using a self-administered questionnaire and analysed using Microsoft SPSS software.

Results and Discussion: It was found that 66% of the nurses suffered from LBP. Out of the sample, 77% were travelling a distance of 51-100 km between hospital and their place of residence everyday while 8% of the participants had been travelling more than 100 km. For that, 69% were using crowded public transport as the transport mode to attend to work. Over half of the respondents (52%) stated that they manually handled patients without any assistance and 53% stated that they generally work for more than 12 hours per day.

Conclusion: More than half of the participants were suffering from LBP. Improper manual handling techniques, prolonged traveling in crowded public transports daily and prolonged working hours could be some factors causing LBP. It would be better if the programs can be arranged by the government to detect the LBP in early stages among nursing staff and commence preventative measures, thereby reducing the prevalence of the LBP among nursing staff. This will eventually enhance the effectiveness of the nursing staff as well as promote the health of the nursing staff as well.

Key Words: *Lower back pain, LBP, Nursing staff, Prevalence, Associated factors*

Assessment of perceptions and practices towards the professional knowledge and skills upgrading among Sri Lankan nurses

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Introduction: Psychiatric nursing is a specialized area of nursing practice, employing theories of human behaviour as its science and purposeful use of self as its arts, in diagnosis and treatment of human responses to actual or potential mental health problems. Nurses working in this area are expected to have specialized training as they need to deal with psychologically affected people with various cognitive and behavioural impairments. Generally, nurses get five weeks of training in a psychiatric setting in Sri Lanka during their student period. It is doubtful if this training period is sufficient for nurses to work in a mental health unit. Therefore, the purpose of this study was to examine the practices and attitudes towards the knowledge and skills upgrading of the nurses working in a government mental health hospital in Sri Lanka.

Methods: A descriptive, cross-sectional study was conducted among 100 permanent nursing officers, selected through convenience sampling technique. The data was collected through a self-administered questionnaire and analysed using SPSS software.

Results and discussion: Majority of the nurses (90%) were willing to participate in an on-the-job training program. The most important areas that the participants were willing to get trained were assessment skills, risk patient management, communication skills, medication management, violent and aggression and policy issues and legal aspects. The whole sample (100%) had undertaken a specialized training on psychiatry before or after joining the service in the mental health hospital. When considering the reasons to take the training, the majority mentioned as to improve practice (42%), for continuous professional development (15%), to add into their resume (22%), to get promotions (17%) and to gain a salary increment (4%).

Conclusion: Among the participants, the practice of getting additional specialized training in the field was highly positive while the perceptions of the majority were not always focused on upgrading their professional knowledge and skills. It would be better if the hospital management can organize special training sessions to cover important areas of psychiatric mental health nursing. By this means, the nurses can provide an effective service to the patients with enhanced quality in nursing care.

Key Words: *Perceptions, Practices, Knowledge, Skills upgrading, Nurses*

**Prevention of central venous line-associated bloodstream infections (CVLABSI)
among nurses**

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Introduction: Central venous catheter is passed through a vein and ends up in the thoracic portion of the vena cava or in the right atrium of the heart. The problem of central venous line-associated bloodstream infections (CVLABSI) has gained increasing attention in recent years. They cause a great deal of morbidity and deaths and increase healthcare costs. Therefore, the main goal of this study was to assess knowledge and practices on prevention of CVLABSI among nurses and to find the relationship between knowledge and practice.

Methods: A descriptive, cross-sectional study was conducted among 270 staff nurses from both the private and government sector, attending a private higher educational institute in Sri Lanka. Data was collected using a self-administered questionnaire. The collected data were analysed using SPSS software.

Results and Discussion: Altogether 260 out of 270 distributed questionnaires (96.2%) were completed and returned. The mean age of the staff nurses was 36.78 years and most of the nurses (56.7%) were females. The majority of nurses (91.2%) have completed a diploma in nursing in the government sector and 64% had not received in-service training on infection control. Majority of the nurses displayed a moderate level of knowledge (49%) and moderate level of practices (53%) towards prevention of surgical site infections. A moderately positive significant correlation ($r=0.58$, $p < 0.05$) was determined between knowledge and practice of nurses.

Conclusion: In conclusion the results suggest that the knowledge level of nurses regarding CVLABSI was moderate. Therefore some areas of practice of nurses on prevention of CVLABSI need to be improved. There was a moderate, significantly positive correlation between knowledge and practices, which implicates that those with good knowledge will have a better practice. Therefore it is important to conduct workshops in order to improve both knowledge and practices of nurses.

Key Words: *Central venous line, Bloodstream, Infections, Nurses*

Prevalence of occupational hazards among sugarcane field workers in a selected factory in Sri Lanka

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Introduction: Sugar industry is a growing sector to combat increasing demands of sweeteners throughout the world. Low-income rural people are directly engaged in the production work under various stressful conditions. Several fatal occupational and workplace health hazards can be seen among these sugarcane industry workers. The aim of this study was to assess the occupational hazards among sugarcane field workers in a selected factory in Sri Lanka.

Methods: This study was a descriptive, cross-sectional study conducted to determine the work-related injuries presenting to the medical centre from a major sugarcane factory in Sri Lanka. The study population was 100 workers, who were injured within a year, 2018/2019. An interviewer-administered questionnaire was used to collect data from the participants. The data collected were analysed using SPSS software and Microsoft Excel.

Results and Discussion: According to the results of the study, 89% of the workers are males and only 11% are females. Majority of the workers (50%) were between 40 and 49 years of age and there were no workers under 20 years of age. As for the results, 87% of workers had faced accidents in the last one-year period of their working; however, 70% of workers have not been using any provided PPE. Most common type of injury was abrasion. All the participants have been faced with abrasions while working and the most common cause for injury were due to falling from vehicles.

Conclusion: In conclusion, the study was able to find that almost all the workers of the factory had some form of injury during the last one-year period of work and that most of them were not wearing any PPE. The study also found that the workers were not provided with certain PPEs by their employers; therefore, policies and regulatory measures should be taken in order to reduce occupational hazards. Furthermore the workers should be educated about occupational hazards and how to reduce their risks and prevent such injuries from occurring in the future.

Key Words: *Occupational hazards, Injuries, Workplace, Field workers*

A study on risk factors associated with hypertension and diabetes mellitus among the Sri Lanka Navy personnel

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Introduction: Non-communicable diseases (NCDs) have become the main contributor to disease burden in Sri Lanka. Navy personnel are considered to be highly active and would be considered to have a lesser prevalence of NCDs. However, according to the Annual Health Report of Sri Lanka Navy, the prevalence of Diabetes Mellitus (DM) and Hypertension (HT) are the main NCDs which had increased in prevalence during the past three years. The aim of this study was to estimate and identify risk factors of DM and HT among the Sri Lanka Navy personnel.

Methods: A cross-sectional, descriptive study was done by including the study sample as all Navy personnel attending a selected Navy Hospital for DM or HT treatment. Through a simple random sampling method, 120 Navy personnel were selected for the study. Data was collected using a self-administered questionnaire posted to both commissioned and non-commissioned personnel at the hospital. The collected data was analysed using SPSS 21 and Microsoft Excel software.

Results and Discussion: A total of 115 responded in the study, with a response rate of 95.8%. Altogether, 86 respondents (74.8%) were non-commissioned naval personnel and 29 (25.52%) were commissioned naval officers. Among them, 110 were males (95.7%). Majority had been treated for only HT (49.6%), whereas 40.9% were treated for only DM and 9.6% were treated for both conditions. Most of the participants used tobacco (65.2%), out of which the majority were between 35 and 39 years of age, and consumed alcohol (66.1%). Results also showed that 83.5% of participants did not participate in any vigorous exercises, even though some participants performed some form of exercise due to their health condition. In general, the prevalence of HT and DM among navy personnel was relatively high and had poor practices.

Conclusion: Prevalence of DM and HT is high among Sri Lankan Navy individuals. High rates of tobacco and alcohol use and inadequate physical activity and unhealthy dietary behaviours among participants were also reported. These findings highlight the need for new strategies to strengthen preventive measures to reduce the risks of further complication. It is important to conduct regular health education programs to follow up on their practices.

Key Words: *Diabetes mellitus, Hypertension, Prevalence, Risk factors, Sri Lanka Navy*

Awareness of underweight among mothers of children below five years

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Introduction: A child's weight is a key to their development in both intellectual and physical terms and underweight can impair a child's ability to fulfil their capabilities. Underweight of under-five-year children can be defined as, whose weight is less than two standard deviations below the median level in weight for age chart prepared according to WHO child growth standards. The main aim of this study was to examine the level of awareness of mothers underweight among under five year children, who attended a selected MOH clinic.

Methods: A descriptive, cross-sectional study was done to explore the parents' perception and level of knowledge on preventing childhood underweight. The body mass index of the children was assessed in the MOH and a self-administrative questionnaire was administered to randomly selected parents. Data was analysed by using descriptive statistics with the aid of SPSS 16 software and Microsoft Excel.

Results and Discussion: The study consisted of 132 respondents. Among them, 71 (53%) had a male child and 61 (47%) had a female child. Majority of the mothers were in the age group of 20 to 30 years of age. Majority of mothers were unable to score up to 50% of marks for the questionnaire based on mothers' awareness. Mothers' awareness regarding weaning and diet frequencies had a positive relationship with underweight children. Among the participants, 51% of mothers were used to feed their children for less than five times per day.

Conclusion: Underweight among children under five years is a very common problem. According to the study findings, mother's knowledge was a significant factor for underweight among children under five years old. Greater emphasis should be placed on educating mothers or principal caregivers regarding nutritional status of the children.

Key Words: *Nutrition, Underweight children, Parents' knowledge, Attitudes*

Perspectives of nurse managers on challenges faced in nurse staffing in a private chain of hospitals

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Introduction: Staffing is the process of determining and providing the acceptable number and mix of nursing personnel to produce a desired level of care to meet the patients' demands. The purpose of all staffing activities is to provide each nursing unit with an appropriate and acceptable number of workers in each category to perform the nursing tasks required. The aim of the current study was to assess the perspectives of nursing managers to identify current practices and challenges faced by them in nurse staffing in a selected private chain of hospitals.

Methods: A descriptive, cross-sectional study was done using a self-administered questionnaire with short questions to the nursing managers at three different hospitals belonging to a selected private chain of hospitals. There were 70 nursing managers across the three hospitals who participated in this study. The data was analysed by using the SPSS statistical tool.

Results and Discussion: From the total sample of 70 participants, 25.7% (n=18), 31.4% (n=22) and 42.86% (n=30) of nurse managers participated from three hospitals. Results showed that all the 70 nurse managers have mentioned increased workload as a major challenge and an issue in nurse staffing. Most of the nurse managers (61.4%, n=43) highlighted the fact that nurse managers should make strategies to overcome nurse staffing issues in the hospital; however, all the participants highlighted that the management should recruit more nursing staff for the hospital.

Conclusion: According to the findings of the study, nurse manager's current practice in nurse staffing, challenges and issues, strategies and solutions for the challenges, and issues in nurse staffing can be rectified. Nurse Managers' education should be uplifted and workshops should be arranged to improve their human resource management skills.

Key Words: *Nursing, Staffing and management, Hospital management*

Social and economic status of farmer in the Dambulla area, Sri Lanka

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Introduction: Agriculture has been a livelihood since inception of human civilization. Today it has taken a leading place in the world economy. Agriculture has many different variations and among these, vegetable cultivation provides income to many families in Sri Lanka. The main objective of this study was to identify economic and social issues faced by the farmers and also to assess their ideas, attitudes and living conditions.

Methods: A descriptive, cross-sectional study design was used and 50 families were selected as the study sample using convenience sampling technique. Data was collected using an interviewer-administered questionnaire. The collected data were then analysed using Microsoft Excel software.

Results and Discussion: The study showed that the majority (64%) of the families had three to five family members, 20% had more than five members and 16% had one to three family members. According to the opinions of the participants, 4% believed their vegetable cultivation is a very good income source, 20% indicated that it is a somewhat good source of income and 50% indicated that it is a weak source of income. Further observations of the families revealed that 70% of them had a poor socioeconomic status.

Conclusion: Based on these observations, it could be noted that most of the farmers are not happy about the profit they are getting through vegetable cultivation and that it has a negative impact on their socioeconomic status. Vegetable cultivation can be made profitable if the harvest is good and if they can easily sell. However due to the situation created by the market condition and intermediaries, vegetable cultivation has become unprofitable. Although the farmers in the Dambulla area are faced with certain difficulties in vegetable cultivation, these farmers continue to cultivate amidst many difficulties, since they have no alternative income source.

Key Words: *Social status, Income, Farmers, Agriculture, Vegetables*

A study on knowledge regarding hepatitis B among final-year nursing students in nurses' training school Kandana, Sri Lanka

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Introduction: Nursing students are at a greater risk of acquiring hepatitis B viral infection due to an early exposure to the hospital setting. Therefore, providing an appropriate understanding and instructions on occupational health hazards is of utmost importance, even though knowledge about hepatitis B alone cannot prevent the disease. The right knowledge reflecting in the attitudes of trainee nurses will help prevent infection among them. Aim of this study was to assess knowledge on hepatitis B among the nursing students in Kandana nurses' training school (NTS), Sri Lanka.

Methods: A descriptive, cross-sectional study was conducted among 120 nursing students of Kandana NTS. Sample was selected using a convenience sampling technique and a self-administered questionnaire was used to collect data. Data was analysed using SPSS software.

Results and Discussion: Overall, 90% of the nursing students had a good medical knowledge on the causes, mode of transmission and pathophysiology of hepatitis B infection, 35% had poor knowledge regarding the signs and symptoms of the disease and 32% had an average knowledge. Furthermore, only 28% had good knowledge regarding the diagnostic tests for hepatitis B, while 41% had an average knowledge.

Conclusion: According to the study, the majority of the respondents had good medical knowledge regarding the disease while the knowledge regarding the signs and symptoms and diagnostic tests was poor. As frontline healthcare workers, in the future, it would be better if the NTSs can implement teaching sessions to students providing proper knowledge regarding the disease including the methods of prevention, in order to protect the frontline healthcare workers and also the patients.

Key Words: *Hepatitis B, Knowledge, Nursing students, Signs and symptoms*

A study on assessing knowledge regarding intravenous administration of antibiotics among nurses

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Introduction: An antibiotic is a type of substance acting against bacteria and is the most important type of antibacterial agent for fighting against bacterial infections. The need for advanced knowledge among nurses in administration of intravenous antibiotics takes a major place when they are managing a patient in the hospital. Accordingly, it is common for patients to not complete a prescribed course of treatment and risking the resistance of particular bacteria to the given antibiotic. The purpose of the study was to assess nurses' knowledge on effective administration of intravenous antibiotics.

Methods: A descriptive, cross-sectional study was conducted among 150 staff nurses from both government and private sector, and 50% from each sector were selected through a convenience sampling method. Data was collected using a self-administered questionnaire and were analysed using SPSS software.

Results and Discussion: Nearly three quarter of the respondents (74.7%) were female nurses. The nursing officers who were working at ICU had a significantly higher knowledge on antibiotic administration than others. The number of years of working experience had a positive association with the level of knowledge up to 15 years of experience. However, there was a negative association between knowledge and the experience of nurses then the experience was over 15 years. It was identified that the nurses who had attended additional training programs and workshops related to medication administration and antibiotic usage had a significantly higher knowledge compared to others ($p < 0.05$).

Conclusion: The nurses involved in this study were found to have an average level of knowledge in administration of intravenous antibiotics. In addition, this study suggested that the nurses who are working in intensive care units had a good level of knowledge compared to other units. Moreover, participants who had attended knowledge gaining programs in all units had a significantly higher level of knowledge compared to others.

Key Words: *Intravenous, Antibiotics, Administration, Resistance*

Administration of paracetamol syrup to children: Behaviours of parents in Kalutara district, Sri Lanka

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Introduction: Paracetamol is the commonest available analgesic and antipyretic. It is readily accessible from pharmacy and provisional shops. When administering paracetamol domestically to children deficient knowledge, malpractice and negligence may lead to many complications. Therefore, the aim of this study was to assess the parental behaviours on domestic administration of paracetamol to their children.

Methods: A descriptive, cross-sectional study was carried out among 130 participants who attended an outpatient clinic in Pelawatta area in Kalutara district, by using an interviewer-administered questionnaire. Convenience sampling method was used to recruit participants. SPSS version 20 was used to analyse data.

Results and Discussion: According to the results of the study, the majority of the participants (46.1%, n=60) administered paracetamol syrup as per the manufacturer's guidelines. Nearly, one in every seven parents (14.6%, n=19) administered paracetamol according to a previous prescription. Only 39.2% (n=51) calculated the dose according to the weight of the child. In addition, over two third (69.2%, n=90) of the sample used measuring cups to measure doses prior to administration. Majority of the participants (92.3%, n=120) followed the standard frequency while there were a few (6.9%, n=9) who administered paracetamol syrup eight hours.

Conclusion: According to the findings of this study, the majority of the respondents did not measure the dose of paracetamol syrup before administration to their children and practices were not ideal. Therefore, the demand for more advanced educational programs would be a need.

Key Words: *Behaviours, Parents, Paracetamol administration, Measuring dose*

A study on nurses' knowledge, attitudes and practices regarding infection control in district general hospital, Mullaitivu

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Introduction: Nurses are healthcare professionals whose duty is to help people get back to their normal lives and to protect patients from acquiring infections while hospitalized or while in a healthcare setting. By maintaining an infection-free environment, the patient's recovery will be promoted and high-quality nursing care will be delivered. Therefore, they should have a good level of understanding of the knowledge, attitudes and practices in infection prevention and control in healthcare settings. The aim of the study was to determine the knowledge, attitudes and practices of nurses regarding infection prevention and control.

Methods: A descriptive, cross-sectional study design was used to conduct this research. A study sample of 100 nurses was selected using a simple random sampling method. Data collection was conducted using a self-administered questionnaire which consisted of 43 closed-ended questions. The collected data was analysed using Microsoft Excel software.

Results and Discussion: Majority of the nurses (76%) believe that they had not received enough knowledge regarding infection prevention and control. Almost all the nurses (99%) had good knowledge regarding infection control and had a positive attitude towards it. Only 32% were practicing infection control methods frequently in their work and 80% stated that the main reason for the lack of practice was the lack of personal protective equipment (PPE) and other tools necessary for infection control. Majority of the nurses (63%) indicated that PPE were not always accessible. However, 24% of nurses indicated that they did not perform hand hygiene before or after direct contact with a patient.

Conclusion: In conclusion, despite the nurses being knowledgeable and having a positive attitude towards infection prevention and control, their practices were very poor. Hence, there were barriers to practice proper infection control methods and the main barrier identified was the unavailability of PPE. Therefore, the practice of good infection control can be improved by making PPE readily available for the nursing staff and educating and monitoring them for practicing infection control methods such as hand washing as this will benefit both the nursing staff and the patients.

Key Words: *Nurses, Hospital, Infection control, Knowledge, Practices*

Analysis of patient flow for magnetic resonance imaging at a private hospital in Sri Lanka

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Introduction: In the healthcare industry, especially in a radiology department, most of the problems occur from the ill managed patient flow and the given appointment times. A lot of patients have to wait for more than the expected time to do their magnetic resonance imaging (MRI) scans.

Methods: A descriptive, cross-sectional study design with quantitative data collection method was utilized. A simulation was conducted under ideal conditions to determine the time taken for each step. This simulation acted as a control to compare the subsequent results achieved with the study subjects. Patients with out-patient appointments for MRI scans were selected at random. The data sheet consisted of a demographic profile to be filled out by the patient. The type of MRI and the requirement for contrast medium was noted down. Each step of the patient process was noted down on the data sheet, and at each step: the time of arrival, the time of departure and the time elapsed was noted down by the staff at the counter. If there was a significant delay (compared with the control process) at a certain step, the reason was noted down by the staff. Data analysis was done by using descriptive and inferential statistical tests using Statistical Package for the Social Sciences (SPSS) software. Continuous variables were described using mean and standard deviation while categorical variables were shown with frequency distribution and percentages.

Results and Discussion: Patient arrival time pattern was highly stochastic with a mean arrival rate of 7±5.4 patients noted for one day. The peak arrival hour was 2.00 PM-05.00 PM and an average service time of 30 minutes was obtained. The overall mean waiting time in the system was calculated to be 102 minutes. The waiting time varied significantly with the arrival rate ($p < 0.05$).

Conclusion: A good patient flow management can be achieved in an MRI unit by adopting an optimal scheduling system and can result in reducing the patient waiting times in the unit. Patient flow analysis is a simple, low-resource tool useful in evaluating health delivery processes and identifying areas for intervention.

Key Words: *Magnetic resonance imaging, Radiology, Patient flow*

Attitudes and practices of self-breast examination among adult females in Wattala MOH area, Sri Lanka

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Introduction: Breast cancers can be detected early through self-breast examination (SBE). Early detection and early treatments increase the survival rate. Although breast cancers are preventable, it is the leading cause of cancer morbidity and mortality in Sri Lanka. The objective of this study was to assess attitudes and practices of SBE among adult females in Wattala MOH area in Gampaha district.

Methods: A descriptive, cross sectional study design was used in this survey done among 250, conveniently selected, adult females in Wattala MOH area in Gampaha District. Females who were unable to converse in Sinhala or English and who had cognitive impairments were excluded from the study. Data was collected by distributing a self-administered questionnaire and was descriptively analysed by using MS Excel.

Results and Discussion: Findings showed that the majority of the participants (67.2%, n=168) had never done SBE, whereas only 7.2% (n=18) of them did self-breast examination monthly and 18.4% (n=46) did occasionally. From the sample, 17.2% (n=43) of the participants were not doing SBE as they were afraid that it may reveal breast cancer and 12.8% (n=32) of them considered that they are healthy and do not need to perform SBE on themselves.

Conclusion: Most of the participants did not have good practices on performing SBE correctly and even though the majority of the participants had positive attitudes on self-breast examination, some didn't perform it thinking it may reveal breast cancer.

Key Words: *Breast cancer, Self-breast examination, Attitudes, Practices*

Assessing the awareness of obesity among undergraduate nursing students in a private educational institute in Sri Lanka

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Introduction: Obesity is one of the most prevalent forms of malnutrition in all around the world affecting both children as well as adults. Recent statistics reveal that obesity is the fifth leading cause of death worldwide. It is also identified as an important risk factor in the natural history of certain chronic, non-communicable diseases. Thus, the general objective of this study was to determine the knowledge and the attitudes regarding obesity among undergraduate nursing students in a private educational institute in Sri Lanka.

Methods: A descriptive, cross-sectional survey was carried out among nursing officers who are currently following a top-up degree at a private healthcare institute using a self-administered questionnaire. Data was collected from 154 participants, selected conveniently, after obtaining the permission from relevant authorities.

Results and Discussion: A total of 152 respondents completed the questionnaire with a response rate of 98.7%. Majority of the participants (70%) were females in the 31-40 years age group. Majority of the nurses (78%) had excellent knowledge regarding obesity and risk factors while none of them could be considered as having a poor level of knowledge. However, knowledge regarding complications was mostly average (60%). Furthermore, the majority of the respondents had excellent understanding regarding prevention of obesity (80%). Majority of them (80%) showed a positive attitude towards prevention of obesity and even 84.2% agreed with the statement “healthcare workers should be role models by maintaining normal weight”.

Conclusion: The study reveals that the participants have excellent knowledge regarding obesity, risk factors, and prevention. However, they only demonstrated an average level of knowledge regarding complications. Knowledge regarding complications would be an essential motivating factor when it comes to prevention of obesity and in turn, the complications themselves. Therefore, it is vital to include these factors into health education, refer to the internet to update knowledge and conduct in-service programs.

Key Words: *Awareness, Obesity, Nursing students, Sri Lanka*

Assessing risk factors leading to diabetic foot ulcers in K.Maafushi

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Introduction: Diabetic foot ulcers contribute significantly to the morbidity and mortality of patients with diabetes mellitus. The diabetic patients with foot ulcers require long hospitalization and they carry the risk of limb amputation. Diabetic ulcers have increased in number in Maldives due to many reasons such as lack of knowledge, poor financial settings, and lack of appropriate treatments. The objective of this study is to identify the risk factors leading to diabetic foot ulcers among diabetic populations in K.Maafushi.

Methods: A cross-sectional, descriptive study was done among patients attending a diabetic clinic. A pre-tested interviewer-administered structured questionnaire was used. Data was collected from 150 participants.

Results and Discussion: Majority of the respondents already diagnosed with diabetes mellitus (37.3%) were from the age group of 31–50 years. Moreover, most of the participants were females (53.3%), with O-Levels (47.3%), lived with their family (72.7%), unemployed (26%) and obese (40%). A majority had a history of diabetes for 3-5 years without any history of foot ulcer (74.7%). However, 22.8% of the respondents had symptoms of peripheral neuropathy. A majority of the respondents were wearing footwear regularly (76%) but avoided wearing tight shoes (68.7%). Furthermore, most of the respondents did wash their feet regularly (64.7%), did not dry well in between their toes (62%) and were not using any moisturizing cream afterwards (60%). In addition, a majority of the respondents (70.7%), had not read any hand-out regarding diabetic foot ulcers, and some even did not want to read one (56%).

Conclusion: Most of the participants in the study did not have any diabetic foot ulcers but were at a moderate-level of risk of developing one. The practices regarding avoiding diabetic foot ulcers seem not to be optimum. The attitudes among people with diabetes, on preventing diabetic foot ulcers, seem to require to be changed as well.

Key Words: *Diabetes mellitus, Foot ulcers, Risk factors, Practices, Attitudes*

Knowledge, attitudes and practices regarding iron-deficiency anemia among pregnant mothers in Mawanella MOH area, Sri Lanka

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Introduction: Iron-deficiency anaemia (IDA) is extremely common, reaching a state of global epidemic. Iron deficiency is a global nutritional problem affecting up to 52% of pregnant women. Iron deficiency during pregnancy is one of the leading causes of anaemia in infants and young children. Many women go through the entire pregnancy without attaining the minimum required intake of iron. This review aims to determine the knowledge, attitudes and practices regarding IDA among pregnant mothers.

Methods: Descriptive, cross sectionals study design was used to assess knowledge, attitudes and practices regarding IDA. A total of 111 pregnant mothers in Mawanella MOH area were conveniently selected as the study sample. Data was collected using a pre-tested, interviewer-administered questionnaire containing socio-demographic, knowledge, attitude and practice related questions. Knowledge was scored by coding the correct answers as one. Attitude questions were organized in a five-point Likert scale from strongly disagreeing to strongly agree using positive statements. Similarly, practices were assessed using dichotomous (yes/no) questions. Data was descriptively analyzed using Microsoft Excel 2013 using frequency tables, graphs and means.

Results and Discussion: A total of 111 mothers were interviewed with a mean age of 26.3 (SD=5.8y). Overall, 61% (95% CI: 52.6% to 69.5%) of pregnant women had a good knowledge on prevention methods of IDA. More than half (52.3%, 95% CI: 43.7% to 61.0%), had favorable attitudes towards prevention of IDA, while majority of pregnant women (58.6%, 95% CI: 50.1% to 67.1%), had poor adherence to preventive practices of IDA.

Conclusion: Even though knowledge and attitudes of pregnant women on prevention of IDA are satisfactory, they show poor practices towards prevention of IDA, which is the main contributing factor for high burden of anemia. There is the need for a focused, simple, easy-to-understand and a customer-friendly counselling service at antenatal clinic facilities.

Key Words: *Iron deficiency anemia, IDA, Knowledge, Attitudes, Practices*

Association between prevalence of hypertension and smoking among adults in Dhaal Bandidhoo, Maldives

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Introduction: Hypertension is an important health problem in the world. According to the literature, former smokers are at high risk for hypertension when combined with overweight or obesity. The aim of this study was to assess the prevalence of hypertension in relation to smoking among 30 to 75 years' old adults in Dhaal Bandidhoo, Maldives.

Methods: A cross-sectional, descriptive study was conducted to identify the prevalence of hypertension in relation to smoking among 30 to 75 years' old adults in Dhaal Bandidhoo. A total of 81 participants were approached conveniently and an interviewer-administered questionnaire was used to collect data from 01st of November to 05th of November 2019. Data regarding socio-demographic characteristics, history of smoking and attitudes were collected. Descriptive analysis was done using frequencies and percentages to identify the associations.

Results and Discussion: Majority of the participants (59.3%) belonged to a lower socio-economic level. Most of the participants (88.9%, n=72) were above 40 years and prevalence of hypertension was higher among females than in males. Half of the female participants were smokers and 91% of all male patients were smokers. Among all smokers, 66.7% were light smokers and 33.3% were heavy smokers. Over three fourth of the smokers (77.8%) had been smoking for more than 10 years. Results showed the majority (66.7%, n=54) of the hypertensive patients were smokers. This comprised 88.8%, (n=48) of past smokers and 11.1% (n=6) of current smokers.

Conclusion: The overall findings demonstrated a high prevalence of smoking among 30 to 75 years old adults in Dhaal Bandidhoo. Majority of the hypertensive patients were smokers and hypertension was more prevalent among people who have smoked for over 10 years. Further research needs to be carried out to find the reason for high prevalence of hypertension among females and presence of other risk factors in both genders. It is recommended to improve health promotion and tobacco control programs.

Key Words: *Hypertension, Smoking, Attitudes, Practices*

Assessment of the weight of pregnant mothers in a rural area, Meegahatenna divisional secretariat, Sri Lanka

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Introduction: Having a healthy balanced diet is important to maintain optimal health throughout life. For women of childbearing age, good nutrition is important to prepare the body for the demands of pregnancy. The nutritional status of pregnant women is very significant as it is through them and their children, the deleterious effects of malnutrition are transmitted to future generations. BMI is one of the measures that can be used to assess the effects of long-term poor dietary habits. Purpose of this study was to assess the pregnant mothers' weight in a rural area, Meegahatenna divisional secretariat, Sri Lanka.

Methods: Descriptive, cross-sectional study design was used. The study was conducted using a self-administered questionnaire and weight and height were measured by the researcher themselves. Convenience sampling method was used to recruit 120 mothers attending the maternal clinic in Meegahatenna divisional secretariat. BMI was matched against the normal ranges for pregnant females. Data was descriptively analysed using Microsoft Excel.

Results and Discussion: Majority of respondents belonged to the age group of 26-35 years (62.9%), Buddhists (87.6%), married (96.2%), and had an income range of 10,000 to 25,000 LKR (42.9%). Most of the respondents were expecting their second child (46.7%) and in their 13th gestational week (43.8%). The BMI of most of the mothers (61%) were within a normal range.

Conclusion: Nutrition plays a major role in maternal and child health. Poor maternal nutritional status has been related to adverse birth outcomes. According to the results, mothers had their weight within the recommended range according to the BMI calculations. Contribution of MOH clinics to improve maternal knowledge and attitudes regarding nutrition level among pregnant mothers are very important.

Key Words: *Maternal nutrition, Pregnant mothers, Rural area, Knowledge, Attitudes*

Barriers to provide quality nursing care in Atoll hospital, Mahibadhoo

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Introduction: The core operational area for the nurses is to avail adequate quality health services to the care seekers which would in turn be beneficial to the healthcare organizations as well. Facilitation of a quality nursing service is one of the crucial factors of mitigating health problems of the care seekers and this also helps in enhancing the future prosperity of the healthcare organizations.

Methods: A descriptive, cross-sectional study design was used to assess barriers affecting the delivery of quality nursing care. A sample of 30 nurses working in the Atoll hospital of Mahibadhoo was selected to obtain the data for the research through a simple random sampling method. The data was collected through a pre-tested, self-administered questionnaire. SPSS version 25 was used for data analysis.

Results and Discussion: Among 30 participants, the majority were male nurses (63%). A majority (33.3%) believed that the inadequacy of staff was the main reason behind failing to provide quality nursing care. Most of the participants believed that work structure (46.7%) is the main organizational factor affecting nursing quality, whereas some believed that resources (30%) would be the main factor. Over one third of the sample (36.7%) believed that personality is the main personal factor which would affect quality of nursing care in the hospital.

Conclusion: It was found that various organizational factors such as nurse-patient ratio, work structure, resource needs and work environment often pose a potential barrier for the nurses preventing them from providing quality healthcare support services. It has been perceived that the organizational factors in the Atoll hospital, Mahibadhoo, are the major barrier in delivering quality nursing care to the patients.

Key Words: *Nursing care, Quality, Barriers, Organizational factors*

Prevalence of overweight and obesity among adolescent school children in a government school in Kurunegala educational zone, Sri Lanka

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Introduction: The increasing prevalence of overweight and obesity in developing countries like Sri Lanka puts an enormous burden on the public healthcare system. It increases future risk of developing a range of other health problems, mainly non-communicable diseases. In addition, there are indirect economic and social consequences. Therefore, this study was done to identify the prevalence of overweight and obesity among adolescent school children in Sri Lanka.

Methods: A survey of a total of 150 students from grades 9 and 10 were conveniently selected from government schools Kurunegala educational zone, Sri Lanka. In addition to that, the height and weight of each student was measured using a calibrated and validated Stadiometer and a properly calibrated weight scale respectively in order to calculate the BMI. A pre-tested, self-administered questionnaire was used to collect all non-anthropometric measurements needed to assess the correlation with risk factors. Age and sex specific BMI charts, as denoted by the International Obesity Task Force, were used in the interpretation of obesity and overweight. Data was analysed using descriptive statistical methods and the chi-square test was used to analyse categorical variables.

Results and Discussion: Prevalence of obesity was 6% from the whole sample, from which 66% were males. Prevalence of overweight was at 18% from the whole sample, from which 51.8% were males. Overall, nearly one quarter (24%) of the school students were overweight or obese. A statistically significant association ($p < 0.05$) was found between BMI and the following risk factors, namely, family income, parents' education level, and the level of physical activity.

Conclusion: Study found a relatively high prevalence of overweight and obesity among 14-16 year old school children from an urban government school in Kurunegala education zone. Data confirmed a major emerging public health problem among those children. Thus, an educational approach on maintaining a proper BMI should be introduced much earlier to school children and their parents.

Key Words: *Overweigh, Obesity, Prevalence, Adolescents*

A study on the risk factors for gestational diabetes mellitus among pregnant mothers in Baddegama MOH area, Sri Lanka

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Introduction: Maternal glucose metabolism and insulin sensitivity change during pregnancy. Due to that, some factors make women more susceptible to develop gestational diabetes mellitus (GDM). GDM is associated with risk of fetal mortality and fetal macrosomia. Neonatal hypoglycemia, jaundice, polycythemia are also known as complications of GDM.

Methods: A descriptive, cross-sectional study was conducted using a pre-tested, self-administered questionnaire given to the pregnant mothers who attended the antenatal clinic in Baddegama MOH area. Data collection was done among a conveniently selected 160 pregnant mothers and data analysis was done using SPSS version 25.

Results and Discussion: Out of 157 pregnant mothers, GDM were pre diagnosed in 4%. All the participants were between 18-49 years and among them the mothers who were over 25 years of age had more risk factors for GDM, such as higher pre-pregnancy weight and body mass index and sedentary lifestyle in women of higher socio-economic status. Family history of diabetes mellitus has been reported to be associated with higher chances of developing GDM. In this study, a significantly higher per cent of women with GDM had a positive family history of diabetes mellitus.

Conclusion: The risk factors of a woman over 25 years of age developing GDM were higher than a woman below 25 years of age. Mothers with high educational levels had lower risk of developing GDM. There is an association between GDM and the socio-economic status of the participants, which could be related to multiple factors such as higher maternal age, higher pre-pregnancy weight, and sedentary lifestyle in women of higher socio-economic status. Family history of diabetes mellitus has been reported to be associated with higher chances of developing GDM as well. However, good mental health would reduce the risk for GDM.

Key Words: *Overweigh, Obesity, Prevalence, Adolescents*

Prevalence of anemia and associated factors among pregnant women attending antenatal clinic (ANC) in Mahaoya MOH area

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Introduction: Anaemia is a global public health problem that affects both developing and developed countries with major health, social and economic development consequences. It is defined as a condition in which there is less than normal level of haemoglobin (Hb) in the body which decreases the capacity of red blood cells to carry oxygen to tissues. Anemia is a major public health concern among pregnant women as well as it contributes to adverse foetal and maternal outcomes. The main aim of this study was to determine the prevalence of anemia among pregnant women in the Mahaoya MOH area, Sri Lanka, and to assess associated factors.

Methods: A descriptive, cross-sectional study was conducted among 120 pregnant women who were at their second or third trimester of pregnancy, who attended the antenatal clinic during September 2018 to July 2019. Information was gathered using a self-administered questionnaire, physical measurements and health records. Data was analysed descriptively using Microsoft Excel.

Results and Discussion: Overall prevalence of anemia was identified as 44.1% (n=53) by using a cut off haemoglobin level of <11g/dl (<33% Haematocrit). Out of all anaemic pregnant women, 71.7% (n=38) were mildly anaemic, 24.5% (n=13) were moderately anaemic and only 3.7% (n=2) were severely anaemic. History of excessive menstrual bleeding and history of recurrent miscarriages had significant associations with the prevalence of anemia (p <0.05). Furthermore, it was identified that although anemia was experienced by most individuals, the majority of them had a poor level of awareness regarding anemia (66.6%, n=80).

Conclusion: According to the findings of the study, a considerable percentage of mothers were identified of having anemia and majority of the mothers were identified of having poor level of knowledge regarding anemia and its associated factors. This emphasizes the need for continuous strengthening of interventions on correcting anemia and more advanced educational programmes on preventing anaemia.

Key Words: *Prevalence, Factors, Anemia, Pregnant women*

Factors affecting psychological stress among mothers of hospitalized children with dengue fever

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Introduction: Dengue is a rapidly rising health concern in tropical and subtropical countries where the world's population mostly resides and increases rapidly. This constitutes a substantial health burden on the population in Sri Lanka as well. When children are diagnosed with dengue fever, it creates a highly stressful environment to most parents. Awareness of those concerns allows us to minimize such situations and plan accordingly. The objectives of this study were to identify common parental stressors during their child's critical illness and to examine the relationship between demographic variables and the stressors.

Methods: A descriptive, cross-sectional study was conducted among 100 mothers of hospitalized children who were diagnosed of having dengue in the paediatric ward of National Institute of Infectious Diseases by using a self-administered questionnaire. Several categories were included in the questionnaire such as child-related factors, socio-economic factors, environmental factors and health professional-related factors to assess how each factor contributes as a stressor. Simple random sampling technique was used and Statistical Package of Social Science version 20.0 was used for the analysis of data.

Results and Discussion: It was identified that fear of the child's death (84%) and fear of the other siblings being infected with Dengue virus (84%) were the most commonly given answer regarding child-related factors. They were also worried about the unpleasant odours in the ward (56%). Considering the health professional-related factors, the mothers noted not getting enough explanation regarding insertion of IV lines (54%) as another major factor which would stress them. There were significant associations ($p < 0.05$) between the stressors and the mothers' age and occupation, child's age and number of days of hospitalization.

Conclusion: According to the findings of this study, a significant proportion of mothers were identified as having many psychological stressors. This emphasizes the need of professional and in depth training programs for healthcare providers on dealing with parents of hospitalized children.

Key Words: *Stressors, Mothers, Hospitalized children, Dengue fever*

Awareness and practices of mothers regarding first aid techniques used for basic domestic injuries Karapitiya, Sri Lanka

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Introduction: One of the most significant health problems during childhood is domestic injuries. Despite the fact that, domestic injuries are not considered as the leading cause of mortalities in the world wide, they contribute to the years of life and productivity loss, especially in young people. Home environment is the place in which about 50% of the injuries happen to young children. The main aim of this study was to assess awareness and practices among mothers regarding first aid techniques used for basic domestic injuries among mothers in Karapitiya, Sri Lanka.

Methods: A descriptive, cross-sectional study was conducted in which, conveniently selected, 118 mothers of children under 12 years of age in Karapitiya grama niladhari division were assessed using a self-administered questionnaire. Data gathered was descriptively analysed.

Results and Discussion: Out of 118 participants, majority (42.3%, n=50) had children between age 5 and 9 years, 25.4% of the participants (n=30) had children aged between 1 and 4 years and 16.9% (n=20) with children below 1 year. Only 15.2% (n=18) had children between ages 10 to 12 years. Majority of the participants (76.1%, n=90) had studied beyond A/L's, whereas 1.6% (n=2) had only studied up to grade 5. According to the findings of the study, majority of the participants had children who had cut injuries (93.2%, n=110) whereas some had experienced burns and scalds (16.9%, n= 20), fractures (8.4%, n=10) and even poisoning (2.5%, n=3). Findings showed that the general knowledge regarding first aid techniques was fairly good among mothers even though many were not putting that into practice. The level of knowledge regarding first aid was significantly associated with age and the educational level of mothers ($p < 0.05$).

Conclusion: According to the findings of this study, majority of the respondents had good knowledge regarding first aid techniques but did not have good practices. Therefore the demand for educational programs would be a need.

Key Words: *Domestic injuries, Knowledge, Practices*

A study on patient satisfaction towards quality of outpatient department services in a hospital in Matara District, Sri Lanka

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Introduction: A healthy population is a fundamental necessity for the growth and prosperity of a nation. This can only be achieved by providing quality healthcare services to the population. Quality patient care is the underlying principle of a country's healthcare delivery system. In healthcare systems, patients' perceptions is of utmost important to understand the relationship between quality of care and utilization of health services and it is considered as an outcome of healthcare delivery. The main aim of this study was to assess patient's satisfaction regarding Outpatient Department (OPD) services in a selected secondary care hospital in Matara district, Sri Lanka.

Methods: A descriptive, cross-sectional study was conducted among 250 patients who received treatments at the OPD of divisional hospital Weligama in Matara district. Sample was selected conveniently and a self-administered questionnaire was distributed among them. Data was analysed descriptively using SPSS.

Results and Discussion: Majority of the participants were satisfied regarding ventilation (62%, n=155), lighting facilities (73.6%, n=184), drinking water facilities (57.2%, n=143), and cleanliness of the environment (50%, n=125). There were 111 participants (44.4%) who were satisfied regarding the seating facilities and 98 (39.2%) were satisfied regarding the toileting facilities at the hospital. Only a few patients were strongly dissatisfied with the ventilation (0.8%, n=2), sitting facilities (5.6%, n=14) or toileting facilities (3.6%, n=9). Although few participants (3%) complained about the waiting time for the registration process and receiving medications from the pharmacy, the majority (62%, n=155) of them were satisfied regarding the services provided by doctors, nurses and other supportive staff.

Conclusion: It was found that majority of the respondents were satisfied with OPD services offered at divisional hospital Weligama. Most of the patients were satisfied with the hospital staff services, facilities and cleanliness of the hospital environment with only a few being dissatisfied regarding longer waiting time for the registration process and to get medicine from the dispensary. This evidence can be used to provide better facilities and develop a better public complaint handling procedure in Sri Lankan healthcare delivery systems.

Key Words: *Outpatient department, Services, Secondary care, Patient satisfaction*

Knowledge, attitudes and practices on hand hygiene among non-medical healthcare staff of general hospital Vavuniya

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Introduction: Effective hand hygiene is essential for reducing healthcare associated infections. However, compliance of healthcare workers to hand hygiene guidelines are reportedly poor. It is important, therefore, to instill adequate knowledge and good attitudes and practices at the time of primary training of the healthcare workers. This study was done to identify gaps in knowledge, attitudes and practices with a view to improve existing training programs and enhance good practices and working ethics in the future.

Methods: A descriptive, cross-sectional study was conducted among a conveniently-selected 100 non-medical healthcare staff members of Vavuniya hospital. A self-administered questionnaire was used to collect data from the participants and Microsoft Excel software was used to descriptively analyse data.

Results and Discussion: Study showed that a majority of the respondents (60%) had moderate knowledge and 85% of respondents recognized the importance of healthcare workers' hands hygiene to avoid cross transmission of harmful germs. However, interestingly, 30% said that the most frequent source of microorganisms responsible for healthcare associated infections came from the hospital environment while only 51% knew that microbes present on the patient was the main source of infection. While 81% said that hand hygiene before a clean aseptic procedure prevents transmission of infections, 65% agreed that hand hygiene before touching a patient was required to prevent cross contamination. Majority (61%) were knowledgeable on the importance of hand hygiene after immediate risk of body fluid exposure but 39% of respondents were not knowledgeable regarding the exposure to body fluids. Majority (70%) of the respondents had satisfactory knowledge on actions to prevent transmission of infections.

Conclusion: Healthcare assistants and cleaning service workers have a moderate-to-poor knowledge regarding hand hygiene. The study shows the need for further improvement of the existing hand hygiene training programs to address the gaps in knowledge, attitudes and practices. Furthermore, display of infection prevention notices, easy access to hand hygiene facilities at the training centres and active involvement of healthcare staff to emphasize the importance of correct hand hygiene would be beneficial.

Key Words: *Hand hygiene, Hospital-acquired infections, Healthcare workers*

Assessing dietary habits, exercise patterns and health status of nurses in a selected tertiary care hospital

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Introduction: Non communicable diseases (NCD's) are the leading cause of death worldwide. People become obese and overweight due to lack of exercise and unhealthy dietary habits. Various studies have reported that while performing their role, nurses face multiple occupational and personal stressors that may influence their ability to engage in regular exercise and maintain positive dietary habits. A Majority of the nurses also do not receive adequate sleep. This study assessed dietary habits, exercise patterns and health status of nurses in a selected tertiary care hospital in Sri Lanka.

Methods: This was carried out as a descriptive, cross-sectional study. A self-administered questionnaire with 35 closed-ended questions was used to gather data from conveniently selected 200 nurses. Demographic data, general dietary assessment, personal dietary assessment, exercise patterns and health status were considered. Data was descriptively analysed using Microsoft Excel 2010 software.

Results and Discussion: From the total of 200 nurses approached, 185 nurses (92.5%) completed the questionnaire. Majority of the respondents (65%, n=120) believed that breakfast is the most important meal and 92.5% (n=171) of the participants would usually have three meals per day, whereas 6.5% (n=12) of them had more than three meals. More than half of the nurses (52.4%, n=97) noted that they use two to three teaspoons of salt per day. The results showed that 86.5% (n=160) of the respondents had not participated in regular exercises. It was observed that 72.4% (n=134) stood for more than six hours during their working time. Analysis of sleeping patterns showed that 83.7% (n=155) of nurses sleep only 4-6 hours per day. Nurses suffered from back pain (41%, n=76) and other conditions such as hypercholesterolemia (28.1%, n=52), hypertension (22.1%, n=41) and diabetes mellitus (15.7%, n=29).

Conclusion: Less exercises and underlying NCDs are high among nurses, which is a major health concern. Study findings suggest that strategies and coordinated effort should be taken to reduce the risk factors of NCDs among nurses and to promote healthy eating habits and regular exercise patterns.

Key Words: *Dietary habits, Exercise patterns, Health status*

Assessing awareness and perception on childhood obesity among parents of students of Al Khoud primary school, Oman

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Introduction: Obesity is a vital problem, particularly among young children of various ethnic/racial backgrounds as it causes several lifelong comorbidities and many psychosocial burdens. Globally, the prevalence of overweight and obese children is rising and it has been observed that in certain ethnic groups, even less than half of parents recognize their children being overweight or obese. It is likely that the awareness on childhood obesity among parents in the Gulf region is quite poor. The aim of this study was to find parents' perception and level of knowledge on preventing childhood obesity in Oman, Alkhoud area.

Methods: A descriptive, cross-sectional study design was used to explore the parents' perception and level of awareness on preventing childhood obesity through a self-administered questionnaire. The BMI of the students was calculated using the CDC growth chart. A total of 100 parents of students between 6-11 years of age from the primary school-Al Khoud, Oman, were chosen through convenience sampling. Data was analysed using SPSS.

Results and Discussion: Majority of the parents (86%) agreed that food has great impact on maintaining a healthy weight while 70% of the respondents agreed that mostly exercising affects the body weight; however, it could be identified that they did not possess scientific knowledge regarding childhood obesity. Among the respondents, 78% were not aware regarding childhood obesity. Research revealed that 88% of them had no awareness as to what BMI is. Around 80% of the parents held beliefs such as the child's appearance will affect the family's social status.

Conclusion: Since it was evident that parents did not have awareness or healthy perceptions on childhood obesity, this study recommends the need to address the misbelief among the parents, provide proper and adequate awareness regarding childhood obesity, food behaviours and exercising in a scientific manner. Enhancing physical activity at schools through interventional programs and making facilities for children to exercise in the living societies by the government should also be looked into. These activities will help improve parents' perception and awareness on prevention of childhood obesity.

Key Words: *Childhood obesity, Parent's perception, Level of knowledge, Primary school*

Challenges and successes in teaching autistic students in mainstream classes

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Introduction: Autism can lead to severe communication and behaviour problems, which could have an impact on their education. The objectives of this research were to understand the barriers and successes in identifying autistic students, to find the advantages and challenges experienced in teaching autistic students in mainstream classes, and to assess the preparedness of the selected mainstream school in accepting and adopting students with autism.

Methods: A qualitative, exploratory study was done. Semi structured, in-depth interviews were conducted with parents of autistic students and the principal of the Arabic medium schools in Maldives. Furthermore, a focus group discussion with six teachers who teach autistic students in mainstream classes was conducted. The data was thematically analysed.

Results and Discussion: A total of four parents and the school's principal participated in the in-depth interviews. Additionally, a total of six teachers participated in the focus group discussion. The results indicated that autistic students need to be identified when they are mainstreamed. However, according to the principal of the school, teachers and parents, most of the time the autistic children are not being identified and teachers label them as misbehaving children. All the participants agreed that in order to give proper education for the autistic students, a professional or qualified teacher is a necessity. Participants expressed overcrowding of classes, curriculum, policies, teacher-to-student ratio and applying IEP method as barriers in teaching autistic students.

Conclusion: The findings of this study have led to the understanding that creating an inclusive learning environment is a complex task. According to the participants in this research study, significant progress has been made even though certain obstacles remain to be overcome before the school can be considered fully inclusive.

Key Words: *Autistic students, Mainstream, IEP method, Autism, Teacher*

**Awareness and practices regarding prevention of non-communicable diseases
among working adults in Western province, Sri Lanka**

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Introduction: Non-communicable diseases (NCDs) are the leading cause of death globally, when compared to all other causes combined, of which 80% of deaths occur in low-and middle-income countries. NCDs have been on the rise in the past two decades in Sri Lanka and at present, is the leading cause of mortality, morbidity, and disability. The present study aims to identify the level of awareness and practices regarding prevention of NCDs among working adults in a private company in an urban area of Western province of Sri Lanka.

Methods: A descriptive, cross sectional study was done among age 20 to 60 years', females and males working in a private engineering consultancy company, using a self-administered questionnaire. The questionnaire was distributed among all the staff and 125 responses were collected.

Results and Discussion: Almost all the participants (99%) had awareness regarding NCDs. Over 90% were aware regarding risk factors for NCDs, namely, excessive salt intake, higher levels of anxiety, fatty diet, reuse of cooking oil, and smoking tobacco whereas only about 65% of the participants were aware regarding the impact of alcohol, genetics, lack of exercise, and obesity on developing NCDs. Overall, 89% of the participants reported no engagement on exercises regularly and 74% have consumed alcohol and/or tobacco regularly. In addition to that, only 5% of the participants have done medical check-ups annually.

Conclusion: The results show that participants have a good level of awareness regarding risk factors of NCDs, even though practices on a healthy lifestyle are poor. It is important to carry out regular surveillance for NCD risk factors and programs on preventing NCDs amongst working adults need to be initiated.

Key Words: *Knowledge, Practices, Non-communicable diseases, Risk factors, Healthy lifestyles*

Sleeping habits and its perceived effects on day-to-day activities among teenagers studying in Olhuvelifushi school, Maldives

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Introduction: Sleep is crucial for the functions of the brain as certain important brain activities and body functions occur during the sleep. Sleep deprivation in teens can lead to different non-desirable health conditions, moods or effects on a teenager's life on a daily level, including low self-esteem, anxiety and even risk of depression. It can even contribute to other serious comorbidities such as heart attack, diabetes, high blood pressure, stroke in addition to obesity, depression, etc. Avoiding sleep can be harmful or can even be deadly, particularly if that person is engaged in activities such as driving. The present study was aimed at identifying the perceived effects of sleeping habits on daily activities among teenagers (aged 13-18 years) in Olhuvelifushi School in Maldives.

Methods: A descriptive, cross-sectional study was done among teenagers (aged 13-18 years) from Olhuvelifushi School in Maldives using a self-administered questionnaire. Questionnaire was developed through a literature survey of standard questionnaires. A 26-item questionnaire was distributed among 20 students of both genders between the ages 13 and 18 who are currently studying at Olhuvelifushi School. Participants were selected randomly through a database. The data was descriptively analysed through SPSS (version 20).

Results and Discussion: Majority of the students (90%) agreed that the lack of sleep affects their daily activities; however, 10% of the students did not share a similar view. Half of the students (n=10) stated that they received 7-8 hours of sleep and 30% received less than 8 hours of sleep. Majority of the participants expressed that they would feel irritable (70%) and difficulty concentrating during their normal sessions of classes the next day (85%) when they did not have enough sleep.

Conclusion: Lack of sleep can cause many psychological issues where they would be irritable and would lack focus. It can affect the daily activities and academic performances of the students.

Key Words: *Sleep, Teenagers, Mood disorders, Academic problems*

**Knowledge and practices of parents on oral hygiene of their children in Uhana
MOH area, Ampara, Sri Lanka**

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Introduction: According to World Health Organization, "oral health is a state of being free from chronic mouth and facial pain, oral and throat cancer, oral sores, birth defects such as cleft lip and palate, periodontal (gum) disease, tooth decay and tooth loss, and other diseases and disorders that affect the oral cavity". Level of knowledge and practices regarding oral hygiene among the parents of pre-school children plays an important role in maintaining good oral hygiene of their children. In Sri Lanka, sufficient research has not been performed on this area. Therefore, this study aimed to assess the knowledge and practices of parents on oral hygiene of pre-school children (3-5 years) who are attending pre-schools in Uhana MOH area in Ampara.

Methods: A descriptive, cross-sectional study was conducted among conveniently selected 50 parents of preschool children attending preschools in Uhana MOH area in Ampara using a self-administered structured questionnaire. Data was descriptively analysed and presented as numbers and percentages.

Results and Discussion: A total of 50 preschool parents participated in the study. Two third of parents (66%) perceived that the kid's oral hygiene is important; however, 52% were not satisfied with the level of information available regarding kid's oral hygiene. Over two third of the participants (65%) lacked adequate knowledge on which toothpaste is best suited for their child. Only a mere 12% of parents encouraged their children to brush teeth twice a day. Two major oral infections the children present with were mouth sores and dental cavities. Majority of parents (72%) expressed limiting sugar intake and acidic food is the best preventive method of dental related problems.

Conclusion: The study indicates that there is a lack in the knowledge and practices regarding oral hygiene among the parents of preschool children. Improving their awareness by means of awareness campaigns need to be considered.

Key Words: *Pre-schoolers, Dental hygiene, Uhana MOH, Oral health*

Assessing the awareness towards breast cancer among females aged 25-50 in Haliela MOH Area, Sri Lanka

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Introduction: According to the World Health Organization, nearly 1.15 million new breast cancer cases are being diagnosed every year and nearly half a million deaths are occurring annually due to this lethal disease. Diagnosis at an advanced stage of the disease contributes to the high mortality rate among women due to breast cancer. Aim of this study is to assess the awareness towards breast cancer among females aged 25-50 years in Haliella MOH area, Sri Lanka.

Methods: A descriptive, cross-sectional survey study was done to assess awareness on breast cancer among females aged 25-50 years in Haliella MOH area. A total of 150 females responded to the self-administered questionnaire, consisting of 25 questions related to awareness and practices on breast cancer and demographic details. Data were descriptively analysed using Microsoft Excel.

Results and Discussion: Among the 150 female participants, majority (38.7%) were within the age group of 36-40 years. Majority of the respondents had awareness regarding breast cancer, where 86% of the females knew breast cancer to be the commonest cancer in females. However, the awareness regarding risk factors for breast cancer was comparatively less (45.3%) and only 18% were aware about the screening methods for breast cancer. Even though only 14% of the respondents were aware regarding early symptoms of breast cancer, over two folds of that amount (30%) were aware regarding the treatments available for breast cancer. Only 14% of the respondents have performed breast self-examination (BSE) regularly, mentioning the reason as they do not have enough knowledge regarding BSE.

Conclusion: It is evident from the results that even though the awareness regarding breast cancer is reasonable, only a very less number of females perform BSE, due to lack of knowledge regarding the procedure. Health education programs need to be created to improve the awareness regarding the importance of BSE and early reporting.

Key Words: *Breast cancer, Awareness, Health education, Breast self-examination, Screening*

Knowledge and practices of self-administration of insulin among adult diabetic patients in Baddegama MOH area, Sri Lanka

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Introduction: Diabetes mellitus (DM) is a rapidly growing health concern around the world. Self-administration of insulin is a part of the medical management of DM in the domestic system. Likewise, this study aimed to assess the knowledge and practices regarding self-administration of insulin among adult DM patients in Baddegama MOH area, Sri Lanka.

Methods: A descriptive, cross-sectional study was conducted among DM patients who attended the diabetic clinic at Baddegama MOH areas in Sri Lanka. The study was done focusing on socio demographic details, knowledge on self-administration of insulin and an observational checklist to assess the practices of self-administration of insulin. Convenience sampling method was incorporated in sampling the population. Data was collected from 50 participants who were in the practice of injecting insulin. The data was descriptively analysed using SPSS.

Results and Discussion: Majority of the study participants were males (56%) and were above the age of 50 years (70%). Similarly, most participants had completed grades 6-11 (38%) and were self-employed. A large percentage of participants had been diagnosed with DM 7-10 years ago (42%) and had a family history of DM (72%). Almost all patients (96%) stated that insulin should be administered subcutaneously, in a random pattern (31%) and soon before meals (72%). When it comes to storage, 72% stated that it should be stored in a refrigerator or in a water mud flask and the vials should be inspected for colour changes and clumping before administration (34%). Furthermore, 62% put forth taking in sugar when signs of hypoglycaemia were experienced. In contrast, almost half of the patients did not know how to dispose of the used needles correctly (44%).

Conclusion: Following the results, it is understood that participants were aware of insulin administration techniques, signs of hypoglycaemia and storage. In contrast, participants remained uncertain with regards to the pattern of administration and correct method of needle disposal. It would be recommended that government initiatives be taken to promote educational sessions and advice healthcare workers to provide information covering all the aspects to patients.

Key Words: *Diabetes mellitus, Insulin, Self-administration*

Awareness and attitudes regarding needle stick injuries among nursing students of the school of nursing Jaffna, Sri Lanka

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Introduction: Needle stick injuries (NSIs) is defined as accidental skin-penetrating stab wounds caused by hollow-bore needles. This is the most common source of occupational exposure to blood and the primary cause of blood-borne infections (BBIs) among healthcare workers. More than 80% of the NSIs are preventable using safety devices and effective safety programs. Thus the objective of the study was to assess nursing students' level of knowledge regarding NSIs.

Methods: A cross-sectional, descriptive study was conducted among a conveniently-selected population of 155 nursing students from the school of nursing, Jaffna. Data was collected through a self-administered questionnaire containing questions on areas such as prevalence and frequency of NSIs, causes, safety precautions, and post-exposure management. Data was analysed using Microsoft Excel.

Results and Discussion: A total of 155 diploma-level nursing students participated in the study. Majority of the respondents were females (65.8%) and 34.2% were males. Moreover, 49.0% had an overall average awareness regarding NSIs. Likewise, more than half had a good awareness of the causative agents (54.1%). Similarly, many had good knowledge regarding infection transmission (50.3%), preventative measures for BBIs (61.9%) and follow up care (61.9%). In contrast, student nurses had poor knowledge with regards to immediate post-exposure management (8.3%), situations when post-exposure prophylaxis (PEP) should be sought out (47.0%), initiation of PEP (6.4%) and needle disposal (38.0%)

Conclusion: A satisfactory level of knowledge regarding causative agents, infection transmission, preventative measures for BBIs and follow up care was present. Contrastingly, knowledge was poor with regards to PEP and needle disposal. It is recommended that educational sessions, both practical and theory-based, be conducted to students to improve the levels of knowledge followed by a method of assessment of said knowledge. Likewise, stronger implementation of workplace guidelines would promote better practices among working healthcare professionals as well.

Key Words: *Needle stick injuries, Blood-borne infections, Post-exposure management, Safe needle devices*

Prevalence of primary hypertension and associated modifiable risk factors among adults in island Faafu Bilehdhoo, Maldives

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Introduction: Hypertension (HTN) is an important public health challenge worldwide. The prevalence of hypertension varies across countries. HTN is more prevalent among middle-aged and older adults. It is necessary to obtain valid information regarding the prevalence of chronic conditions like HTN and its predictors in different societies. Hence, this study was conducted to assess the prevalence of HTN and associated modifiable risk factors among middle-aged and older adults in island Faafu Bilehdhoo, Maldives.

Methods: A descriptive, cross-sectional study was performed among randomly selected, 207 adults (over 35 years old) residing in island Faafu Bilehdhoo. Simple random sampling was done using a list including details of residents. A checklist was filled by the researcher for each participant. Height and weight of participants were checked and blood pressure was measured thrice according to protocols for three consecutive days to diagnose HTN. Descriptive analysis was done using SPSS.

Results and Discussion: The prevalence of HTN in this population was 36.7%, out of which 56.9% were males and 43.1% were females. A total of 65 (31.4%) respondents who smoke were hypertensive. There was a positive correlation between obesity and prevalence of hypertension ($p < 0.05$). From the participants, who were diagnosed as having HTN, majority were either overweight (72%) or obese (26%). Most of the participants with HTN were either involved in vigorous physical activities (30.3%, $n=23$) or moderate physical activities (40.8%, $n=31$), whereas, 28.9% ($n=22$) were only involved in mild physical activity. Eating habits were unhealthy among few, where some consumed more than 6g of salt a day (20.3%), consumed processed food regularly (6.3%) and ate no fruits at all (6.3%).

Conclusion: There is a high prevalence of HTN among this population. There is a need for an island-wide HTN screening program. Long term solutions such as implementing lifestyle interventions should be of top priority. Policies targeting healthy lifestyle promotion through awareness building and adopting necessary changes in the environment are priority needs for islands like Faafu Bilehdhoo, Maldives.

Key Words: *Hypertension, Prevalence, Modifiable risk factors, Healthy lifestyle, Physical activities*

Support of staff nurses on clinical education of student nurses in a selected tertiary care hospital in Central province, Sri Lanka

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Introduction: Providing quality clinical exposure in a supportive clinical learning environment is a significant concern for educational institutions. Student nurses should get adequate support from staff nurses to enhance their clinical skills to provide quality patient care. Currently, there is no insight into student nurses' experiences on staff nurses' support for their clinical education. Hence, this study was done to describe the support given by staff nurses' for clinical education of student nurses in a selected tertiary care hospital in Central province, Sri Lanka.

Methods: A descriptive, cross-sectional study was done. A pre-tested, self-administered questionnaire was administered among conveniently selected 100 nursing students. Gathered data was descriptively analysed using Microsoft Excel.

Results and Discussion: Majority of student nurses were in their third year (50%) and agreed to have gotten support from staff nurses. Likewise, students stated that staff nurses in special units were the most supportive (50%) and 54% expressed that they were received well by staff during clinical placement. Moreover, 72% were satisfied with the orientation received for placement but the majority was not satisfied with the support given during clinical placement (46%). Furthermore, 77% stated that there was not enough time to practice within the clinical setting and 60% stated that there was not enough equipment present for practical learning. In contrast, first-year students had the most time to practice (41%) and be exposed to demonstrations (56%), second-year students had the most opportunity (54%), whilst third-year students had more equipment to work with (48%). Overall, 42% stated that they believed to have an average gain in skill level.

Conclusion: With regards to the study findings, the majority of the student nurses state that more focus and support should be provided to learning by nurses in the hospital setting. Certain year groups are exposed to elements that lack in others. Likewise, to balance this trend, it is recommended that hospitals implement orientation programs and rotational scheduling for members of staff to better attend to student nurses.

Key Words: *Student nurses, Clinical education, Staff nurses, Experiences*

Risk factors, comorbidities and complications associated with preterm birth in a secondary care hospital in Sri Lanka

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Introduction: Preterm birth is an important healthcare problem in Sri Lanka, with a significant contribution for neonatal morbidity and mortality. Preterm delivery is defined as a live birth that occurs at less than 37 completed weeks of gestation. The purpose of this study was to recognize the risk factors and comorbidities associated with preterm birth in a secondary care hospital in Sri Lanka.

Methods: A hospital-based, descriptive, cross-sectional study was conducted among 100 mothers with preterm babies at the neonatal intensive care unit and the postnatal ward of the district general hospital, Negombo. Self-administered questionnaires were distributed among the participants. Data was analysed and coded using Microsoft Excel software and SPSS software.

Results and Discussion: Majority of mothers (n=91) had singleton pregnancies whereas 9 had delivered twins. According to the data, pregnancies with antenatal complications were at a significantly higher risk of preterm delivery. Risk of preterm delivery was higher among mothers with pregnancy-induced hypertension (PIH), gestational diabetes mellitus (GDM) and intrauterine growth restriction (IUGR) (88%). Most of the mothers who delivered a preterm baby have done the delivery by a caesarean section (91%). Fetal distress was significantly common in preterm deliveries (59%). Neonatal jaundice and respiratory distress of the newborn were more frequent among babies born preterm (61%).

Conclusion: This study concludes that mothers with conditions such as PIH, GDM and IUGR are more prone to deliver the baby preterm. It can also be seen that complications of a preterm newborn could include respiratory distress, hypothermia, hypoglycaemia, jaundice, infections and feeding problems. Preterm delivery risks are increased among the mothers with a past history of miscarriages. More research should be conducted in multiple settings in the country with larger study samples.

Key Words: *Preterm births, Risk factors, Comorbidities, Complications*

**A study on awareness regarding oral cancer among adults aged 20-60 years in
Gampaha district, Sri Lanka**

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Introduction: Oral cancer is a huge concern in Sri Lanka as three people die each day due to oral cancer-related complications. Having awareness regarding oral cancers is essential for a healthy population. This study aimed to assess awareness regarding oral cancer among individuals between the ages 20 and 60 years in the Asgiriya area of Gampaha district in Sri Lanka.

Methods: A descriptive, cross-sectional study was done to assess awareness of oral cancer among conveniently selected 20-60 years old individuals from the Asgiriya area. A total of 120 participants were included in the study. An interviewer-administered questionnaire, consisting of 22 questions, was used to assess the awareness among the participants. Data was descriptively analysed using Microsoft Excel 2007.

Results and Discussion: From the total of 120 respondents, 62.5% (n=75) of them were males and 22.5% were between 20 and 30 years, 27.5% were between 30 and 40 years, 35.9% were between 40 and 50 years and 14.1% were between 50 and 60 years. The study showed that only 5% of the participants were aware about human papilloma virus (HPV), which is a major cause for oral cancer, whereas 95% of the participants were unaware of HPV. The study also showed that only 2.5% of participants had undergone screening tests whereas 97.5% had not participated for any screening tests.

Conclusion: The study concludes that there is very poor awareness of oral cancer among the participants. Therefore, health education programmes should be arranged appropriately with the association of the government sector in order to improve the awareness of oral cancer among the villagers. In addition to that, cancer screening tests should be conducted for the early detection of the cancer and improve the quality of life of the villagers.

Key Words: *Oral cancer, Cancer, Human Papillomavirus, Awareness*

Level of awareness on neonatal jaundice among expecting mothers in Kandy district, Sri Lanka

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Introduction: Neonatal jaundice (NNJ) is one of the leading causes of preventable brain damage, mental retardation, physical disability and premature death in infants. Lack of awareness among mothers on this condition could increase neonatal mortality and morbidity rates. This study was done to assess the level of awareness regarding recognition, cause, treatment and management of NNJ amongst expecting mothers in Kandy district.

Methods: A descriptive, cross-sectional research approach was used. A hospital-based, self-administered questionnaire was given to 250 expecting mothers aged 18 to 44 years for data collection. The participants were selected using convenience sampling. Data was analysed by Microsoft Excel.

Results and Discussion: A total of 230 (92%) pregnant mothers responded. According to the results, more than half of the respondents (58.7%) belonged to the age group of 25-34. The majority (57.4%) of the respondents had no other child, whereas 23.1% had two or more children. Majority (93.9%) of the participants were aware of NNJ from varying sources, however 6.1% had no health education received on NNJ. A majority of participants were able to correctly identify jaundice as yellowish discoloration of skin (85.2%) and correctly answered the awareness-related questions on jaundice (85.2%). Study also shows that 25-34 years' old respondents had a good level of awareness regarding management of NNJ rather than other age groups of respondents.

Conclusion: It could be identified that the overall awareness among the pregnant mothers on NNJ was average. It could also be identified that NNJ is better known amongst mothers with regards to its symptoms and treatment. It would still be recommended that health education programs, especially during the antenatal care period, highlight the importance of NNJ. In addition to this, it is vital that health education and information on the NNJ be provided to mothers to prevent the undesirable effects of the condition as well as the increase in mortality and morbidity rates.

Key Words: *Neonatal jaundice, Expecting mothers, Awareness, Yellowish skin*

Assessment of parental awareness regarding dietary needs of school-age children and practices at a leading private school in Sri Lanka

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Introduction: School-age children (5 to 12 years) are supposed to take a nutritious diet since they are in the highest energy consuming, active ages of their childhood. The dietary habits they are practicing during that period will have an effect on their health condition in future when they become adults. Parents play a major role in deciding a child's meal and therefore, they should have a good knowledge and healthy attitude regarding the dietary habits of their children. The aim of this study was to assess the awareness among parents regarding dietary habits of school-age children and their practices.

Methods: A descriptive, cross-sectional study design was used to assess the awareness among parents regarding the dietary habits of school-age children. A pre-tested, self-administered questionnaire was used to gather data from 100 individuals and the gathered data was descriptively analysed.

Results and Discussion: Most of the participants were aware regarding the correct amounts of fruits (99%), whole grain (92%) and vegetables (86%) children should consume and their awareness on the consumption of fatty foods (63%) processed red meat (57%) were average. However, most of the participants were not aware regarding the effects of each type of fat, namely, saturated fat (21%), unsaturated fat (20%) and trans-fat (10%). Considering the respondents' attitudes, most of them were considering child's preferences when preparing food (95%), presenting foods in an attractive way (94%), encouraging child to eat a wide variety of foods (51%) and encouraging child to try foods that the child hasn't tasted before (55%). However, the majority of the parents were giving sweet desserts to get the child to finish the main course (57%) and rewarding the child with take-away meals from fast food centres (54%).

Conclusions: According to the study, parents had good awareness regarding overall dietary needs among school-age children except for fatty food and fast food consumption. They had positive attitudes on dietary habits except for sweets and processed food consumption. Conducting awareness programmes for parents regarding healthy dietary habits could positively affect the health of children.

Key Words: *Dietary habits, Non communicable diseases, Obesity, Processed foods*

Attitudes of nursing officers towards usage of technology for nursing education

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Introduction: Technology has influenced every field and people all over the world. Today, the use of technology in nursing education has also increased. Because nursing students have access to online education, live and web-based simulations, apps and electronic textbooks on mobile devices would make nursing education more accessible. The goal of this study was to assess the attitudes of nursing officers towards usage of technology for nursing education.

Methods: A descriptive, cross-sectional study design was used to conduct this research. Simple random sampling method was used to select the study population of 120 female nursing officers in a female nursing quarter of the National Hospital of Sri Lanka. The data was collected using a self-administered questionnaire distributed among the participants. The data collected from the questionnaires was analysed using SPSS Software and Microsoft Excel.

Results and Discussion: All participants were female nursing officers. According to study results, most of the participants (65%) were aged between 28 and 32 years and only 3% of the participants were aged between 38 and 42 years or above. Only 11% of the participants were married. According to the results, all participants had access to an electronic device with smart technology where 73% of participants used smartphones, 18% used personal computers (laptop or desktop) and 9% used tablets. All of the participants agreed that knowing how to use new technology is a necessary skill and had positive attitudes towards the use of technology for their further education.

Conclusion: In conclusion, all the participants of the study had positive attitudes towards new technology as well as use of new technology in nursing education. All participants agreed that the ability to use new technology is an important skill. In conclusion even though all participants had positive attitudes towards new technology, some participants had difficulty in using it by themselves. Therefore, it is important to improve their ability to use new technology.

Key Words: *Technology, Education, Nursing education, Attitudes*

Perceptions of nurses regarding the barriers affecting provision of quality nursing care in a hospital in Mahibadhoo, Maldives

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Introduction: In context with nursing service, quality of care refers to the extent to which nursing services are provided to the care seekers to enhance their health status and to obtain the desired health-related outcomes. Availability of quality nursing care allows care seekers to receive essential healthcare support whilst alleviating negative aspects of their health in a time-efficient manner, all in all, making a significant contribution to the betterment of patient recovery. Likewise, this study aimed to explore the perception of nurses with regards to barriers affecting their nursing care practice.

Methods: A mixed-method study design was used to assess the perceptions of nurses regarding barriers affecting quality nursing care. A convenience sampling method was used in the study. Moreover, nurses were engaged in an in-depth interview process alongside a question guide targeting major concepts (factors affecting nursing quality, resources needed for service and job satisfaction within the nursing practice) of the research area. Data was collected until the point of saturation and thematic analysis was done on the data obtained.

Results and Discussion: Majority of the study participants were males (63.3%) and were 25-30 years of age (30%). Furthermore, 33.3% of the participants had mentioned that provision of staff is inadequate in terms of comprehensive skills although 33.3% were satisfied with the hospital management. Considering organizational factors, 46.7% stated working structure affects care whilst 36.7% stated that personality was a personal factor to be considered. In addition, three themes under the headings; factors affecting nursing care, resources needed, job satisfaction and nursing practices were identified. Firstly, it could be identified that sufficient social insurance structure was a fundamental asset for serving quality care. Secondly, the accessibility of human services was identified to be a significant asset. Lastly, it has been perceived by the nurses that because of the overwhelming number of tasks that are needed to be performed by a single medical attendant, they feel demotivated, leading to a higher turnover rate in hospitals.

Conclusion: Although nurses were satisfied with the management, expected areas of barriers were noted from the three themes. It would be recommended that diversification of the workload, bringing technologically-advanced equipment and integration of the internet of things (IoT) in healthcare practices to ease the workload for nurses, be considered for the reduction of nursing care barriers.

Key Words: *Nursing care, Quality, Perception, Barriers*

Knowledge and attitude regarding tuberculosis among general public in a rural area of Trincomalee, Sri Lanka

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Introduction: Tuberculosis (TB) is a potentially serious, but curable and preventable infectious disease caused by *Mycobacterium tuberculosis* bacterium that affects the lungs. It can be transmitted from person to person through air or via droplets. About one-quarter of the world's population has latent TB and they carry 5-15% lifetime risk of falling ill with TB. This study aimed to identify the knowledge and attitude of the general public of Trincomalee regarding TB.

Methods: A descriptive, cross-sectional study design was used to identify the knowledge and attitude regarding TB among the general public in a rural area of Trincomalee, Sri Lanka. A self-administered questionnaire was given to 150 conveniently selected villagers to collect data. The collected data was then descriptively analysed using Microsoft Excel.

Results and Discussion: Response rate for the self-administered questionnaire was 100%. A total of 65 participants (43.3%) had obtained only a primary education, whereas 11 participants (7.35%) had completed their tertiary education. From the respondents, 14 participants (9.3%) had never attended school. Majority of the participants (96%) have heard about TB and some were aware that TB is a communicable disease (88.7%) and that the causative agent of TB is a bacterium (38%). A number of participants perceived that they had poor knowledge (27.3%) or an average knowledge (58.0%). Only 22 respondents (14.7%) perceived that they have a good knowledge of TB. Majority, (64.7%, n=82) of the respondents had a negative attitude towards the disease.

Conclusion: The study shows that the knowledge regarding the cause, transmission and seeking care for TB among the general public is at an average level and majority of them have a negative attitude towards curability and cause and had negative feelings towards TB patients due to the social stigma.

Key Words: *Knowledge, Attitude, Tuberculosis, Mycobacterium tuberculosis, General public*

Factors affecting obesity and overweight and its prevalence among nurses in a selected private hospital in Gampaha district, Sri Lanka

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Introduction: Prevalence of overweight and obesity is increasing in various populations and is becoming a huge concern among occupational and professional groups worldwide. Nurses are in the frontline healthcare workforce and obesity has, therefore, become a global issue. The main aim of this study was to determine factors affecting obesity and overweight and its prevalence among the nurses in a selected private hospital.

Methods: This was a descriptive, cross-sectional study, conducted among nurses who were working in a private hospital in Gampaha district, Sri Lanka. A self-administered questionnaire was distributed among 93, non-pregnant, non-lactating nurses from all grades, and weight and height was measured in three random strata: wards, outpatient departments and special units. WHO guidelines were used to classify the body mass index (BMI) and data was analysed using Microsoft Excel and SPSS software.

Results and Discussion: The mean BMI of the subjects was 27.16 Kg/m². In detail, 25% (n=23) of nurses were obese, and 47% (n=44) were overweight. Prevalence of obesity and overweight is significantly low among unmarried nurses (16.13%, $\chi^2=8.26$, $p=0.02$). Further, obesity and overweight had risen with the number of pregnancies ($\chi^2=9.502$, $p=0.04$). The occupational factors such as working units and average hours of work were not significantly associated with the prevalence of obesity and overweight among nurses. Further, nurses who would go to sleep soon after the meal had a high prevalence of obesity and overweight (34.41%).

Conclusion: Every seven out of ten nurses working in the chosen private hospital were overweight or obese. Despite this, their marital status had an effect on the prevalence of obesity and overweight. The findings emphasise the stakeholders of the hospital to design obesity prevention programmes for nurses to enhance their wellbeing.

Key Words: *Obesity, Overweight, Nurses, Body mass index, Private hospital*

Assessment of adult patient's satisfaction on nursing care and associated factors at the district general hospital, Trincomalee

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Introduction: Nursing has been recognized as one of the most important services in the health sector in Sri Lanka. Patient satisfaction analysis is a key tool in evaluating the nursing care which will be received through hospitalized patients in the government sector and will help to estimate the nursing care required to reach the patients' maximum satisfaction. Therefore, the purpose of this study was to assess the level of patient satisfaction with nursing care among adult patients in a selected public hospital in Sri Lanka.

Methods: A descriptive, cross-sectional study design was used for this study. The sample was selected from medical and surgical wards of district general hospital Trincomalee according to quota sampling, selecting 100 male and 100 female patients of over 18 years from both the sections. Data collection was done through a self-administered questionnaire and data analysis was done using SPSS 22 Software. Chi Square test was done to identify relationships.

Results and Discussion: The sample consisted of 200 male and female patients (50% each), ranging from 18 years to 78 years. The mean age was 44.55 years (SD \pm 13.681) and the majority (42.5%) of the respondents aged between 46-60 years. Most of the respondents (60%) were highly satisfied with nursing care followed by 35.5% of respondents being moderately satisfied and only 1.5% of respondents being unsatisfied. The study also showed that there is no significant association between patients' satisfaction with gender, marital status, religion, type of admission, mode of hospital admission, type of illness, underwent operation, number of days stayed at the hospital or pain experience.

Conclusion: Patient satisfaction has become an important indicator to measure the quality of care rendered to the patients during hospitalization. This study was able to assess the levels of patient satisfaction with the nursing care they received. Moreover, the study showed that the overall patient satisfaction with nursing care was high. A multi-centre research needs to be done before generalizing the results.

Key Words: *Nursing care, Quality care, Patient satisfactions*

**Awareness and practices among the general public on managing polythene waste in
Dickella grama niladhari division, Sri Lanka**

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Introduction: Open, uncontrolled burning is by no means an environmentally sound option to dispose of waste plastics. The awareness among the general public is crucial in controlling the environmental effects of burning polythene or plastic waste. The main aim of this study was to assess the awareness and practice on home burning of plastic and polythene waste among householders in Dickella grama niladhari division.

Methods: This was a descriptive, cross-sectional study conducted among 153 householders of the Dickwella grama niladhari division in Kegalle district, Sri Lanka. A self-administered questionnaire was distributed among conveniently-selected female housewives between ages of 20 and 60. Further, the data collected was descriptively analysed using SPSS software.

Results and Discussion: According to the participants' opinion regarding home burning polythene and plastic waste and other waste, majority of them were concerned regarding the harmful effects on the environment (40.5%, n=62) and on human health (29.4%, n=45). Majority (60.8%, n=93) were in agreement that the media has raised their awareness regarding harmful effects of home burning polythene and plastic waste. Majority of the participant householders (43.8%, n=67) stated that television was more effective in improving their awareness. However, the respondents stated that they would dispose of polythene and plastic waste by burning (51%), digging a hole around the house (32.7%), or throwing them on an open space or street (3.3%). In addition to that, the majority (86.9%, n=133) believed that their waste disposal method would not pollute the environment.

Conclusion: Research findings show that the majority are aware regarding harmful effects of improper management of polythene and plastic waste. However, overall practices regarding waste management at home are not adequate. Proper public awareness needs to be made, which will gain a positive impact on future waste management activities.

Key Words: *Waste management, Air pollution, Polythene, Plastic*

Knowledge and practices of breast self-examination among women in Badulla, Sri Lanka

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Introduction: Breast cancer has been considered as a primary cancer form that affects women worldwide. Breast cancer is the result of uncontrolled growth of cells where these cells, that group out ordinary cells, make a lump which can lead to health hazards. The aim of this study was to evaluate the knowledge and practices related to breast self-examination (BSE) among women in Badulla.

Methods: A descriptive, cross-sectional research study was followed. A close-ended questionnaire on breast cancer signs and symptoms and screening methods was distributed in both Sinhala and English languages among 100 women of age between 30 and 60 years in Badulla district, Sri Lanka. Convenience sampling method was used in selecting the participants. The collected results were analysed using EPI software (version 3.3.2).

Results and Discussion: Among the participants, majority (68%) were in the age group of 40-50 years. Out of the 100 respondents, 91% were able to define BSE as a primary tool of breast examination and 64% indicated that BSE was supposed to be initiated as soon as a woman starts menstruating and should be done monthly, 1-7 days after menstruation, although 72% of the respondents lacked knowledge on how to perform BSE method. However, 64.5% of respondents did not conduct BSE for the fear of detecting breast lumps in their breasts.

Conclusion: The study confirmed that theoretical knowledge does not necessarily or automatically indicate good practice. There is a need for practical demonstrations followed by return demonstration to assess whether women are able to do BSE correctly and regularly. The findings demonstrate the gap between knowledge and practice which needs to be corrected to improve health promotion through BSE. Moreover, the study emphasized that knowledge is not determined by area of residence, age or level of education; therefore, when giving health education, all women should be properly informed on how to practice BSE.

Key Words: *Knowledge, Breast cancer, Breast self-examination, Practices*

**Knowledge and practices about waste management among households in
Ambanpitiya grama niladhari division, Kegalle, Sri Lanka**

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Introduction: Solid waste management has attracted the attention of various environmentalists, social scientists, planners, administrators, academicians and a number of researchers. This study was conducted to identify the knowledge and practices of housewives on waste management at their households.

Methods: A descriptive, cross-sectional study was followed to assess the knowledge of waste management of housewives and their attitudes towards waste management protocols taken. A self-administered questionnaire on household waste management methods and knowledge on proper practice of waste management was distributed among 153 housewives in the Ambanpitiya grama niladhari division in Kegalle district. Information gathered was analysed using SPSS 22 software.

Results and Discussion: Majority of the participants were in the age group of 35-50 years. It was identified that out of 153 housewives, 50.3% of them had stored waste in an appropriate manner, whereas 49.7% of them did not even have proper waste disposal bins and used their household environment to dispose. Many of those who stored waste properly (45.8%) had also transferred their household waste to the government waste contractor. It was also identified that the 24.2% of those housewives, who did not dispose of waste properly, used plastic bags as an alternative for the bins.

Conclusion: While considering the research findings regarding waste management practices, the majority of the housewives were aware and did practice the correct methods of disposing waste at home but some of them lacked adequate knowledge and practices on their waste management principles. A lack of public awareness had been the root cause to the results identified where the housewives' educational levels played a part in their attitudes. To ensure proper knowledge being given to those housewives, waste management workshops and awareness programs should be conducted.

Key Words: *Knowledge, Waste management, Pollution, Practice, Environment*

Assessing the factors affecting work-life balance (WLB) of nurses in a hospital in Dambulla, Sri Lanka

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Introduction: Work-life balance (WLB) is an important topic in both professional business practices and academic research. WLB is the relationship between employees' personal life and the total working environment. Nurses are the largest group of employees in healthcare. WLB in the nursing profession is an important factor for the delivery of quality healthcare to patients. This study aimed to examine WLB and its related factors among nurses in a hospital in Dambulla.

Methods: A descriptive, cross-sectional study was followed in conducting the research to identify the aspects of WLB and factors that can affect it, such as age, gender, and marital status. A closed-ended questionnaire was distributed among 100 conveniently-selected nurses between the ages of 20 and 60 years with a work experience of over 3 years. Gathered data was analysed using Microsoft Excel software.

Results and Discussion: In the study, 80% of the participants were males and 20% were females. 58% of the participants were unable to balance work and personal life. It was also noted that 37% of female nurses have had the privilege of obtaining support from their families whereas 5% have stated that their families were unsupportive. Majority of the nurses (55%), both male and female, stated that they have been able to spend quality time with their families amidst the work schedule, with the majority spending 6-12 hours with families. In terms of managing stress levels, it was noted that 98% of the respondents had no time to partake in physical exercises or in any stress management activities.

Conclusion: Overall, the results show that there are many factors which impact on a person's social life as well as personal life. Hospital authorities should implement family-friendly approaches to encourage nursing staff to balance their work-family life. Dissatisfaction among nursing staff can be reduced by providing an attractive system of rewards and recognition of good work and improving the working environment which will improve the quality of work life.

Key Words: *Well-being, Work-life balance, Environment, Healthcare*

Nurses' knowledge, attitudes and practices regarding pressure ulcer prevention of hospitalized patients

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Introduction: Pressure ulcers are a common problem in healthcare settings and pose a significant burden on patients, relatives as well as caregivers. Patients who develop hospital-acquired pressure ulcers have a higher rate of mortality. Nurses would require good knowledge, attitudes, and practices to prevent pressure ulcers. The aim of this study was to evaluate nurses' knowledge, attitudes, and practices regarding pressure ulcer prevention at general hospital, Nawalapitiya, Sri Lanka.

Methods: A descriptive, cross-sectional study was conducted among 75 nurses who worked at surgical wards in general hospital Nawalapitiya. Convenience sampling method was used and data analysis was done through Microsoft Excel software.

Results and Discussion: All the respondents (n=75) had more than six months' work experience. From the respondents, 93% had knowledge regarding pressure ulcers, where 72% of the participants had studied international guidelines regarding prevention of pressure ulcers. Majority of the participants (93%) believed the nurses are responsible for pressure ulcers. Nearly two third of the population (64%) believed correct healthcare techniques are more important to minimize pressure ulcers. Furthermore, 89% of the participants had given care to patients with pressure ulcers.

Conclusion: This study concludes that, overall, nurses had a good level of knowledge. Majority of the participants had positive attitudes towards pressure ulcers and good practices on prevention of pressure ulcers. It is recommended that nurses should have more knowledge regarding pressure ulcers. Nurses should have further education, top up courses and training programs regarding pressure ulcer prevention in order to enhance their knowledge, attitudes and practices of care in this field.

Key Words: Pressure ulcers, Prevention, Knowledge, Attitudes, Practices

A study on factors affecting job satisfaction of nursing officers at the district general hospital Mannar

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Introduction: Job satisfaction can be described as the level of contentment employees feel with their job, which goes beyond their daily duties to cover, satisfaction with team members/managers, satisfaction with organizational policies, and the impact of the job on their personal lives. In the profession of nursing, job satisfaction has supreme importance, as they will perform better which ultimately affect the condition of patients. The aim of this study was to assess the factors affecting the job satisfaction of nursing officers in district general hospital, Mannar.

Methods: A descriptive, cross-sectional study was conducted in which 111 nursing officers from Mannar district general hospital were selected through convenience sampling method and assessed by using a self-administered questionnaire. Statistical package of social science version 20.0 (SPSS) was used for the analysis of data.

Results and Discussion: Overall, job satisfaction was not satisfactory and it was identified that several factors such as salary, availability of quality equipment and promotion system can have a great impact on nurses' job satisfaction. Majority 51.3% (57) of the participants reported that they are satisfied with the salary they are being paid but most of them were not satisfied with the existing amendment of practices (59.4%, n=66), quality of the equipment they have to work with (50.4%, n=56), and promotion system of nursing officers (51.3%, n=57).

Conclusion: This study concludes that the majority of nursing officers are not having optimal job satisfaction due to various external factors. Job satisfaction is one of the vital key factors for the employer, employee and service receiver. If the employer is not happy, the overall goal of the institution or the company will not be achieved. Therefore, further studies on this should be conducted and these evidences should be used to develop the nursing profession in Sri Lanka.

Key Words: *Factors, Job satisfaction, Nursing officers*

Assessment of occupational stressors of nurses in intensive care units of a government hospital in Colombo district, Sri Lanka

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Introduction: Stress is a normal physical reaction to an internal or external pressure that is placed on a person's system. Extended periods of stress can cause destructive changes in the body such as depression, heart diseases and various other medical problems. Out of many groups who are affected by such emotional states and disorders, medical staff, especially the intensive care unit (ICU) staff comprise of an important group because of the unique environment in which they work. The mental health of ICU staff is not only of concern to them but also to the larger society served by them. Aim of this study was to assess the occupational stressors of and coping strategies used by ICU nurses in a government hospital in Colombo district.

Methods: A descriptive, cross-sectional study was conducted among a conveniently-selected 144 staff nurses working in four different ICUs in a government hospital in Colombo district. A self-administered questionnaire was used to collect data and Microsoft Excel software was used to analyse.

Results and discussion: According to the study, 47% of the respondents were working in the hospital for over 10 years, and 94% of the respondents were educated up to the Diploma level. Out of the respondents, 74% stated that they have not received any ICU-specific training. Majority of the respondents (79%) stated that lack of time is a major factor contributing to their mental stress, and 62% of the respondents stated that lack of technological knowledge is also contributing towards increased mental stress.

Conclusion: Stress may be the result of an individual's interaction with the environment. However, poor working conditions such as high workloads, shift work and experience of aggression at work are stressors to nurses. It would be better if the hospital management can implement workshops on stress management to the nursing staff in order to cope with their work stress. These measures will enhance and promote the mental health of the nurses.

Key Words: *Stress, Nursing staff, Management, Stressors*

Prevalence and risk factors of varicose veins among nurses

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Introduction: According to the Sri Lankan system, nurses have much tighter schedules for work than many of the developed countries in the world. One of the main reasons for the prevalence of varicose veins among the nurses is their long working hours, especially standing. Most nurses are affected by varicose veins due to long hours of working and standing. Aim of this study was to assess the prevalence and risk factors correlated to varicose veins among undergraduate nursing students in a private healthcare institute.

Methods: A descriptive, cross-sectional study was designed to find out the prevalence and risk factors correlated with varicose veins among undergraduate nursing students following a bachelors program. Study group consists of 150 undergraduate nursing students in different age groups, who were working for more than 5 years in different hospitals in Sri Lanka. A self-administered questionnaire was used to collect data and data was analysed by Microsoft Excel software.

Results and Discussion: According to the analysed data, 34% of the participants stated that they currently have varicose veins and 60% of the participants stated that they have a family history of varicose veins. Majority of the participants (83%) stated that during their working hours, they would stay for more than six hours standing regularly. Majority of the participants (93%) believed that prolonged standing during working hours may be one of the biggest risk factors for varicose veins. Furthermore, 65% of the respondents believed that age and BMI would further increase the risk of development of varicose veins.

Conclusion: This study arrived at a valued conclusion on the risk factors and prevalence of varicose veins among undergraduate nursing students. It is important to use preventive methods and reduce risk factors. Regarding this case, newly appointed nurses can give attention to these risk factors and avoid those. The Sri Lanka government needs to consider establishing facilities to minimize nurses' heavy work schedule.

Key Words: *Varicose veins, Prevalence, Nursing students, Risk factors*

A study on awareness among mothers regarding neonatal danger signs

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Introduction: Parenthood of a new life is a responsibility for protection and crucial for the health and safety of a newborn, without a less-developed immune system. As the symptoms of illness in a newborn baby are difficult to recognize, mothers always need to stay alert. The majority of parents lack awareness regarding how a sick baby reacts as compared to a healthy baby, as they lack experience in recognizing what are normal signs and what is unhealthy. Therefore this research was carried out to understand the degree of awareness of neonatal danger signs among mothers attending postnatal clinics.

Methods: A descriptive, cross-sectional study was conducted among a conveniently-selected 150 mothers with a child below six months. They were recruited from a post-natal clinic in a government hospital in Malabe, Sri Lanka, and were assessed by using a structured, pre-tested, self-administered questionnaire. Statistical package of social science version 20.0 (SPSS) was used for the analysis of data.

Results and Discussion: From the study sample of 150 participants, age category 25-29 years represented the highest number of participants which was 130 (86.6%). Majority had studied up to G.C.E A/L (80%, n=120) and most of the participants were housewives (90%, n=135). Majority of the mothers (69.3%, n=104) mentioned that they received health education related to neonatal danger signs when attending antenatal sessions in the antenatal clinics but most of them (74.6%, n=112) were noted to be having poor awareness on identifying neonatal danger signs and there was a significant association between awareness and educational level ($p=0.0000$).

Conclusion: Despite the expanded coverage of maternal and child care services, many mothers have limited awareness about neonatal danger signs which can cause the neonates to get delayed care. Mothers who had formal education and those who had postnatal care follow-ups were more likely to have good awareness regarding neonatal danger signs. Therefore, educating women can help tackle the effects of neonatal danger signs that indicate an abnormal health condition which ends in severe consequences.

Key Words: *Maternal, Awareness, Neonatal, Danger signs, Child welfare clinics*

Knowledge, attitudes and practices on healthcare waste management among janitorial staff in selected teaching hospitals in Colombo district

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Introduction: Healthcare waste management (HCWM) can be described as the management of waste produced in hospitals by using different techniques that will prevent the spread of diseases. It is considered as a vital component in any hospital management system as improper HCWM poses a great threat to humans and the environment that they live in. As janitorial staff members are involved in disposing the waste, they should have adequate knowledge, practices and attitudes regarding HCWM in order to control adverse consequences related to HCWM. The aim of the study was to assess knowledge, attitudes and practices regarding HCWM among janitorial staff members.

Methods: A descriptive, cross-sectional study was conducted among a conveniently selected 200 janitorial staff members of selected teaching hospitals in Colombo district, Sri Lanka. A pre-tested, self-administered questionnaire was distributed among them and gathered data was descriptively analysed using statistical package of social science version 20.0 (SPSS).

Results and Discussion: From the study sample of 200 participants, the majority were males (67.5%, n=135) in the age category of 35-45 years (42.5%, n=85). Majority (70%, n=150) were identified as having optimal knowledge regarding colour codes and the segregation process of healthcare waste, yet only 85 respondents (42.5%) showed adequate knowledge on sharp waste management. Most of the participants (70%, n=140) were identified as having good practices related to segregation and disposal of healthcare waste. Although the knowledge and practices were at a satisfactory level, a considerable amount of participants (42.5%, n=85) had negative attitudes regarding waste management.

Conclusion: Health education programs targeting janitorial staff members on HCWM would aid minimize adverse health and environmental consequences of improper HCWM in hospital settings. Proper prior training programs on HCWM should be developed and conducted for janitorial staff members and such programs would aid to improve practices regarding HCWM among janitorial staff members.

Key Words: *Hospital, Waste management, Knowledge, Janitorial staff, Sri Lanka*

A study on the factors associated with underweight among children under five years in Elpitiya MOH area: Mothers' perspectives

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Introduction: A child's weight is a key factor in their development both intellectually as well as physically. Being underweight can impair a child's growth. Body weight is an essential measure in terms of maintaining good health. Underweight under five-year children are a timely recognized major health problem in both developing and developed countries. The aim of this study was to examine the factors associated with underweight among under five years' old children.

Methods: A descriptive, cross-sectional study was conducted using a pre-tested, self-administered questionnaire. A total of 150 mothers with children below five years were selected from the Elpitiya MOH area for the study through convenience sampling. All participants for the study participated voluntarily. Data was descriptively analysed using Microsoft Excel.

Results and Discussion: Only 132 mothers (88%) responded to the questionnaire. Nearly one third of the participants' (32%) children were born with low birth weight. Majority of the participants (83%) have fed their child only breast milk during the first six months of age and 51% of the participants were used to feed their child less than five times a day. In addition to that, 14% of the participants had several misconceptions regarding factors affecting nutritional status of their children.

Conclusion: It could be concluded from the study that mothers' knowledge and practices regarding weaning and diet frequencies could be considered as a factor affecting their children being underweight. Misconceptions among mothers and principal caregivers might also affect the children of below five years being underweight. Providing health education is the appropriate way to improve the mothers' knowledge regarding underweight problems and to change attitudes and improve practices.

Key Words: *Underweight, Children, Mothers, Perspectives, Associated factors*

Barriers perceived by nurses in prevention of DVT among surgical patients in a private hospital in Kurunegala

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Introduction: DVT is a life threatening condition. Incidence of DVT among surgical patients is highly rated even though it can be reduced by just proper care after surgery. Increased number of DVT cases is highly due to lack of knowledge and poor practices among healthcare providers, especially nurses as they are the ones mostly taking care of the patients. Therefore, the nurses' involvement is crucial for prevention of incidences of DVT. Thus, this study was conducted to assess the barriers faced by nurses in prevention of DVT among surgical patients in a private hospital in Kurunegala.

Methods: A descriptive, cross-sectional study was conducted among 180, conveniently-selected, nurses working in surgical units of a hospital in Kurunegala district. A self-administered questionnaire was used as the study instrument and data was descriptively analysed using Microsoft Excel.

Results and Discussion: The respondents consisted of 93.3% (n=168) of female nurses and majority had a diploma as their highest qualification in nursing (78.9%). Most of the nurses had over five years of experience as a nurse (57.2%). Respondents worked in different sections, namely, surgical ward (38.9%), surgical intensive care unit (14.4%), Operation Theatre (31.1%), orthopaedic ward (3.9%) and accident service unit (11.7%). Only one third (32.7%) had a good level of overall knowledge regarding DVT; the condition, causes, physical identification and investigations, and preventive measures. However, 48.9% of the nurses had excellent practice. Many of the nurses (80%) mentioned lack of support from the patient as the main barrier for prevention of DVT.

Conclusion: The level of knowledge and practices on prevention of DVT among nurses is not at a satisfactory level. There could be many other barriers hindering effective management of DVT, such as lack of experience, lack of time or lack of interest for continuous professional development (CPD), and not being very competent in handling information technology. Doing further studies to understand the exact needs of the health system and organizing CPD programmes is a current need in the country.

Key Words: *Nurse, Knowledge, DVT prevention, Surgical patients, Continuous professional development*

Knowledge on sexual health and contraception among male students in a private educational institute in Sri Lanka

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Introduction: Annually, thousands of students enter universities from various regions of the island, different socioeconomic groups as well as from different ethnicities and religions. As most of them are young and active people, they all enjoy their freedom in university life alongside studies. Universities create favourable and secure environments for students' desires, beliefs, fantasies and practices. Opportunity for engaging in sex-related activities is not rare in universities. Purpose of this study was to assess the level of knowledge on sexual and reproductive health (SRH) and contraception among male students in a private educational institute in Sri Lanka.

Methods: This descriptive, cross-sectional study was conducted among first-year male students in a private educational institute in Malabe area. Sixty students were conveniently selected and data was collected by using a pre-tested, self-administered questionnaire, which contained questions on socioeconomic and family characteristics and many dimensions of SRH, such as knowledge regarding signs of secondary sexual characteristics, issues related to puberty, sex and reproduction, sexually transmitted diseases, and contraceptive methods.

Results and Discussion: Most of the students had adequate levels of knowledge regarding SRH, where 76.7% of the respondents scored high and 23.3% of the participants were at a satisfactory level. Knowledge regarding common contraceptive methods was relatively less compared to the knowledge on SRH, where knowledge regarding contraceptive methods was mainly at a satisfactory level (91.7%) with only 3.3% scoring high. Attitudes toward the SRH and contraception were favourable.

Conclusion: It is better to educate the students more on human sexuality, to improve good knowledge and attitudes regarding safe sexual behaviours. It is better to have an extended curriculum on sexual matters in schools and universities for all the students.

Key Words: *Sexuality, Puberty, STD, Contraceptives, Reproduction*

Assessing the parents' awareness and practices on administration of paracetamol for children below 12 years

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Introduction: Paracetamol (also known as acetaminophen) is a well-known medicine, commonly used to relieve pain and control fever. Paracetamol is considered to be an essential medicine in a basic health system by WHO. The aim of this research was to assess the parents' awareness and practices on administration of paracetamol for their children.

Methods: A descriptive, cross-sectional study was done among parents of children below 12 years. A pre-tested, self-administered questionnaire consisting of 32 open-ended questions was given to a randomly selected 120 mothers. Data was descriptively analysed using SPSS software.

Results and Discussion: Out of 120 mothers approached, 80 responded to the given questionnaire (66.6%). Majority of the participants were between the ages of 31 and 40 years (67.5%, n=54) or 41 and 50 years (25%, n=20). All of the participants used paracetamol as the first choice of antipyretic in case of fever. Most of the participants used liquid paracetamol (62.5%, n=50). It was noted that only 8.75% (n=7) of participants followed the correct dosage when administering paracetamol. Majority (75%) administered paracetamol six hourly while some did five hourly (19%) or even four hourly (6%), despite most of the respondents were aware of the frequency of paracetamol dose as four times a day (69%) or the rest thinking it as three times a day (31%). Many (70%) were not aware of the strength of paracetamol suppository.

Conclusion: According to the result, most of the parents did not have sufficient awareness or practice to calculate the correct dose of paracetamol for their children's weight and age. Also, most of the parents were not aware of the overdose of paracetamol. Parents should be taught how to select paracetamol preparation, how to store paracetamol and how to calculate the dose of paracetamol based on body weight or age.

Key Words: *Paracetamol, Antipyretic, Analgesics, Drug overdose*

Assessing dietary habits and BMI among advanced level students in Monaragala district, Sri Lanka

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Introduction: Dietary habits contribute to overall health and wellbeing of young people, especially for their growth and cognitive development. The prevalence of obesity also has increased in the South Asian region during the last decade. However, dietary and lifestyle factors associated with obesity in Sri Lankan adults are unclear. Poor dietary habits are most likely to be acquired during the school education period and in this case, BMI can be utilized as a good indicator of obesity. The aim of this research was to assess the dietary habits and BMI among advanced-level students.

Methods: A cross-sectional, descriptive study design was utilized to collect data from 200 advanced-level students, aged between 17 and 20 years in Monaragala district, Sri Lanka. An individual administrative questionnaire consisted of questions based on their dietary habits according to gender, age and BMI. The collected data was analysed using SPSS software.

Results and Discussion: Majority of the participants were female students (54%), under 18 years old (56.5%). Over one third of the respondents (39%) were in the risk group of BMI of over 25 kg/m², where 56.4% of them were females. Over half of the respondents (55%) consumed fast food for at least once a day. In addition, 10% of male students and 15% of female students took five to six meals per day. Furthermore, many women reported consumption of vegetables (36.5%) and fruits (45%) at least three days per week.

Conclusion: Several studies among university students reported a positive association between perceived stress and weight gain, which were in accordance with the results of this study. Overweight and obesity are becoming increasingly prevalent in low-income countries and socioeconomic conditions and rapid urbanization are causing a “nutritional transition”. Specific behavioural intervention programs should be implemented to ensure the opportunity to overcome barriers to adopt healthy dietary habits and BMI.

Key Words: *Food habits, BMI, Obesity, Young, Stress-induced eating*

Health and hygiene awareness among tea estate employees in Helboda estate, Sri Lanka

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Introduction: Health is defined as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Hygiene refers to conditions and practices that help to maintain health and prevent the spread of diseases. Tea estate labourers are considered to be an ethnic group of the country and are having very low standards of living. The main goal of this study was to identify the health and hygienic status of tea gardeners.

Methods: A descriptive, cross-sectional study design was used and a sample of 100 tea estate employees was selected using simple random sampling method. Data was collected using an interviewer-administered questionnaire. Data was analysed using Microsoft Excel software.

Results and Discussion: Majority of the respondents were females (56%) who had better awareness on water sanitation than males. Among 166 water sources within the community, 101 were not usable. Majority of the respondents (68%) used tube-wells for their water requirements. Male respondents had better awareness on personal hygiene (56%) than females. The higher the education level was, the more awareness they had on good health and personal hygiene practices ($p < 0.05$).

Conclusion: Although health and hygiene is one of the most significant factors for living a standard life, the awareness on health and hygiene among tea estate employees was not up to mark. The research explored the deteriorated situation to some extent. The main cause found for poor health and hygiene was the lack of clean water facilities. It is important that these tea estate workers get necessary attention and be provided with basic needs of humans such as clean water supply. It is also important to educate them on hygienic practices and good health behaviours.

Key Words: *Health, Hygiene, Tea estate workers, Practices*

Assessing the level of awareness on type-2 diabetes mellitus among women in Kirinda, Puhulwella MOH area, Sri Lanka

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Introduction: Among non-communicable diseases (NCDs), type-II diabetes mellitus (T2DM) is a rapidly growing significant health problem in Sri Lanka. Peoples' increased awareness is very important in controlling diabetes and preventing complications. The objective of this study was to identify the level of awareness regarding T2DM among women in the Kirinda, Puhulwella MOH area, Mathara district, Sri Lanka.

Methods: The study followed a descriptive, cross sectional design and was carried out among conveniently-selected 100 mothers of school children. Data was collected using a pre-tested, self-administered questionnaire. Data was analysed using Microsoft Excel software.

Results and Discussion: Among the participants, majority (53%) had family members suffering from T2DM and the respondents had a sound awareness regarding T2DM (44%). Most participants were aware that T2DM is a hereditary disease (55%); however, most participants (66%) were not aware regarding healthy food habits, exercises, or effects of hypertension and smoking that may lead to the development of T2DM. Considering the results on the level of knowledge regarding complications, most of the participants were aware regarding the necessity of diet control and attending diabetic clinics. However, the participants generally had insufficient knowledge on complications of T2DM and the management.

Conclusion: Participants in this study had greater understanding and knowledge on their general knowledge of T2DM and they had poor knowledge on factors regarding T2DM and average knowledge on complications regarding T2DM. There should be more awareness programs and health education programs held to improve the public awareness regarding T2DM and government must take actions to maintain quality public healthcare for a better future.

Key Words: *Type 2 diabetes mellitus, Awareness, Complications, Non-communicable diseases*

Awareness on family planning methods among women of reproductive ages in Induruwa MOH area, Sri Lanka

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Introduction: Globally, family planning services are an essential element of reproductive health and have protected the health of millions of women and children. Family planning enables people to make informed choices about their sexual and reproductive health. The main objective of this study was to assess the awareness of family planning methods among women in their reproductive ages in Induruwa MOH area.

Methods: A descriptive, cross-sectional study design was used for this study. A systematic sampling approach was used to select 170 participants according to the arrangement of their homes in the village. An interviewer-administered questionnaire was used to collect data. The data collected was analysed using SPSS software and Microsoft Excel.

Results and Discussion: Out of 170 participants, 20% of the women were aged between 16 and 25 years, 55% of women were between 26 and 35 years and 25% of the women were between 36 and 45 years. Majority (41%) of the participants had three children in their families. According to the results, 32% of the participants agreed that family planning methods are useful; however, 18% thought it would be harmful and 34% had no idea about family planning methods at all. The study also showed that 18% of the participants believed that family planning could cause sterility. Majority of the participants (83%) had used contraceptive pills or condoms at least once; however, 17% were not aware of how to use them correctly.

Conclusion: In conclusion, most of the participants had awareness regarding certain contraceptive methods, with condom being the most commonly known method. The study also identified the need for qualified and trained female healthcare providers for properly-arranged, long-term family planning services. It is important for these families to be properly educated on family planning methods and its importance.

Key Words: *Family planning, Reproduction, Sexual health, Awareness*

Awareness and behaviours related to menstruation and menstrual hygiene among adolescent school girls, Sri Lanka

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Introduction: Menstruation is a normal physiological process of females at their reproductive age. The poor awareness and understanding of menstruation may lead to unsafe hygienic practices that in turn would increase the risk of reproductive and genitourinary tract infections, cervical cancers, school dropouts, poor academic performances and overall, poor quality of life. Therefore, the main objective of this study was to assess the awareness and behaviours related to menstruation and menstrual hygiene among adolescent school girls.

Methods: This was an institutional-based, cross-sectional study conducted at three different schools in Piliyandala educational division, among 200 adolescent girls selected through stratified random sampling. Grade 10, 11, 12 and 13 female students in the schools were selected for the study sample and data was collected using a self-administered questionnaire prepared in all three languages. The collected data was entered and exported to SPSS software for analysis.

Results and discussion: Majority of the girls attended government (38%) or semi-government (37%) schools, and the average age of a girl in the sample was 17.29 years. Overall, irrespective of school type, religion, or ethnicity, majority of the students had a greater awareness (87%) on menstruation and related matters and regarding appropriate hygienic practices, where 97.5% have used a disposable sanitary napkin and has maintained acceptable level of hygiene during menstruation. However, 65.5% faced certain common problems such as itching, pain, fear of stains on clothes (73.5%), while a significant percentage of students (77.5%) were not allowed to participate in religious activities during this period.

Conclusion: It was noteworthy to see that the majority of the adolescent school girls had an acceptable level of awareness and understanding regarding menstruation and hygienic practices. This outcome could be due to the family and economic background of these students and the results could be different in the outskirts or rural areas in Sri Lanka. This demonstrates a need to design acceptable awareness creation and advocacy programs across the country, to improve the awareness and promote safe hygienic practice among adolescent school girls, during menstruation.

Key Words: *Awareness, Hygiene, Behaviours, Menstruation, Adolescents*

Habits of soft drink consumption among advanced-level students attending a private education centre in Mirigama, Sri Lanka

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Introduction: Soft drinks, also known as ‘sugary drinks’ or ‘sugar-containing drinks’, encompass carbonated, sugar-sweetened soft drinks as well as fruit juices, fruit drinks, cordials, sports drinks, energy drinks and iced teas. Sugar-sweetened soft drinks pose many threats to the health of the general public by means of a variety of non-communicable diseases, such as diabetes mellitus. Furthermore, soft drinks contain large amounts of sugar and are highly acidic, which would contribute to enamel erosion and dental caries. Evidence indicates that the consumption of soft drinks is increasing worldwide. The highest growth in the soft drinks market in the year 2010 was observed in Asia, with India and China reporting growth rates of 16% and 14% respectively. Soft drink consumption varies according to age, and particularly the consumption of sugar-sweetened carbonated beverages is highest during adolescence. The aim of the study was to identify the patterns of soft drink consumption among students attending a private education centre in Mirigama.

Methods: A descriptive, cross-sectional study was carried out using a self-administered questionnaire as the data collection tool. The study sample included conveniently selected advanced level students, aged 17-19 years, who attended a private tuition class in Mirigama, Sri Lanka.

Results and Discussion: The study sample included 100 participants. Overall 98% of the participants consumed soft drinks and 65% consumed sugar-sweetened soft drinks once a week or more often than that. Nearly half (47%) of the respondents consumed sugar-sweetened carbonated drinks or sugar-sweetened fruit drinks at least once a week. Social factors such as total family income were independently associated with the consumption of sugar sweetened soft drinks ($p < 0.05$). Furthermore, 11% of the participants were reported to have dental cavities.

Conclusions: The majority of the students in this sample consumed sugar-sweetened beverages more than once a week. It was evident that certain socio demographic factors were associated with the consumption of these drinks. Implementation of legislation to limit the selling of sugar-sweetened soft beverages in schools will contribute to a substantial decline in the intake of such beverages.

Key Words: *Sugary drinks, Soft drinks, Beverages, Adolescents, Carbonated drinks*

**Awareness of cervical cancers among women over 30 years in Ambanpola area
Kurunegala district, Sri Lanka**

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Introduction: Cervical cancer is a cancer arising from the cervix. It is due to the abnormal growth of cells that have the ability to invade or spread to other parts of the body. It is an important public health problem worldwide. Cervical cancer is the second most common cancer in Sri Lanka. The purpose of this study was to evaluate and ascertain the current level of awareness towards cervical cancer (CC) among women in Ambanpola area.

Methods: A descriptive, cross-sectional study was done by using a closed-ended, self-administered questionnaire, distributed among women over 30 years in Ambanpola area in Kurunagala district. Convenience sampling technique was used to select the participants and data was collected from 150 women who were willing to participate for this study. The data collected was analysed using SPSS 20 software.

Results and Discussion: All 150 responses were taken in for data analysis. Participants were from the age groups 40-49 years (35.3%, n=53), 30-39 years (30%, n=45), 50-59 years (26%, n=39) and 60-70 years (8.6%, n=13). According to the results, there were only 63 respondents (42%) who were aware of cervical cancer, and 87 of the respondents (58%) had below-average awareness regarding cervical cancers.

Conclusion: Findings show that majority of the respondents had heard about cervical cancer but had little awareness regarding it. Therefore it is important that these women be provided with necessary education regarding cervical cancer. Awareness campaigns should be conducted in the community to motivate the public towards cervical cancer screening.

Key Words: *Cervical cancer, Awareness, Women, Prevention, Treatments*

Awareness among pregnant women on supplementary medications used in antenatal period

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Introduction: The most blissful physiological change responsible for the survival of mankind is the ‘pregnancy’. Sri Lanka has been able to reach health priorities such as low maternal mortality rate, low infant mortality rate, and low under-five mortality rates. In order to have a healthy baby and prevent prenatal and postnatal complications, supplementary medications such as iron and folic acid play a vital role. The aim of this study was to assess the knowledge among pregnant mothers on supplementary medications used in the antenatal period.

Methods: A descriptive, cross-sectional study was conducted using a self-administered questionnaire. Convenience sampling method was used to recruit a sample of 150 pregnant mothers between ages 18 and 40 years, who lived in Pannala and sub urban areas in Pannala, Sri Lanka.

Results and Discussion: From the participated antenatal mothers, 81% were aware regarding the supplementary medications used in the antenatal period; the rest did not have a clear idea regarding them. All the participants (100%) who participated in this study were aware that folic acid and iron are essential to be taken as a supplement during the pregnancy period. Majority (89%) of the respondents were also aware that vitamin C is an essential supplementary medication. However, only a little over one third of the participants (37%) thought vitamin A is also an essential nutrient that needs to be supplemented.

Conclusion: This study shows that the majority of the mothers were aware of the types of essential supplementary medications required during the antenatal period. There needs to be further studies done to identify the mother’s awareness on food containing the essential nutrients.

Key Words: *Antenatal mothers, Knowledge, Supplementary medications*

**Awareness and practices on safe use of pesticides among farmers in Gonagama -
Kudagalmuwa**

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Introduction: Pesticides are chemicals used in agriculture to control pests, weeds, or plant diseases. Misuse and overuse of pesticides is very common among farmers in the countries with developing economies. The aim of this research is to assess the awareness and practices of safe use of pesticides among farmers in Gonagama area.

Methods: This study was carried out as a descriptive, cross-sectional study. A structured questionnaire was used to collect data from the farmers. Convenience sampling method was used and 200 farmers were included in the study. SPSS software was used to descriptively analyse the collected data.

Results and Discussion: Among the 200 subjects, a nearly a one third of the farmers had good level of awareness regarding safe use of pesticides (31.5%, n=63), whereas, the majority of the farmers had only average (42%, n=84) or poor level of awareness (26.5%, n=53). Majority of the farmers (69%, n=138) believed that long term exposure to pesticides would reduce skin irritation due to toxicity while 106 farmers (53%) believed that using alcohol to wash during or after the use of pesticides can reduce skin irritation.

Conclusion: The study reveals that neither the awareness nor the practices of farmers on safe use of pesticides was satisfactory. Majority of the farmers had neglected the proper methods of using pesticides. Organizing special educational programmes, regulating the pesticide use, promoting the use of safer pesticides, and introducing personal protective measures should be done to reduce the pesticide exposure of farmers in the North Western province.

Key Words: *Pesticides, Knowledge, Farmers, Sri Lanka*

Effects of and factors associated with workplace incivility among nurses in Hulhumale' hospital, Maldives

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Introduction: Workplace incivility is a global phenomenon and a prevalent issue among nurses in the Maldives. Workplace incivility would result in nurse turnover, absenteeism, and many other problems and would ultimately affect the quality of care provided to the patient. The purpose of this research was to explore the effects of workplace incivility among the nurses of Hulhumale' hospital in Maldives.

Methods: A descriptive, cross-sectional study design was used, including 100 respondents. Data was collected using a self-administered, closed-ended questionnaire consisting of five sections, namely, demographics, organization and personal experience, physical and emotional factors, work behaviours and problems and effects of incivility. Data gathered were descriptively analysed using Microsoft Excel.

Results and Discussion: The findings showed that workplace incivility is common among nurses (53%). All the nurses who were exposed to incivility had a higher level of anxiety during working hours and were not happy at work. Furthermore, 45% of nurses were compelled to work without a rest and all the nurses agreed that workload would lead to more stress. There was no significant correlation between incivility and educational background, gender, or the number of years of experience in the nursing field ($p > 0.05$). However, there was a positive correlation between physical, emotional, and personal experience factors with incivility ($p < 0.05$). The results showed that workplace incivility leads to nurses' turnover, burnout, and increased absenteeism. Increased workload would, in turn, affect the quality of care provided to the patient.

Conclusion: Workplace incivility plays a vital role in employees' anxiety and also it affects the quality of care provided to the patient. Therefore, awareness programs should be implemented in the institute to ensure quality and efficient care.

Key Words: *Incivility, Effects, Factors, Maldives, Nurses*

A study on health behaviours related to hypertension among patient attending non-communicable disease clinics

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Introduction: Hypertension is a vascular disorder associated with high morbidity and mortality. Social, cultural and political changes that take place in society would also affect people's health status. Risk factor prevention plays a key role in control of non-communicable diseases. Health professionals implement strategies that favour hypertensive patients who are undergoing treatment to have healthy lifestyles. The aim of this study was to assess prevalence of risk factors related to hypertensive patients and to identify the lifestyles of hypertensive patients, focusing on their health beliefs and behaviours related to hypertension risk.

Methods: This cross-sectional, descriptive study was conducted among 150 hypertensive patients who attended non-communicable disease clinics in base hospital, Wellawaya. They were subjected to evaluation of modifiable risk factors like obesity, lack of exercise, smoking, dyslipidaemia and pre-existing diabetes mellitus along with non-modifiable risk factors like family history and age.

Results and Discussion: On risk factor evaluation of 150 hypertensive patients, it was found that 89.4% of patients lacked physical exercises, 19.6% patients were obese, 74.1% were of age over 60 years, and 13.9% of them had a family history of hypertension. In addition to that, 31.2% of patients had dyslipidaemia, 28.2% were smokers, and 24.4% had diabetes mellitus before they were diagnosed with hypertension.

Conclusion: High prevalence of risk factors for hypertension in the Sri Lankan community is alarming. Dealing with modifiable risk factors by health education, promotion of exercises, favourable lifestyles, dietary modifications, cessation of smoking, and screening programmers for early detection of deranged blood pressure, blood sugar, and lipid profile can be effective as preventive strategies.

Key Words: *Hypertension, Blood pressure, Health belief model, Health seeking behaviour*

A study on parents' knowledge and practices regarding oral hygiene of pre-school children in Madampagama area, Sri Lanka

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Introduction: Oral diseases present a major public health concern. Many children and adults have experienced dental caries worldwide, with the disease being most prevalent in Asian and Latin American countries. Recent studies show that the prevalence of dental caries is very high (85%) among school children. Therefore, in an effort to achieve the best oral health outcomes for children, parents should be considered to be key persons who would educate them regarding ideal dental hygiene practices. The purpose of doing this study was to assess the parents' current level of knowledge and practices regarding oral hygiene of their preschool children.

Methods: A descriptive, cross-sectional study was conducted among 120 parents of children (3-5 years) attending a preschool in Madampagama MOH area, selected through random sampling technique. A self-administered questionnaire consisting of 32 questions was distributed among the sample and the collected data was descriptively analysed using SPSS version 25.

Results and Discussion: The majority of the participants were aged between 36 and 40 (80%, n=96). Out of 120 respondents, 51.7% (n=62) scored above average for the knowledge section of the questionnaire. From the sample, 46.6% (n=56) scored above average for the practice section of the questionnaire with 53.3% (n=64) scoring below average.

Conclusion: Overall, knowledge and practices of parents regarding oral hygiene was average. There is a need for further awareness programmes conducted among the general public on maintaining oral hygiene and the children should be educated on the importance of oral hygiene from their childhood.

Key Words: *Oral hygiene, Awareness, Practices, Preschool, Caries*

Awareness on breast cancer among females in Gonagamuwa village area in Hambantota district

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Introduction: Breast cancer is the most common cancer in women worldwide. In South-East Asia, both the incidence and mortality rates of breast cancer are on the rise, the latter likely being due to the limited access to large-scale community screening programmes in resource-limited countries. Breast cancer awareness is an important tool which would reduce breast cancer mortality. Examining the breast cancer awareness of women is likely to help identify those at risk and provide insights into developing effective health promotion interventions.

Methods: A descriptive, cross sectional study was conducted among 200 female participants, selected using convenience sampling from residents in Gonagamuwa village in Hambantota district. Data was collected using a self-administered questionnaire and descriptively analysed using Microsoft Excel software.

Results and Discussion: According to analysis, 89% of the respondents had good awareness regarding breast cancer, where 50.5% from that were unemployed and 49.5% were employed females. Diploma holders (62%) and graduates (47%) showed positive attitudes and good awareness regarding breast cancer. Those who have only got primary education had less awareness (39%) regarding breast cancer. Young people were more likely to have a better awareness (49%).

Conclusion: According to these results, majority of the females in Gonagamuwa village area in Sri Lanka had some awareness regarding breast cancer. Young females with a higher education had better awareness. It can be assumed that the next generation in this area will be more aware on breast cancer.

Key Words: *Awareness, Females, Breast cancer*

A study on awareness and practices among adults regarding diabetic complications in Pujapitiya area, Sri Lanka

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Introduction: More than two-thirds (70%) of diabetes mellitus (DM) patients in the world are from lower middle-income countries. DM is predicted to be the leading cause of morbidity and mortality in the foreseeable future. The goal of treatment for DM is to prevent mortality and complications by normalizing blood glucose level. However, in some patients, blood glucose levels might increase despite getting appropriate treatment, resulting in complications such as disturbances in fat metabolism, nerve damage, and eye disease. The main objective of the study was to assess awareness and practices regarding diabetic complications among adults living in Pujapitiya area, Sri Lanka.

Methods: A descriptive, cross-sectional study design was followed and convenience sampling technique was used. Study sample included 200 adults residing in Pujapitiya area in Kandy district. Data was collected using a pre-tested, self-administered questionnaire and analysed descriptively using Microsoft Excel software.

Results and Discussion: A higher percentage (78%) of the participants had a family history of diabetes. Out of all the respondents, 88% were aware regarding complications of DM. Nearly one third of the sample (30.2%) had awareness regarding the glucose tolerance test and 47.1% knew how random blood sugar level was checked. Most of the participants were aware that DM can be managed by exercising (70.2%), controlling sweets (78.4%), and avoiding smoking and drinking (60.6%), even though only 13% from the total of respondents was practicing.

Conclusion: Study concluded that most of the participants were aware about the complications of DM, although majority were not showing good practices. Good awareness and practices towards reducing and preventing complications of DM is crucial for a better health outcome. An awareness program and frequent follow-ups regarding practices would improve overall outcome.

Key Words: *Nurses, Diabetes mellitus, Awareness, Practices*

Effects of mobile phone usage on education of teenagers in Ambalangoda area in Galle district, Sri Lanka

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Introduction: A national survey conducted in 2010 showed that mobile phones are the most needed form of communication for adolescents. It has practically affected the accessibility of society, security and the coordination of business and social activities positively and as a result, has become a part of the culture of the world. The mobile phone has the power to undermine the authority of schools and weaken their control over students, in addition to affecting their level of academic performance. The purpose of this study was to assess why teenagers use mobile phones.

Methods: A descriptive, cross-sectional study design was used. A pre-tested, self-administered questionnaire was distributed among conveniently selected 200 teenagers (between 15 and 18 years of age) residing in Ambalangoda area. Data was descriptively analyzed using Microsoft Excel software.

Results and Discussion: Among 200 respondents, 56% were males and 44% were females; 35.5% were 18 years old. All of the participants had access to a smartphone. Over half of the respondents (55%, n=110) rarely used their smartphones for texting or calling, whereas they frequently browsed social networks like Facebook (85%, n=170), browsed internet (70%, n=140), or played video games (45%, n=90). Half of the respondents (50%) were mostly using their mobile phones during the day time. All of the respondents claimed that the phone was a helpful tool for their education than a distraction, where 64.5% of the students have got a final grade of 85-89% during their previous term test.

Conclusion: There is a positive relationship on how a smartphone is used for the academic performance of students. There is a positive link between the time consumption using smartphones and the academic performance of students and the educational methodology should be changed as it can be aligned with smart technology. If these results are to be generalized, an island-wide study needs to be conducted.

Key Words: *Mobile phones, Teenagers, Academic performance*

Assessment of the participation in continuous nursing education and its influencing factors among the nurses working in nation hospital of Sri Lanka

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Introduction: Nurses are encouraged to engage in continuous nursing education (CNE) to stay abreast of the current nursing practice. CNE with the development of knowledge, skills, and attitudes results in the improvement of the nursing activity, and thus tends to improve the healthcare in the society. This study is to assess nurses' participation in continuing nursing education and the influence of associated factors.

Methods: This was a descriptive, cross-sectional quantitative study that recruited 337 registered nurses who worked in the national hospital of Colombo, Sri Lanka. A self-administered questionnaire was given to assess the nurses' extent of participation in a variety of CNE and the influence of factors, motivation, reflection, support, and the resources on the CNE. Descriptive statistics were used to present the nurses' demographic data and describe the availability of influencing factors. Binary logistic regression analysis was used to investigate the relationship between CNE and influencing factors.

Results and Discussion: Majority of nurses (86.1%) have participated in CNE activities. Respondent rate on participation in individual CNE activities was relatively low, which had a result of 78.3%. The majority of the respondents (72.7%) were having support, motivation, reflection, and competencies. As far as the resources are concerned, nurses were positively concerned, nurses positively responded to the resources other than adequate time and income. The model was statistically significant ($p < 0.004$). According to the findings, there was no relationship between CNE and support, motivation, and competencies ($p > 0.05$).

Conclusion: Availability of influencing factors, resources, supports, motivation, reflection, and competencies, confirms the overall satisfactory participation of nurses in CNE.

Key Words: *Continuous nursing education, CNE, Nurses, Associated factors, Facilitators*

Assessing the awareness, practices and usage of painkillers among students in a selected private educational institute in Sri Lanka

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Introduction: Analgesics, also known as painkillers, are medications that function in different ways to alleviate various forms of body-experienced pain. Higher educational students are known to be users of analgesics highly while being busy with their day-to-day various tasks. The study was conducted to identify the knowledge that they have regarding types of painkillers, purposes of different types of painkillers and contraindications of each painkiller as well as their practices regarding painkillers in their usual lifestyle and level of usage of the painkillers among students.

Methods: A descriptive, cross-sectional study was conducted among a sample of 100 students, selected using convenience sampling method. The data was collected using a self-administered questionnaire. The collected data were analysed using SPSS software.

Results and Discussion: Majority (84%) of the students were using oral tablets rather than topical creams, ayurvedic balms or oils to relieve pain. From the respondents, 78% have used oral painkillers for headaches and 32% for other muscle pains. Majority (69%) were using painkillers less often than others due to their belief regarding the harmful effects of using painkillers and 65% have used alternative methods to relieve pain other than using oral painkillers. Most of the respondents (77%) have not noticed any side effects of painkillers, whereas 67% were aware of side effects of frequent usage of painkillers and 59% were not aware regarding the risk of Reye's syndrome due to usage of aspirin.

Conclusion: Awareness of the students regarding different aspects of usage of painkillers including mechanism of action, adverse effects, side effects and contraindications should be improved. This could be achieved through awareness programs conducted among those young adult communities. Studies should be conducted to identify the painkillers that they frequently use and the possible effects of those should be communicated to them in order to reduce the misuse of painkillers.

Key Words: *Awareness, Practices, Usage, Painkillers, Students*

Awareness of home-based management of childhood diarrhoea among mothers of children under five years in the Kurunegala district, Sri Lanka

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Introduction: Worldwide, about 480,000 children die annually from diarrhoea, despite the availability of simple but effective treatments. According to UNICEF and WHO, diarrhoea can be controlled by home-based management with oral rehydration therapy. This study was done in order to determine the awareness of mothers with children under five years of symptoms of diarrheal diseases and dehydration as well as awareness on the practices of home-based management of childhood diarrhoea.

Methods: A descriptive and cross-sectional study was done. Data were collected from 130 mothers who had children under five years of age, in Kurunegala district, using a self-administered questionnaire which was distributed in both Sinhala and English languages. Data was collected at the Kurunegala teaching hospital by the researchers. Convenience sampling was used as the sampling method. Data were analysed using Microsoft Excel and SPSS (version 22).

Results and Discussion: Almost all participants had heard about the condition diarrhoea (98.4%) and 93% of respondents had the idea that diarrhoea is passing watery stools while many also linked diarrhoea with abdominal pain (72.1%) and fever (26.4%). Dehydration is considered as the most severe stage of diarrhoea and on identifying dehydration, 74.6% selected dry mouth as a symptom of dehydration while 40.5% and 23% have selected cracked lips and urinating less frequently respectively. In contrast, 6.3% have chosen more salivation and 1.6% have selected hyperactivity, which is a minority. The aspects of the understanding of practices related to home-based management of childhood diarrhoea revealed that only 56% selected the response to administer oral rehydration solution (ORS) always. Regarding the fact that a prepared ORS can be used for only 24 hours, 69.8% have selected the accurately.

Conclusion: Even Though the mothers have a considerable awareness regarding the symptoms of diarrhoeal diseases and dehydration, they do not follow correct practices as only a little over half of the sample have always considered administering an ORS.

Key Words: *Diarrhoea, Dehydration, Oral replacement solution, Awareness, Management*

Perception and awareness on the practices of obtaining informed consent prior to medical intervention among hospitalized patients in Puttalam district, Sri Lanka

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Introduction: Informed consent is providing necessary information about a procedure or a treatment recommendation to improve the autonomy of the individual in making healthcare-related decisions. Adequate information must be provided on the diagnosis, the proposed treatment, benefits and risks, alternative treatment and any risks and benefits of declining treatment. Healthcare workers may ignore this as a result of busy schedules, which would eventually affect the quality of life of the patient. The purpose of this was to study patients' perception and knowledge on the practice of informed consent prior to a medical intervention.

Methods: A descriptive, cross-sectional study was conducted among 141 patients who were hospitalized. The sample was selected using a convenience sampling technique. A self-administered questionnaire was used to collect data and was analysed using Microsoft Excel and SPSS software.

Results and Discussion: Altogether, 46.8% of the respondents stated that the written or verbal consent was obtained only for certain procedures. Majority (89.4%) were aware that informed consent is important before initiating a medical procedure and among them, 85.1% were aware that obtaining consent is a legal requirement and some (66%) noted that their family could give consent on their behalf. Majority (78.7%) stated that the explanation included a full description of the procedure, whereas, 36.2% stated that the information given prior to obtaining the consent have rarely included an explanation of the alternative procedures, any lifestyle changes after the procedure, or disadvantages of not conducting the procedure. Only 40.4% of the respondents had completely understood the explanations. Furthermore, 68.1% agreed that a procedure cannot be conducted without the voluntary consent of the patient and 85% stated that the written consent is better than verbal consent. However, 59.6% were satisfied with the informed consent process in the hospital.

Conclusion: The patients had a good level of awareness regarding informed consent processes. Only an average number of participants were satisfied with the current process. Thereby, the healthcare providers must ensure that the process of obtaining informed consent must be completed. More importance must be given to providing an opportunity to ask questions and clarify their doubts.

Key Words: *Informed consent, Perception, Knowledge, Patients, Medical intervention*

Knowledge, attitudes and practices regarding dietary intake related to diabetes among young adults in Gampaha district

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Introduction: Diabetes is obviously one of the most important medical problems, which is a high-incidence metabolic disease. According to predictions of the World Health Organization, by 2030, 366 million people worldwide will have diabetes (90% of cases are type 2). People who are diagnosed with diabetes will experience serious health problems because the disease itself has proven to be a catalyst for other health problems. Therefore, the young adults must be provided with adequate knowledge in order to change the attitudes and behaviours about simple preventive measures of diabetes such as dietary intake. The purpose of this study was to assess the knowledge, attitudes and practices regarding dietary intake related to diabetes among young adults in Gampaha district.

Methods: A descriptive, cross-sectional study was conducted among the young adults in Gampaha district, Sri Lanka. A printed questionnaire in English language was circulated among the recruited sample, selected using convenience sampling for data collection. The collected data was then statistically analysed by using Microsoft Excel and SPSS (Statistical Package for Social Sciences) version 22.

Results and Discussion: Out of the total 150 respondents, 55.3% of the individuals were females and 44.7% of individuals were males. Majority of the respondents (81.3%) were between 18 and 25 years old. Majority (70%) agreed with the fact that urine tests and blood tests are equally good for testing the levels of blood glucose. Nearly three fourth (74%) agreed that diabetic diet can reduce the risk of complications; however, 63.3% had consumed high fat foods within the last week. In addition to that, 38.7% of the individuals believed that unsweetened fruits would raise the blood glucose levels. The Majority of the respondents (40.7%) believe that regular exercises and good control has an effect on blood sugar levels.

Conclusion: From the results, it is evident that young adults lack proper knowledge on diabetes, its preventive measures and dietary modifications. Therefore, it is recommended to raise awareness on prevention of diabetes among youth by conducting educational programs, as well as interactive sessions to improve attitudes and practices in following good health habits.

Key Words: *Dietary intakes, Diabetes, Metabolic disease, Gampaha district, Young adults*

A quantitative study on contributing factors and impact of social media addiction on mental health of teenagers in Gampaha district

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Introduction: Social media involves digital platforms and interactive participation. Over the past 10 years, social media has become a prominent component of youth life, which has led to many mental health issues. Aim of this study was to assess factors contributing towards social media addiction and impact on depression among school students in Gampaha district, Sri Lanka.

Methods: A quantitative study was conducted among conveniently-selected 200 school children aged 13-17 years in Gampaha district. Data was collected using a self-administered questionnaire which was validated through a pre-test. Depression level was measured by Mood and Feeling Score (MFQ) range from 0 to 26, where a score of 12 or higher indicated the presence of depression. Data was analysed using Statistical Package for Social Science.

Results and Discussion: Response rate of the study was 87%, where 174 out of the approached 200 students participated. It was found that one fourth of the sample (n=43, 24.9%) are experiencing depression according to the scale. Most of the sample have responded on “internet addiction” as having a negative impact (61.85%) whereas minority responded on “suicide and self-harm” as well (20.81%). It was found that there is no association between personal factors and depression (p=0.329), or between social media factors and depression (p=0.865). However, there was a relationship between self-knowledge the student is having on mental or health problems and depression (p=0.000), and between usage of social media and depression (p=0.038). Among students who were categorized as having depression, majority mentioned that they do not have mental or health problems (n=28, 65.1%). However they also mentioned that they use social media for more than 15 times a week (m=28, 65.1%).

Conclusion: Since social media will remain an important factor of children’s lives, a better understanding of the mechanisms of its relationship with depression could be beneficial to increase exposure to mental health interventions and promote well-being among them and their family.

Key Words: *Depression, Social media addiction*

Perceived barriers of virtual learning among students in a healthcare institute in Gampaha district, Sri Lanka: Transforming education into virtual learning during Covid-19 pandemic

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Introduction: Virtual learning conditions are characterized as a stage that allows the substitution of learning methodology from homerooms to web. Disparities in medical knowledge, education and information are a major determinant of health practice inequalities in developing countries such as Sri Lanka. The recent pandemic, along with the diffusion of the internet, is facilitating the creation of virtual learning education to overcome traditional learning. This study aimed to identify the barriers faced by students during the pandemic at a private healthcare institute in Gampaha district, Sri Lanka.

Methods: A descriptive, cross-sectional study was done via a Google form, using closed-ended questions. The questionnaire was distributed among 107 students in a healthcare institute. Both male and female participants between the ages of 18-25 years were recruited. In the Google form, questions were distributed in English language for data collection. Data was analysed using Microsoft Excel.

Results and Discussion: The respondent rate for the most questions was 100%. According to the responses, satisfaction towards virtual learning was average as only 43% were satisfied and others were not satisfied regarding online learning. In addition to that, 68.2% were not happy regarding their study outcome, whereas 59.8% were having positive feedback about virtual learning as most students accepted that it is a better way to spend their time effectively in studies. Similarly, some studies showed that online learning helps students in assigning reading and homework time in a better way than being on campus. Moreover, 73.8% agreed on holding online exams and showed a higher interest towards that. However, the results of this study showed that unavoidable issues such as power cuts made virtual learning harder for many students (81.3%).

Conclusion: In conclusion, as most were having positive feedback regarding virtual learning, certain problems they face need to be considered and proper solutions need to be sought for this method to be successful in future learning.

Key Words: *Virtual learning, Pandemic, Covid-19, Nursing students*

Study on the prevalence of respiratory problems among workers of wrapping beedi in Bombuwala MOH area Kalutara, Sri Lanka

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Introduction: Sri Lanka is a developing country where some people engage in wrapping beedi as self-employment, which is more common among females in low socioeconomic society. Even if they gain some income, there are some negative health effects among those workers. The objectives of this study were to identify the prevalence of respiratory problems among beedi wrapping workers in Bombuwala MOH area and to identify the factors related to respiratory issues among them.

Methods: A descriptive, cross-sectional study was conducted among 75 people employed in wrapping beedi by using an interviewer-administered questionnaire. Convenience sampling method was used in selecting the participants. Data was analysed using Microsoft Excel.

Results and Discussion: Majority of the workers were females (94.6%) and most of them were over 50 years old (68%). There were 28% of workers who were suffering from respiratory disorders. Considering environmental factors, most of the participants were working under asbestos sheets as the roof (43.3%). Majority (80.6%) were having satisfactory ventilation at their homes. Majority of the workers were employed in beedi wrapping for 10-12 years in their residence (66.6%). It was also found that 4% were suffering from respiratory problems since their childhood and that 95.2% have taken medicine for respiratory disorders within the last five years.

Conclusion: It was found out from the study that nearly one quarter (24%) of the people who wrap beedi are suffering respiratory disorders. Further studies among this population with a bigger sample size should be done to find out the prevalence of respiratory illnesses and the factors associated with that. Using personal protective equipment and educating them on the respiratory complications and the prevention methods are recommended.

Key Words: *Beedi wrapping, Respiratory problems*

Awareness and practices regarding respiratory health related issues among traffic police officers in Colombo district, Sri Lanka

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Introduction: Traffic police officers are significant individuals who carry out general road-based operations throughout our nation. With increasing urbanization, the number of vehicles in many cities around the world is increasing rapidly, contributing to severe traffic congestion and pollution-related health hazards. Road traffic pollution is a major public health threat and therefore, individuals such as the traffic officers who are continuously exposed can be at an increased risk. The aim of this study was to evaluate the awareness of respiratory problems that may arise among traffic police officers.

Methods: A descriptive, cross-sectional study was conducted among 50 traffic police officers who had more than five years of experience, working in Colombo district. Convenience sampling technique was used and data was collected using a self-administered questionnaire. Analysis of collected data was performed through Microsoft Excel using descriptive statistics.

Results and Discussion: Among 50 traffic police officers, 76% of the respondents were within 21 to 26 years of age and 24% were 31 to 40 years of age. Everyone had experience of more than five years. Majority (88%) of the participants stated that they work 8-10 hours in high traffic congested areas every day. The values on the assessment of awareness regarding traffic-related air pollution were rather unexceptional since 22% of the participants had false assumptions. Furthermore, it was remarked that 43.7% out of the total respondents were unfamiliar with the safety measures needed in order to reduce risk of respiratory-related health problems. Majority (74%) of the respondents had awareness regarding the risks of pollution on their health but very few of the respondents were practicing preventive measures for respiratory problems.

Conclusion: Traffic police officers working in Colombo district were prone to respiratory health problems. The level of awareness among participants was sufficient, however, the level of practice for minimizing the risk of respiratory problems was not satisfactory.

Key Words: *Awareness, Traffic police, Respiratory problems, practices*

Awareness on early identification of oral cancers among non-staff primary caretakers of cancer patients in Apeksha hospital Maharagama, Sri Lanka

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Introduction: It has been realized that patients with oral cancer have less chance for recovery even in the presence of effective oncologic management. Therefore, prevention of oral cancer is the best solution and identification of cancer at the early stage is the secondly best choice to be made. The aim of the study was to assess the awareness of primary caretakers of cancer patients in prevention and early detection of oral cancer.

Methods: A descriptive, cross-sectional study was conducted on men of age between 18 and 30 years. A self-administered questionnaire regarding oral cancer prevention and early detection was distributed among 400 non-staff primary caretakers in Apeksha hospital, Maharagama. They were asked to complete the questionnaire with their own level of understanding and experience. The results were analyzed by using SPSS.

Results and Discussion: The mean age of the participants was 25 years. Majority of the population (95%) did identify two major risk factors for oral cancer, namely, intake of alcohol and smoking, and 85% of individuals were aware that chewing beetle with tobacco is another risk factor for oral cancers. Nevertheless, the awareness and experience regarding early detection of oral cancer was below the satisfactory level and only 64% of participants had mentioned that getting medical advice is required in notice of any differentiation in the oral cavity such as white spots or red spots in oral cavity, gum or tongue.

Conclusion: Majority of the population had awareness of oral cancers. Although prevention of oral cancer has a greater positive effect, only few individuals were able to recognize the early signs. Oral cancer incidences could be minimized further through formal health education programs.

Key Words: *Oral cancer, Oncological management*

Ethical issues in using a social media based remote patient management platform: A focus group discussion

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Introduction: The physical distancing and social isolation related challenges posed by the Covid-19 global pandemic forced many healthcare delivery institutes to use telehealth solutions. The Impulse Rehabilitation Centre, based in Welisara, Sri Lanka, also planned to use an innovative telehealth solution based on the popular social media platform, Facebook™. The main purpose of this study was to determine the likely ethical issues that may arise when using a social media platform based remote patient management scheme and the likely solutions to mitigate such issues.

Methods: Two focus group discussions were held via video conferencing software. One group comprised six physiotherapists; four, directly connected to the clinic and two living abroad. The other group was composed of 10 patients, including both males and females, reasonably representing the age groups of the clinic's patient base. The interview questions were mainly around what ethical aspects they thought are challenged and what measures can be taken to minimize them. The results were thematically analysed.

Results and Discussion: Four main themes were identified, namely, 'threat of breaching privacy and confidentiality,' 'using social media will be more ethical,' 'thorough explanation would improve informed participation' and 'likely harms of alternative systems'. Under those themes many points were noted such as the threat of health-related information being leaked into the social media space, patients accessing each other's profiles. However, it was noted that social media will uphold justice and beneficence as a quick, low-cost solution in a pandemic time, accessed by many and majority are anyhow likely to require care only for non-stigmatized, common conditions. A delay in deploying a system, likely introduction of a complex system with sophisticated security features and other difficulties from patients' end could be expected otherwise.

Conclusion: Using a common social media platform to deliver telehealth services does generate multiple ethical issues. However a certain level of compromising can be made in order to deliver rehabilitation services to a larger patient group more efficiently during a crisis situation.

Key Words: *Remote patient monitoring, Ethics in Telehealth, Social media*

Awareness of diabetic retinopathy among patients attending the diabetic clinic of Colombo South Teaching Hospital

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Introduction: Diabetic retinopathy is a micro-vascular eye complication and occurs in both types I and II diabetes mellitus. The aim of this study was to determine the knowledge on prevention of diabetic retinopathy among patients attending the diabetic clinic of the Colombo South Teaching Hospital.

Methods: A descriptive, cross-sectional study was conducted among 384 diagnosed, type-II diabetic patients attending the diabetic clinic of Colombo South Teaching Hospital. Baseline data and data regarding level of awareness were collected through a questionnaire. Data was analysed using SPSS version 16 statistical software.

Results and Discussion: Nearly all (97.6%) type-II diabetic patients were aware that diabetes affects the eyes. Majority (92.5%) were aware that poor control of diabetes also has an effect on vision. When considering diabetic eye diseases, 64.9% had awareness that diabetic retinopathy can occur as a result of diabetes in this population. Majority had awareness that cataract (86.7%), glaucoma (69.0%) and damage to the retina (80.5%) can occur as a result of diabetes. Most of the participants were aware that to prevent from diabetic eye diseases, a regular assessment by an ophthalmologist is essential.

Conclusion: The results of this study revealed that patients with diabetes in Sri Lanka have good awareness on diabetic eye diseases. A study done in 2010 had reported that people with diabetes have satisfactory awareness regarding eye complications and eye care. Diabetic patients' awareness on diabetic eye diseases has improved compared with previous studies done in Sri Lanka.

Key Words: *Diabetes mellitus, Diabetic eye diseases, Knowledge, Sri Lanka, Diabetic retinopathy*

A study on the quality of life of physically disabled people by road traffic accidents (RTA) in the community in Western province, Sri Lanka

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Introduction: Road traffic accident (RTA) is a leading cause of morbidity, mortality and disability in Sri Lanka. In Sri Lanka, a lack of road safety and the limited availability of statistics on road traffic accidents make it difficult for policymakers to propose interventions that would minimize road traffic accidents. The main purpose of this research was to find the quality of life of people who were physically injured by road traffic accidents.

Methods: A qualitative research was done using one-to-one in-depth interviews with open-ended questions. Likewise, 20 young adults (18-35 of age), who have faced disabilities due to RTA's were selected through convenience and snowball sampling methods and data was gathered until the point of saturation. Results were analysed using thematic analysis.

Results and Discussion: Among the 20 participants who took part in this study, there were young adults who had undergone long-term disabilities (paraplegic) due to RTAs. Some have had only a short term disability. Majority explained that the reason for most of the accidents are careless driving of bikers and mentioned that the attitudes should change among all drivers more than the rules and punishments enforced by law. It was also remarked by the participants that younger individuals are more involved in RTAs. However, they added that considering their type of injury, they are physically and psychologically better now.

Conclusion: The quality of life was better than expected among most of the participants with regards to their physical and psychological well-being. However, socioeconomic status requires more focus. Traffic rules and stringent punishments alone will not solve the persisting crisis. Change in the mindset of riders and drivers and road users realizing their responsibilities alone will bring about a change so that the roads become safer.

Key Words: *Road traffic accidents, Physical disability, Injury, Quality of life*

Awareness on effects of alcohol consumption among the consumers in Kokmaduwa area, Sri Lanka

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Introduction: Alcohol consumption contributes to three million deaths each year globally, in addition to millions of people with disabilities and poor health. Overall, harmful use of alcohol is responsible for 5.1% of the global burden of disease. Heavy alcohol consumption is highly prevalent among the regional areas in Sri Lanka. Such practices are considered as a heavy burden for the local health system. The aim of this study, therefore, was to assess the awareness on effects of alcohol consumption among consumers of alcohol in Kokmaduwa area, Sri Lanka.

Methods: A community-based, descriptive, cross-sectional study was conducted among 100 adult residents in the Kokmaduwa area. A self-administered questionnaire was distributed among people who were known to consume alcohol through convenience sampling and then snowballing. Statistical package of social science version 20.0 was used for the analysis of data.

Results and Discussion: From the study sample of 100 participants, majority belonged to the age category 35-45 years (39%), studied only up to G.C.E. O/L (46%), and most of the participants were labourers by profession (35%). Majority of the participants (78%) mentioned that they were not aware of any harmful effects of alcohol consumption when they started consuming alcohol and only 45% of participants were aware of all the adverse effects of alcohol consumption by the time of the survey. Most of the participants (85%) stated that they started consuming alcohol because of a failed relationship and there were (25%) of participants who started consuming alcohol due to peer pressure. Majority (85%) agreed that they have verbally abused their family members after consuming alcohol and some have even physically abused their family members (17%).

Conclusion: According to the findings of the study, it was identified that the majority of the participants do not have adequate awareness regarding the effects of alcohol consumption. Therefore, the need for more advanced educational programs has become a need, which could be used as a strategy in controlling alcohol consumption.

Key Words: *Effects, Alcohol, Awareness, Prevention, Consumption*

Assessment of mothers' knowledge regarding oral health among preschool children in the 3-5 year age group in Gonawala sub division, Sri Lanka

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Introduction: Children under the age of 5 years generally spend most of their time with their parents and guardians, especially mothers, even when they attend pre-schools or nurseries. Many preschoolers are too lazy to brush their teeth. They think it was a very unpleasant experience. It has been found that young children's oral health maintenance and outcomes are influenced by their parent's knowledge and beliefs. Oral health is very important to improve general health and also increase quality of life. This study was done to assess the mother's knowledge about the oral health of their preschool children.

Methods: A descriptive cross sectional quantitative study design was used for the study. The study sample was selected using a convenient sampling method where 165 mothers with children between ages 3 – 5 were selected from Gonawala Sub Division. The data were collected using a self-administered questionnaire which was handed to the mothers to be filled and the collected data were analysed using descriptive statistical methods using Microsoft Excel 2010 Software and SPSS Software.

Results and Discussion: The study results showed that 1.2% mothers were under nineteen years old, 30.9% were in the 20-29 age limit, 46.1% were between 30-34 age limit, 15.2% were between 35-39 age limit, 3.6% were between 35-39 age limit. From the Sample, out of 165 mothers, 34.5% of participants' knowledge on oral health was not good; however 62.4% of participants' knowledge was good. According to the SPSS Pearson correlation analysis, Mothers' age is not significantly associated with knowledge regarding oral health among preschool children, however according to Pearson Correlation, educational status of mothers are directly related with mothers' knowledge of children's oral health.

Conclusion: In conclusion the study was able to find a direct correlation between mothers' educational status with their knowledge on children's oral health. But the overall knowledge regarding oral health among mothers could be further improved. This can be done by conducting workshops and clinics for mothers and providing them with health education regarding oral health and how to maintain good oral health.

Key Words: *Preschools children, Oral health, mother's knowledge,*

Awareness regarding first aid for home accidents among mothers of school-aged children in a selected MOH area in Sri Lanka

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Introduction: Injuries to children arising from home accidents are an increasing community health concern. Home accidents are one of the leading causes of deaths in children and young adults all over the world. Children below the age of five are at a high risk for many accidents at home setting. Therefore, it is important that their parents have good knowledge regarding first aid. The goal of this study was to assess the awareness regarding first aid for home accidents among mothers of school-aged children.

Methods: This was a descriptive, cross-sectional study, conducted among mothers who had grade-5 children, in the Tissamaharama area. Altogether, 150 mothers were selected for the study by using convenience sampling method. Data was collected via a self-administered questionnaire and descriptively analysed using Microsoft Excel.

Results and Discussion: According to the study results, the majority (65%) of mothers were between 30 and 35 years of age, 45% were between 35 and 40 years of age and 40% of mothers were between 25 and 30 years of age. When considering the gender of the children, 56% of children were females and 44% were males. Study showed the most common type of accident as cut injuries (69%), ranking above fractures (58%). For cut injuries, most of the mothers (64%) did not wash and apply tight dressing for the affected area when taking their child for further treatments. For fractures, only 23% of mothers were aware regarding splints, and 66% of mothers chose local medication over western medication for fractures.

Conclusion: In general, the knowledge on first aid among these participants is not satisfactory. Parents who had experienced these kinds of incidences among their children were more aware regarding first aid than those who had no such experience. Therefore, attending training courses in first aid would be essential in having better knowledge and consequently, practice regarding first aid, and organizing of such training programs should be done at local clinics.

Key Words: *First aid, Knowledge, Children, Mothers*

Awareness regarding blood donation among voluntary blood donors in Kandy district

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Introduction: Donation of blood is an essential service to fulfil the demand for blood in healthcare settings. Millions of lives are saved each year through blood transfusions. Yet, the safety of blood transfusion is still a concern particularly in the developing countries according to the world health organization. Aim of this study was to assess the knowledge, attitudes and practices towards blood donation among voluntary blood donors.

Methods: A descriptive, cross-sectional study was conducted among a conveniently-selected, 250 blood donors of age between 18-55 years, who visited mobile blood donation campaigns conducted by the blood bank of national hospital Kandy. Data was collected using a self-administered questionnaire and analysed using Microsoft Excel software.

Results and Discussion: From the whole sample, 60% of the participants were males. 92.2% had an appropriate awareness regarding some aspects of blood donation, including the amount of blood in a one pint and the criteria to be eligible as a donor. Males had more knowledge regarding blood donation when compared to females. Majority of the participants (84.4%) were aware of their blood groups. Over half of the respondents (55.8%) stated that Hepatitis-B or HIV/AIDS cannot be transmitted to the donor while donating blood. Majority of the respondents (83%) agreed that blood donation helps in blood purification.

Conclusion: It can be concluded that, the proper awareness among the blood donors was limited only to some aspects of blood donation while they had misconceptions regarding some other aspects. It would be better if the government can organize awareness programs to the public pointing out the importance of the blood donation and also to reduce the misconceptions regarding blood donation.

Key Words: *Blood donation, Voluntary, Donors, Awareness*

Assessment of awareness and practices of mothers regarding stoma care of their children in the general surgical unit in Lady Ridgeway Hospital, Sri Lanka

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Introduction: A stoma is an actual part of the small or large bowel or urinary tract that it is brought through an incision on to the abdominal wall, which can be seen on the skin. A stoma may be temporary to allow the affected area to heal and grow or permanent, depending upon the child's condition. Purpose of stoma care in children and infants are to prevent skin breakdown at site, maintain integrity of stoma and peristomal skin and prevent infections. Children with stoma rely mostly on their parents for stoma care. Therefore, this study was aimed to assess the overall awareness and practices of mothers regarding their child's stoma care.

Methods: A descriptive, cross-sectional study design was used among 65 mothers of children with stomas who attended the surgical ward at Lady Ridgeway Hospital. Convenience sampling technique was used and data was collected using an interviewer-administered questionnaire. Data was descriptively analysed using SPSS software.

Results and Discussion: From the 65 respondents, the majority were aged between 25 and 29 years (44.6%, n=29) and housewives (72.3%, n=47). Only 56.9% (n=37) were aware of the definition of stoma, even though everyone (100%) was aware what type of a stoma their child was having. More than half of the respondents (52.3%, n=34) were unaware of complications of stoma. Majority (92.3%, n=60) had no previous experience regarding stoma care, even though many were aware regarding the correct procedure of cleaning and changing the stoma (84.6%, n=55) and on performing hand hygiene prior to providing stoma care (98.4%, n=64). All agreed with the fact that adequate knowledge regarding stoma care has been provided by a healthcare professional after the surgery of their child.

Conclusion: The study results show, overall, satisfactory levels of knowledge and practices among the participated mothers regarding stoma care, even though some areas of knowledge and practices need to be improved, such as complications and cleaning and changing procedures of the stoma. Improving awareness and practical skills of the caregiver is very important in standardizing the quality of life of children with stomas.

Key Words: *Stoma care, Children, Knowledge, Practices, Mothers*

Awareness and practices of mothers on administration of paracetamol to children

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Introduction: Paracetamol is a commonly available, over-the-counter antipyretic and analgesic medication which is commonly used by most people. Most of the mothers use paracetamol syrup and tablets as a drug to be administered in any flu-like symptoms of their children. The deficient knowledge, malpractices and negligence when administering paracetamol domestically to children has led to many complications. The goal of this study was to assess the level of awareness and practices regarding domestic administration of paracetamol to children among their mothers.

Methods: A descriptive, cross-sectional study design was used to conduct the study. Convenience sampling method was used to select the sample of 130 mothers with children below the age of 12 from Baduraliya MOH area. An interviewer-administered questionnaire was used as the data collection instrument and the collected data was analysed using Microsoft Excel software.

Results and Discussion: A little over half of the responded mothers (52.5%) had awareness on adverse effects of paracetamol usage. In addition to that, 45.7% administered paracetamol syrup according to the manufacturer's guidelines while 37.5% calculated the dose according to the weight of the child and 15% of mothers administered paracetamol according to a previous prescription. When considering frequency of administering the drug, 90% of the mothers followed the correct frequency.

Conclusion: The levels of awareness and the practices of mothers in Baduraliya area on administration of paracetamol to their children were poor. Therefore, the improvements on the awareness and practices should be done. This could be accomplished by providing health education sessions to mothers on paracetamol administration, during visits to clinics or by conducting awareness programs. Furthermore, providing proper equipment to measure the amount of paracetamol can also improve the practices.

Key Words: *Paracetamol, Administration, Children, Mothers*

Awareness and practices regarding dengue prevention at home settings among general public in Bulugahadeniya area in Kegalle, Sri Lanka

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Introduction: Dengue fever is one of the most prevalent mosquito-borne infections, not just in Sri Lanka, but across more than 100 countries. As a country with rainfall across most months of the year, with plenty of water streams, Sri Lanka experiences major epidemics of dengue fever. The number of fatalities has reduced during the last few years despite the increase in the number of cases. The main goal of this study was to examine the current level of awareness and practices regarding dengue prevention at the home settings.

Methods: A descriptive, cross-sectional study design was used for the research and convenience sampling method was used to select 206 participants from Bulugahadeniya area in Kegalle, Sri Lanka. The data was collected using a self-administered questionnaire and the collected data was analysed using SPSS Software.

Results and Discussion: From the sample, 60.2% of the participants were females. Majority (94.2%) had an average awareness regarding dengue fever and 99.5% agreed that the carrier for the dengue viral disease is a mosquito. All of the participants (100%) were aware of the possible places of mosquito breeding at home and garden and the methods of cleaning and removing them; however, only 43% stated that they find and clean the mosquito breeding areas often, while others were used to clean the surrounding in dengue rising seasons only. Some (56.8%) have even had requests at least once from their neighbours to keep their surroundings clean.

Conclusion: Almost all the participants had a good level of awareness regarding dengue fever and the methods of prevention, while less number of them were following the correct practices for the prevention. Majority seemed to be influenced to practice the preventive measures due to the increasing number of dengue patients in the country and the majority had even influenced others to practice preventive measures. Since overall practices regarding dengue prevention methods at home were still not satisfactory, it is important to educate the general public regarding the importance and methods of dengue prevention at the home setting.

Key Words: *Dengue fever, Mosquito breeding, Prevention, Home setting*

Knowledge and attitudes towards kangaroo mother care among healthcare professionals in a primary care hospital, Sri Lanka

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Introduction: Yearly, 15 million babies are born preterm in the world. Preterm and premature babies are unable to maintain their temperature constantly. This has become a leading factor of preterm child mortality and morbidity. Aims of the kangaroo mother care (KMC) concept are to promote optimal temperature and weight gain of preterm and premature babies. The goal of the study was to assess the knowledge and attitudes of healthcare professionals towards KMC.

Methods: A descriptive, cross-sectional study design was used. Convenience sampling method was used to select 100 healthcare professionals from a primary care hospital as the study sample. Data was collected using a self-administered questionnaire, which consisted of 36 questions. The collected data were analysed using Microsoft Excel software.

Results and Discussion: From the sample, 69% were female healthcare professionals. Mean age of the respondents was 31 years with a mean work experience of 6.5 years. Everyone in the sample (100%) knew that KMC is about keeping close contact between parent and the child and is beneficial to both mother and baby. Only a little over half of the sample (53%) had a satisfactory level of knowledge regarding maintaining temperature, heart rate and respiratory rate through KMC and only 50% stated that they often encourage the mothers to practice KMC. However, all the participants (100%) believed that KMC is not getting effectively used in Sri Lanka.

Conclusion: In conclusion, the study was able to show some positive results about awareness on KMC; however, the knowledge regarding KMC was only somewhat satisfactory. In the aspect of attitudes, all the healthcare professionals responded had a positive attitude towards the promotion and implementation of KMC for preterm and premature infants.

Key Words: *Kangaroo mother care, Preterm babies, Premature babies, Knowledge, Attitude*

Study on the perceptions of pregnant mothers towards lower-segment caesarean section at a private hospital in Jaffna, Sri Lanka

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Introduction: Lower-segment caesarean section (LSCS) is one of the oldest procedures performed in obstetrics. The medically justified, LSCS can effectively prevent maternal and perinatal mortality and morbidity. Therefore, LSCS has become more prevalent over the years due to various factors. The objective of this study was to analyse rates of LSCS and to identify the factors contributing to increase in LSCS in a private hospital in Jaffna.

Methods: This study was conducted using a mixed method. The quantitative aspect of the research was conducted as a descriptive, cross-sectional study using a self-administered questionnaire whereas the qualitative aspect was conducted through focused group discussions and in depth interviews. Convenience sampling technique was used to select 132 third-trimester mothers at Holy Cross hospital. Qualitative data was analysed using thematic analysis and the quantitative data was analysed using Microsoft Excel software.

Results and Discussion: According to the study, the majority (92%) of the participants were Sri Lankan Tamils, whereas only 5% of them were Sri Lankan Muslims, and 3% of them were foreigners. Nearly half of the sample (49%) had only a secondary level of education, 15% had vocational training and 24% of them had a degree or higher. All the participants have heard of LSCS while only 30% of them were aware of complications. Majority (78%) had gone through normal delivery and among them, 54% were not willing to go through the normal delivery again. According to the qualitative data, lack of respectful treatment towards women in labour and fear of pain they have to go through during normal delivery were the major factors influencing the choice of delivery.

Conclusion: Most of the participants had a positive perception towards LSCS as a delivery option, not because of the proper knowledge regarding the surgery, but due to the negative perceptions and fear towards normal vaginal delivery. Although LSCS is a major surgery which causes maternal and fetal morbidity and mortality, mothers are still convinced that it is an easy method of delivery. In order to develop positive attitudes towards vaginal delivery, awareness has to be raised and the existing misconceptions should be corrected to encourage vaginal delivery among mothers.

Key Words: *Lower-segment caesarean section, LSCS, Perception, Pregnant mothers, Mode of delivery*

Awareness and behaviours related to menstruation among working females in garment sector in Central province, Sri Lanka

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Introduction: Menstruation is a normal physiological process happening in females. Deficiency in awareness, misconceptions and malpractices related to daily living, nutrition, pain management, restrictions, and hygiene practices bound with menstruations are common. The aim of this study was to identify the level of awareness and behaviours related to menstruation among working females in the garment sector in Central province, Sri Lanka.

Methods: A descriptive, cross-sectional study design was used. A self-administered questionnaire including 20 questions related to awareness including common misconceptions and malpractices related to menstruation was given to 200 working females. The participants were selected using convenience sampling. Data was descriptively analysed using SPSS software.

Results and Discussion: Nearly all of the respondents (98%) were aware that menstruation is not a medical condition. Majority (90%) were aware that menstruation is a normal process happening in the female reproductive system. Over half of the females (51%) were aware that menstrual periods occur after ovulation. Many were not having bath during the first day of menstruation (49%) or not doing any physical exercises during their menstrual periods (21%) as they believed that to be bad for health.

Conclusion: This study concludes that nearly half of the participants had certain unhygienic practices and misconceptions which may affect their daily living. Active involvement of health professionals to increase their awareness regarding menstrual management will help maintain proper menstrual practices among females. It is important to understand the importance of having adequate awareness and practices during menstruation to take care of their own health and educate the next generation in a proper manner.

Key Words: *Menstruation, Misconceptions, Awareness, Practices, Behaviours*

An assessment of the factors affecting premature births in Indira Gandhi Memorial Hospital, Maldives

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Introduction: Preterm birth can be subdivided based on the gestation age into extreme preterm (<28 weeks), very preterm (28 to 32 weeks), and moderate preterm (32 to 37 weeks). According to the World Health Organisation, the majority of the preterm births take place in South Asia and Africa. The mortality rate of the premature baby depends on the place where the delivery took place, the time and the care delivered accordingly. The study aim was to find the factors associated with premature deliveries in the neonatal intensive care unit (NICU) at the Indira Gandhi Memorial Hospital (IGMH).

Methods: A retrospective research design was used to conduct this study at IGMH in the Maldives from January 2017 to December 2018. All the babies who were delivered during this period were included. Another sample (babies delivered from January 2014 to December 2018) was included to identify the seasonal variations affecting premature birth. All the data collection was done through secondary sources. Data was collected from the admission and discharge registry of IGMH, NICU and analysed descriptively through SPSS.

Results and Discussion: The study revealed that premature rupture of membrane (25.05%), gestational diabetes mellitus (19.35%) and pregnancy-induced hypertension (14.26%) were the main three causes among others for premature delivery. In-vitro fertilization (1.8%) was the least affecting factor. Furthermore, 36% of mothers were primigravidae with a maternal age between 21 and 30 years. According to the time series graph, the seasonal indices analysing the frequency indicate average upwards movements in the first six months and average downward movements in the last six months. In addition to this, the seasonal detrend data also noted that the seventh and eighth months have the least variation of seasons compared to the sixth and ninth months which had higher variations. The study results indicated a connection between the identified factors and premature births ($p < 0.05$).

Conclusion: It can also be concluded that there is a seasonal variation for several premature births. Minimizing maternal complications through adequate counselling can be recommended. Furthermore, further studies are needed to identify the complications associated with premature births to reduce the mortality rate by providing the best care at the appropriate time.

Key Words: Premature birth, Delivery, Premature delivery, Preterm

Assessing the factors associated with work-related stress among staff of Ga. Atoll hospital, Maldives

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Introduction: Mental illnesses are predominant in the world today and can lead to a variety of other conditions. It is often disturbed by stress and anxiety. Therefore, it is important to control stress and anxiety. The aim of this study was to assess the causes, effects and practices on work-related stress among staff of Ga. Atoll hospital.

Methods: A descriptive, cross-sectional study with a sample of 111 staff from Ga. Atoll hospital was recruited through a convenience sampling method. Data was collected through ASSET questionnaire via an online Google Form and analysed quantitatively using SPSS and one-way ANOVA test.

Results and Discussion: Majority of the participants (41.4%) were in the age group of 21-30 years, 69.4% of the sample was married. There was a correlation between work-related stress and level of education ($p=0.012$), and with the number of dependents in the family ($p=0.038$). Majority (63.9%) stated that working long hours would contribute as a cause of work-related stress and 61.2% agreed that they were troubled when they were assigned to work on unsociable hours. Over half of the respondents (57.6%) agreed that technology was one of the factors that contributed to workplace stress and 64.8% stated that workload increased stress.

Conclusion: Stress among the staff is associated with factors including inadequate pay and benefits, long hours, unsociable hours, high load of work, unrealistic deadlines and technology. These associations are in treaty with many previous findings on the same issues. The findings implied that participants were experiencing the symptoms of stress such as headaches, mood swings and insomnia as effects on health and well-being, thus affecting their work life as there would be many sick leaves. Personal interventions such as relaxation, having some kind of hobby could be used as well.

Key Words: *Stress, Work-related, Mental illness*

A study on knowledge, attitudes and practices on oral antibiotics use among residents in Mukurimagu, Laamu Gan, Maldives

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Introduction: Antibiotic resistance is one of the major health issues in Maldives since it is increasing to a hazardous level across the world. Abuse of antibiotics, both in humans as well as animals, is quickening the antibiotic resistance process. The aim of the study was to assess the knowledge, attitudes and practices of the general public on oral antibiotics use.

Methods: A descriptive, cross-sectional survey was conducted recruiting 200 respondents through simple random sampling. Data was collected using an interviewer-administered questionnaire in Mukurimagu, Laamu Gan, Maldives from December 2019 to January 2020. Data was statistically analyzed using SPSS.

Results and Discussion: The average age of the respondents was 35 years and more than half (54.5%) were females. The respondents' average knowledge and practices scores were at moderate level (48%), whereas their average attitude score was at a good level (69.5%). Age ($p=0.004$) and educational level ($P=0.001$) were factors that correlated significantly with the level of knowledge and practices. The mean knowledge level and practice score of the 26-35 year old group was higher than that of the others (mean= 1.231, SD=0.55 and mean= 2.4500, SD=0.562). Unlike knowledge levels, the mean practice score was higher of respondents with higher secondary education than that of others (mean =2.450, SD=0.045). There was no association with the demographic data and the respondents' attitudes. However, there was correlation between respondents' level of knowledge and practices ($p=0.002$) and their attitudes and practices ($p=0.003$).

Conclusion: The study shows that knowledge and education play a vital role in improving proper practices on the usage of antibiotics. Awareness programs should be implemented based on age groups and educational backgrounds in order to have best practices on usage of antibiotics within the community.

Key Words: Antibiotic, Knowledge, Attitudes, Practices, Maldives

Knowledge, attitudes and practices of road traffic regulations among teenagers in Kandy district, Sri Lanka

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Introduction: Road traffic injuries (RTI) are a significant factor contributing to death of many throughout the world. According to the second global status report on road safety, more than a million, between the ages of 15 and 29 years, die each year due to RTIs (WHO, 2013). Sri Lankan statistics show that the number of reported incidents of RTIs varied from 2700 in 2012 to 2269 incidents in 2018 (Sri Lanka Police Service, 2014). The aim of this study was to identify the level of knowledge, attitudes and practices of road traffic regulations among school-going teenage students in Kandy, Sri Lanka.

Methods: A community-based, descriptive, cross-sectional study was done among 136 students recruited through random sampling. Data was collected using a monitored and administered questionnaire, which was issued to students. Statistical analysis was done using SPSS.

Results and Discussion: Most of the students were at the age of 18 years and 46.3% travelled almost daily as passengers. Majority (94%) of the participants identified regulations and 64% recognized the road traffic regulation of Sri Lanka. In addition, 97.1% of them considered everyone should follow rules and regulations. Majority of the participants (87.5%) followed road signs and signals, and 83.1% used zebra crossing while walking. However, 14% of the participants were driving without a legal license. Majority of the participants (98.5%) answered they did not use a helmet and 84.6% of the participants answered they did not use a seatbelt while driving and 74.3% have used a phone while walking on the road.

Conclusion: The study participants had sufficient knowledge regarding road traffic rules and regulation, and most of them agreed that people should follow all the rules, regulations and laws. Most student participants considered vehicle roadworthiness is the way of reducing accidents and almost all the students agree that following road traffic lights and signals should be properly followed to minimize road traffic accidents.

Key Words: *Road traffic rules, Regulations, Knowledge, Attitudes, Practices*

Knowledge on HBV vaccination among nursing students in a nurses' training school in Central province, Sri Lanka

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Introduction: The Hepatitis B virus (HBV) is a tissue-specific DNA virus that infects hepatocytes and basal squamous epithelial cells, respectively. Hepatitis B (HBV) vaccination has been perceived in diverse ways, some of which would encourage its uptake while others could potentially deter its acceptability. This study explored nursing students' perceptions about HBV vaccination and the implications of the perceptions for acceptability of HBV vaccination.

Methods: A descriptive, cross-sectional study was conducted recruiting 100 female nursing students, between ages 20 and 25 years in a nurses' training school in Central province, Sri Lanka. The sample was recruited through convenience sampling technique. The study was conducted following the initial vaccination of nursing students. The data was collected using an interviewer-administered questionnaire and analysed using statistical analysis.

Results and Discussion: Among 100 nursing students, 84% were aware of hepatocellular carcinoma, 61% were aware of hepatocellular carcinoma diagnostic methods. Majority (81%) stated that hepatocellular carcinoma can be prevented and 74% were aware of the HBV vaccine. Over two thirds of the respondents (69%) stated that sexual intercourse was the mode of transmission of HBV and 64% stated that both genders have equal chance of getting infected with HBV. Majority (60%) knew how to protect themselves from HBV and 58% stated that HBV vaccines would protect those who encounter HBV. However, 43% did not have any idea about when someone should get HBV vaccine and 72% had never taken an HBV vaccine before. Three fourth of the respondents (75%) did not have enough knowledge regarding the HBV vaccine and 49% stated that health facilities such as hospitals, clinics would have an appropriate system for vaccine delivery.

Conclusion: To lessen the weight of hepatocellular carcinoma and usage of liver biopsy, mindfulness is required which can be proficient by print and electronic media, conducting free campaigns in places such as emergency clinics, to improve the nursing students' awareness on the importance of immunizations.

Key Words: *Vaccine, HBV, Knowledge, Attitudes, Practices*

Impact of lifestyle on body mass index (BMI) among multiparous women in Thaa Guraidhoo, Maldives

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Introduction: Obesity is associated with both modifiable and non-modifiable factors. In some women, childbirth is associated with permanent weight gain, due to factors such as BMI in parenthood, number of births, dietary patterns, level of physical activity and sleeping patterns. This study was done to establish the impact of lifestyle on the status of overweight and obesity among multiparous women in Thaa Guraidhoo Island.

Methods: This study is a quantitative cross-sectional inferential study design conducted to identify the correlation between lifestyle-related factors and BMI among multiparous women aged 18–55 in Thaa Guraidhoo, Maldives. According to systematic sampling techniques, the population included 121 multiparous women who resided in Thaa Guraidhoo. In addition, data collection was done using a self-administered questionnaire and was analysed by SPSS statistical tool.

Results and Discussion: Majority of women were 26-35 years of age (38.8%), married (90.1%) and had an educational background of up to ordinary levels (38%). Similarly, 42.1% were overweight and had 2-4 children (81.8%). Participants described their diet to be moderate (33.9%) but had a varied mealtime (55.4%) and skipped meals (61.2%). Most participants ate three meals a day (49.6%) with the preferred cooking method of baking, frying or boiling (66.1%). Correspondingly, 56.2% consumed one litre of water a day. Among participants, 81.8% stated that they did not exercise regularly but spent 3-5 hours per day on household chores (47.9%). Besides, 71.1% slept for only 4-6 hours a night with no rest in between (65.2%). Lastly, it was found that there was no relation between BMI and nutrition ($SD=0.778$), exercise ($SD=0.845$) or sleeping patterns ($SD=0.644$).

Conclusion: This study concludes that although a generalized unhealthy lifestyle was followed by the participants, no significant relationship was noted with regards to the BMI. Further, it would then be recommended that future studies be carried out with a larger geographical area, focused on other factors such as the socioeconomic status and mental well-being to gain more insight into the subject.

Key Words: *Impact, Lifestyle, BMI, multiparous women*

Knowledge, attitudes and practices on diabetic wound care among diabetic patients in a teaching hospital

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Introduction: A diabetic wound/ulcer is an open wound that occurs in approximately 15% of diabetic patients and is commonly located on the bottom of the foot. About 6% of those with diabetic wounds will be hospitalized due to infection or other ulcer-related complications. Diabetic foot ulcer is the leading cause of non-traumatic lower extremity amputations in the United States, and approximately 14% to 24% of patients with diabetic foot ulcers will require an amputation. Foot ulceration accounts to 85% of all diabetes-related amputations. This study focused on investigating the awareness, attitudes and practices on diabetic wound care among diabetic patients in a surgical ward in a hospital in Rathnapura.

Methods: A descriptive, cross-sectional study was done among 100 diabetic patients admitted to the surgical ward of Rathnapura hospital, using convenient sampling. Data was collected using a self-administered questionnaire and descriptively analysed using Microsoft Excel software.

Results and Discussion: In the study, 80% of the participants were between 40-60 years of age and 60% had an educational level of up to grade 9. Likewise, only 2 people had access to a tertiary education. Accordingly, 73% had a good knowledge on diabetic wound care and have gained this information through mass media, books and the internet (42%). The Majority of the participants however gained knowledge from medical institutions such as hospitals or clinics (21%). In addition, 33% of all participants were well-versed with wound care. Moreover, 28% of patients had a positive attitude towards diabetic wound care.

Conclusion: As a conclusion, patients must assume good practices and improve their attitudes towards diabetic wound care. It is imperative to ensure that all diabetic patients have sufficient awareness and good practices on preventing or minimizing risk of diabetic ulcers. It would be recommended that further information be brought to the general public through the use of mass media facilities and wellbeing clinics as this is what patients of the current study relied the most on.

Key Words: *Diabetes mellitus, Surgical ward, Foot ulcers, Amputations*

Awareness and attitudes on child health records among mothers in rural areas in Badulla district, Sri Lanka

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Introduction: Child health development records (CHDR) is the key document of the national growth monitoring and promotion program for children between the ages of 0-12 years. CHDR used by parents helps them to actively participate and understand the child's welfare and development. CHDR also serves the purpose of providing healthcare workers with a framework of the child's development. This study aimed to examine the mothers' awareness and attitudes regarding CHDRs.

Methods: A descriptive, cross-sectional study design was followed and data was collected through a self-administered questionnaire. The data collection tool was distributed among 150 mothers with children under 12 years of age in Halpe, Kumbalwela and Ella areas within the Badulla district. The sample was selected conveniently and data gathered was analysed descriptively using SPSS version 20.0.

Results and Discussion: Most mothers were 31-40 years of age (38.7%), had sat for their advanced level examination (39.3%), were Sinhalese (76%) and were employed (58%). Moreover, the respondents had a poor state of awareness with regards to the use of BCG vaccine (86%), which diseases required pentavalent vaccines (82%), what disease the Japanese encephalitis vaccine is given for (81.3%), MMR vaccine (60.7%) and DPT vaccine (87.3%). On the other hand, mothers were aware of the use of polio vaccine (58%). In addition, 52.7% of mothers agreed to have their child's eyes checked, adhering to check-up dates (63.3%) and nutritional needs (60.7%). However, more than half did not attend programs held within the MOH (58%). Lastly, 62% of the respondents received assistance from family members in achieving their child's needs.

Conclusion: This study concludes that there is a lack of knowledge and awareness among mothers regarding vaccinations and medical records of their children. Majority of the participants attended check-ups timely, which ensured that their child's health was looked after according to the CHDR. Overall, the study recommends that mothers participate in awareness programs in MOH to gain knowledge and awareness regarding the child's health records. Moreover, governing bodies may impose the need for up-to-date health records prior to school admittance, improve current MOH programs and aim for better health coverage and advice given to mothers regarding the need for vaccinations and other health check-ups.

Key Words: CHDR, MOH, Badulla district, Child growth and development

Knowledge and practices on endotracheal suctioning among intensive care nurses of a government hospital in Colombo district, Sri Lanka

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Introduction: Endotracheal suctioning (ETS) is a common invasive procedure which aims at keeping airways of the patients clear by mechanically removing accumulated pulmonary secretions. Intubated patients often have an increased production of mucous and weakened ability to clear airway secretions which may pose some risks to the patient, including infection (pneumonia) and atelectasis. This study aimed to assess the knowledge and practices of an intensive care nurse on ETS of intubated patients in the intensive care unit (ICU).

Methods: This study used a descriptive, cross-sectional, observational study design. The sample consisted of 125 nurses from four ICUs, as per the calculation based on the formula $N = Z^2P(1-P)/d^2$. Data was collected via a self-administered questionnaire and an observational checklist, designed according to the current ETS recommendations. All 125 nurses responded to the questionnaires and 35 nurses were observed for their endotracheal suctioning practices. Analysis of data was done using descriptive statistics using MS Excel software.

Results and Discussion: In this research, 85.6% of the participants were females and 14.4% were males. Furthermore, 30% of the participants have got 5 to 10 years of working experience. All the participants had undesired (80.6%) or moderate (19.4%) levels of knowledge regarding ETS recommendations, whereas, none of the nurses scored well. Furthermore, the majority did not disinfect their hands after nursing procedures (77.1%) and only 50% of the sample performed hand hygiene before the ETS procedure.

Conclusion: The study found that practice of ICU nurses was not in line with current ETS recommendations. Significant discrepancies in knowledge and practices in relation to current recommendations as well as contrasting relationships between knowledge and its corresponding practice were demonstrated. Evidence-based ETS recommendations and clinical guidelines coupled with adequate support such as mentors, support systems can be implemented.

Key Words: *Hand hygiene, Hospital-acquired infections, Medical officer, Nursing officer*

Perception towards benefits and barriers for physical exercises among diabetic patients in the Maldives

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Introduction: Exercise is considered to be an important aspect of managing diabetes. The benefits of regular exercising for physiological and psychological health are well-advised by health professionals, although, the level of physical activity among the general population of Maldives is reportedly varied. This study was conducted to identify the perception of the benefits and barriers of exercises among diabetic patients in the Maldives.

Methods: The research was conducted as a descriptive, cross-sectional study. Total of 150 participants, between the ages of 30 to 80 years, with a prior diagnosis of diabetes, at least three months before, was approached. The participants were selected through simple random sampling from the patient list of diabetic clinics at a hospital in Male, Maldives. Global physical activity questionnaire and exercise benefits/barrier scale were used in the data collection tool. Descriptive analysis was performed using SPSS.

Results and Discussion: In the study, most participants were females (58.7%) and were in their 40-50s. Out of the 150 respondents, 90% stated that exercises provided relaxation and improved social skills. Majority of the participants claimed that exercises improved their physical and psychological well-being as well as sleep quality (90%). One-third of the participants (33.3%, n=50) participants agreed that exercising consumed too much time. Moreover, 10% of participants stated that exercising was tiring and had a limited area for activity (90%). In addition, 70% lacked spousal support and claimed that the outfit that needs to be worn to exercise was unappealing.

Conclusion: Overall, the respondents had a positive perception of physical exercises. However, many participants consider finding time to exercise as one of the major barriers among a few others. Considering the responses, it would be recommended that a conducive environment be created for diabetic patients to improve their motivational levels. Also, further study is required to understand the increasing incidences of sedentary lifestyle and obesity, how to improve the engagement of diabetic patients on exercises and reasons for migrating to the city from subordinate islands.

Key Words: Barriers, Benefits, Diabetes, Physical exercise, Maldives

Knowledge and attitudes among mothers of preschool children on age-appropriate coverage of routine immunization

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Introduction: Vaccines are widely acknowledged to be the most successful medical advancement in current times. Vaccines continue to save hundreds of thousands of lives annually and are the best prevention against infectious diseases. Mothers' knowledge and attitudes regarding immunization greatly influence the prevention of infectious diseases. This study was aimed at assessing the knowledge and attitudes of mothers with preschool children on age-appropriate coverage of routine immunization at the vaccine clinic of a specialized children's hospital in Peradeniya, Sri Lanka.

Methods: This was a cross-sectional, descriptive study which was conducted among 100 mothers attending the vaccine clinic, selected using convenience sampling. A self-administered questionnaire was used to collect data on maternal knowledge and attitudes regarding routine immunization of preschool children, under the expanded program of immunization. The level of knowledge was determined by assigning marks to correct responses for questions on knowledge. Age-appropriate immunization of children was assessed using child health development records. Data was analysed using Microsoft Excel.

Results and Discussion: The participants of the study were mainly above 30 years of age (55%) and had an education level of up to ordinary level examination (48%). Moreover, 73% looked upon village commissions for mother and child as a source of information about vaccine-prevented diseases and were well informed with regards to vaccine scheduling (63%). Furthermore, 70% of the participants demonstrated positive attitudes towards the expanded program of immunization whilst 91% of mothers possessed a favourable attitude towards the immunization program. Similarly, they did not experience their child going through serious adverse effects post-vaccination.

Conclusion: This study concludes that the majority of the mothers have a good knowledge and attitude towards age-appropriate coverage on routine immunization. It is recommended to conduct more educational sessions for mothers with children under five years of age with the main emphasis on the importance of vaccination and vaccine-preventable diseases.

Key Words: *Children, Mothers' knowledge, Attitudes, Immunization, Vaccine-preventable diseases*

Knowledge and practices among nursing students regarding cardiopulmonary resuscitation (CPR)

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Introduction: The nursing profession constantly deals with emergencies and is skilled in the management of such scenarios. Likewise, cardiopulmonary resuscitation (CPR) is a concept that should be well learnt by nurses as the applicability and effectiveness of CPR and nurses' confidence depends on training. A team-based approach is the key to a successful CPR rescue and highly trained nurses should work together and coordinate key events of CPR involving chest compressions and ventilation. Understanding the importance, this study aimed to find out student nurses' knowledge and practices regarding CPR in an emergency.

Methods: This research was a descriptive, cross-sectional study and the study sample consisted of 50 nursing students, studying the bachelor's program at a healthcare institute in Gampaha, Sri Lanka. Convenience sampling technique was used. Moreover, a self-administered questionnaire with 38 multiple-choice questions and one open-ended question was distributed among them. Data was descriptively analysed using SPSS version 23 and MS Office Excel software.

Results and Discussion: The study findings state that 88% of the participants were females and 56% were within the age group of 35-45 years. Most participants had a work experience of 5-14 years (44%) and 64% had no previous intensive care unit exposure. Moreover, the majority of the nurses have not attended acute cardiovascular life support (84%) nor basic life support (60%) training programs. Majority (60%) had scored 30-40 points regarding CPR guidelines indicating average level of knowledge. During the practical component, nurses were well aware of recognising a systole intervention (100%) and the steps of the chain of survival (96%). In contrast, nurses required improvement in electrical therapy skills (36%).

Conclusion: The nurses in the current study, based on the findings, were equipped to aid medical emergencies and provide CPR if required. At large, nurses possessed an average level of knowledge on CPR guidelines. In addition, it would be recommended that awareness still be raised amongst healthcare professionals through workshops and awareness campaigns on continuous development.

Key Words: *Cardiopulmonary resuscitation, Cardiac arrest, Nurses, CPR techniques*

Assessing the factors associated with high turnover rates among nurses in a hospital in the Maldives

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Introduction: High turnover among nurses is a huge concern in healthcare systems all over the world. In addition to the scarcity and the shortage of healthcare providers, especially nurses, the rate of turnover has never declined over the years. This has negatively affected healthcare systems in many ways and has become an obstacle to deliver quality care, to achieve effectiveness and efficiency in managing healthcare systems. This issue has reached a point where healthcare administrators need to study the reasons that lead to a large number of nurses stepping down from their profession. This study was aimed at finding the main reasons which would lead to nurses in a hospital in the Maldives to consider giving up their career.

Methods: This study was a cross-sectional, descriptive study done among nurses. A randomly selected 100 nurses were provided with a questionnaire containing 40 questions regarding the nurse turnover and possible solutions for the issue. Data was analyzed descriptively using SPSS AMOS 18 software.

Results and Discussion: Most nurses were females (77%) and were 26-30 years of age (42%) with 0-5 years of work experience. Moreover, 90% of the overall participant population mentioned that high turnover rates is a rising issue and have thought of changing the place of work (57%). Also, 94% of the participants agreed that job stress is a factor for high turnover rates. Accordingly, nurses stated that their work aids in feeling accomplished (42%), allows skills to be practiced (38%), had adequate work per duty hour (48%) and that co-workers tend to be helpful in the workplace (42%). On the other hand, nurses remained neutral with regards to workplace autonomy (44%) and recognition (33%). In contrast, 24% disagreed with the chance of promotions. Moreover, 89% believed communication would improve outcomes, whereas, everyone agreed that better environments can elevate job stress (100%).

Conclusion: This study concludes that many factors can lead to nurse turnovers such as job stress, workload, organizational injustice and payroll. It is recommended that providing nurses with a good possible working environment, recognition, awards, and improving communication skills among nurses can reduce the nurse turnovers.

Key Words: *Nurses, Turnover rate, Job satisfaction, Healthcare*

Knowledge, attitudes and practices on oral healthcare among nursing students of a private healthcare institute in Gampaha district, Sri Lanka

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Introduction: Oral hygiene represents an individual's total healthcare. Nurses are the role models of the part of the healthcare setting who deliver care for ill patients. Therefore, their attitudes are more influential for patients' well-being. The purpose of this study was to study the knowledge, attitudes and practices towards oral healthcare among nursing students in a private healthcare institute in Gampaha district, Sri Lanka.

Methods: A cross-sectional study was conducted to study the knowledge, attitudes and practices of oral health care among nursing students. Total of 140 nursing students were included in the study. Data collection was done using a self-administered questionnaire. Statistical analysis was done using the Microsoft Excel.

Results and Discussion: All the nurses (100) were aware that good oral health is important for the overall health of them. About 82.3% of the respondents had good knowledge regarding oral health. Majority of the nurses (85%) showed positive attitudes toward preventive oral health diseases. The study shows practices of oral health care among nurses as good (79.2%).

Conclusion: The study revealed that the overall knowledge, attitudes and practices of oral healthcare was in a satisfactory level among the nursing students. Appropriate training and encouragement for promotion of oral health and providing suitable care for the prevention of dental diseases should be included in the curriculum of nurses training.

Key Words: *Attitudes, Knowledge, Practices, Nurses, Oral healthcare*

Prevalence of hair loss and associated factors among students in the nurses training school Kalutara, Sri Lanka

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Introduction: Androgenetic alopecia (AGA) is the most common cause of hair loss in both men and women. The pattern of hair loss in women, known as female-pattern hair loss (FPHL), is defined as loss of hair volume over the mid-frontal scalp. The form of hair loss in women is less recognized, but FPHL can still be diagnosed clinically. The aim of this study was to assess lifestyle changes and prevalence of hair loss among students in the nurses training school (NTS), Kalutara, Sri Lanka.

Methods: This study was a descriptive, cross-sectional study, which was conducted among a conveniently-selected 100 third-year students in the NTS, Kalutara. A self-administered questionnaire was used to collect data and collected data was descriptively analysed using Microsoft Excel.

Results and Discussion: From the 100 students enrolled in the study, a vast majority was females (98%) and most of the respondents had suffered from hair loss (83%). Most of the students (83%) have used chlorinated tap water for day-to-day activities and believed that usage of chlorinated tap water to shower may have an association with hair loss. The respondents have also suffered from other hair problems such as dry hair (61%), dandruff (60%), gray hair (15%), and oily greasy hair (3%). Over half of the participants (54%) were under stress as they perceived. A vast majority (91%) were not attending any physical exercises and 90% of the participants stated that they were having an unbalanced diet. Moreover, the majority of the participants (85%) had taken 4-8 hours' sleep during the last month.

Conclusion: Hair loss seems to be very common among the study sample. Another study should be conducted with a larger sample size to understand the actual issue as it seems the majority of the students have experienced hair loss during the last three years, which is during their time in the NTS. This could be due to the usage of chlorinated tap water, increased stress levels, and/or changes in their lifestyles.

Key Words: *Scalp, Hair, Nursing students, Lifestyle changes*

A study on the prevalence of social anxiety among undergraduate students in Western province, Sri Lanka

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Introduction: Social anxiety disorder is best defined as an anxiety disorder in which a person has an excessive and unreasonable fear of social situations. Anxiety (intense nervousness) and social consciousness arise from a fear of being closely watched, judged and criticized by others. In Sri Lanka, sufficient research has not been published on this area. The aim of the present study was to assess the prevalence of social anxiety among undergraduate students in Western province, Sri Lanka.

Methods: A descriptive, cross-sectional study was conducted among 213 undergraduate students selected using convenience sampling technique and data was collected using a self-administered questionnaire which included questions regarding common fears and anxious situations of the participants including attending social events, talking in front of an audience, talking to new people, talking with people belongs to higher authority than themselves. Data was analysed using SPSS software.

Results and Discussion: From a total of 213 participants (140 females, 72 males and 1 preferring not to say) it was identified that 45% of population was affected from mild-to-moderate social anxiety according to the social inventory and most of them belonged to 18-25 age group (91.1%). The results obtained have shown that females (23%) have screened more positive for social anxiety than males (12%). From the total population, 5.6% was affected from severe-to-very severe social anxiety and 67% of them were females. According to the ANOVA test, there was no association identified between age and anxiety level, but there was an association between gender and anxiety level.

Conclusion: There was evidence to suggest that nearly half of the participants were affected from social anxiety and that the levels of anxiety were different according to the age group and gender. Using this study as a base, more studies should be conducted among other students and age groups, to identify the factors affecting the social anxiety and to identify the strategies to prevent them in order to improve the social skills of future adults of the country.

Key Words: *Social anxiety, Undergraduates, Western province*

Knowledge, attitudes and practices on smoking and use of tobacco among advanced level students in Gampaha district, 2020

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Introduction: Smoking is the process of inhaling and exhaling of burning plant material fumes. Tobacco contains many unhealthy ingredients. There are different types of tobacco based products. Both males and females, especially younger generations, tend to smoke, and get addicted. Smoking ultimately results in many health complications. The main aim of this study was to assess the knowledge, attitudes and practices on smoking and the use of tobacco among advanced level students in Gampaha district, Sri Lanka.

Methods: A descriptive, cross-sectional study was conducted among 150 students selected using clustered sampling method. A closed-ended, self-administered questionnaire distributed as a Google form was used to collect data. Data was analysed using Microsoft Excel version 2016 by preparing descriptive graphs and diagrams according to the data obtained.

Results and Discussion: Out of the total number of participants, 54.7% were males and 45.3% were females. The results indicated that 90% of the students in the study were in grade 13. Almost half (47.3%) of the participants showed adequate knowledge about smoking and its types. Majority of the participants (81.3%) were aware of the impacts of tobacco use and held negative attitudes towards it (82%). Participants mentioned that they were motivated to use tobacco through peers (21%) and media (56%) mostly during the ages of 16-18 years (49%). It was shown that students use tobacco mostly for stress relief (46.7%) and for pleasure (40%). A significant number of students (80.7%) were not using tobacco; however, 19.3% of them used tobacco over the last two years.

Conclusion: The results made it evident that despite having sufficient clarity of knowledge regarding tobacco use and its consequences, and holding negative attitudes on it, certain advanced level students in Gampaha district were driven towards using tobacco due to many reasons as mentioned.

Key Words: *Tobacco, Smoking, Advanced level students*

Awareness on effects of caffeine consumption on hypertension and heart rate among youth in Gampaha district, Sri Lanka

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Introduction: Caffeine is the most commonly and widely used physiological stimulating drug worldwide. Today, most people acknowledge that intake of caffeine is perhaps one of the most prevalent causes for the increase of heart rate and blood pressure. The main aim of this study was to evaluate the level of awareness on the effects of caffeine consumption among youth.

Methods: This was a descriptive, cross-sectional study, conducted among both males and females, within the age group of 19 to 40 years in Gampaha district. A self-administered questionnaire, presented only in English language was distributed among, conveniently-selected 384 individuals at an institute, who had no medical history of hypertension and tachycardia. Furthermore, responses were statistically analysed using Microsoft Excel.

Results and Discussion: The analyzed data showed that 80.5% of the respondents were aged between 19 and 25 years. Majority (90.6%) of the respondents were aware of the term caffeine. However, 51.6% of the respondents were not aware of the caffeine content in beverages. Also 29.4% of the respondents consumed caffeine containing beverages every day, while 75% of the respondents have consumed caffeine for about three or more years. In addition, only 51.6% were aware of the effects of caffeine consumption on health and only 50.5% were aware of the resulting effects of caffeine consumption, such as, hypertension and increased heart rate, which is largely inadequate. Also, 54.9% of the respondents identified heart diseases as a resulting health issue due to overdose of caffeine.

Conclusion: The available evidence from this study shows low awareness level on the effects of caffeine consumption. It is recommended to organize more community-level awareness programs, especially during the “National Caffeine Awareness month-March”.

Key Words: *Caffeine, Awareness, Hypertension, Heart rate*

Level of knowledge and practices on phlebotomy among students of a private healthcare institute in Gampaha district, Sri Lanka, 2020

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Introduction: Phlebotomy, the act of drawing blood through venipuncture, is one of the most common medical procedures in healthcare, being the basis for most of the diagnosing and treatment procedures (Mbah, 2014). Knowledge and basic skills for blood drawing using safety equipment can help the phlebotomist or the nurse to decrease possible issues that would arise in the procedure. The aim of this study was to assess knowledge of nursing and biomedical sciences students related to phlebotomy, who would be future nurses and biomedical scientists (phlebotomists) with their scope of study.

Methods: An electronic-based survey was conducted by administering a questionnaire to nursing and biomedical sciences students attending a healthcare institute in Gampaha district. The questionnaire consisted of 20 closed-ended questions in English language. All data were then subjected to excel sheet and SPSS software for descriptive analysis.

Results and Discussion: Altogether 100 students, including 82 nursing students and 18 biomedical sciences students participated to the study. Many of the students (73%) had a general knowledge regarding the procedure, but lacked practice and experience. Majority of the students (35%) who had needle phobia have overcome through professional advices and advices from friends. Moreover, the count of students whose family members are working in this particular healthcare field was less (33%). Alternative sites for drawing blood were not identified properly by the respondents due to insufficient knowledge of them regarding sites of venipuncture; metacarpal vein (39%), external jugular vein (29%), palmar digital vein (29%), popliteal vein (3%). Moreover, knowledge on capillary blood tests was average (53%) among nursing and biomedical students. Majority of the respondents, on the types of syringes, stated that 3 cc syringe is used to draw blood from infants (57%), whereas some stated they would use winged infusion set (40%) or 5 cc syringe (3%).

Conclusion: Inadequate knowledge and practices on phlebotomy procedure can adversely affect the patients' health status. Therefore, students who practice phlebotomy should get updated on modern blood drawing techniques.

Key Words: *Phlebotomy, Knowledge, Needle phobia, Nursing, Biomedical sciences*

A study on the application of virtual lab in Biomedical SciencesJayathilake J.M.N.J.^{1*}, Karunathilaka W.D.D.¹, Mahalingam N.¹¹ *School of Biomedical Sciences, International Institute of Health Sciences, Welisara, Sri Lanka*

Introduction: The recent Covid-19 pandemic has become a chaos around the world affecting daily activities including education. There has been a conscious effort towards adapting to the new normal due to lockdowns, quarantines, social distancing and isolation. There are 1.2 billion students around the world who are affected by the closure of schools. Thus, most of the education practitioners are moving towards online classrooms. However, online learning methods have progressed in the last few years in the education sector and made us realize the effectiveness of delivering the course material and information. Here, various powerful eLearning tools have been introduced to the communities. However, there are gaps between the student and the eLearning tools, especially regarding the subjects that contain practical components which need to be studied further. To overcome this, it has become a need of developing an interactive virtual learning platform. This study discusses the development of a real gesture virtual lab system with regards to the field of biotechnology.

Methods: In this study a systematic review was performed by utilizing major databases to gather information on eLearning and the effectiveness of virtual learning platforms in practical class conduction. For this, research articles published after 2010 were studied. The articles which were primarily focused on eLearning and utilization of virtual labs for biotechnology were included. The data were extracted from articles and the results have been presented as a narrative synthesis.

Results and Discussion: Previous studies confirm that virtual labs perform an efficient role in learning and teaching, resulting in a higher level of satisfaction, retention and achievement in a diverse student body. It allows users to conduct experiments individually and to repeat them multiple times if needed. Further, time, effort and money could be saved through implementing this technology in educational institutes. Requirement of professional programmers with strong skills in different programming languages and a team of experts in lab protocols and psychology is essential in the process of developing a virtual lab. Augmented reality is another important concept that goes together with virtual reality to give an immense hand on experience that increases the student immersion and engagement. There are few negative impacts related to reduction of direct communication between student and teacher. Therefore, the effectiveness should be continuously evaluated by instructors. However, potential issues related to virtual labs should be identified during developing a virtual lab system and appropriate strategies should be taken towards the success of implementation.

Conclusion: Though this concept has been integrated with the education system of developed countries, its application in Sri Lankan education system is rare. This study directs to initializing, maintaining, developing and integrating experience of virtual lab protocols in the Sri Lankan education system.

Key Words: *E-learning platforms, Virtual labs, Biomedical Sciences*

A study on knowledge regarding dengue fever among hospitalized patients in a selected government hospital in Sri Lanka

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Introduction: According to the World Health Organization (WHO), among arboviral infection diseases, dengue is considered to be one of the most common types in the world. Approximately 390 million infected cases are recorded yearly, and 40% of the world population are living in at-risk areas. A total of 18,760 dengue cases and 28 dengue deaths have been reported across the country in the first five months of 2019. Dengue outbreaks are common in Sri Lanka between May and July and usually coincide with the South-Western monsoon which commences in May. Knowledge regarding this disease has always been a controversial topic. Therefore, it is necessary to scientifically validate the knowledge regarding this disease. The aim of this study was to assess the knowledge regarding dengue fever among hospitalized patients in a selected government hospital in Sri Lanka.

Methods: A descriptive, cross-sectional study was conducted among 150 patients who were admitted to the selected hospital. A self-administered questionnaire was used to collect data. Data analysis was done by Microsoft Excel software and descriptive analysis was used to interpret the results.

Results and discussion: Among the participants, 68% of them were males. Majority of the respondents (85%) stated that they have not received any information regarding dengue fever in the last 2 weeks prior to their hospitalization. However, 67% of the respondents stated that they knew that dengue was a transmissible disease and 60% of the respondents stated that clean water was the breeding point of mosquitos while 23% believed it as dirty water. Majority of the respondents stated that they were aware of the vector cycle of the mosquitos. From the sample, 90% of the respondents stated that immediate hospitalization is ideal if they have fever and other symptoms of dengue.

Conclusion: Majority of the respondents have sufficient knowledge regarding dengue fever. It would be ideal if the communities can be informed via mass media and other electronic media, providing further knowledge to the people in the communities.

Key Words: *Dengue fever, Knowledge, Hospitalized patients*

The tendency and probability of showing post-menopausal symptoms among post-menopausal women in a suburban area in Kegalle district, Sri Lanka

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Introduction: Menopause is one of the most hypocritical stages of life among women. Post-menopausal symptoms are common among most women. Early recognition of symptoms can help in reduction of discomfort and fears among them. Menopausal symptoms, though well tolerated by some women, may be particularly troublesome in others. Severe symptoms compromise overall quality of life for those experiencing them. This study was conducted to explore the tendency and probability of showing post-menopausal symptoms and their impact on individual and family life among post-menopausal women in a suburban area in Kegalle district.

Methods: A descriptive, cross-sectional study was conducted. Convenience sampling method was used to select 120 women who had undergone menopause. An interviewer-administered questionnaire was used to collect data and descriptive analysis was done using Microsoft Excel software.

Results and Discussion: Form the whole sample, 43% of the participants were overweight according to the BMI scale. Majority (81%) of the participants stated that they are having muscle and joint pains. In addition to that, 65% stated that they experience physical and mental exhaustion, while 47% were experiencing hot flushes and sweating at night, where 31% from the participants experiencing hot flashes stated that the discomfort is moderate-to-severe.

Conclusion: It can be concluded that a considerable amount of the participants are experiencing symptoms which are suggestive of post-menopausal symptoms. Therefore, the tendency and probability of showing post-menopausal symptoms could be considered as high. It is imperative to ensure quality of individual and family life among post-menopausal women in Sri Lanka. Recommendations would include making strategies to meet the identified challenges. It would be better if the government can arrange clinics for post-menopausal women in the MOH area to deliver much needed health services, ensuring health and safety of the women in the community.

Key Words: *Menopause, Pre-menopause, Post-menopause, Tendency, Probability*

Knowledge regarding contraception among undergraduate students in a selected government university, Sri Lanka

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Introduction: Sri Lanka National Health Survey (2000) has stated that knowledge about contraception and reproduction is generally poor among Sri Lankans. Students in tertiary education are a vulnerable group, as these young people find themselves where they can discover their sexuality. Students in higher education institutions are generally presumed to have a higher level of awareness about accessible methods of contraception, but the request rate for the termination of pregnancies remains high among young adults, and especially among students in higher education. The aim of this study was to explore the level of undergraduate students' knowledge on contraception and emergency contraception.

Methods: A descriptive, cross-sectional study was conducted among 206 full-time, second year undergraduate students at a selected government university in Sri Lanka from selected four faculties of the university. Sample was selected using simple random sampling method. The data was collected using a self-administered questionnaire, and analysed by using Microsoft Excel software.

Results and Discussion: Majority of the respondents (92%) stated that, male condoms are single used and need to be discarded after using once, whereas 6% stated a single condom can be used twice and 2% they could be used multiple times. Slightly over half of the respondents (51%) identified that the withdrawing method is a safe contraceptive method while the remaining 49% of the respondents stated that withdrawing method is not a safe method in preventing pregnancies. Out of the female respondents, 58% stated that contraceptive pills is the most suitable method of contraception in females.

Conclusion: It was identified that the students generally had a good knowledge of contraception in only some aspects. The overall recommendation was that students should be provided with accurate, specific information regarding contraception and emergency contraception, and those information would need to be easily accessible to the students to reduce the misperceptions about contraception.

Key Words: *Contraceptives, Knowledge, Higher education, Students*

A study on the impact of quarantine stress among youth and strategies used by them to cope up, 2020

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Introduction: Stress is a condition of mental pressure of an individual which leads to conditions such as depression and anxiety, whilst quarantine is predicted as a factor for acute stress disorder and post-traumatic stress symptoms. This study focused on identifying the stresses among youth who are quarantined due to the current pandemic and strategies used by them to cope up with stress.

Methods: The research was carried out as a descriptive, cross-sectional study among students who are between the ages of 15-24 years in a private institute of Gampaha district. The students were selected through convenience sampling. Data was collected using the WEMWBS (Warwick-Edinburgh Mental Well-being Scale, 2020) and was analysed using the Statistical Package of Social Sciences version 20.0 (SPSS).

Results and Discussion: Data was obtained from 75 participants out of which the majority were females (73.3%) and 26.7% were males. The average age of the participants was 20 years and most participants were nursing students (69%). The respondents obtained an average of 47 as the final score for the WEMWBS section of the questionnaire which shows that the population of students was of average mental well-being. It could be observed that the most common stressors during quarantine were the duration of quarantine (65.8%) and loneliness (46.1%). However, the academic work did not act as a significant stressor (1.3%). It was also seen that watching videos (84%), sleeping (78.7%) and listening to music (76%) were the most common strategies used to cope up with stressors whereas the minority stated that they would play with pets (1.3%).

Conclusion: The results make it evident that these students were stressed due to quarantine during the pandemic, mainly because of loneliness. As per the findings, they have been using a number of coping strategies to get through these stressors. Yet, having more family time and exercising daily can be implemented to not only help their mental health but also to keep their days productive.

Key Words: *Stress, Stress management, Quarantine, Youth*

Quality of life among smear-positive pulmonary tuberculosis patients in a chest clinic in Colombo district, Sri Lanka

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Introduction: Tuberculosis (TB) continues to be a major public health problem globally. Quality of life (QoL) is one of the main factors that should be considered for TB patients as the condition greatly affects the wellbeing of patients. Moreover, QoL is a broad and complex multidimensional concept that incorporates physical, social, psychological, economic, spiritual and other domains. Thus, the study aimed to assess the QoL among smear-positive pulmonary TB patients in a chest clinic located within the Colombo district.

Methods: A descriptive, cross-sectional study design, alongside convenience sampling techniques was used in the study. The short form (SF-36) QoL questionnaire was used as the data collection tool amongst 100 patients attending the chest clinic. The gathered data was analysed by SPSS software.

Results and Discussion: According to results, prevalence of TB is higher in males (65 %) than in females (35 %) and commonly can be seen in individuals who were between 30-39 years of age. Likewise, the majority were also diagnosed as diabetic (31%) and cigarette smoking was the most common risk factor among those patients (77%). In addition, most patients (87%) had been reported as negative after two months of treatment and on the other hand, patients stated that they experienced a better state of wellbeing with continuous treatment after a duration of one year (47%). However, only 1% of the total population had an excellent QoL despite having TB, 33% reported it to be good, whereas 44% stated that it was slightly poor and 23% to be poor. There were positive correlations between QoL with physical problems ($p=0.006$) and emotional problems ($p=0.0000$).

Conclusion: Patients with TB have a low QoL in spite of receiving new care strategies. Therefore, enhancement in QoL may improve adherence to anti-tuberculosis treatment, functioning and well-being of patients with TB. Hence, strict pulmonary TB screening of immunosuppressant patients and intensification of health education to avoid risk factors identified are recommended.

Key Words: *Mycobacterium tuberculosis, Pulmonary tuberculosis, Quality of life*

Prevalence of teenage pregnancies and associated factors in Male', Maldives

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Introduction: Teenage pregnancy has become a global concern in recent years. This has been viewed as a global crisis due to the increase in the level of adolescent pregnancy and the number of teenagers bearing children out of marriage. The aim of this survey was to assess the prevalence of teenage pregnancies and associated factors in Male', Maldives.

Methods: A descriptive, cross-sectional study was done with a conveniently selected sample of 100 participants who were 15-19 years' old teens. Data was collected using a Google Form shared among the selected sample. Data analysis was done using SPSS software and Excel 2013.

Results and Discussion: Majority of the participants (59%) belonged to the age group of 18-19. Over half of the participants (56%) have studied up to Advanced Level. Nearly three quarter of the respondents (74%) did not engage in any occupation and 86% of the total participants were neither married nor pregnant. However, teen pregnancy was equally common among age groups of both 15-17 (51%) and 18-19 (49%). Majority of the total participants (65%) have engaged in sexual activities as a result of peer pressure and social issues. Majority of the participants (76%) had received sex education through social media. Majority of the teen mothers regret getting pregnant during teenage years (75%) and believe that teen pregnancies are a huge issue in Maldives (88%).

Conclusion: Teenage pregnancy is a huge problem in the Maldives. This is due to lack of awareness and misguidance through social media and peer pressure. Therefore, conducting awareness programs on teenage pregnancy will help to improve this major problem.

Key Words: *Adolescence, Pregnancies, Teenage, Sexual maltreatment*

Study on knowledge and practices regarding blood sugar control and complications among patients with diabetes mellitus

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Introduction: Globally, an estimated 422 million adults were living with diabetes in 2014, compared to 108 million in 1980. The global prevalence (age-standardized) of diabetes has nearly doubled since 1980, rising from 4.7% to 8.5% in the adult population. This reflects an increase in associated risk factors such as being overweight or obese. The main purpose of this study was to assess the knowledge and practices regarding level of blood sugar control and complications among diabetes patients.

Methods: A descriptive, cross-sectional study was done on 150 participants, selected through convenience sampling from a private hospital in Malabe in Sri Lanka. Data was collected by using a structured, self-administered questionnaire and analysed descriptively through SPSS software.

Results and Discussion: According to the analysis, 51% of the respondents were males and 49% were female. Males seemed to have more knowledge on blood sugar control and complications of diabetes mellitus than females. Age group of 30-39 years' participants had better knowledge and practices regarding blood sugar control and complications compared to other age groups. People who were educated up to O/L and A/L had comparatively less knowledge than people who were more educated. Most of the participants (43%) checked their blood sugar once a week and 17% of participants checked their blood sugar level at least once a month. From the respondents in the age group of 30-39 years, only 4% checked their blood sugar at home using a glucometer and 96% of them checked at a nearby facility.

Conclusion: According to these results, the knowledge and practices regarding blood sugar control and complications of the majority of participants, was not satisfactory. Hence, it is very important to educate all the participants regarding blood sugar control and complications.

Key Words: *Blood sugar, Diabetic patients, Complications, Knowledge, Practice*

A study to assess the factors influencing men entering the nursing profession in Laamu Fonadhoo, Maldives

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Introduction: Nursing is a profession that is responsible for the continuous care of the sick, the injured, the disabled, and the dying. It also encourages the health of individuals, families, and communities. Though men were utilized as nurses even before nursing was recognized as a profession, male nurses were continuously becoming a minority within the field. The aim of this study was to assess the factors influencing men entering the nursing profession in Laamu Fonadhoo, Maldives.

Methods: A descriptive, cross-sectional study with a sample of 100 teenage males in the age group of 18-25 were recruited using convenience sampling from the general public in Laamu Fonadhoo, Maldives. Data was collected through a Google Form questionnaire and analysed using descriptive statistics.

Results and Discussion: In this study, 91% were aware of the nursing profession. Among them, the majority were aware of what nurses do at hospitals (80%), nursing specialties (70%), nursing schools in the country (81%), that the country has high demand for male nurses (58%). However, 92% agreed there could be family issues and cultural barriers and 73% agreed they will face gender bias and discrimination. Nevertheless, 52% agreed that men are suitable to be a nurse. The challenges encountered according to the responders were that, 43% agreed nursing is a traditionally female profession, 26% viewed it as a stereotype, 10% viewed it as inappropriate for men, 6% had cultural objections, 5% lacked guidance or information, 4% had family objections, 2% viewed it as intellectually challenging and that there is a lack of male mentors, 1% viewed nursing to be lacking career progression and to have a poor salary scale.

Conclusion: According to this study, it is clear that men are not encouraged to do nursing as a career, although male nurses are in high demand all over the world. Addressing the barriers males have identified in nursing schools, challenging gender stereotypes and increasing the visibility within the culture that nursing is skilled and technical and not gender based will get more male nurses into the profession.

Key Words: *Gender biases, Male nurses, Sexual diversity in nursing, Nursing schools, Nursing profession*

Knowledge, attitudes and practices towards blood donation among healthcare staff in base hospital Dehiattakandiya, Sri Lanka

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Introduction: There is a need for blood to be stored in any country to be used for patients in need later. Healthcare workers are, therefore, expected to have knowledge regarding usage of stored blood, increasing demand and scarcity of the products, and are also expected to donate as well as encourage the general public for voluntary blood donation. Therefore, the objective of this study was to determine the knowledge, attitude and practices towards blood donation among healthcare staff in base hospital Dehiattakandiya.

Methods: A cross-sectional, descriptive study design was carried out among conveniently selected 100 healthcare staff members, aged 25–60 years, working in the base hospital Dehiattakandiya. Sample included doctors, nurses, and other healthcare assistants. A self-administered questionnaire consisting of 27 questions was used to obtain data. Data was analysed using Microsoft Excel software.

Results and Discussion: Among 100 participants 33% were males and 67% were females. Over half of the respondents (53%) had good knowledge and most of the participants (74%) were found to have good attitudes regarding blood types, donation procedure, etc. However, only a little over quarter (26%) of the respondents have donated blood at least once in their lifetime and a majority (74%) have not donated blood.

Conclusion: Even though the overall level of attitudes was satisfactory, only a little over half of the respondents' knowledge on blood donation was good. The willingness to donate blood if called upon or reminded to do so and the practice of blood donation were good. Healthcare workers are demanded to upgrade their knowledge and be motivated to donate blood and save lives. Blood banks should make their services more accessible to healthcare workers in order to get regular blood donors.

Key Words: *Blood donation, Healthcare workers, Knowledge, Attitude, Practices*

Prevalence and risk factors of lower back pain among nurses in Gampaha district, Sri Lanka 2020

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Introduction: Lower back pain is one of the commonest occupational musculoskeletal diseases among nurses, mostly among nurses working in specialty medical ICUs such as cardiology and neurology. Risk factors of lower back pain could be categorized into individual risk factors and occupational risk factors, and occupational risk factors consist of physical and psychological factors. The aim of this study was to investigate the prevalence and risk factors of lower back pain among nurses in Gampaha district, Sri Lanka.

Methods: This research was a descriptive, cross-sectional study conducted among 160 male and female registered nurses, aged between 20-55 years and worked for at least one year in a government or private hospital or a healthcare centre in Gampaha district during the month of October, 2020. Convenience sampling method was used to select respondents carried out as an online survey using a self-administered questionnaire. The data obtained were analysed with the aid of Microsoft Excel and Statistical Package for Social Sciences (SPSS) version 20 software.

Results and Discussion: The study sample consisted of 132 (82.5%) female and 28 (17.5%) male nurses. Majority was unmarried (68.1%) while 26.3% were married. Results showed 61.3% prevalence of back pain among the population, while 38.7% reporting for not having back pain at present. Besides individual risk factors which were commonly identified, common nursing works involving sustained sitting (59.9%), frequent bending (59.2%), lifting heavy objects (32%), inadequate rest (62.4%), heavy workload (57.4%) were also identified as risk factors. Furthermore, according to their opinion, assuming bad posture for a long time (51.9%), suddenly performing movements (35.2%) and lifting heavy loads (27.8%) are major risk factors for low back pain.

Conclusion: Lower back pain is a common health issue among nurses in the Gampaha district, showing 61.3% of prevalence among the study population. Perceived risk factors for occurrence of lower back pain identified in the study were workplace stress and heavy workload, bad posture assumed for a long time, sustained sitting, lifting heavy objects, frequent bending, sudden movement, and a history of having back pain.

Key Words: *Prevalence, Risk factors, Lower back pain, Nurses*

Student nurses' perception on patients' comfort in physical, psychospiritual, environmental and sociocultural domains

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Introduction: Variations in the delivery of comfort care are largely based on the nurse's educational preparation (Briggs, 2010). The degree of providing comfort care is evidenced in nursing performance, greatly depending on the way the nurses perceive the concept during their education. The aim of this study was to assess the student nurses' perception on patients' comfort in physical, psychospiritual, environmental and sociocultural domains.

Methods: Kolcaba's comfort concept and theoretical framework was chosen to guide the study. Quantitative, descriptive, cross-sectional study was conducted at college of nursing, Ratnapura. A conveniently selected 415 nursing students who were following a three-year diploma of nursing program were selected as the study participants, including 152 first-years, 193 second-year and 70 third-year students. Kolcaba's general questionnaire of comfort (GCQ) was used as the tool which consists of 48 self-report items generated from the taxonomic structure of comfort with each statement. Ethical clearance was gained through the ethical clearance committees of teaching hospital Ratnapura and BioInquirer. Data was analysed with SPSS version 22.

Results and Discussion: All of the 415 participants (100%) were in the age group of 21-25 years and 92.3% were females. Most students were in their second year of study (n=193, 46.5%) and the least number of students were in their third year (n=70, 16.8%). Study findings further highlighted the need for further education among student nurses to improve skills to identify the healthcare needs of comfort and the state of enhanced comfort in four domains. The four domains being physical (p=0.81), psychosocial (p=0.55), environmental (p=0.92) and sociocultural (p=1.03). Moreover, the study results revealed that there are no significant changes (p >0.05) in the ability to identify the state of the comfort and the healthcare needs of the patient in second and third year students, indicating the need to incorporate assessment of comfort throughout the nursing education curriculum.

Conclusion: The findings are significant for nursing education in developing applicable interventions focused on knowledge and skills for enhancing comfort care. Students' perceptions, as learners and practitioners, provide valuable insights into how patient care can be improved whilst contributing to the education of students in practice. It is clear that curricular developments need to both drive cultural and practice change, and facilitate the education of reflective and critical-thinking nurses.

Key Words: *Student nurses, Physical domain, Psychospiritual domain, Environmental domain, Sociocultural domain*

Assessing the awareness and attitudes of organ donation among adults in Udugampala, Sri Lanka

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Introduction: Organ donation is very important these days as organ failure is becoming a common problem. At present, a number of people in the North Central province are suffering from kidney problems which increase the demand for donated kidneys. The aim of this study was to assess the awareness and attitudes towards organ donation among adults in Sri Lanka.

Methods: A descriptive, cross-sectional study design was used for the study. According to the convenience sampling method, 125 participants who were in the age group of 25-70 years of age were included in the study. A self-administered questionnaire was used as the data collection tool and the gathered data were analysed using Microsoft Excel software.

Results and Discussion: Majority (68%) of the participants were females and the mean age of the participants was 58 years. The findings showed that the majority of the participants (88%) had a clear idea about organ donation and 12% of them did not have a proper idea. All participants were aware that a kidney can be donated but had different thoughts about other organs. Majority of the participants (80%) were willing to donate organs to others and had good reasons for organ donation according to their culture and religions. Among the participants, 56% were aware that the heart can be donated, 36% were aware about liver donation and 12% were aware that the lungs and pancreas can be donated. In addition to that, 50% were aware that bone marrow can be donated but only a minority (14%) were aware that bones could also be donated.

Conclusion: The present study contains good information for future planning related to methods of improvement of the awareness and attitudes on organ donation in order to fulfil the need of organ donation through promotions.

Key Words: *Organ donation, Cultural aspects, Awareness, Attitudes, Practices*

Assessment of mothers' knowledge, attitudes and practices regarding oral health of preschool children in Welimada, Sri Lanka - 2018

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Introduction: Oral health is an essential and integral component of general health and well-being of people. Although largely preventable, many people across the world are still suffering unnecessarily from pain and discomfort associated with oral diseases. The objective of this study was to assess mothers' knowledge, attitudes and practices regarding oral health of preschool children in the 3-5 year age group in Welimada, Boralanda area.

Methods: A descriptive, cross-sectional study was conducted among 106 mothers of preschool children (3-5 years old). The data were collected using a self-administered questionnaire which included 29 questions addressing various aspects of knowledge, attitudes and practices of oral health in preschoolers. Data was analysed using descriptive statistical methods using Microsoft Excel 2010 software.

Results and Discussion: In this study, of 106 respondents, 37 (36%) were between 35-39 years of age and 47 (44%) had a family income of Rs.40,001-60,000. Majority of the mothers (n=65, 61%) had a high school education. Only less than half mothers (n=47, 43.3%) possessed good knowledge in oral health whereas the knowledge of 27 mothers (25.4%) was poor. In addition to that, 20 mothers (18.8%) presented negative attitudes regarding the importance of having a balanced diet. Only 71 mothers (66.9%) knew the importance of visiting a dentist after the second year of the child. According to the oral health practices of mothers, 95% had poor practices as they have given sweet foods to their children. Only 77% of mothers gave plain water frequently during the meal.

Conclusion: The result shows that while a substantial number of mothers still remain ignorant of oral health issues, overall, the knowledge of the mothers regarding the oral health of preschool children was moderate. However, implementation of preschool-based oral health promotion programs for mothers is needed to improve children's oral health status.

Key Words: Mothers, Knowledge, Practices, Oral health, Pre-school children

Factors affecting work life balance (WLB) of nurses working in a hospital in Gampaha district, Sri Lanka

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Introduction: Work life balance (WLB) is an important topic in both professional business practice and academic research. WLB is the quality of relationship between employees and the total working environment. Nurses are the largest group of employees in a healthcare organization. The literature shows that WLB is a central issue affecting the well-being of individuals, as family and work are the two most important elements of everyone's life. WLB in the nursing profession is an important factor for the delivery of quality healthcare to patients. Therefore, the aim of this study was to examine WLB and its related factors among nurses.

Methods: A quantitative study was conducted using a self-administered questionnaire among nurses in a government hospital in Gampaha district, Sri Lanka and was carried out in August 2020. Altogether 110 nurses were selected as the sample size through quota-sampling technique. Data was analysed using SPSS software.

Results and Discussion: Majority of the respondents (55.5%) were between 30 and 40 years old and most of the nurses (58%) were living in a nuclear family structure. Over one third (39.1%) of the sample stated that they were spending 30 to 60 minutes travelling traveling to and from hospital. Independent sample t-test and ANOVA test were run to identify demographic factors affecting WLB. It was found that there is an association between WLB and family structure, age, travelling time and working unit ($p=0.000$, $p=0.018$, $p=0.003$, $p=0.002$ respectively). There was no association between WLB and marital status, religion, experience, number of working hours, mode of transportation or the monthly salary ($p=0.050$, $p=0.871$, $p=0.076$, $p=0.194$, $p=0.070$, $p=0.060$ respectively). In addition to that, Pearson correlation test, results of the study revealed that there was a positive relationship between WLB and job related stress, family work conflicts and satisfaction ($p=0.006$, $p=0.004$ and $p=0.002$ respectively).

Conclusion: WLB among nurses is an important phenomenon as they provide healthcare to the patients. This study identifies key factors affecting WLB of nurses, which can be adopted by revising the human resource policies of the hospital and providing family-friendly benefits to the nurses for the betterment of nurses' life and in turn, to gain quality of service to the patient in a hospital.

Key Words: *Work life balance, Satisfaction, Nurses*

Assessing the satisfaction on special unit clinical placement among student nurses of nurses training school Kalutara, Sri Lanka

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Introduction: The aim of nursing education is to advance nurses by preparing them with the indispensable knowledge, attitudes and skills to implement their duties proficiently. With regards to accomplishment of this goal in nursing education, clinical education plays a significant role. Clinical practice in special units would help students to gain more experience rather than from general clinical settings. The aim of this study was to assess the effectiveness of special unit clinical placement among student nurses in the nurses' training school Kalutara, Sri Lanka.

Methods: A descriptive, cross-sectional study was carried out among conveniently-selected 321 nursing students by using a Google Form. Information was included in the Google Form and submitting the answers was considered as the consent being given. Ethical approval was taken from the BioInquirer ethics review committee of International Institute of Health Sciences, Welisara, Sri Lanka. Collected data was descriptively analysed.

Results and discussion: Majority of the participants (58.9%) were satisfied with the special unit training and (74%) believed 7 a.m.-12 noon time period as the most effective time for practicing. Few participants (2.7%) preferred practicing in the evening and 6.2% preferred practicing during 7 a.m.-4 p.m. Most of participants (63%) identified learning opportunities in special units. Majority of the participants (69%) were satisfied with the current allocated time for the practice. A considerable amount of participants were not confident enough to practice procedures in a special unit while 61.5% were not happy with initial interactions with the permanent staff at those special units.

Conclusion: Majority of the students are satisfied regarding time and place allocation but students are not satisfied regarding the supervision, support from the staff members and they are requesting for more opportunities to be given to practice procedures in special units.

Key Words: *Student nurse, Special unit, Clinical placement*

Knowledge and practices of hand washing among nurses working in a private hospital in Malabe, Sri Lanka

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Introduction: Knowledge and practices regarding hand hygiene of nurses has shown to be an effective measure in preventing hospital-acquired infections. The main purpose of this study was to assess the knowledge and practices regarding hand washing for infection control among nurses who are working in a private hospital in Malabe.

Methodology: The study was carried out as a descriptive, cross-sectional observational survey, done among 100 participants who were selected through convenience sampling from nurses who were working in a private hospital in Malabe, Sri Lanka. Data was collected by using a structured, self-administrated questionnaire as well as an observational checklist and MS Excel 2010 software was utilized to descriptively analyse the gathered data.

Results and Discussion: In the study, the majority of nurses were knowledgeable regarding hand hygiene and its purpose for infection control (79.6%). Likewise, most nurses were diploma holders (75%) and were practising, averaging an experience of 2-5 years (78%). In addition, overall, nurses demonstrated a good level of practice (70.8%). Similarly, nurses performed hand hygiene for the recommended time duration (74%) but followed an incorrect number of steps (43%). Knowledge on purpose (81%) and when it should be performed (70%) were adequate.

Conclusion: The study concluded that hand hygiene practices, and knowledge was at an average level among participants, however, areas of improvement are still present. This suggests that stricter workplace guidelines should be implemented and more focus should be placed on infection control workshops focusing on the practical aspect of the subject to eliminate the current gap.

Key Words: *Knowledge, Practices, Infection control, Hand washing, Nurses*

A study on the level of knowledge on hypertension and its correlation with medical regimen compliance among hypertensive patients

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Introduction: Hypertension (HTN) is one of the most common health problems in the world. Although hypertension can be managed, it is a leading risk factor for mortality, especially with a large portion of the population having uncontrolled levels of HTN. Knowledge and lifestyle modifications of patients play an important role in controlling HTN and preventing long-term complications. This study aimed to assess the knowledge level about hypertension and to identify the correlation between hypertension and medical regimen compliance.

Methodology: A descriptive, cross-sectional study was done. In selection of the sample, regardless of age, race, gender, or income level all the HTN clinic patients in a hospital located in Kathiravelly were considered. Out of them, 120 subjects were chosen through convenience sampling. For this survey, 5 demographic questions and 22 knowledge-related questions were included in a self-administered questionnaire. Descriptive analysis was done through SPSS software.

Results and Discussion: The majority of the participants were females between the ages of 60 and 69 years (66.87%). This study revealed that general knowledge among the study participants regarding HTN was inadequate (35.79%). Patients lacked understanding of risk factors (74%), manifestation (68%), or lifestyle modifications (56%) of HTN. Also, there was a poor level of awareness regarding lifestyle behavioural modifications that a HTN patient should follow (45%).

Conclusion: This study has shown poor level of knowledge regarding hypertension. Educational programs that can enhance patients' awareness regarding HTN are urgently needed to be conducted among these patients. Also, these programs are required to change the perceptions regarding lifestyle behavioural modifications in order to control hypertension.

Key Words: *Knowledge, Hypertension, Correlation, Medical regimen*

Assessing knowledge and practices of nurses on prevention of pressure ulcers, in a hospital in Nilandhoo, Maldives

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Introduction: Pressure ulcers (PU) are still considered to be a major concern, especially for the elderly and patients with chronic-degenerative illnesses who are bedridden. PU or decubitus ulcers are injuries to the skin and underlying tissue resulting from prolonged pressure on the skin. The main purpose of this study was to assess nurses' knowledge and practices on PU prevention.

Methods: This study was carried out as a descriptive, cross-sectional survey research. The sample size for this study was 50 nurses from a hospital in Nilandhoo, Maldives. Convenience sampling technique was used to recruit the sample. A pre-tested, structured questionnaire was used to collect data from the respondents. Data collected by means of a printed questionnaire or as a Google Form, which was filled either by the researcher or the participant themselves. All data was coded, entered and analysed using SPSS 20 version.

Results and Discussion: In this study, majority of the participants were female nurses (85%) whilst 15% were males and majority had a working experience of 10-15 years (63%). Overall, most participants were knowledgeable with regards to pressure ulcer prevention (62%), however, a substantial proportion (38%) was not. Likewise, nurses were well informed with regards to the causes (64%), what type of patients were most often affected (67%), compromises (55%) and finally the appropriate care for PU (70%). As nurses were working in a recognized Atoll hospital, and are expected to be well experienced, this level of knowledge is accepted. Similarly, the findings of this study were also comparable to other studies conducted in different parts of the world.

Conclusion: Nursing professionals must be educated to intervene positively in the process to prevent and treat pressure ulcers. In this study, nurses' knowledge and practices regarding prevention of pressure ulcers were found to be adequate. As the study focuses on solely the nurses' knowledge and practices, it is required that further studies be performed with regards to resource management to understand the overall perspectives of the delivery of proper care according to organisational standards.

Key Words: *Pressure ulcers, Knowledge, Practices, Prevention, Nurses*

Study on the awareness and usage of folic acid supplements among women in reproductive age at Yatinuwara area in Kandy district, Sri Lanka

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Introduction: Folic acid is a form of water soluble vitamin. It has an important role in DNA/RNA synthesis, amino acid transformation, formation of red blood cells and formation and maintenance of body cells. Folic acid supplements are standard for pregnant women and women who are planning to become pregnant. It reduces the risk of birth defects related to the baby's brain and spine. The aim of this study was to assess the level of awareness and usage of the folic acid supplements among women in the reproductive age at Yatinuwara area.

Methods: A descriptive, cross sectional study was conducted among 100 women in the aged group of 18-45 years. Convenience sampling technique was used. Data was collected using a self-administered questionnaire and analysed using Microsoft Excel software.

Results and Discussion: Majority of the participants (96%) have heard about folic acid supplement and 60% have got the information about folic acid from the MOH clinic in the area. Majority (96%) were aware regarding folic acid containing food and only a little over half of the respondents (52%) had the awareness regarding the relationship between folic acid and iron and 52% were aware that folic acid deficiency may cause anemia, mouth ulcers and poor growth. In addition to that, 68% noted that folic acid is important in the first trimester in pregnancy. It was identified that 72% were currently taking folic acid while 28% have never used it. Furthermore, 68% have used folic acid in the first trimester of their pregnancy. Major reasons given for not using the folic acid supplement were, due to poor income (37%) and as it is not important to have (30%).

Conclusion: It can be concluded that the awareness and level of usage of folic acid is in average levels among this community. Therefore it is important to educate these women regarding the importance of taking folic acid supplements. Healthcare professionals and media have a greater responsibility towards this issue, because educating women is an important factor which would influence the health of the newborn. Education may help to maintain a good healthy life for women and their children.

Key Words: *Folic acid, Awareness, Reproductive age, Women*

Awareness and attitudes regarding health issues resulting from substance abuse among young adolescents in Sri Lanka

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Introduction: Young adolescence is the transition phase when the mind is naturally motivated to experiment and explore the world. Substance abuse has increased all over the world and the age of initiation of abuse is progressively falling. This study aimed at assessing the awareness and attitudes regarding health issues resulting from substance abuse among young adolescents.

Methods: A descriptive, cross-sectional study was conducted among a conveniently-selected 100 students attending a technical college in Colombo district, Sri Lanka. Data was collected through a self-administered questionnaire and was analysed using Microsoft Excel software.

Results and Discussion: All of the participants (100%) were males, 77% had a good level of awareness regarding addictive substances and modes of availability, 73% of them had an average awareness regarding the diseases causing substance addictions, whereas, 23% did not have an adequate awareness on any sign or symptoms of addiction. Minority (17%) were not aware of the fact that substances cause addiction. Only 35% of the students had a good level of attitudes in terms of prevention of drug abuse, while 37% had scored poorly for the attitudes in tendency towards illegal drug use. Reasons for the usage of drugs were stated as due to curiosity (42%), freely available (18%), peer pressure (19%), and psychological issues (11%).

Conclusion: The conclusion shows poor levels of awareness and attitudes regarding health issues resulting from substance abuse among young adolescents. Therefore, it should be recommended to conduct awareness sessions on health effects of drugs and substance abuse, signs and symptoms of the addiction, what are the addictive substances and what kind of diseases may be caused. It may help to improve their awareness and the attitudes towards solving this emerging problem.

Key Words: *Awareness, Attitudes, Drug abuse, Substance abuse, Young adolescents*

A study on breast cancer prevention among women in Kegalle divisional secretariat area, Sri Lanka

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Introduction: Breast cancer is the commonest cancer among females. Women need to be aware of the clinical symptoms and course of the disease to increase the chances of early detection of breast cancer and thereby, to reduce mortality due to it. The study aimed to assess the awareness of breast cancer prevention among women living in the Kegalle divisional secretariat area of Kegalle district, Sri Lanka.

Methods: A cross-sectional, descriptive study was conducted among 250 women aged above 18 years and below 50 years in Kegalle divisional secretariat areas. A structured, interviewer-administered questionnaire was used to collect data on the awareness of breast cancer. The participants were enquired about the risk factors, symptoms, early detection, awareness, and treatment of breast cancer. Data was analysed using SPSS version 25.

Results and Discussion: The majority of the respondents were in the age range of 33-44 years (60%) and the majority had completed their educational level before 10th grade (53%). Out of 250 women, 242 (96.8%) had heard or read about breast cancer, either from a healthcare personnel (39.2%) or a friend or relative (37.2%) as the leading sources of information. Furthermore, breast lumps were the best-known symptom (86%). The most known risk factor was a positive family history (69.6%) and prolonged oral contraceptive pills usage (55.6%). The majority of the participants (75.2%) were aware that the early detection of breast cancer could increase the chance of getting cured. Majority of the respondents (69.6%) were aware that surgery was one of the treatment modalities for breast cancer.

Conclusion: The females who participated in this study had average levels of awareness about breast cancer and early identification measures. The future breast cancer awareness programs need to address the women who possess lower educational standards.

Key Words: *Awareness, Breast cancer, Risk factors, Prevention*

Knowledge, attitudes and practices on cervical cancer screening among women in Thalgahadeniya gramasewa division, Sri Lanka

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Introduction: Cervical cancer is the second most common cancer among women in Sri Lanka. It is also one of the most preventable and treatable cancer if it is detected in its early stages through screening tests. This research study assessed the knowledge, attitudes, and practices on cervical cancer screening (CCS) among women of reproductive age between 30 and 60 in the Thalgahadeniya gramasewa division, Sabaragamuwa province.

Methods: cross-sectional, descriptive study was conducted in Thalgahadeniya gramasewa division during December 2019 to April 2020 using a pre-tested, modified, self-administered questionnaire. The questionnaire consisted of four sections where it assessed participants' demographic data, knowledge, attitudes and practices regarding CCS tests. Data was descriptively analysed using Microsoft Excel.

Results and Discussion: A total of 150 women participated in this study. Most common age group was 50-60 years (76%) and 52% (n=78) were educated up to Advanced Level. Majority of the participants were married (85.3%, n=128) and did not have any family history of cervical cancer (90.7%, n=136). It could be observed that most participants had a positive attitude (68%, n=102). It was also identified that 71.3% (n=107) of the participants have not attended any CCS testing before and therefore, they did not possess adequate awareness regarding accurate practices. It could also be noted that 54% (n=81) of the participants were willing to carry out the CCS test in the near future.

Conclusion: An average number of participants showed a good level of knowledge on CCS tests and their attitudes towards CCS were positive. The practices regarding CCS tests were poor even though the majority were willing to perform the screening test in the near future. Healthcare workers hold a great responsibility in increasing awareness among women on the importance of performing the screening test.

Key Words: *Cervical cancer, Screening, Knowledge, Attitudes, Practices*

Knowledge and perception of diet and physical activity among adults with diabetes mellitus attending medical clinics at a government hospital in Sri Lanka

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Introduction: Diabetes mellitus (DM) is a rapidly growing health concern in Sri Lanka. Diet and physical activity are important modifiable risk factors affecting the incidence, severity, and management of DM. The present study aimed to evaluate the knowledge and perceptions about dietary patterns and physical activity among a group of adults with DM in Sri Lanka.

Methods: A descriptive, cross-sectional study was done among 50 adults from a cohort of diabetic patients attending the medical clinics in a government hospital in Batticaloa, Sri Lanka. Data were collected via a self-administered questionnaire and analysed using the statistical software SPSS version 21.

Results and Discussion: The mean participant age was 50-60 years and the majority were females (55%). The mean duration of having diabetes was more than 10 years. All were aware of the importance of dietary management of DM. However, most had difficulty in incorporating this knowledge into their lives, mostly due to social circumstances (63%). The majority described a list of 'good' foods that can be consumed at all times (56%), irrespective of quantity, and 'bad' foods that should be completely avoided (76%). The majority thought that there were 'special' foods that help in controlling blood glucose, such as curry leaves and bitter-gourd (77%). Most study participants were aware of the importance of being physically active (89%). However, there was a lack of consensus and clarity with regards to the type, duration and frequency of physical activity.

Conclusion: It was found that adherence to practices was poor in relation to dietary management and physical activities, mainly due to the lack of clarity of information provided. There were many myths with regards to dietary management, some of which have originated from healthcare professionals. More evidence is needed to support or refuse the claims on 'special' food that the participants believe as being good for diabetes. It is recommended that healthcare professionals advise patients on dietary measures as well as introducing personalized exercises regimes as part of care for patients with DM.

Key Words: *Knowledge, Diet, Physical activity, Diabetes mellitus*

**Awareness on the maternal nutritional status among pregnant mothers in
Ruwanwella MOH area, Sri Lanka**

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Introduction: Nutrition is a fundamental pillar of human life and its requirement varies concerning age, gender and during physiological changes such as pregnancy. Maternal nutritional-related health issues remain as one of the most prevalent public health concerns in Sri Lanka. This study aimed to assess the awareness of pregnant mothers on maternal nutrition and associated factors in the Ruwanwella MOH area, Sri Lanka.

Methods: A cross-sectional, descriptive study was conducted on a sample of 100 pregnant women out of all the pregnant mothers who had their first pregnancy, residing in Ruwanwella MOH area. Convenience sampling method was used. A structured, closed-ended, self-administered questionnaire was given to the participants in both Sinhala and English languages. The data were analysed using statistical software (SPSS) version 20.

Results and Discussion: Most participants' age range was 25-29 years (78%) and they had completed their education level up to advanced level (66%). The study showed that only 85% of women were aware regarding the nutritional requirements during pregnancy. There was a significant correlation between the awareness on nutritional requirements and educational status of the mother and family income ($p < 0.05$).

Conclusion: Information on nutrition during pregnancy, family income, and educational status of mothers had a significant relationship with the level of awareness regarding nutritional requirements of the mothers. Hence, the government, in collaboration with concerned bodies, should focus on nutritional education to improve the awareness and practices of pregnant mothers during pregnancy.

Key Words: *Knowledge, Maternal nutrition, Pregnancy*

A study on psychological well-being of parents with hospitalized newborns in a selected NICU, Sri Lanka

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Introduction: The birth of a child that requires hospitalization in a neonatal intensive care unit (NICU) can be very stressful for the family. This study aimed to find the stress levels and associated variables for stress among parents of newborns hospitalized in NICU at a pediatric hospital in Colombo.

Methods: A cross-sectional, descriptive study was conducted among 100 parents including fathers who visited their neonates three times per day or mothers who stayed in the NICU. Stress levels were calculated using the parental stress scale: neonatal intensive care unit (PSS: NICU) and the perception of parents with regards to the stressors was measured. The data were analyzed using statistical software (SPSS) version 21.

Results and Discussion: The average parental stress was 0.22 according to the scale. The highest level of stress experienced was in the sight and sound subscale with a mean of 0.27 and the relationship with the baby-parental role means 0.25. The highest subscale score was for “sights and sounds of NICU. There was no significant difference between the overall stress score and maternal characteristics such as age ($p=0.07$), parity ($p=0.06$), level of education ($p=0.06$) and income ($p=0.08$). There was a significant correlation between a previous baby being admitted to the NICU and the overall stress level ($p=0.03$).

Conclusion: The significant characteristics like gestational age, birth asphyxia and sepsis are related to the cause of high-stress levels among mothers. Similarly, the history of a previous baby being admitted to NICU also has a strong association with high maternal stress. However, stress levels presented in parents are unrelated to gender and the studied clinical variables.

Key Words: *Psychological stress, Parents, Neonatal intensive care units, Premature infants, Newborn babies*

**Awareness and practices regarding oral health of school children, aged 12-14 years
in a government school in Weligama area, Sri Lanka**

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Introduction: The school children aged between 12 and 14 years meant to have skills and awareness in various oral hygiene practices, including usage of the various tooth cleaning devices and dentifrices. This study was aimed to determine the level of awareness and practices regarding oral health of school children, aged between 12 and 14 years in a government school in Weligama area.

Methods: A descriptive, cross-sectional study was conducted using a self-administered questionnaire to collect data among 100 school children in grades of 6, 7, and 8 who were selected using a convenience sampling technique. The content of the questionnaire included questions on basic demographic information, knowledge, and oral health practices.

Results and Discussion: Regarding the level of awareness on oral health, 43% had a good level, 42% had a poor level while 15% had no awareness. Only 5% had never experienced any toothache. Regarding the dental clinic visits, 45% stated that there were no dental clinics nearby and 40% stated the treatment cost was high. In addition to that, 10% of the students were afraid to have treatments due to pain. Regarding the practices, 88% of students were brushing their teeth at least once a day, and 67% of students used toothpaste and a toothbrush to clean the teeth.

Conclusion: Although they had less awareness regarding oral health, their basic awareness and practices were adequate. Therefore it is important to improve the awareness and practices of these students towards proper oral health. This aim can be achieved through school health promotion programs including awareness sessions on the importance of maintaining good primary oral healthcare habits.

Key Words: *School children, Oral health, Awareness, Practices*

Awareness on first aid among school-going students in Akuressa, Sri Lanka

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Introduction: Being able to provide first aid is an important skill as situations, where it is needed, may arise at any moment. Therefore, it is a shared responsibility to have the knowledge and skill to perform basic first aid. A first respondent should be able to assess, provide care and provide direction to medical care. Thus, this study aimed to assess first aid awareness among ordinary and advanced level students in Akuressa.

Methods: A descriptive, cross-sectional study was carried out in five selected schools in Akuressa educational division. Likewise, 155 participants were conveniently sampled and were eligible for the study. Data was collected using an interviewer-administered questionnaire, which consisted of both open-ended and closed-ended questions and analysis was done through Microsoft Excel software.

Results and Discussion: Among 155 participants, majority were male students (61.2%). In addition, all participants (100%), when questioned on basic terms and what 'first aid' often refers to, were aware of the concept. In contrast, only 39% were aware of the components in a first aid kit and were able to name the items correctly. The responses were statistically significant among who had previous first aid experience ($p < 0.05$). Also, only 75% were aware of the concept, safety of one's self and then others in an emergency.

Conclusion: Following the study findings, the majority were aware of the concept of first aid but lacked the awareness on terminology and on how to handle emergency situations. It is recommended that governing institutions introduce first aid training programs at large to increase the knowledge and application of first aid. It is also advisable to resort to social media as a mediator to achieve educating the target age groups.

Key Words: *First aid, Emergency, Awareness, First responder*

Factors related to hypertension among middle-aged female patients attending a medical unit in a government hospital in Kandy district, Sri Lanka

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Introduction: Hypertension (HTN) is a critical public health concern, affecting large populations globally. Likewise, HTN is one of the most notable risk factors for cardiovascular diseases which in turn result in one million deaths annually. HTN is often defined as a medical condition in which the blood pressure in the arteries is elevated exceeding 140 over 90 mmHg. With that being said, the main aim of this study was to examine the factors related to hypertension in the middle ages among female patients attending the medical unit in a government hospital, Kandy district.

Methods: A descriptive, cross-sectional study design was used alongside the convenience sampling method. The participants of the study included 50 middle-aged women attending the medical unit of a selected hospital in Kandy district. An interviewer-administered questionnaire was used as the data collection tool and the gathered data were analysed using Microsoft Excel software.

Results and Discussion: Participants in the study were asked about basic contributing factors for HTN and the participants stated that the minority engaged in regular physical exercises (14%) and 4% specifically stated having attempted to reduce salt consumption as recommended by their doctor or health care provider. However, the majority consumed a normal level of salt, as they did earlier, in their diet (86%). In addition, most participants did not show any concern with regards to their medication (60%). Moreover, it was also presented that participants who were above 55 years of age were the most vulnerable to HTN (49%).

Conclusion: Majority of the participants showed poor knowledge regarding HTN and poor concern about taking medication. In order to take effective prevention measures, identification of the risk factors is an essential prerequisite. This study intends to generate information on the prevalence of hypertension and their associated risk factors in a general hospital in Kandy. Age was found to be an important risk factor for hypertension. It is recommended that healthcare providers advise patients thoroughly to aid in understanding the needs and prognosis of unmanaged HTN.

Key Words: *Hypertension, Middle age, Awareness, Knowledge, Medications*

Occurrences, risk factors and acute adverse effects of apheresis donations

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Introduction: Platelet apheresis is a standard procedure by which platelets are separated from whole blood, concentrated, and collected. Apheresis donations are an essential part of treatment for patients with cancer and other life-threatening medical conditions. During the donation, blood is drawn from one arm using a sterile needle and channelled through single-use tubing into a single-use sterile collection kit within the apheresis machine. However, occurrences of adverse effects from the process are the main reason that donors may not come back for donation. The study was conducted to assess the occurrence of adverse events of platelet apheresis donations.

Methods: A descriptive, cross-sectional study was conducted at National Blood Centre, Sri Lanka to assess the occurrence and probable risk factors of acute adverse effects in platelet aphaeresis donations. A total of 500 platelet aphaeresis procedures were performed during the study period (December 2019 to March 2020). Data were analysed by using the SPSS-25 statistical software package.

Results and Discussion: Total of 449 platelet apheresis procedures performed during the study period with 167 donor participants (166 donors were male with only 1 female). The mean age of participants was found to be 30.5 years, while the mean weight was 77.3 kg. It could be seen that 46 cases (10.2%) out of a total of 449 platelet apheresis procedures experienced adverse events. Of these adverse events, 35 (7.7%) had mild reactions while 11 (2.4%) had moderate reactions. However, there was no severe type of reaction reported. Citrate related reactions 7.3% was the commonest reaction category of all, followed by vasovagal reactions 1.7% and venipuncture-related adverse events 1.1%.

Conclusion: The low incidence rate of adverse events indicates that the procedure is well tolerated by donors. Obtaining data regarding the incidence of adverse events is a way of promoting a dynamic review of medical and nursing teams to improve the safety and comfort of the donor. Knowledge and attitude of donors towards donations and adverse events should be addressed in a more comprehensive manner to establish a safe donor base. Pre-donor counselling, displaying posters or leaflets regarding the importance, safety as well as the risks of procedures will improve the donor pool and donor safety.

Key Words: *Acute adverse effect, Platelet apheresis, Risk factors, Adverse events*

A study on nurses' respective roles and responsibilities in preventing antibiotic resistance

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Introduction: The increasing prevalence of antimicrobial resistance coupled with the dry antimicrobial development pipeline threatens the success and continuation of clinical medicine as we know it. This threat decreases the ability to treat numerous infectious diseases successfully while increasing health risks for vulnerable patients. The aim of this research was to review antibiotics resistance and the roles and responsibilities of nurses in preventing antibiotics resistance.

Methods: Qualitative descriptive research using a phenomenological research design was done. A purposive sampling technique was utilized to select a sample size of 20 nurses working in a hospital in the Maldives with an experience of over 2 years. Data were transcribed and thematically analysed.

Results and Discussion: Antimicrobial resistance happens when microorganisms such as bacteria, fungi, viruses, and parasites change when they are exposed to antimicrobial drugs. Microorganisms that develop antimicrobial resistance are sometimes referred to as “superbugs”. As a result, the medicines become ineffective and infections persist in the body, increasing the risk of spread to others. The identified themes indicated that the main cause of antibiotic resistance is antibiotic misuse. Likewise, the increased consumption of antibiotics is also a cause of concern because a proportion of this quantity will eventually appear in the environment. This is because antibiotics are seldom fully metabolized, either by humans or by animals, and can show up in their urine and faeces.

Conclusion: There seems to be some over usage of antibiotics according to the nurses, which however did not translate to hesitation to use antibiotics. Rather, there is evidence of escalation of antibiotic choice in the context of a lack of information on local resistance patterns. Prescribing and dispensing was moreover shaped by acute economic issues at the local level but also chronic infrastructural issues in health systems that have been built to rely on the presence of antimicrobials as a substitute for care and hygiene. In this scenario, the role of pharmaceutical representatives is amplified, and their influence was palpable across settings.

Key Words: *Antimicrobial resistance, Preventions, Roles and responsibilities*

Factors affecting maintaining proper documentation process by the nurses in the Maldives

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Introduction: Proper documentation helps to establish continuity of a patient's care, justify clinical reimbursement, safeguard providers from malpractice and foster communication among health providers. However, nurses may experience many barriers to poor documentation. The inadequate practice of documentation can lead to clinical errors in inpatient care. There is a probable chance of legal disagreements and loss of registration. This study aimed to identify factors affecting proper documentation to reduce clinical errors by nurses.

Methods: A qualitative study was conducted. Purposive sampling was used to collect data from 30 nurses. Nurses who can understand English were included. One-to-one in-depth interviews were conducted to collect data until the point of saturation was met. Data was transcribed and thematically analysed.

Results and Discussion: According to the findings, proper documentation would reduce clinical errors. The primary theme identified factors affecting proper documentation. These were mainly described by the nurses as the workload, monitoring and evaluation by seniors, training of nursing staff, reduced number of staff and miscommunication. Secondly, high workloads made nurses procrastinate and or completely undermine the need for documentation. Nurses stated that adequate monitoring by senior members of staff especially to check if documentation is complete would ensure the responsibility of nurses. Also, it was mentioned that if nurses are trained on proper documentation and the importance of doing so, it would contribute to improving their practice. Moreover, reducing clinical errors was made possible through documentation alongside improved services provided to patients.

Conclusion: This study indicates that the practice of documentation can be improved with proper training. Healthcare authorities must ensure that the nurses have adequate knowledge to work within their scope. Thereby, better care would be provided to patients and patient satisfaction can be ensured.

Key Words: *Documentation, Clinical errors, Training, Nursing staff, Workload*

Knowledge and practices of nurses on administration of total parenteral nutrition to critically ill patients in a tertiary care hospital, Central province, Sri Lanka

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Introduction: Critical care nurses are responsible for administering total parenteral nutrition (TPN) for critically ill patients. Nurses must know the proper constituents of each solution and should be experts in calculating the dose of the medications. Awareness about the indications, action, contraindications, adverse reactions and interactions of each parenteral solution is essential. The study aimed to assess the knowledge and practices regarding TPN among nurses working in intensive care units.

Methods: A descriptive, cross-sectional study was conducted alongside a convenience sampling technique. The study sample included 120 ICU nurses working in the Kandy Teaching Hospital. Data collection was done through 'TPN knowledge questionnaire' and analysis was done using Microsoft Excel software.

Results and Discussion: In the study, the mean age of the sample population was 35 years of age. A majority of the respondents (70.8%) had an educational qualification leading up to a diploma. In addition, about 37.5% of the respondents had an experience of 1-5 years in the ICU. Many participants (70%) knew about the types, preparation and complications associated with TPN and about 85% knew about the correct method of administration of TPN. In contrast, 40% were unaware of preparing the solution. In addition, only 65% noticed the complications if TPN is not administered. Most nurses (79.2%) agreed that education on TPN is required while 15.8% were satisfied with the knowledge they already have.

Conclusion: It can be concluded that ICU nurses have adequate knowledge regarding TPN. However, proper training and more education are needed to fill the gaps in knowledge. Carrying out educational programs about nursing management of TPN complications and training on TPN administration is required.

Key Words: *Total parenteral nutrition, Intensive care unit*

Patient satisfaction of outdoor department services in a secondary care hospital in Matara district

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Introduction: Patient satisfaction is a crucial measurement of the care provided by a healthcare provider. The mismatch between patient expectation and the services received are related to decreased satisfaction. The primary goal of a secondary care hospital is to provide the best possible healthcare to the patients. The aim of the study was to study the patient satisfaction on outdoor department services in a secondary care hospital in Matara district, Sri Lanka.

Methods: A descriptive, cross-sectional study was conducted using a conveniently obtained sample of 247 patients in the OPD of a secondary care hospital. Self-administered questionnaires were used for data collection. Data analysis was done through Microsoft Excel 2010.

Results and Discussion: Only an average number of respondents were satisfied with ventilation (63%), lighting facilities (74%), seating arrangements (45%), and availability of drinking water (58%), lavatory facilities (40%) and cleanliness of the environment (51%). About 34% stated that they were dissatisfied with the time taken for the registration process. Over half of the respondents (59.5%) were satisfied with the communication skills of the staff. Approximately 60% were satisfied by the services provided in the OPD. About 66% were satisfied with the number of nursing staff in the OPD and 57% stated that they were satisfied with the communication skills of the nurses. Around 60% were satisfied with the services provided at the pharmacy. However, 47% stated that they were not satisfied regarding the explanations provided on medications. About 70.4% were satisfied with the teamwork of the healthcare team.

Conclusion: It was found that, overall; only an average number of respondents were satisfied with the OPD services offered. Patients were satisfied with the hospital staff services, facilities and cleanliness of the hospital environment. The patient was unsatisfied with waiting for a long time for registration and to get medicines from the pharmacy. It is recommended that hospital management implement procedure changes to eradicate the time taken for registration and / or for patients to receive their medication.

Key Words: *Patient satisfaction, Outdoor department services, Patient expectations*

Association between reproductive factors and risks of cardiovascular events among women attending cardiology clinics in Western province, Sri Lanka

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Introduction: Cardiovascular diseases (CVD) are the leading cause of mortality in the world. There are significant differences between men and women according to the epidemiology, diagnosis, treatment and prognosis of CVD in the middle-age population. The increasing number of women with CVD presents the substantial need to identify those specific variables relevant to cardiovascular health in women, to see whether pregnancy-related factors would reveal some of these variables. This study aimed to find the association between reproductive factors and risks of CVD in women.

Methods: This was a descriptive, cross-sectional study conducted at a government hospital in the Western province. Convenience sampling method was used to select 150 female patients, between the ages 45 and 65 years, who attended the cardiology clinics. An interviewer-administered questionnaire was used to collect data. Furthermore, the collected data was analysed using SPSS software and Microsoft Excel 2010.

Results and Discussion: Within the study population, women who had their menarche before the age of 13 years were at a higher risk of CVD. Results showed that 52 participants (34.6%) have had a myocardial infarction, 20 participants (13.3%) recorded disease of the heart valve, and 11 participants (7.3%) had heart failure, angina pectoris and stroke previously. The study showed an overall significant association between younger age at menopause and a higher risk of CVD among those who experienced natural menopause ($p < 0.05$). Contrastingly, women with a later age of menopause (> 55 years) did not have a higher risk of CVD compared to those who had their menopause before 55 years of age.

Conclusion: Women who had their menarche before the age of 13 years, multiple pregnancies, younger age at menopause and use of oral contraceptives may predict more risk of CVD in later life. Women with a later age at menarche, earlier age at first or last delivery and later age of menopause had a comparatively lower risk of CVD. It is recommended that the study population be broadened to identify further trends in the presentation of CVD in order to develop a means of risk reduction for CVD as well.

Key Words: *Cardiovascular diseases, Reproductive factors, Women*

Knowledge, attitudes and practices on oral hygiene among parents of preschool children in Mattegoda, Sri Lanka

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Introduction: Poor oral health has been a silent global epidemic and has affected children at large. Studies on the subject state that poor oral health is the result of a lack of preventive care (dental appointments) and restorable care (addressing dental care for diseases). Likewise, poor level of knowledge on oral health may lead to poor oral health self-care practices down the road. Thus, this study investigated the knowledge, attitudes and practices of oral health among parents having preschool-age children.

Methods: A descriptive, cross-sectional study was carried out among 150 participants, who were parents of preschoolers in the Mattegoda area. Convenience sampling method was used to access participants and a self-administered questionnaire was used as the data collection tool to explore the knowledge, attitudes and practices on preschool children's dental health. Data was analysed using SPSS software.

Results and Discussion: Out of the total population, 76.7% were mothers who answered the questionnaire, and there were 23.3% of fathers. Overall, 77% stated that their children experienced dental problems. Similarly, only 40% strongly agreed that they would use toothpaste enriched with fluoride and 20% agreed that fluoride would prevent dental damage. In contrast, all the participants (100%) presented positively with regards to identifying risk factors such as eating sugary food, drinking soft drinks, bed-time feeding and usage of non-fluoride toothpaste. Majority of the population had a good practice of oral hygiene and prevention methods. Most of the parents disagreed to regular dental visitations. It was claimed that 92% visited the dentist only when a concern arose.

Conclusion: Prevalence of dental caries among preschool children in this population is very high. Majority of the decayed teeth are left unattended, indicating poor dental care facilities for preschool children. Process of dental caries begins at a very early age and progress steadily thereafter. An interventional program aimed at improving oral hygiene among preschool children is needed urgently. Although the prevalence of dental caries was high, practices related to brushing teeth were satisfactory, indicating wrong oral health practices as a possible cause.

Key Words: Oral health, Knowledge, Attitudes, Practices

A study on the effects of English language spread in Sri Lanka

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Introduction: Sinhala and Tamil are the main native languages used for communication in Sri Lanka. Since the Official Language Act, no 33 was introduced in 1965, Sinhala and Tamil are the official languages whereas English language is used as a link language in Sri Lanka. English is an international language that is used all over the world. Purpose of this study was to understand the effects of the spread of English Language in Sri Lanka in relation to Nationalism.

Methods: A descriptive, phenomenological qualitative research design was used. The Quota sampling method was applied in the study. Academic heads in institutes and universities, school principals, religious leaders and parents of school children were interviewed. Participants between the age ranges of 35-60 years were included in the study. Open-ended questions were used during the interview and recorded. The questionnaire had basic questions regarding background and demographics in addition to the open-ended questions. Collected data was thematically analysed.

Results and Discussion: Interviewed 6 females and 6 males. Almost all participants mostly used Sinhala language and some used Tamil and English languages for their day-to-day activities in Sri Lanka. Language maintenance, language shift, personal preferences and education were identified as themes. They thought it is very important to preserve native languages in Sri Lanka. Most of the study participants preferred to have higher education in English medium. Participants also thought spreading of English language in Sri Lanka is very important and they preferred to use it. However, they stated that mostly native language usage is preserved in Sri Lankan context.

Conclusion: This research shows that even though Sinhala and Tamil languages are the native languages in Sri Lanka, English language is commonly used. Nevertheless, it is not badly influencing nationalism and the usage of native languages in Sri Lanka according to the participants.

Key Words: *English language, Native languages, Nationalism*

Adverse impact of gaming disorder among adolescents in Colombo district, Sri Lanka

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Introduction: Gaming disorder could be considered as a behavioral addiction and has been found to be related to a number of psychological and health problems. It includes depression, social anxiety, weariness, loneliness, negative self-esteem, and impulsivity. Gaming disorder co-arises with several psychiatric circumstances and could lead to a series of adverse consequences. The aim of the study was to check the impact of gaming disorder and the awareness of its effects among adolescents in Colombo district, Sri Lanka.

Methods: Quantitative, descriptive, cross-sectional study was carried out over three months of period in Colombo district, Sri Lanka. Ethical clearance was obtained from the Ethics Review Committee, International Institute of Health Sciences, Welisara. 150 adolescents were selected as the study cohort using the convenient sampling method. Data was collected using an online self-administered questionnaire. Informed written consent was taken from each of the participants prior to the enrolment of the study.

Results and Discussion: 42.2% have mentioned that sometimes they could distract from gaming behaviours and 30.8% have stated that they systematically failed, when they were trying to control or cease the gaming activities. 28.3% of the participants have stated that they sometimes find loss of interest in previous hobbies and other activities, while 29.3% of participants have stated that they never have lost their interest in previous hobbies and other activities. The study reveals that, majority (60.9%) of the participants have lost their personal relationships because of gaming behaviour. 35.9% of participants stated they play games in order to temporarily escape or relieve a negative mood. Majority (63%) of the study group was not aware about the bad impacts of gaming disorder while 47% were aware about the bad impacts of gaming disorder.

Conclusion: The study findings reveal that adolescents in Colombo district have experienced adverse impacts in their lives because of the gaming disorder and also that it has been affected by routine activities. Nevertheless, the majority of the participants were not aware about the adverse impacts of gaming disorder.

Key Words: Gaming disorder, Gaming addiction, Adolescents, Colombo district

Understanding the role of nationalistic attitudes towards the economic growth among entrepreneurs in Gampaha district, Sri Lanka

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Introduction: Based on the area of research, perception of nationalism, the study aimed to explore the roles of nationalistic attitudes towards the economic growth among entrepreneurs. Economic nationalism is becoming an increasingly critical component of nationalistic sentiment. The objective was to identify roles of nationalistic attitudes towards economic growth among entrepreneurs in Gampaha district.

Methods: The research was conducted through in-depth interviews of participants selected. The inclusion criteria included participants residing in Sri Lanka. Data collection was done based on a question guide. Data was transcribed and analysed with the use of thematic analysis.

Results and Discussion: Majority of the selected participants were legal residents of Sri Lanka, and it was also evident that majority were males with working experience of over 10 years. Most of the respondents stated that they think that nationalism is an important factor in society. It was also clear that they held a positive attitude towards it and stated that it is one of the strongest areas of one's national identity. They significantly specified that nationalistic attitudes are essential for the economic growth. Elaborating further, the main reason for them to state so was because it increases the strength of a country's economy as well as it supports and helps local businesses to flourish. According to the results, many had mixed feelings and opinions on globalization, as many of them stated that it has both negatives and positives in it, in terms of a country's economy. Although it gives many job opportunities it has its hidden fluctuations in prices and increased competition. Most of the participants believed that factors such as technological improvement, increased competition and rapidly changing political environments contribute and affect globalization.

Conclusion: As a result of the analysis, based on the information received and also as an overall conclusion, it was clear that the opinion of nationalistic attitudes had an optimistic view on economic growth among the entrepreneurs in the selected locality of Sri Lanka.

Key Words: *Economic growth, Nationalism*

A study on barriers of nurse-patient communication among the nursing staff in a selected government hospital, Sri Lanka

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Introduction: Effective communication is vital for effective healthcare provision, often having a multitude of positive outcomes, including decreased anxiety, guilt, pain, and disease symptoms. Likewise, many factors affect the barriers of communication between nurses and patients and the identification of these barriers would aid healthcare workers and relevant authorities in preparing for the steps to be taken to reduce such instances. Thus, this study aimed to investigate barriers in nurse-patient communication from a nurses' perception.

Methods: A descriptive, cross-sectional study was conducted on a sample of randomly-selected 100 nursing officers from a government hospital in Colombo district, to investigate barriers of nurse-patient communication. Data was gathered using a self-administered questionnaire and descriptively analysed using SPSS software.

Results and Discussion: Majority of the participants were females (89%) and the mean age of the participants was 52 years. According to the study, 80% of the participants stated that they have prior knowledge regarding communication skills, though 58% of the participants stated that they did not receive proper training for effective use of communication. Also, 78% of the respondents stated that the language barrier between the nurses and patients who are from different ethnic backgrounds is another major issue for nurse-patient communication. Besides, it was revealed that other major factors affecting nurse-patient communication were high workload (30%), shortage of nursing staff (45%) and lack of time (25%).

Conclusion: It was observed that an average level of communication was maintained by the nursing staff. Moreover, one of the best ways to gain the patient's satisfaction is through the establishment of effective and appropriate communication. It would be recommended for hospital management to reintroduce introductory courses for staff nurses to better inaugurate ways of effective communications. It is also advisable to allocate bilingual members of staff who can act as an interpreter if required.

Key Words: *Barriers, Nurse-patient communication, Effective communication*

Perspectives of third-year nursing students on the future of the nursing profession

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Introduction: The professional status of nurses' change day by day and now has many more areas of specialisation to build their profession upon. With that being said, is it important that what is expected by a student nurse is understood as to better establish the needs of future nurses and possibly reduce dissatisfaction with the profession. Therefore, this study aimed to focus on exploring the perception of professional life among nursing students.

Methods: The study was done as a descriptive, cross-sectional study. The study participants were nursing students, engaged in their final year of study of the diploma program. Participants for the study were recruited through convenience sampling. An online survey was distributed through social media as the data collection instrument. Quantitative data gathered from that questionnaire was analysed using Microsoft Excel.

Results and Discussion: The study consisted of 111 students with the majority being females (98%). With regards to the student perception, it was comparatively better than the perception students held prior to joining the nursing school. On average, 32.4% chose nursing as the primary career as it is an established profession. Similarly, 45.5% had an average perception with regards to innovative trends within the nursing profession. Moreover, 89.8% were interested in specialising in specific areas of nursing and updated their knowledge on the profession through tutorial staff (56.8%), internet (17.1%) or senior staff nurses in the clinical setting (16.2%). When identifying workplace preferences, 36% preferred the educational stream (becoming a member of the tutorial staff), 34.2% the medical services, 29.7% public health services and 67.5% to be working in general and surgical units. Furthermore, 44.1% hoped to follow a bachelor's degree programme once graduated and 28.8% considered continuing their education up until the MSc or PhD level. Furthermore, 60% of the respondents strongly agreed of continuous professional development (CPD) being vital in professional development.

Conclusion: Most students have good perception regarding the nursing profession. The students have also established their preferred place of work and how further developments in their careers would be made possible. It is recommended that barriers, resources in terms of furthering the nursing profession and CPD be further explored as the current study only accounted for students' perception.

Key Words: *Continuous professional development, Nursing students, Specializing areas in nursing*

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