# MEDICAL UNDERGRADUATE RESEARCH DAY

# 2022

28<sup>th</sup> Batch

Organized by

The Department of Community Medicine

Faculty of Medical Sciences

University of Sri Jayewardenepura





Held on 24/08/2022 from 9.00 am to 12.00 noon via zoom platform

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# Non Communicable Diseases and Nutrition

## Chairperson: Dr. Chamil Marasinghe

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## Chairperson: Dr. Sajith Edirisinghe

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## Panel 01:

## Non Communicable Diseases and Nutrition

Chairperson: Dr. Chamil Marasinghe

#### Group 01

The Proportion of Compliance with a Selected Weight Reduction Program and its association with Some Selected Factors and Reduction in Body Weight Among Adults in Sri LankaK. A. D. P. M. Athukorala, A. N. K. S. Amarathunga , D.M.H.C. Abeyrathne . G.A.H.Hasanka , P.K.N.C.De Silva

#### Background

Obesity is a growing global health problem, with serious social and psychological dimensions, affecting virtually all ages and socioeconomic groups.Health authorities and professional associations have been focusing on the prevention of obesity by introducing various types of multifactorial weight loss program. Therefore, it is very important to evaluate the weight loss strategies which are currently being discussed in the world.

#### Objective

To describe the proportion of compliance with a selected weight reduction program, association between some selected factors and non-compliance with components of the chosen weight reduction program, and association between the proportion of compliance with components of the chosen weight reduction program and reduction in body weight among adults in Sri Lanka.

#### Method

A descriptive cross-sectional study was carried out among adults (above 18 years of age) who were following a selected weight loss program which was conducted through a Facebook group. A self -administered questionnaire was given to the participants through a Microsoft form and 518 responses were selected according to the inclusion and exclusion criteria. Data were analyzed using spss software version 25.0 and a P value of less than 0.05 was considered significant.

#### Results

Among 518 participants 94.8% were compliant with dietary component, 67.0% with sleep component, 55.2% with exercise component and 10.0% with meditation component. Meantime, 82.0% of participants were compliant with the whole weight loss program.

There were some selected factors that have effect on the non-compliance with the individual components of the program. As the compliance towards dietary, sleep, and exercise components were decreased respectively, the number of factors that had a statistically significant association with the non-compliance has been increased. But there were no factors that had a significant association with the non-compliance of the meditation component.

The compliance towards dietary, sleep and exercise components had a statistically significant association with the weight reduction but the compliance towards the meditation component did not. There was a statistically significant association between the compliance with the whole weight loss program and the weight reduction while a mean weight loss difference of 4.4 kg was there between the participants who were compliant with the whole program and those who were non-compliant.

#### Conclusion

This selected weight loss program has a great effect on weight reduction and especially the dietary, sleep and exercise components are more effective compared to the meditation component.

#### Keywords

Compliance, non-compliance, weight loss program, meditation, sleep, diet, exercise

Knowledge on Colour Vision Deficiency, its associated factors, and proportion of Colour Vision Deficiency among adults in Western Province A.P. Alahakoon, S.J. Dasanayaka, Y.B. Jayasinghe, K.G.W Jayawardane, G.O. Wimalanath

#### Background

Colour Vision Deficiency (CVD) is an abnormality or absence of one or other of the three forms of photo pigments in the retinal comes. It can affect anybody of any age, varying in the aetiology and the degree of impact. Even though CVD is not so rare on a global scale, the proportion of individuals carrying a comprehensive knowledge on the disease was found to be insignificant.

#### **Objectives**

This study was aimed to describe the knowledge on CVD, its associated factors, and the proportion of CVD among the adults in Western Province.

#### Methods

A descriptive cross-sectional study was conducted among 423 adults aged above 18 years from Colombo ,Gamapaha and Kalutara districts in the Western Province. Stratified sampling method along with snowball sampling within the district was used as the sampling technique. Prior to the proper data collection, a self administered questionnaire

was pretested via online platforms. The questionnaire addressed sociodemographic and socioeconomic characteristics of the study participants, the knowledge on colour vision,

the knowledge on CVD and colour vision assessment tools. Also, the colour vision of

the study participants was assessed through an online colour vision assessment tool. The colour blind test (https://colourmax.org/colour-blind-test) was used as the reference. Descriptive statistics and Pearson's Chi-square test were used in the analysis of data. Statistical significance was taken as p < 0.05.

#### Results

A majority of the participants were females (63.4%) and the mean age of the sample was 33 years (SD 12.62) .Most of the participantswho participated in the study were undergraduates (40.2%) followed by graduates (22.2%). Most of the participants had an overall good knowledge

on CVD (53.7%). From the total sample population, 91.0% was aware of the term 'CVD'. Most of the participants were aware of colour recognition, risk factors and prevalence of CVD, the impact of CVD on day today activities and occupations. Most of the participants have gathered knowledge from internet/social media (40.6%). Although the participants had an understanding on screening CVD through assessment tools, only few participants knew about the exact screening tools. A notable proportion of 37 participants (9.5%) were already diagnosed with CVD. Considering the methods of diagnosis, only a few participants (21.6%) were diagnosed at a medical campaign. Out of the already diagnosed subjects with CVD, a positive family history was observed. Sociodemographic factors such as age, the level of education and marital status were associated with the overall knowledge on CVD (p<0.05). Socioeconomic factors such as employment status and economic status were also associated with the overall knowledge on CVD (p<0.05). According to online colour vision assessment tool, only 22 participants (5.2%) were suggestive of abnormal colour vision. Therefore the proportion of CVD among the adults in the Western Province was significantly lower. The above results showed a male predominance (63.6%). Out of the Muslim participants, a notable proportion was suggestive of an abnormal colour vision (13.6%).

#### Conclusions

A notable proportion of 37 participants (9.5%) were already diagnosed with CVD. Regarding method of diagnosis, only a few participants (21.6%) were diagnosed at a medical campaign. According to our online colour vision assessment tool, only 22 participants (5.2%) were suggestive of abnormal colour vision.

#### **Keywords**

Colour Vision Deficiency, congenital Colour Vision Deficiency, Acquired Colour Vision Deficiency, prevalence, associated factors, screening.

Parental knowledge, attitudes and factors associated with parental knowledge and attitudes regarding eating disorders of adolescents in selected districts of Sri Lanka N.M.Thilina Akalanka, D.M.N.U.Dissanayake, G.A.Amashakya, A.A.Fathima Munsifa, K.Ghajanan, Y.Swasthigan

#### Background

Eating disorders are characterized by disturbances of eating and other behaviour leading to changes in food consumption and impairing the physical or psychosocial functioning. Adolescents can be mainly affected by anorexia nervosa, bulimia nervosa, binge eating and other specified feeding or eating disorders. Among youth, interventions led by parents are the most effective for promoting eating disorder recovery therefore early identification of adolescents at risk and appropriate management are important in preventing the long-term adverse effects of starvation on physical and psychological health and on the reproductive health on females.

#### Objective

To describe parental knowledge, attitudes and factors associated with eating disorders of adolescents in selected districts of Sri Lanka.

#### Methods

A descriptive cross-sectional study was conducted among parents of adolescents (10-19years) in selected districts of Sri Lanka. A sample size of 200 was calculated and a multistage sampling was performed Parents who have access to internet in the selected districts and one parent from each adolescent were included in the study. A structured self- administrated questionnaire was used as the main data collection instrument. The questionnaire was formulated in English, Sinhala and Tamil languages and was sent via a google form.

#### Results

Majority of the participants 133(67%) were aware of eating disorders. Out of them majority 48(36%) had a moderate level of knowledge. While only 39(29.3%) had adequate knowledge. Out of the total sample 11(5.5%) had a favourable attitude while majority 189(94.5%) had a

moderate level of attitude. Prior reading about eating disorders (p=0.000), district of the parent (p=0.001), ethnicity (p=0.015) and religion (p=0.020) were significantly associated with the level of knowledge of the parent. Meanwhile the gender of the parent (p=0.025) was significantly associated with the level of attitude.

#### **Conclusions and Recommendations**

Majority of the population in our study had a moderate level of knowledge about eating disorders and most of the parents showed a moderate attitude towards eating disorders. It was found that adequate knowledge was significantly associated with prior reading about eating disorders, district, ethnicity and religion. Considering the attitude level, a majority who showed a moderate attitude were mothers and a significant association was observed between gender and the attitude level.

Recommendations to conduct further studies among different populations of Sri Lanka regarding knowledge and attitudes of eating disorders are indicated. Furthermore, online platforms are recommended to increase the awareness since internet was a major source of information used by a majority of the parents.

#### Group 16

A Comparison of Knowledge, Practices and Associated Factors Related to Protein Intake between Vegetarian and Non-Vegetarian Sri Lankan Adults R.I.G.O.B Siriwardana, S. Ganeshraj, D.S.D. Jayasinghe, M.D.S.V. .Dharmawardena, J.H.T.S Jayakody, R. Ravindran

#### Background

Protein is a crucial macronutrient essential for one's survival, growth, development reproduction and health. Sri Lankans have been well-documented to have inadequate protein in their diet. In view of vegetarians having been reported to consume less protein than non-vegetarians, it is likely that protein inadequacy is more prevalent among Sri Lankan vegetarians compared to nonvegetarians. One of the factors that may influence the dietary practices of a population is nutritional knowledge. Lack of knowledge related protein may be a contributing factor to thedietaryproteininadequacyamongSriLankans.Objective

To compare knowledge and practices related to protein intake and their associated factors between vegetarian and non-vegetarian Sri Lankan adults. Methods

A cross-sectional, comparative study was carried out on an online platform between vegetarian and non-vegetarian Sri Lankan adults. Non-probability, convenience sampling method was employed to recruit participants. A questionnaire was presented as a Google form to collect data on the sociodemographic profiles, knowledge and practices related to protein intake. **Results** 

423 non-vegetarians and 96 vegetarians participated in the study. The youngest age group (18-29 years) accounted for over 60% of both samples. Females were the predominant gender in both samples comprising 74% and 76.1% in the vegetarian and non-vegetarian samples respectively. The results indicated that subjects of both samples had very good protein-related knowledge overall, with over 85% of both samples scoring more than 50% of the marks but demonstrated poor knowledge of the protein requirement of an adult and the amount of protein-rich food needed to meet the requirement. The quality of dhal as a source of protein was overestimated by the majority of the subjects of both samples. The mean daily intakes of protein of both samples exceeded the reference value of 37.5 grams but non-vegetarian sample had a higher mean value than the vegetarian sample. However, in spite of the mean values exceeding the reference value, 29.3% of the vegetarian sample and 12.7% of the non-vegetarian sample had daily protein intakes below 37.5 g. Subjects had a predominantly plant-based intake of protein. Animal sources contributed to less than 10% of protein in vegetarians and less than 30% of protein in non-vegetarians. Compliance with national food-based dietary guidelines related to protein was poor among the subjects. 72% of vegetarians and 41% of non-vegetarians consumed less than the recommended number of daily servings of fish, pulses, meat and eggs. The recommended number of daily servings of dairy was not met by 45% and 36% of vegetarians and nonvegetarians respectively. Non-vegetarian women were more likely to have protein inadequacy than non-vegetarian men (p=0.001). Adequacy of intake of fish, pulses, meat and eggs was

associated statistically significantly with religion (p=0.006) and ethnicity (p=0.019) in the vegetarian sample and with province of residence (p=0.02) in the non-vegetarian sample. No statistically significant associations were found between adequacy of dairy and sociodemographic characteristics. Protein inadequacy did not vary statistically significantly with knowledge.

#### Conclusions

Sri Lankan adults have good overall knowledge related to protein but demonstrate poor knowledge when it comes to their own protein requirement and the amount of protein-rich food required to meet their requirement. They exhibit poor intakes of fish, pulses, meat and eggs and dairy. Inadequacy of those food groups is more prevalent among vegetarians than nonvegetarians. Inadequacy of total protein is also more prevalent among vegetarians. Consumption of animal proteins is low among Sri Lankan adults. The study samples being poorly representative of the populations major limitation of this is а study.

#### Recommendations

The findings of this research should be corroborated by a more representative study. Measures should be implemented to educate the public on the quantitative and quantitative recommendations for protein intake.

#### Keywords

Vegetarian, Non-Vegetarian, Protein Intake, Protein Requirement, Protein Sources, Nutritional Knowledge

#### Group 21

## Injury patterns and nature of the road traffic accidents reported to the Accident Service Unit in Colombo South Teaching Hospital and its associated factors M.D.N. Rabel, V. Ghajhanee, J.K.M.S. Isurika, P.S.U. Perera, D.M. Kulathilake

#### Introduction

Road Traffic Accident (RTA) occurs when a vehicle collides with another vehicle, pedestrian, animal, road debris or other stationary object such as a tree or utility pole. These collisions may result in injury, death and damage to property. With the increasing urbanization projects around

the world the usage of vehicles increased and hence the rate of RTA has significantly increased, and for Sri Lanka also there is no exception, showing the same pattern of increment in the rate of RTAs. Such changes not only impact the personal lives of the citizens but also it adds an economic burden to any given country.By considering this outcome, studying of the injury patterns and the nature of RTA cannot be overlooked. When there are evidence based findings, it will definitely be helpful to address the burning issues.

#### Objective

To describe the injury patterns and nature of road traffic accidents reported to the Accident Service Unit in Colombo South teaching Hospital and its associated factors.

#### Methodology

A descriptive cross-sectional retrospective study was carried out among the patients admitted to the Accident Service Unit of CSTH. Data was collected from the 1st of November 2021 to the 31st of December 2022.Data records from year 2020 and 2021 were also used. A data extraction form consisting of all the necessary information needed to be recorded was our instrument of the study. IBM SPSS Statistics Version 26 was used for data analysis. P < 0.05 was taken as the level of significance.

#### Results

The percentage of people equal to or less than 40 years old is 54.4% while the percentage of people above the age of 40 is 45.6%. Themajority of the participants were males (86.2%). More than 3/4th of the population resided in Colombo. Mostly affected body part is lower limb. (54.2%) Head and neck, and upper limbs are affected in nearly equal amounts. (39.8% and 39.3%).

While considering the type of injury received, it was in the forms of lacerations (51.8%) and fractures (51.3%).Injury severity according to ISS scale, the majority were minor injuries which accounted for 90.9%. There were only 35 major injuries. Out of 384 the majority was FAST negative (96.6%). The mean days of hospitalization was 3.98 days (SD=3.67) Out of the study population, majority of the participants (87.5%) were not under the influence of alcohol at the

moment of that they met with the RTA. More than half of the population were not undergone for any surgery (59.6%). Most of the RTAs were occurred during the night (52.3%). RTAs were more frequent on weekdays (64.8%). When compared to the weekends (35.2). While considering the referral to other specialties, most had been referred to the orthopedic surgeon (37.8%), ENT/OMF surgeon (14.1%) and plastic surgeon (6.5%). Out of participants (N=384) the mostly affected party is drivers (67.2%). The major type of vehicles involved in road traffic accidents were motorcycles (65.9%). This was followed by the three wheelers (20.3%). The majority of accidents have taken place due to collision of two vehicles. (40.6%).

A positive mild correlation is observed between the age and the duration of hospitalization which is a statistically significant finding(p=0.002). A moderate positive correlation is observed between the duration of hospitalization and ISS score which is also statistically significant(p<0.001). There is a statistically significance between the age group and the duration of hospitalization too. (p=0.007). There is a statistically significant association between the sex and the affected body area. (p<0.001)

#### Conclusions

Future plans must be focused on reducing the RTA incidents of RTA as they cause a significant impact on an individual's life as well as on the society as a whole. Since the motorcycle riders had involved in RTA in a significant level representing the majority immediate interventions are warranted in order to reduce the prevalence. Strict regimes to control driving under the influence of alcohol should be enforced and also better traffic management during night-time can minimize the incidence of RTA. Steps towards minimizing the RTA should be taken forward as it is an avoidable problem in the present day society: - prevention is better than cure.

#### Key words

Road traffic accidents, injury patterns, associated factors

Knowledge and practice of healthy eating and associated factors among medical undergraduates of selected universities in Sri Lanka R.N.H. Perera , M.D.M.R.Perera, M. D. D. N. C Madurawala, K.G.K.P. Kiriwandeniya J.M.R.A.Jayakody

#### Introduction

Healthy eating can be defined as eating practices and behaviors that are consistent with improving, maintaining and/or enhancing health. To practice a good dietary pattern, it is essential to have a proper knowledge regarding the categories of food and required serving sizes per day.

#### Materials and methods

A descriptive cross-sectional study was carried out among 326 4<sup>th</sup> year medical undergraduates from six selected universities (University of Colombo, University of Sri Jayewardenepura, University of Kelaniya, University of Peradeniya, University of Rajarata, Kothalawala Defense University). A self- administered online questionnaire (Microsoft form) was distributed among the students of the selected universities. Data were analyzed using SPSS software. P value less than 0.05 was considered as significant.

#### Results

Participation of each university was equal. Majority of the participants were females (56%) and Sinhalese (83.3%). Majority had a good knowledge on healthy eating (60.8%) There was a statistically significant association between overall knowledge on healthy eating and universities ( $\chi_2$ =18.680, df =5, p=0.002). There was a statistically significant association between the university of the participant and the daily intake of the vegetables ( $\chi_2$ =18.672; df =10; p 0.045), place of living, daily intake of meat (chicken, pork, beef, lamb etc.), fish, egg (p=0.038).

#### **Conclusions and recommendations**

Majority of the participants had a good knowledge (60.8%) on healthy eating. There was a significant difference among universities on overall knowledge on healthy eating (p=0.002)

There was a significant difference among selected universities, on recommended daily intake of vegetables and a significant association between recommended daily intake of meat (chicken, pork, beef, lamb etc.), fish, egg and place of living was observed.

Further measures should be taken to improve the knowledge on healthy eating among the rest of the students as they should be able to guide their patients well.

#### Key words

Healthy eating, Knowledge, Eating practices, Undergraduates

#### Group 26

Sleep quality during the face to face school closure period due to the COVID -19 sleep pandemic and associated factors among teachers in government schools in four districts in Sri Lanka

# U.K.C.D. Kularathne, N.A.U.A.Kulathunga, S.T. Perera, L.H. Navodya, R.D.S.M. Kumari Background

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-Co-2) emerged in China in December 2019 and spread worldwide very rapidly. The influence of this novel virus reached Sri Lanka in January 2020. Due to the pandemic most of the countries including Sri Lanka had to undergo national lockdown. It had a great impact on daily life routines, sleep patterns and mental health of people. As a significant consequence of island wide lockdown physical classrooms at school were converted to virtual classrooms and thus teachers had to adapt to this new normal condition and it had significantly influenced the sleeping patterns and thereby the mental health of teachers.

#### Objective

To describe the sleep quality during the school closure period due to the COVID-19 pandemic and associated factors among teachers in government schools in four districts in Sri Lanka.

#### Method

A descriptive cross-sectional study was conducted to assess the impact of the COVID-19 pandemic on sleep quality of teachers, the socio demographic and comorbidity factors associated with these variations in sleep quality, and the association between sleep quality and mental health among these teachers of selected government and semi government schools in Gampaha, Colombo ,Kandy and Hambantota districts. Data was collected through a self-administered

questionnaire as a google form distributed via social media platforms. A multistage sampling method was used. Internationally validated PSQI and DASS21 instruments were used to collect data. Data was analyzed using SPSS software. Data was presented as percentages for qualitative variables and means and SD values for quantitative variables. Associations were determined by using Chi-square and Fisher's exact test for qualitative data. P value less than 0.05 was considered as significant.

#### Result

Of the 336 studied subjects, 37.5% were grouped as poor sleepers with a global PSQI score of >5. However, 96.8% of the subjects reported their subjective sleep quality as very good or fairly good.19.6% of participants scored less than 75% in the habitual sleep efficiency component. The PSQI graded daytime dysfunction on a scale of 0-6 and 25% of the studied subjects scored more than 3/6 indicating worse problems.15.5% reported to sleep for less than 6 hours and 12.8% of the group reported to use sleep medication once or more than once a week. The PSQI graded sleep latency on a scale of 0-6 and of the 336 the studied subjects, it was found that 28.5% scored more than 3/6 indicating worse problems.

Sleep disturbances of participants were graded on a scale of 0-27 and 21.8% of the participants scored a value greater than 10 indicating more frequent sleep disturbances.

Socio-demographic factors such as marital state (p=0.019), subjective family support (p=0.026) have statistically significant association with sleep quality. Majority of the participants who were unmarried suffered from poor sleep (52.5%) while the majority of the married participant's experienced good sleep (65.6%) and majority of participants who reported excellent (65.8%) or good (66.1%) family support were good sleepers. The highest proportion of good sleepers (68.4%) was recorded among those who did not have any comorbidities and as the increase in the number of comorbidities that individuals had, the proportion of poor sleepers also gradually increased. There is a statistically significant association between the number of comorbidities and sleep quality. (p=0.037). The highest proportion of good sleepers were recorded among the teachers who had served for 10-19 years (72.2%) and teachers who had served less than 10 years

majority (52.9%) of the population recorded poor sleep quality . There is a statistically significant association between work experience of the participants and sleep quality. (p = 0.016)

Participants who had at least one family member who tested positive for COVID -19, more than half of the group (59.5%) suffered from poor sleep. Therefore, there is a statistically significant difference between having a family member/s who tested positive for COVID-19 with the sleep quality. (p=0.002). Participants, who had been quarantined due to COVID -19, 54.2% suffered from poor sleep and the participants who hadn't been quarantined, 65.3% experienced good sleep. Therefore there is a statistically significant difference between being quarantined due to COVID 19 and sleep quality. (p=0.01)

When considering the association between severity of depression, anxiety and stress with sleep quality, There is a statistically significant association between the level of depression (p=0.000), anxiety (p=0.000) or stress (p=0.000) and sleep quality.

#### Conclusions

Teachers unfortunately suffer from an alarming prevalence of poor sleep .The mean sleep durations of teachers in our study was 6.59 (SD 1.295) and this is considerably lower than the 7-9 hours of sleep recommended for adults to achieve optimal sleep. Approximately 4 in 10 adults suffer from sleeping disorders sleep medications were used within the last month by approximately 3 in 10 participants.

Overall, the areas in which participants scored higher (indicating worse sleep problems) were global PSQI score, sleep latency, sleep disturbances, and daytime dysfunction, while subjective sleep quality, sleep duration and use of sleep medication scored very low. Poor sleep was strongly associated with the presence of at least one comorbidity whereas the highest proportion of poor sleepers were recorded among those who are suffering with Obstructive Sleep Apnoea .Higher work experience, positive subjective family support and being married were significant sociodemographic factors which affected sleep quality. Being quarantined for COVID -19 and having at least one family member who tested positive for COVID -19 were strongly associated with poor sleep quality. There is a statistically significant association between the level of depression, anxiety and stress and sleep quality.

Biophysical, Behavioural and Anthropometric factors in Predisposition of Non-Communicable Diseases in adults attending Healthy Lifestyle Centers in Kalutara district A.V. Udawella, Y.O. Weerasinghe, C.U.I. Wimalarathna, S.A.C. Dilshan, S.K.H.C. Nirmani

#### Background

NCDs are the most common cause of morbidity and mortality worldwide. As a developing country in South Asian region it is also a major public health challenge in Sri Lanka too. Biophysical, behavioural and anthropometric factors plays a crucial role as risk factors in predisposition of NCDs. Therefore, it is important to do studies about these risk factors for prevention and control of NCDs. Considering it as a timely need, we conducted our research to identify the association of biophysical, behavioural and anthropometric factors in predisposition of NCDs.

#### **Objectives**

To determine the association of biophysical, behavioural and anthropometric factors in predisposition of NCDs in adults attending HLCs in Kalutara district.

#### Methods

A descriptive cross sectional study was performed using secondary data available at randomly selected 4 HLCs in Kalutara district. Healthy lifestyle clinic records of 482 adults between the ages of 30 - 60 years who attendedKatugahahena, Dodangoda, Bandaragama and BulathsinhalaHLCs from March to September 2021 were collected to achieve the sample size. A multistage sampling method was used. Data collection instrument was Epicollect5 Data Collection application which is a free mobile data gathering platform. WHO criteria were used in classification of risk level of anthropometric and biophysical factors associated with NCDs. Data was analyzed using SPSS software. P value < 0.05 was considered as significant. Chi squared test was used to find the associations.

#### Results

Out of 393 participants 183 (46.6%) were in high risk of having NCDs according to the accumulative effect of biophysical, behavioural and anthropometric factors.Out of 480 participants 299 (62.3%) were in high risk to have NCDs according to anthropometric factors. According to biophysical factors, 239 (60.8%) were in high risk to have NCDs out of 393 participants, and out of 482 participants 226 (46.9%) were in high risk to have NCDs according to behavioural factors.

Majority with high SBP (57.5%), high DBP (56.8%), high RBS level (68.4%), high FBS level (58.8%) and high serum cholesterol level (50.4%) were in age group of 46 -60 years and majority with high SBP (53.2%), high FBS level (61.8%) and high serum cholesterol level (52.3%) were males. Participants who consumed tobacco (98.6%) and alcohol (100.0%) were almost all males and majority of them were in age group of 30-45 years. Most of the participants who had high levels of anthropometric measurements were females and majority who were overweight (52.9%) and who had high WC (50.7%) were in age group of 30 - 45 years.

There was a statistically significant difference between physical activity and WHtR (p=0.005) and in physical activity with SBP(p=0.009) and DBP(p=0.010). A statistically significant difference was observed in tobacco consumption with WC (p<0.001), WHtR (p=0.032), RBS (p=0.045) and serum cholesterol level (p=0.038). There was a statistically significant difference between alcohol consumption and WC (p<0.001) but no statistically significant difference was observed between alcohol consumption and any biophysical factor. A statistically significant association was observed between BMI and SBP (p<.001) and statistically significant difference differences was seen in WC with SBP (p=0.044) and DBP (p=0.006) while WHtR only showed significant different with DBP (p=0.011).

A statistically significant difference was observed in NCD risk with physical activity (p=0.000), tobacco consumption (p=0.001), alcohol consumption (p=0.001), WC (p=0.000), WHtR (p=0.000), SBP (p=0.000), DBP (p = 0.000), RBS (p=0.000) and serum cholesterol level (p=0.000) and statistically significant association was observed between NCD risk and BMI (p=0.000).

#### **Conclusions:**

Majority who had high SBP, high DBP, high RBS levels and high serum cholesterol levels were in high risk category for having NCDs. When the relationship of NCD risk is considered with each behavioural factor separately, majority who had risk behaviours such as, physical inactivity, tobacco consumption and alcohol consumption had high risk of having NCDs. Most of who were in overweight category and those who had high WC and WHtR levels were in high risk group of having NCDs. Less than a half of the population were in high risk of having NCDs according to the accumulative effect of biophysical, behavioural and anthropometric factors. Although a relatively same proportion of population were in high risk of having NCDs according to their behavioural factors, more than half of the population were in risk of having NCDs according to biophysical and anthropometric factors separately. In conclusion, all biophysical, behavioral and anthropometric factors were considerably associated with NCD risk within this population.

#### Key words:

NCD, Biophysical, Behavioural, Anthropometric

## **Panel 02:**

## **Medical Education and Environmental Health**

Chairperson Dr. Sajith Edirisinghe

Group 02

Challenges in English medium learning, coping strategies and associated factors among first year undergraduates of a selected medical faculty in Sri Lanka. A.A.C.C.Abeysinghe, A.R.F. Allana, G.S. Anuththara, D.M.V.V. Atapattu, A.I.S. Dodangoda

#### Background

In the current globalized world, English has become the most significant & widely recognized international language. Tertiary education in English medium has become a timely demand in most parts of the world. Students from non-native English-speaking countries in fact face many English language related challenges in various aspects. Especially in high yielding courses such as Medicine which require a great deal of knowledge and understanding along with adequate language skills to achieve a competent level. Most students are bound to face English language related challenges during the first year of the curriculum. Considerable number of students are pressurized by language barriers and heaping workloads. While others adapt to this new system by utilizing various coping strategies. Hence evaluating the challenges in English medium learning, coping strategies and associated factors among the first-year medical students is crucial.

#### **Objectives**

To describe the challenges in English medium learning, coping strategies and associated factors among the first-year undergraduates of Faculty of Medical sciences, University of Sri Jayewardenepura.

#### Methods

A descriptive cross-sectional study was conducted among the first-year medical students of Faculty of Medical sciences, University of Sri Jayewardenepura. Convenience sampling technique was used. A self-administered questionnaire in English was provided via google form to the participants. Data was analysed using SPSS software version (25). P value less than 0.05 was considered as significant.

#### Results

Out of 169 participants 64.5% (n= 109) were female and majority (87%, n=147) were Sinhalese. Majority had A passes in both O/L (86.4%.) and A/L (60.4%) examinations. Most had satisfactory marks for both pre - and post- test English orientation exams. Among the English language skills, speaking was the most challenging; many were not able to communicate ideas fluently and express their opinions in English (62%). The participants who had a low level of language anxiety (82%, p= 0.018) and those who were satisfied with English learning at school (78.8%, p= 0.010) had a good knowledge in English language. Participants who had attended government schools comparatively faced more challenges in English medium learning (36.2%, p= 0.004). Those who had good results in A/L English (23.9%, p < 0.05) had less English related challenges. Participants with high anxiety (45.6%) and low level of confidence (43.5%) found it more challenging (p<0.05). The students who completed A/L in mediums other than English (37.9%) and those who were unsatisfied with English knowledge gained during school (54.8%) faced more English language related challenges (p <0.05). Participants who were from rural backgrounds (58.3 %) and who sparsely used English at home (42.6%) evidently faced more challenges in English medium learning (p<0.05).

#### Conclusion

Even though most of the study participants had satisfactory results in their English language examinations prior to university entry, a considerable proportion still faced various difficulties in English medium learning in terms of various language skills. A significant number of students found speaking to be the most challenging skill. Challenges in English medium learning was affected by a multitude of factors such as A/L study medium, unsatisfied knowledge gained during school, high level of anxiety and low confidence. Students from rural backgrounds were also among them.

#### Keywords

English medium, undergraduates, knowledge, challenges, coping strategies, associated factors.

# Knowledge on selected venomous snakes, the first aid given following a snake bite their associated factors, and the attitude towards snakes, among the adults between age 20 to 60 years in Colombo and Gampaha districts

V. Perera, T.Chamod, M.Krishna, P. Jayasekara, K. Amarasekara, K. Lakshan

#### Background

Snake bite is one of the most neglected public health issues world wide. It is one of the commonest causes of hospital admission of Sri Lanka and there is a lack in research studies conducted to assess the risks of snake bites and knowledge of snake identification by the general public in Sri Lanka.

#### **Objectives**

To describe knowledge in identification of selected venomous snakes, first-aid given following a snake bite, their associated factors and the attitude towards snakes among the adults between 20 to 60 years of age in Colombo and Gampaha districts

#### Methods

A descriptive cross-sectional study was conducted among 422 adults between 20 to 60 years of age in Colombo and Gampaha districts. A self-administered questionnaire as a Google form was used to collect data after informed written consent was obtained from participants. When selecting the sample size of both Colombo and Gampaha districts, stratified sampling was performed. Sample size was equally divided among the two districts. From each district, the first 211 samples were obtained. Descriptive statistics were used to analyze the sample characteristics using SPSS software version 26. Chi- square and Fisher's exact test were used in determining the associated factors. P value of less than 0.05 was considered as significant.

#### **Results**

Among 422 participants, a significant Sinhalese (93.1%) and Buddhist (85.8%) predominance were observed. Majority of the participants (73.2%) were between the ages 20 to 30 years (73.2%). The majority of the study population were females (231, 54.7%) and majority had achieved an education above G. C. E. A/L (81.3%). The majority (66.4%) of the participants

have not studied about snakes or have not been involved in a medical profession. Most of participants (75.5%) were correctly identified Indian cobra and their venom state. Almost all of the participants (90.8%) have stated that being frightened is not correct during a snake bite. Out of the total study population, 91% suggest that the area of the snake bite should be washed in running water. Majority of participants (44.1%) have neutral attitude towards snake. Appearance and the behavior of the snakes, movies, the documents in social media and other literature based on snakes were mostly affect attitude towards snakes. Majority of population have been selected western treatment (81%) and the reason were given for that was felling more safe.

Except higher educational level, other socio-demographic variables were shown statistically significant association (p<0.05) with the knowledge on identification of snakes, their venom state and the first aid given following a snake bite. Being a male, Sinhalese, Buddhist had good knowledge. Religion and ethnicity had significant association (p<0.05) with attitude towards snakes were observed. As majority of among Sinhalese had good attitude when compared to others. However other socio-demographic variables did not show any statistically significant association with attitude.

#### Conclusions

Our research showed half of study population had good knowledge about identification of snake, their venom state and the first aid given following a snake bite. Most of participants had neutral attitude towards snakes. There was an association between age, gender, district, ethnicity, and religion, employed status with knowledge about identification of snake, their venom state and the first aid given following a snake bite.

#### **Keywords**

Snake bites, first aid, snake identification, knowledge, attitude

Perception on online learning, its associated factors and perceived barriers and suggestions to overcome them among medical undergraduates of University of Sri Jayewardenepura during COVID-19 restrictions

D.M.N.R. Handagala, D.T.D. Wijesinghe, L.U.I. Kumara, H.B.D. Anjana, M.G.A. Oshilani

#### Background

Online learning has been implemented to recommence the halted medical education for a while now, as a result of the restrictions due to the COVID-19 pandemic. Since, a deviation from the traditional methods can change the quality of education, positively and/or negatively. Thereby, carrying out a cross-sectional study to describe the perception on online learning, its associated factors and perceived barriers and suggestions to overcome them among medical undergraduates during COVID-19 restrictions is a timely need to uplift the efficiency and quality of medical student's learning during this hard time.

#### Objective

To describe perception on online learning, its associated factors and perceived barriers and suggestions to overcome them among medical undergraduates of University of Sri Jayewardenepura during COVID-19 restrictions.

#### Method

A descriptive cross-sectional study was carried out among 338 undergraduates of all the 6 batches of the Faculty of Medical sciences, University of Sri Jayewardenepura, selected using multistage-stratified sampling technique. Data was collected using a pre-tested self-administered questionnaire on socio-demographic information, factors associated with perception on online learning, perception of online learning and perceived barriers for online learning and suggestions to overcome them. The collected data was analyzed using the 25th version of SPSS software. Perception on online learning was measured by asking four questions using Likert scale. According to the responses, a score of 5, 4, 3, 2 & 1 wasgiven to strongly agree, agree, neutral, disagree and strongly disagree respectively. Therefore, the possible maximum score was20 and the possible minimum score was4. This mark wasconverted to a percentage; 20 in to 100% and 4

in to 20% as the extremities. Here, since the mean score percentage was 77.69% a score more than or equal to thatwasconsidered as satisfied (Good perception on online learning) and less than 77.69% as unsatisfied (Poor perception on online learning) with online learning. Descriptive statistics were used to describe the perception on online learning and, perceived barriers and suggestions to overcome them, while the associations were determined using the chi-square test. "p" values less than or equal to 0.05 were considered as significant.

#### Results

According to our study a majority of the participants were females (n=202, 40.2%). Also, most of the participants were form the 30th batch (n=66, 19.5%) while, the least were from the 27th batch (n=52, 15.4%). The current average monthly income of the family of most the participants was between LKR 50,000-100,000 (n=145, 42.9%). 35.7% (n=179) of the participants the current mode of obtaining data for online learning was pre-paid mobile data cards. The current average monthly expenditure of most of the participants for internet connection with increased online learning activities (during COVID-19 academic period) was equal to or more than LKR 2000 (n=94, 27.5%). The study had found that most of the respondents had a good perception on online learning during the COVID-19 restrictions (n=237, 70.1%). The district of current residence (p=0.006), current average monthly income of the family (p=0.025), having clinical appointments (p<0.001), using a desktop for online learning (p=0.017), using a laptop for online learning (p=0.049), using a tablet for online learning (p=0.03), using YouTube videos as the online learning resource that the faculty provided students for online learning (p=0.016), having past experience/ familiarity on online learning (P < 0.001), have involved in any in-person group studies during pre-COVID-19 academic period (p=0.007) and have participated in any extracurricular activity/activities during the pre-COVID-19 period (p=0.006) showed statistically significant associations with the perception towards online learning during COVID-19 restrictions.

#### Conclusion

A majority had a good perception on and satisfied with online learning during the COVID-19 restrictions. Also, a majority of the respondents had encountered technological and individual barriers. While, only a minority had encountered any domestic barriers and institutional barriers for online learning during the COVID-19 restrictions. A majority has also agreed on suggestions

for the educators, for the institute, to improve the mental status of the students and to cope with the economic status of the students to overcome the barriers. The district of current residence, current average monthly income of the family, having clinical appointments, using a desktop for online learning, using a laptop for online learning, using a tablet for online learning, using YouTube videos as the online learning resource that the faculty provided students for online learning, having past experience/ familiarity on online learning, have involved in any in-person group studies during pre-COVID-19 academic period and have participated in any extracurricular activity/activities during the pre-COVID-19 period showed statistically significant associations with the perception towards online learning during COVID-19 restrictions.

#### Key words

Online learning, perception, barriers, suggestions, undergraduates

#### Group 17

Factors Associated With Practices Towards Household Waste Management In Selective Districts In Sri Lanka M. Y. J. Fernando, B. M. M. Rashmika, J. P. S. S. Jayaweera, P. N. Ayachana, I. M. Asarutheen

#### Background

To develop an effective waste disposal system in a community, household waste management is the fundamental unit. This study was conducted among households of selective districts which are Badulla, Colombo, Gampaha, Galle and Kandy.

#### Objective

To describe the factors associated with practices towards household waste management in selective districts in Sri Lanka.

#### Methods

This was a descriptive cross-sectional study conducted among adults from households who lived in selective districts in Sri Lanka. Data was collected through a self-administered questionnaire composed of close ended and open-ended questions, complete with an information sheet and consent form. The questionnaire was formulated in both English and Sinhala languages and distributed to the participants via a google form.

#### Results

Among the waste disposal practices a larger proportion of participants (59.8%) had practiced good practices and other participants (40.2%) had practiced bad practices. Majority of the participants who practiced good practices were in Colombo district (24.8%). There was a significant association among waste disposal practices and the selected districts (p= 0.014). Larger proportion of the participants who had practiced good practices were female (70.1%).

Major proportion of participants who practiced good practices had an adequate knowledge (78.5%). Most of the participants (95%) had a favourable attitude toward household waste disposal practices. Majority of the participants (72.9%) responded that there were an inadequate rules and regulations and insufficient government involvement (72.0%) in Sri Lanka toward household waste management.

Mostly generated waste type in households was kitchen waste (333) and least was glass. Majority of the participants (319) had used rubbish bin as their waste storage method. Most of the participants responded that burning was their major waste disposal method (269). Minor percentage of participants used recycling as their waste disposal method.

#### Conclusions

The study explores practices of household waste management and factors associated with the practices. Majority of the participants of the study population had practiced good practices. There was a significant association between household waste disposal practices and socio demographic factors which are household's district, highest level of education and average monthly income of households and with other factors which are knowledge of households and government involvement toward waste disposal mechanisms.

## Attendance of medical students for compulsory and non-compulsory learning activities before and during COVID-19 lockdown S. M. S. I. Senerath, A.G.G.S.W Ranawaka, L.G.N Kumari, . F. Rilfana, . R. Lokitha

#### Background

Attendance of Sri Lankan medical students for compulsory and non-compulsory learning approaches were different before COVID-19 lockdown and during COVID-19 lockdown with associated factors. In government medical faculties of Sri Lanka, Lecturesare considered as non-compulsory, while others(tutorials/SGDs, clinical session, practical)] considers as compulsory. Many factors which are related to student and lecturer had an impact on attendance.

#### **Objectives**

To describe the attendance and associated factors of medical students for compulsory and noncompulsory learning activities before and during COVID-19 lockdown.

#### Methods

This was a descriptive cross-sectional study conducted among 3<sup>rd</sup> year and 4<sup>th</sup> year medical students from selected universities in Sri Lanka.First year, 2<sup>nd</sup> year, final year and overseas medical students were excluded. The sample size was 420.Data was collected by a structured self-administered questionnaire through Google form through WhatsApp to the 3<sup>rd</sup> and 4<sup>th</sup> year batch representatives from the selected universities. They distributed the link of the questionnaire among their colleagues. The sampling technique was a multi-stage sampling method

#### Results

According to our study, attendance for the compulsory and non-compulsory learning approaches decreased during COVID-19 lockdown when compared with before COVID-19 lockdown. Academic year had an impact on the attendance of compulsory learning activities only during COVID-19 lockdown. Attendance of tutorial/SGDs before COVID-19 lockdown was affected by health issues. Study environment created an impact on attendance before COVID-19 lockdown

and during COVID-19 lockdown. Face to face interaction is a cause for decreased attendance in tutorial/SGDs.

#### Conclusions

The proportion of attendance from medical students were self-reported, it would have been better to take the information of attendance from the records of the respective universities. It is recommended to make the lecture hall in a calm environment with good lighting and also advice the parents of the students to make a suitable study environment for them in their home as well. We assessed the compulsory learning activities in 2<sup>nd</sup> and 3<sup>rd</sup> year students only, it is recommended to take all five years of medical students.

#### Group 25

Participation and perception towards fundraising programmes and factors associated among the undergraduates of selected faculties of University of Sri Jayewardenepura M. M. M. Premathilake, H. Gnanavelrajah, G. D. W. Silva, U. D. Liyanagamage, M. A. D. Chiranjaya

#### Background

Fundraising programmes for many different causes are carried out by the undergraduates of Sri Lankan state universities, which in turn help them to improve their social skills.

#### Objective

To describe the participation and perception towards fundraising programmes and factors associated among the undergraduates of selected faculties of University of Sri Jayewardenepura

#### Method

A descriptive cross-sectional study was carried out among 2<sup>nd</sup> and 3<sup>rd</sup> year undergraduates of University of Sri Jayewardenepura, selected using a multi-staged stratified sampling. Data was collected using a pre-tested self-administered questionnaire and analysed using the 25<sup>th</sup> version of SPSS software. The mean value of the percentage score for total perception was used as the cutoff to divide the responses as negative and positive. "p" values less than or equal to 0.05 were considered as significant.

#### Results

The study found that majority of the respondents had participated in fundraising programmes (88.3%), and had an overall positive perception (53.1%) towards fundraising programmes. Most of the respondents from the Faculty of Applied Sciences, the Faculty of Management Studies and Commerce and the Faculty of Medical Sciences perceived preparing and selling food items, selling wearable items, and finding direct donations and sponsorships as the easiest method of fundraising respectively. While most of the respondents from the Faculty of Management Studies and Commerce perceived fundraising through personal contacts as the best way to reach out to donors, most of the respondents from both the Faculty of Applied Sciences and the Faculty of Medical Sciences perceived face-to-face fundraising as the best way to reach out to donors. Senior academic years (p = 0.006), non-organizing roles in fundraising (p = 0.002), involvement in fundraising because of peer pressure (p < 0.001), mandatory only participation in fundraising (p = 0.001), not receiving parental support in fundraising (p = 0.050), never achieving the target amount of money in the past (p = 0.002), past conflicts with batch mates during fundraising (p = 0.001) showed statistically significant associations with negative perception towards fundraising.

#### Conclusion

The academic year, nature of participation (mandatory/voluntary) in past fundraising programmes, main role in past fundraising programmes, peer pressure, parental support, achievement of the target amount of money, and past conflicts with batch mates during fundraising programmes showed statistically significant associations with the perception towards fundraising.

Key words - fundraising, undergraduates, participation, perception, attitudes

# Group 27

# Knowledge, Attitude and Practices on Single Use Plastics and Their Alternatives among Undergraduate Students of a Selected Faculty in the University of Sri Jayewardenepura and Factors Associated

C.D. Amarajeewa, B.L. Madhumenon, A.V.I. Tharushi, S. Kirishanth, M.S.R. Zainab

# **Background:**

It is a well-established fact that throughout the 20<sup>th</sup> century, the usage of plastics has drastically increased. In the early 2000s, our output of plastic waste rose more in a single decade than it had in the previous 40 years. Sri Lanka- an island comprising 65,000km2 of land is one of the top 5 plastic polluters in the world. Day by day our plastic usage and wastage continue to increase. Single use plastics(SUP) makes up most of plastic waste and this is becoming a serious problem. These SUPs undergo photodegradation where they disintegrated into tiny particles which are called microplastics. These microplastics get into the food chains and accumulate in flora and fauna which eventually end up in humans and cause various health complications. The answer to this crisis lies in eco-friendly alternatives and initiative for change. In order to bring forth change for the better it is necessary to assess the current status amongst the population. By performing this study on the selected population of undergraduate students we hope to assess just that. University students are more prone to usage of SUPS. In addition to this, as a highly educated group of young individuals who will be future leaders and policy makers, we decided to assess their knowledge, attitude and practices on SUPs and their alternatives.

# **Objective:**

To determine knowledge, attitude and practices of single use plastics and their alternatives among undergraduate students of a selected faculty in University of Sri Jayewardenepura and factors associated

# Methodology:

A descriptive cross-sectional study conducted among the students of the Faculty of Applied Sciences of the university of Sri Jayewardenepura. Data was collected through an selfadministered questionnaire composed of close ended questions complete with an information sheet and consent form. Questionnaire was formulated in three major languages: English, Sinhala and Tamil. A message containing the link for the google forms was passed on to the representatives of each batch and an explanation regarding the research was also provided. A description of the purpose of study was included in the google form. Informed consent was obtained from all the study participants prior to filling the questionnaire.

## **Results:**

Out of the study population 60.9% had good knowledge on SUP and their alternatives, whereas 90.4% were aware that SUP can cause malignancy even though their knowledge on micro plastics is poor (76%) Our study concluded that 72% have good attitude and 55.3% have good practices. Majority of students (86.2%) agreed to a government-imposed ban on single use plastics. Almost all the students (99.1%) agreed to make the University of Sri Jayewardenepura a plastic free university. Even though most of the participants (68%) discard SUPs into the specific bin for plastics, another 33.5% stated that they burn SUPs regardless of their knowledge on health issues. We observed that there is a significant difference between level of knowledge with place of residence(p=0.021) and department of study (p=0.002). On the other hand, gender (0.015) is the only statistically significant variable affecting attitudes towards SUP and their alternatives. Family income and place of residences were the two statistically significant variables associated with level of practices.

## **Conclusions & recommendations:**

60.9% of the students had good knowledge on SUP & their alternatives.72.6% students had good levels of attitudes and almost half (55.3%) had a good level of practices. Even though overall knowledge was good there was gaps in knowledge on micro plastics . Our research revealed a statistically significant association between knowledge and practices. We observed that department of study and place of residence were factors associated with knowledge. Our research revealed that females exhibited a good level of attitude compared to male. This observed difference was found to be statistically significant. Monthly income and place of residence were factors associated with knowledge.

**Key words:** Single-Used Plastics, Plastic Alternatives, Micro plastics, Knowledge attitude and practices

# Group 29

Knowledge and behavior related to drinking water consumption and factors associated with these among adults in Sri Lanka

# P.K. Kularatne, P.B.U.B. Wimalasooriya, D.D. Rathnayake, W.A.G. Madhuwanthi, T.N. De Silva

# Background:

Water is essential for all bodily functions, and humans are unable to survive without drinking adequate amount of good quality water. Knowledge about drinking water is a key aspect that ensures the well-being of individuals therefore the research highlights the level of knowledge, common patterns of behavior and factors which would lead to long term benefits. The consumption of adequate amounts of hygienic drinking water is of utmost importance however there is a significant lack of research regarding the subject.

# **Objective**:

To describe the knowledge and behavior related to drinking water consumption and factors associated with these among adults in Sri Lanka.

#### Methods:

A descriptive cross-sectional study among adults in all districts of Sri Lanka. Data was collected using a self-administered web-based questionnaire from 260 subjects ensuring the anonymity of the participants. Snowball sampling stratified among districts of Sri Lanka. The questionnaire was pretested among adults in Western province. The data was analyzed using SPSS software version 25.0. The significance of associations was assessed using a p value of < 0.05.

#### **Results**:

Out of the study sample of 271 who participated, 68.3% (n = 185) were <25 years of age. There were no participants from the districts of Mullaitivu and Mannar .Most of the participants in the study had a higher educational qualification 73.8% (n= 200). Overall, 61.6% of adults had good knowledge of drinking water consumption. Most of the participants 40.6% (n=110) consumed only 1000-1999 mL of water and80.1% (n=217) used boiling as a method of purification of

drinking water. Between 6am - 12am majority of the participants consumed water after meals. Among the time periods assessed between 6am - 12 pm, 12 pm - 6 pm, 6pm - 12 am there were 70.1%, 82.7%, 81.2% (n=190, n=224, n=220) respectively in each time period. Overall, there were only 11.8%(n=32) with good behavior. Majority of the population 72.7%(n=197) were under the assumption that "drinking lots of water helps clear out toxins" while it's factually incorrect. Knowledge of drinking water was significant when considering the ethnic background of the individuals( $\chi 2=6.992$ , df=1, p= 0.008), it was seen that higher percentage of Sinhalese showed good knowledge 64.7% in comparison with other ethnicities41.7%. Knowledge also demonstrated a significant association with the province of the individual ( $\chi 2=14.425$ , df=1, p= 0.001), it was seen that higher percentage of those from Western Province showed good knowledge 76.5% in comparison to other provinces 53.2%.

# **Conclusion and recommendations:**

Although a majority of the population had good knowledge, only a minority had good behavior related to drinking water consumption. One important finding was that a large portion of the population consumed drinking water after meals. Since a majority has poor behavior interventions should be done to improve their behavior. Targeted educational programs should be conducted giving focus to other ethnic groups which showed poor knowledge of drinking water. As it was shown that there was a lack of knowledge in the other provinces in comparison to the Western Province there should be an increase in the number of programs conducted island wide giving preference to other provinces.

**Keywords**: Drinking water, knowledge, behavior, factors, adults, purification, sources, timing, myths, Sri Lanka.

# Panel 03:

# Mental Health and Youth

Chairperson: Dr. P.S. Alles

Group 04

Burnout, Quality of Life and Coping Strategies among Intern Medical Officers in selected tertiary care hospitals during the lockdown of the COVID 19 pandemic H. Dasanayake, S. Jayasundara, I. Bandaranayake, S. Abeysiriwardana, P. Jayamanna

# Background

Many studies done abroad which have looked into the burnout among medical interns, their quality of life and the coping strategies employed by them have yielded notable results. However, no such research has been done in Sri Lanka. This study aims to determine the prevalence of aforementioned factors as well as their associations among intern medical officers in selected tertiary care hospitals in Sri Lanka during the lockdown of the COVID 19 pandemic.

## Objective

To describe burnout, quality of life and coping strategies among intern medical officers in selected tertiary care hospitals in Sri Lanka during the lockdown of the COVID 19 pandemic.

#### Methods

This was a descriptive cross sectional study conducted among intern medical officers who worked in selected tertiary care hospitals in Sri Lanka during the lockdown of the COVID 19 pandemic. Intern medical officers who were on prolonged medical or pregnancy leave were excluded from our study. A total sample of 210 intern medical officers was selected and was provided with a self-administered questionnaire made accessible through Google Forms. The questionnaire comprised of close ended questions, with the validated tools, Copenhagen Burnout Inventory and WHOQOL- BREF being used to assess burnout and quality of life respectively and an author designed component to assess the coping strategies employed.

#### Results

A high degree of both personal (60.1%) and work burnout (55.7%) was observed among the majority of interns. On the contrary, the majority was shown to have a low degree of client burnout (70.5%).

When considering the factors associated with burnout, none of the sociodemographic factors had any statistically significant association in any of the three categories. The only exception being a statistically significant difference which was observed between the degree of client burnout and the current appointment (p = 0.037) with a comparatively higher percentage of interns currently appointed in medicine suffering from a high degree of client burnout (n=22; 40%).

Generally, the interns perceived their overall quality of life to be good (n = 63; 35.4%). The social relationships domain assessed under quality of life was the most positively perceived aspect by the interns, as suggested by the highest mean score of  $58.5 \pm 19.5$ . Whereas the lowest mean score of  $44.1 \pm 11.9$  denotes the least positive outlook when it comes to physical health.

Looking into coping strategies, problem focused coping was employed by the majority of interns to deal with stressors. Out of which, getting help /advice from others seemed to be the most applied, with a higher percentage of interns stating that they use this strategy (n =144; 81.8%). When considering emotion focused coping strategies, talking with colleagues seemed to be the most popular option(n=143; 81.3%). Avoiding the problem was the mainly adopted dysfunctional coping strategy among the medical interns.(n =96; 54.5%).

#### Conclusions

Most intern medical officers who participated in our study had a high degree of both personal and work burnout. In comparison client burnout was found to be less. These findings however were limited to our study's inclusion criteria and thus the study of burnout among interns can further be expanded by assessing its' prevalence among medical interns who are working in rural areas.

The degree of client burnout was significantly associated with the interns' appointment, in which a higher percentage of interns who were appointed in medicine at the time of study were found to have a high degree of client related burnout. The exact factors to which can be further explored upon.

The main coping methods that interns had employed to deal with stressors were, problem focused and emotion focused coping strategies. However a worrying proportion of interns were found to have employed dysfunctional coping strategies, some of which may have the potential to cause harm to both the patient as well as the practitioner and thus it is advisable to follow up such associations between the maladaptive coping strategies and any undesirable outcomes in future studies.

#### Group 05

Reasons for video gaming and association of video gaming duration with sleep quality and mental health among adults between age 20-40 years in the Western province, Sri Lanka J. S Wickramanayake, S. W .C .S Chandrasiri, A. M .U .P Athapaththu, K .N .M Wickramapala, K .A . Handapahandunna

#### Background

Video gaming is becoming popular among children and adults with the development of the smart devices and its association with sleep quality and mental health is important area to investigate about in order to minimize the harmful effects of it for a healthy life style.

#### Objective

To describe the reasons for video gaming, association of video gaming duration with sleep quality and mental health among adults between age 20 - 40 years in the western province, Sri Lanka.

## Methods

A descriptive cross-sectional study was conducted among adults between 20 -40 years, in Western province, Sri Lanka as an online survey and Pittsburgh's Sleep Quality Index and General Health Questionnaire 12 (GHQ - 12) were used. Average minutes of video gaming per day from Monday to Thursday and average minutes of video gaming per day from Friday to Sunday were accessed separately. The final sample size selected was 359 and stratified sampling method was used. Data was analysed using SPSS Software version 25.0. P value of less than 0.05 was considered as significant.

#### Results

The majority of the population (54.0%, n=194) has initiated video gaming as a stress releasing method and the majority of population (70.5%, n=253) has continued playing video gaming as an entertainment. Out of 359 participants 53 (14.8%) had a poor sleep quality while 306 (85.2%) had a good sleep quality. Almost one third (n=127, 35.4%) participants had a poor mental health while 232 (64.6%) participants had a good mental health. Those who have a poor sleep quality play an average of 153 minutes per day from Monday to Thursday and an average of 216 minutes per day from Friday to Sunday. Those who have a good sleep quality play an average of 109 minutes per day from Monday to Thursday and an average of 140 minutes per day from Friday to Sunday. An average of 132 minutes of video gaming per day from Monday to Thursday and an average of 171 minutes of video gaming per day from Friday to Sunday were done by those who have a poor mental health while those who have good mental health play for an average of 106 minutes of video gaming per day from Monday to Thursday and an average of 141 minutes of video gaming per day from Friday to Sunday. A strong positive correlation (r = 0.832) was observed between the average minutes of video gaming per day from Monday to Thursday and the average minutes of video gaming per day from Friday to Sunday.

#### Conclusion

The majority of the population has started video gaming as a stress releasing method and has continued video gaming as an entertainment method. Video gaming duration was significantly associated with sleep quality. But video gaming duration was not significantly associated with the mental health. Awareness programs should be conducted among people to educate about the importance of sleep. Further studies should be done to assess the long-term outcome due to poor sleep quality.

Key words: Video gaming duration, Reasons, Adults, Sleep quality, Mental health

# Group 09

Working from home and stress Among Information Technology professionals of IT companies in Colombo district during COVID-19 pandemic D.N. Doluweera , V. Sivakumar, W.A.H. Kavya, H.K.H. Enasha, W.A.A.M. Kumarasinghe

# Background

With the emergence of COVID-19 pandemic, working from home has been a new normal practice which was first initiated in the Information Technology (IT) field.

# Objective

To describe the perception on working from home, level of stress and to determine the factors associated with stress among IT professionals of IT companies in the district of Colombo during COVID-19 pandemic.

# Method

A descriptive cross-sectional study was carried out among 249 IT professionals working in IT companies situated in the district of Colombo using a pretested self-administered online questionnaire. Snowball sampling method was used to select the participants. Perception on working from home and level of stress were described using percentages. Perception on working from home was assessed by giving a score for nine close ended questions. The scores were calculated as percentages. Those who obtained 50% or more were categorized as participants with good perception and those who obtained less than 50% were categorized as participants with poor perception. Level of perceived stress was assessed using the standard 10 item "Perceived Stress Scale". Scores ranging from 0-13 were considered as low stress, scores ranging from 14-26 would be considered as moderate stress and scores ranging from 27-40 were considered as high stress. Association between variables were assessed using Chi-square test. p value <0.05 was considered as significant.

#### Results

Majority of the participants were in the age group of 24 to 28 years and 61.8% were males. Majority (78.3%) had a good perception regarding working from home. Hundred and thirteen participants (45.4%) had experienced increment in productivity and 45.8% were satisfied about the working from home concept. Among the participants 80.7% had moderate stress, while 4.8% had severe stress. Factors significantly associated with stress are being never married (p=0.022), changes in body weight (p=0.047), good quality sleep (p=<0.001), frequency of feeling sleepy during daytime (p=0.025), changes in time spent for exercise (p=0.042). The family related challenges were also found to be associated with level of stress (p=0.009). Among physical discomforts faced while working from home, headache and eye related problems had statistically significant associations with the level of stress. (p=0.007 & p= 0.012 respectively)

#### **Conclusions and recommendations**

The results revealed that a significant proportion of IT professionals was moderately stressed when working from home though the majority of them had good perception regarding working from home. The finding implies importance of stress management programs for the IT professionals who are working from home.

Keywords IT professionals, stress, perception on working from home, COVID-19

## Group 10

Proportion of Gastro-oesophageal reflux disease (GORD) symptoms, associated factors & health related quality of life among undergraduates of selected faculties in university of Sri Jayewardenepura

R. Dasanayaka, V. Amarakoon, T. Gankanda, N. Dulan, T. Jayasanka

#### Background

Gastroesophageal reflux disease (GORD) is a chronic and a common upper gastrointestinal disorder characterized by heartburn and acid regurgitation. Undergraduate students represent a vulnerable population that has a higher risk of GORD compared to general population due to the

exposure to various lifestyle and psychological factors which are recognized as risk factors. So it is a timely necessity to assess GORD symptoms among them.

#### Objective

To determine the proportion with GORD symptoms and its distribution, associated factors and the impact of GORD symptoms on health related quality of life among undergraduates of selected faculties in University of Sri Jayewardenepura

#### Methods

A descriptive cross sectional study was conducted among 540 undergraduate students of selected faculties (Faculty of Medical Sciences, Faculty of Applied Sciences, Faculty of Management Studies and Commerce, Faculty of Engineering and Faculty of Technology) in USJ using stratified sampling method.108 students from each faculty (36 from 1st,2nd and 3rd year students) was included. Self-administered questionnaires (in Sinhala and English) were given. Who scored  $\geq$ 8 to the Frequency scale for the symptoms of GORD (FSSG) was considered as having GORD symptoms. Chi-square test was performed to determine associations. Mean scores to 16 item GORD-QoL questionnaire were compared between those with & without GORD symptoms using two-sample t test. Data was analyzed using SPSS software version15.0. P value of < 0.05 was considered significant.

#### Results

Out of the 540 participants, 55.4% (n=299) were male and majority (96.3%) were Sinhalese. Proportion of having GORD symptoms among undergraduates of USJ was 45.7% (n=247). GORD symptoms are significantly associated with the family history of upper gastrointestinal diseases (p=0.012), frequent consumption of tea/coffee (p=0.005), frequent consumption of fatty foods (p=0.004), usage of NSAIDS/Aspirin (p=0.008), stress (p<0.001). The observed difference of overall impact of GORD symptoms on health related quality of life is statistically significant (p=0.004).

# Conclusion

Proportion of GORD symptoms among undergraduates of USJ was 45.7%. Family history of upper gastrointestinal diseases, frequent consumption of tea and coffee, fatty foods, NSAIDS/aspirin and stress were found to be associated with GORD symptoms. The health related quality of life is higher among the individuals who doesn't have GORD symptoms. It is recommended to educate the university students regarding GORD symptoms, common associated factors, pharmacological and non-pharmacological management options which are available.

Keywords GORD, proportion, symptoms, associated factors, quality of life

# Group 11

Proportion having migraine, its associated factors, knowledge and pharmacological and non-pharmacological practices used for relief of migraine among adults aged 18 – 30 years in the districts of Colombo and Ratnapura

L.J.T. Wijewardena, N.N. Ekanayake, H.G.C. Anukampa, P.A.D. Gangani, L.D. Premathilaka

# Background

Migraine is a common, intermittently disabling disorder characterized by recurrent attacks of headache and other associated symptoms which has been negatively affected for lifestyle of patients. Migraine prevalence varies with sociodemographic factors such as gender, climatic changes, financial and lifestyle difficulties. Stress is a precipitating factor in developing migraine attacks. Having good knowledge or experience on symptoms and preventative methods of migraine has led to more effective precautions and proper treatments.

# Objective

To describe the proportion, knowledge and pharmacological and non-pharmacological practices used for relief of migraine and its associated factors among adults aged 18 - 30 years in the districts of Colombo and Ratnapura

# Methods

A descriptive cross-sectional study was carried out among 403 adults aged 18 - 30 years in the districts of Colombo and Ratnapura.

The sample size was divided into two districts with using stratified sampling technique and the participants were selected using convenient sampling method. A pretested self-administered online questionnaire was used to collect the data.

To identify the patients with migraine a validated form of migraine screening questionnaire was used. Data was analyzed using SPSS software version26.0. Knowledge on migraine was assessed using seven questions regarding what migraine is, symptoms of migraine and associated factors of migraine. Association between variables were assessed using chi-square test. P value of less than 0.05 was considered as significant.

#### Results

Out of 303 participants 22.8% was previously medically diagnosed as having migraine (Colombo 20.8% and Ratnapura 32.7%). Higher proportion of females were having migraine compared to males (28.6% vs 11.9%). Married participants have shown the highest proportion compared to other marital statuses (37%).

82% migraineurs are taking medication prescribed by a doctor, 8% are taking over the counter and 10% are using ayurvedic medication.

The majority (44%) said that migraine is relieved when resting in quite dark place is effective at most of the times. Using hot packs are effective most of the time for 30%, effective at times for 33% participants while for 32% it was never effective. According to a majority it is effective. 42% participants state that ice packs are effective most of the time. 47% of diagnosed and MSQ

positive participants said that exercise was never effective.22% from diagnosed and MSQ positive participants stated that reducing caffeine intake helps to relieve migraine. 8% of individuals say that reducing consumption of cheese and 27% of individuals say reducing chocolate consumption help to relieve migraine.

High percentage of age group 18 - 21 years have been diagnosed with migraine (p = 0.113). In contrast there was no statistically significant difference in age categories in developing migraine Results conclude that participants with low BMI (<18.5) have a high prevalence of developing migraine (p = 0.319). High stress is associated with developing migraine attacks with a significant p value (p = 0.001). There was a statistically significant difference between stress categories in developing migraine. Both excess sleep (p = 0.009) and insufficient sleep (p < 0.001) have been associated with migraine development. There's a statistically significant difference in bright light (p = 0.021) and loud sounds (p = 0.004) but) also.

## **Conclusions and recommendations**

High stress plays a major role in developing migraine. Females show a high tendency of having migraine.

It is important to have a good knowledge on symptoms and preventative methods such as rest in quiet dark place which has been effective in most of the time, as well as about availability of medicine for relief of migraine to prevent lifestyle difficulties due to migraine.

Keywords Migraine, Stress, knowledge, Hormonal factors, non - pharmacological practices

#### Group 15

Effects of COVID–19 pandemic lockdown on the behavioural patterns and mental state of Sri Lankan University athletes

M. Samaranayake, D. Bandara, T. Sanadakalum, M. Suresh, V. N. Kannangara

#### Background

Measures were taken by the Government during the COVID-19 pandemic like social distancing and home confinement, in aim of reducing the spread of the disease. These resulted in undesired impacts on the health, behaviours and lifestyle of the Sri Lankan university athletes. Hence, it is the aim of elucidating the effects of COVID-19 pandemic lockdown on the physical activity, mental well-being and dietary pattern of Sri Lankan athletes this study was launched.

# Objective

To determine the consequences of COVID-19 pandemic lockdown on Sri Lankan university athletes, in relation to the changes in their physical activity, dietary pattern, and mental state, before and during lockdown period and their associated factors.

# Methods

An Analytical cross-sectional study was carried out among University athletes in all the government universities of Sri Lanka. Our exclusion criteria was Athletes who are engaging in board games, students who do not have internet facilities, students who are studying at private universities. Stratified sampling method was used in our study to collect adequate sample size Self-administered questionnaires (in all Sinhala, Tamil and English languages) were given to participants as a google form. Data was analysed using SPSS software version 15.0. P value of less than 0.05 was considered as significant.

# Results

Physical activity is an essential aspect of the day to day life of any athlete involved in aerobic sports. Mean MET score of Sri Lankan university athletes prior to lockdown ( $3144.07 \pm 3217.31$ ) was markedly reduced during lockdown ( $1053.03\pm1536.53$ ). There was a statistically significant reduction in overall physical activity of athletes during lockdown when compared to before (p<0.001).

Mental wellbeing is also an important factor which determines athletes' performance. Mental score was obtained through our questionnaire which indicates an athlete's mental state. A higher

score indicates a healthy mental state. The mean mental score prior to lockdown ( $23.081 \pm 4.243$ ) was reduced to ( $20.815 \pm 3.897$ ) statistically proved (p<0.001) the negative impact of COVID-19 lockdown on an athlete's mental state.

Changes in the dietary pattern of athletes were assessed using five questions and the obtained scores were compared. Number of meals per day (1.97 vs 2.06; p<0.05), eating out of control(1.06 vs 1.15; p<0.05) and late night snacking (1.27 vs 1.55;p<0.05) increased significantly during lockdown, when compared to thee before lockdown period. However, binge alcohol drinking(0.28 vs 0.16;p<0.05) and eating unhealthy food (1.34 vs 1.26; p<0.05)reduced during the COVID- 19 lockdown.

McNemar's test was used to analyse the changes in the time spent for social media and computer games during COVID-19 lockdown period. The study results revealed that there was an increment in the time spent for social media during lockdown. However, there was no significant change in the time spent for computer games. Therefore usage of social media by Sri Lankan University athletes who participated in the study was not affected by the COVID-19 Lockdown. And also only 23 athletes, out of total 199 athletes, have shown an increase in the time spent in computer games. Only 24 athletes have increased their chance to have an unhealthy diet pattern during lockdown. Being male was associated with missing university tournaments/ practice sessions during lockdown period.

# Conclusions

While isolation is a necessary measure to protect public health, results indicate that it has a negative impact on physical activity,mental wellbeing and dietary behaviours. This overall change in the behavioural patterns may lead to detrimental consequences on these athletes' long term careers. Therefore, it is necessary to identify these shortcomings and take necessary measures to overcome these issues,since these university athletes would one day carry our national flag to the international arena.

# Keywords

COVID-19 lockdown, Sri Lankan university athletes, Physical activity, Dietary pattern, mental wellbeing

## Group 22

Mental well-being and coping strategies among undergraduates in selected faculties of state universities in Sri Lanka and its associated factors during the COVID-19 pandemic T.D. Siriwardhana, H.P.P.M. Hewawasam, L.D.D. Chathurika, M.H.P. Kumari, H.A.H.D. Dharmasiri

# Introduction

Maintaining a positive mental well-being is essential for a healthy life. Undergraduates are at high risk of developing mental problems. In Sri Lankan context, research on mental well-being of university undergraduates during COVID-19 pandemic is meagre. Hence we wanted to describe the mental well-being, coping strategies and their associated factors of undergraduates during COVID-19 pandemic.

# Materials and methods

A descriptive cross sectional study was conducted in two selected faculties in three state universities using a self-administered online questionnaire among 440 undergraduates selected by multistage stratified sampling. Questionnaire consisted of four main sections; sociodemography, family and life style factors, mental well-being using WEMWB scale, coping strategies using brief COPE scale. Data was analyzed using SPSS software version 25. Independent sample t test, chi square test, ANOVA test were performed. P value less than 0.05 was considered as significant.

#### Results

Mean age of the participants was 22.15 years (SD= 1.038) and the majority were females (61.6%, n=271). Mean WEMWBS score was 43.77 (SD= 9.728). Having chronic illness showed lower mental well-being (mean=40.00, SD=13.03) than not having chronic illness (mean=43.95, SD=9.526; p=.010). Undergraduates who was reading books had higher mental well-being than others (mean=46.49, SD=9.537; p=.001). Dysfunctional coping strategies were the least used coping strategies (13.0%, n=57) and problem focused coping strategies were the most used one (62.5%, n=275). Female had more frequently used emotional focused coping strategies (52.0%,

n=141) than male (39.6%, n=67; p=.011). Sinhala students had more frequently used emotional focused coping (44.5%, 175) than others (70.2%, n=33; p=.001) and university of Rajarata had more frequently used emotional focused coping (55.1%, n=81) than other universities (p=.027). University of Rajarata had more frequently used problem focused coping (70.1%, 103) than others (p=.021). Undergraduates who was having 4 family members had more frequently used problem focused coping (69.4%, n=102) than others (p=.022).

#### **Conclusions and recommendations**

Undergraduates had an average mental well-being. They had used different coping strategies. Mental well-being and coping strategies were associated with different factors.

All the universities, faculties and academic years should be included to improve the generalizability and get a better picture of the research. Also, should encourage extra-curricular activities among undergraduates.

# Key words

Mental well-being, coping strategies

#### Group 28

Knowledge and attitudes on and factors associated with blood donation among the young adults(18-30) in Western province A. R.Weeratunga, K. M. T. Thiwanka, A. T. S. Silva, K. G. P. S. Nawarathna, U. G. R. P. Piyathilaka

#### Introduction

Blood donation is a vital practice in ensuring safe and adequate supply of blood. It enables blood transfusion activities to be carried out without interruption in order to ensure adequate improved patient survival in the instances such as surgery, trauma and cancer. In Sri Lanka, blood donation is carried out through 100% voluntary non-remunerated blood donors. As there is a global decline of voluntary non-remunerated blood donors, this study was carried out to identify the

potential challenges and to suggest solutions to ensure voluntary blood donation. Therefore, the present study assessed knowledge and attitudes on and factors associated with blood donation among the young adults (18-30) in Western province.

#### Materials and methods

A descriptive cross-sectional study was carried out among the young adults (18-30) in Western province. Non probability snowballing method was used to select our study sample from the young adults (18-30) in the Western Province. Initially, the calculated sample size was 374, but it was increased to 412 considering the non-responding participants. We were able to get the needed responses through an online self-administered questionnaire. (Microsoft Forms) It was circulated among friends and their known contacts. Young adults (18 – 30) who didn't have a device to access to the Microsoft form had to be excluded. Data was analyzed using SPSS software. P value less than 0.05 was considered as significant.

#### Results

Highest number of participants belong to the age category of 21 - 23. (n= 189, 48.3%) Majority in the study sample were Sinhalese (n = 376, 95.9%) and also the majority were Buddhists. (n= 282, 74.4 %) Interestingly, majority were undergraduates. (n=277, 70.7%) Most of the participants had no income. (n= 233, 81.8 %) Overall knowledge on blood donation was assessed and the majority (n= 228, 58.2%) had a poor knowledge. A very positive attitude was observed among majority of the participants (n= 215, 54.8%) towards blood donation. The present study revealed that there was statistically significant association between being a blood donor or a nonblood donor with the gender (p= 0.001) and media (p= 0.035). Also there was a significant association with factors such as altruism (p= 0.013), spiritual benefits (p= 0.018), peer pressure (p= 0.009), refreshments (p= 0.006), appreciations (p= 0.004) and to know the blood group (p= 0.006). Interestingly, availability related issues had a significant association. (p= 0.047) Difficulties in travelling (p= 0.018) was a significant associated accessibility related issue. Studies also revealed that environment of the blood donating camp (p= 0.008) is a significant service quality related issue.

#### **Conclusions and Recommendations**

Majority of the participants had poor overall knowledge on blood donation but had an overall positive attitude. Appreciations, availability related issues, media and gender are significantly associated factors in blood donors and non-blood donors.

Therefore, it is essential to conduct periodic awareness programs to educate the young adults on this and inform about misconceptions and misbeliefs through the media. Media should be used to promote blood donating camps. Further studies should be carried out on availability related issues to suggest a solution.

# Key words

Blood donation, Blood transfusion, Knowledge, Attitudes, Associated factors, Western province

# Group 30

Knowledge, Prevalence and selected Life style related factors associated with Premenstrual syndrome (PMS) among female undergraduates from selected universities in Sri Lanka R.Ramvengadesh, K.Abiraamy, V.S.Liyanagamage, T.Abishega, D.V.S.S.Samarasinghe

# Background

Premenstrual Syndrome (PMS) is an important factor affecting the life of women of reproductive age both physically and mentally. The worldwide incidence of PMS is increasing and awareness of this improves the life.

# **Objectives**

The objective of this study was to describe the knowledge, prevalence and selected lifestyle related factors associated with Premenstrual syndrome (PMS) among female undergraduates from selected universities in Sri Lanka.

# Method

A descriptive cross sectional study was conducted on a sample of 422 of female undergraduates from selected universities in Sri Lanka. Data was collected by using a self-administered , structured Google form questionnaires (in all Sinhala, Tamil and English languages) having

four separate entities on socio demographic factors & menstruation related details, knowledge regarding PMS, prevalence and life style related factors. Results were analyzed by using SPSS software (version 25 software).

# Result

Of the 422 participants, 406 gave consent to participate in this study. Here 32% were found have PMS. This accounted for 130 participants among 406 participants. Most experienced symptoms were physical symptoms than mental and behavioral symptoms. Majority of the people (97.5%) had good knowledge in menstruation. But only few (39.4%) had a good knowledge in Pre menstrual Syndrome. Consumption of coffee and intake of supplements had significant association with premenstrual Syndrome. Also, it was found that dysmenorrheal, heavy menstrual bleeding and regularity of menstrual cycles had significant association with PMS

# Conclusion

Knowledge of premenstrual syndrome among female undergraduates from selected universities were inadequate compared to prevalence. Therefore, the knowledge related to PMS should be improved.

# Key words

Premenstrual syndrome, Menstruation, knowledge, Prevalence, Lifestyle factors, Undergraduates

# Group 31

Knowledge and Attitudes Among Adults Aged Between 20 to 29 Years in Selected Districts in Sri Lanka on Bullying and its Associated Factors A.C. Senaratne, W.A.S.A. Senaratne, B.W.D.M.E. Dissanayake, H.S.V. Weerasekara A.A.D.C. Abeysinghe

# Introduction

Bullying is defined as 'aggressive, intentional acts carried out by a group or an individual repeatedly and over time against a victim who cannot easily defend him or herself'. Bullying is a growing public health concern. Bullying can be experienced in different forms such as physical,

verbal, psychological, social and cyber bullying. In Sri Lanka, prevalence of bullying among school children was estimated to be high. Being a victim of bullying can affect an individual in various adverse ways up to critical degrees of physical, mental and social damage. With the increasing incidents of bullying, it has become a necessity to assess the knowledge and attitudes among adults on bullying in order to educate the society more on the subject of bullying.

#### Objective

The objective of the study was to describe the knowledge and attitudes among adults aged between 20-29 years in selected districts in Sri Lanka on bullying and its associated factors.

# Methodology

A descriptive cross-sectional study was carried out among adults aged 20-29 years who are conversant in Sinhala and English, living in Colombo, Gampaha, Kalutara, Kegalle and Kandy districts in Sri Lanka. A study sample of 405 was obtained through snowball sampling method. Data was collected via a self-administered online questionnaire and IBM SPSS version 26 was used for data analysis. P<0.05 was taken as the level of significance.

#### **Results**

Most of the study population (n=168, 41.5%) had experienced bullying at a point in their lifetime. A majority (n=395, 97.5%) was familiar with term "bullying" and only 87.9% (n=356) identified the term "cyber bullying". A majority of the study population (n=354, 89.8%) identified Face book as the most common platform where cyber bullying takes place. A majority was aware of the common places where bullying can take place. Most of the population (n=173, 42.7%) has never been taught about bullying at schools. Majority of the study population (n=271, 66.9%) thought that the education on bullying is inadequate and believed that educating people about bullying is necessary (n=392, 96.8%) via schools (n=233, 57.5%). The social media, school/university and mass media were the most preferred sources of knowledge on bullying. A majority (n=398, 98.5%) of the population were aware that there are both short- and long-term effects of bullying and that bullying can have an impact on all three parties: the bully, victim and the witness (n=255, 63.0%). A majority (n=283, 69.9%) did not know about the

helpline of the national institute of Mental Health in Sri Lanka. A majority (n=273, 67.4%) believed that there were responsible people in universities and schools who they can inform about incidents of bullying and chose to approach parents if they had to face bullying (n=259, 64.0%). Most of the population believed that consoling is the best choice if a friend talks to them about being bullied and that the best action they can take is to get a friend or a group of friends to help the victim, if they witness bulying. Overall, a majority (n=255, 63.0%) of the study population had poor knowledge regarding bullying. Attitudes towards bullying were almost equally distributed among the population. 50.1% (n=203) had positive attitudes (unfavourable attitudes towards bullying). Being a female, living in Colombo, introvert personality, not consuming alcohol and being a non-smoker had statistically significant association with good knowledge regarding bullying in a girls' school and introvert personality were statistically significant associations with positive attitudes towards bullying (p<0.05).

# Conclusion

The current study attempted to fill the gap of knowledge and attitudes on bullying among the adults who trains for future responsible professions. Emphasis must be applied to the long- and short-term effects of bulling and also the association between the knowledge and attitudes on bullying with the gender and personality types through more specific research. Future studies must focus more on anti-bullying programmes.

Key words: bullying, knowledge, attitudes, long and short-term effects, associated factors

# **Infectious Diseases and Miscellaneous**

# Group 07

Knowledge, attitudes, and associated factors about COVID-19 vaccination among adults in Western province

S. Weerakoon, C.A.Y. Fernando, W.G.R. Tharuka, K. L. D. Dewmini, R.R. Dulakshi

# Background

COVID-19 Vaccination is amongst the most appropriate solutions to conquer the current global pandemic along with the healthcare guidelines. However, acceptance by the public affect the utilization of this solution.

# Objectives

This study aims to describe the knowledge, attitude, and associated factors toward the COVID-19 vaccination among 18-60 years old general public in western province, Sri Lanka.

# Methods

A descriptive cross-sectional study was conducted among people Aged 18-60 years, currently residing in Western Province. Data was collected through a self-administrative questionnaire via Microsoft form composed of closed-ended questions. Questionnaires formulated in both English and Sinhala languages and made available through email and social media platforms to be accessed by the general population of Western Province.

# Results

Out of the 485 to participants 63.5% (n= 306) were within 18-30 age group and majority had average monthly income Rs. 50,000- Rs 99,999 32.2% (n=15) were Buddhist 92.5% (n= 440) unmarried 64.9% (n=313) had highest level of educational level of undergraduate level 49.6% (n=239) were students 44.7% (n=214).

A majority of 66.1% had adequate and moderately adequate knowledge while only a lesser population 33.8% and knowledge which needs to improve.

Knowledge is significantly associated with age group (p=0.026) to religion (P=0.027), marital status (p=0.034).

Generally, a majority of 98.4% had favourable attitude and moderately favourable attitude while a minor percentage (1.6%) exhibited an unfavourable attitude.

The attitude was significantly associated with average monthly income (p=0.000) knowledge source (p=0.001), a highest education level (p=0.014).

# Conclusion

Majority of the participants in our study sample at moderately adequate knowledge and also majority of the participant had moderate favourable attitudes towards COVID-19 vaccination.

# Group 12

Knowledge, Attitudes and Practices related to dengue and factors associated with these among 18-30 year old adults in the Western Province L.T.D. Wijeratna, M.R.V. Pinto, N.A. Mandawala, K.K.N.S. Gunasekara, U.G.K. Gayathmie

# Background

The COVID-19 pandemic, which began in 2020, drew the attention and resources of the government and the public at large. As a result, dengue was overlooked as a public health challenge, even though the country's biggest dengue outbreak was only 5 years ago in 2017. Amidst the pandemic, many dengue cases went undiagnosed due to the correlation of certain signs and symptoms with COVID-19, inaccessibility of medical care due to lockdowns and other reasons. Therefore, an urgent need has arisen to assess and educate the public on dengue in order to curtail the rising number of dengue cases in Sri Lanka. Our study was aimed at fulfilling that timely need.

# Objective

To describe knowledge, attitudes and practices related to dengue and factors associated with these among 18-30 year old adults in the Western Province.

# Method

A descriptive study was conducted among 18-30 year old adults in the Western Province. The sample size was 423, with 141 participants each from the Colombo, Kalutara and Gampaha Districts. A non-probability stratified snowball sampling technique was used in conducting this research. A self-administered questionnaire, which was available in Sinhala and English, was sent to eligible participants known to the research team via WhatsApp and other online modalities from September to October 2021. Data was analyzed using the SPSS software version 25.0. For each finding, p<0.05 was considered to be statistically significant.

#### Results

Out of the 423 total study participants, 64.1% (n=271) were female, and a majority (81.3%, n=344) were in the 18-24 age group. 45.4% (n=192) of participants were assessed to have good knowledge on dengue, taking 70.0% as the cut-off mark. However, 76.4% (n=323) of participants were assessed to have good attitudes on dengue, again taking 70.0% as the cut-off mark. 30.7% (n=130) of participants were assessed to have good practices regarding dengue, taking 70.0% as the cut-off mark. The study revealed a statistically significant association (p < 0.05) between knowledge on dengue and monthly family income (p = 0.027), having a medical background (p < 0.000) and having a prior dengue infection (p = 0.008). The study further shows a statistically significant association between attitudes on dengue and place of residence (p = 0.017). The study also reveals a statistically significant association between practices regarding dengue was also positively associated with attitudes (p = 0.001). Knowledge regarding dengue was also positively associated with dengue preventive practices (p = 0.003). Finally, attitudes regarding dengue were positively associated with dengue preventive practices (p = 0.004).

#### Conclusions

A majority of the participants of our study had good attitudes regarding dengue. The proportion of participants with good knowledge was satisfactory overall, but certain aspects of diagnosis and management were unknown to many. However, the proportion of participants with good practices on dengue was considerably low. It is important to note that good knowledge showed a positive association with attitudes and practices, thus emphasizing the value of dengue educational programmes. In addition, only a minority of the participants said that they were satisfied with the services of the PHI, dengue awareness programmes and vector control programmes.

#### Key words

Dengue, knowledge, attitudes, practices, Sri Lanka, Western Province, adults, prevention, associated factors, signs, symptoms, diagnostic tests, management.

#### Group 13

Patterns of selected crimes between pre-COVID-19 and during COVID-19 pandemic situation in Sri Lanka and behavior of their associated factors; perception of police officers regarding crime pattern changes and their associated factors between those situations C. J. Weerasena, D. J. M. D. H. N. Jayamaha, C. M. N. Fernando, W. F. Arumathanthri, O. K. D. B. Sandanuwan

#### Background

COVID-19 pandemic had a great impact on daily activities globally with introducing social distancing among people, activation of travel restrictions, closure of many public places and cancelling public events. In response to the COVID-19 pandemic, Sri Lankan government issued stay at home orders all around the country. Those policies have also affected on various crime types in different ways. This study provides the changes of crime patterns and the changes of their associated factors between COVID-19 and during COVID-19. Theft and Robberies, drug abuse, child abuse, domestic violence and cybercrimes were the selected crime types in this study.

#### **Objectives**

Our study was carried out to describe the to describe the change in the patterns of selected crime types, to describe the factors associated with crimes and to describe the perception of police officers about the changes in crime patterns and their associated factors between pre-COVID-19 and during COVID-19.

# Method

An analytical cross-sectional study was conducted on five selected crime types which are drug abuse, theft and robberies, child abuse, domestic violence, and cybercrime. Daily police situation reports in Sri Lanka from March/2018 to April/2021 were used to extract data on the changes of number of crimes and changes of their associated factors. A self-administered questionnaire was distributed among a sample of police officers in western province recruited using cluster sampling to determine their perception on the changes of crimes and associated factors. Data

from 431 police officers were analyzed. Data was analyzed using SPSS software version 25.0. for each finding, p<0.05 was considered to be statistically significant. Time series data analyzing was done by using expert modeler time series forecasting method.

## Results

For our 1<sup>st</sup> and 2<sup>nd</sup> specific objectives, we analyzed every crime (drug abuse, theft, robberies, cybercrimes, child abuse, domestic violence) that happened in Sri Lanka from January 2018 to July 2021. We analyzed 998 cases of drug abuse, 8847 cases of theft and robberies, 4053 of child abuse, and 1079 of domestic violence. From that, we observed that there's no statistically significant difference between changes in the pattern of drug abuse and pre-COVID-19, during the COVID-19 period. There is a statistically significant difference between the change in patterns of theft and robberies and pre-COVID-19, during the COVID-19 period. Child abuse and domestic violence also show a statistically significant difference between pre-COVID-19 and during the COVID-19 period. In drug abuse, gender of the criminal (p=0.731), age of the criminal (p=0.476), time of the day that time happened (p-0.463) does not have a statistically significant difference with pre-COVID-19 and during the COVID-19 period. But provinces of the drug abuse happened does have a statistically significant difference between pre-COVID-19 and during the COVID-19 period. In theft and robberies, gender of the criminal (p<0.001), time of the day that crime happened (p=0.002), and the province of the crime happened (p<0.001) do have a statistically significant difference between pre-COVID-19 and during the COVID-19 period. But the age of the criminal does not have a statistically significant difference between pre-COVID-19 and during the COVID-19 period (p=0.76). In child abuse, the gender of the criminal has a statistically significant difference between pre-COVID-19 and during the COVID-19 period. But the age of the criminal, time of the day that crime happened, or province that crime happened does not have a statistically significant difference between pre-COVID-19 and during the COVID-19 period.

In our 3<sup>rd</sup> objective, out of 431 police officers who responded to our questionnaire, the majority was between 36-50 years old, and the majority was male (75.9%) and 59.2% of all the police officers, has a service period of 11-20 years. The majority of police officers responded as the

drug abuse, theft and robberies, cybercrimes, child abuse, and domestic violence has increased during the COVID-19 period.

There is a statistically significant difference between police officers' perception of age p<0.001), gender (p<0.001), educational status (p<0.001), occupational status (p<0.001), of the criminal and drug abuse between pre-COVID-19 and during COVID-19 period. There is no statistically significant difference between police officers' perception of a criminal's economic status (p=0.082) or marital status (p=0.401) with drug abuse between pre-COVID-19 and during the COVID-19 period.

We observed that there is a statistically significant difference between police officers' perception of criminals' age (p<0.001), gender (p<0.001), occupational status (p=0.001) with theft and robberies between pre-COVID-19 and during the COVID-19 period. There is no statistically significant difference between police officers' perception of criminal's educational status (p=0.124), economic status (p=0.0299), and marital status (p=0.024) with theft and robberies between pre-COVID-19 and during the COVID-19 period.

There is no statistically significant difference between police officer's perception of age (p=0.154), gender (p=0.021), educational status (p=0.218), occupational status (p=0.326), economic status (p=0.191), and marital status (p=0.739) of the criminal's and cybercrimes between pre-COVID-19 and during COVID-19 period.

In child abuse, there is a statistically significant difference between police officers' perception of age (p<0.001) of criminal and child abuse between pre-COVID-19 and during the COVID-19 period. But there is no statistically significant difference between police officers' perception of gender (p=0.017), Educational status (p=0.163), occupational status (p=0.592), economic status (p=0.146), and marital status (p=0.008) of criminal and child abuse between pre-COVID-19 and during COVID-19 period.

In domestic violence, there is a statistically significant difference between police officers' perception of age group (p=0.001) and occupational status (p<0.001) of criminal and domestic violence between pre-COVID-19 and during the COVID-19 period. But gender (p=0.162),

educational status (p=0.162), economic status (p=0.114) and marital status (p=0.631) of criminal's and domestic violence between pre-COVID-19 and during COVID-19 period

# Conclusions

According to our research findings, reported incidences of drug abuse and cybercrime has increased during COVID-19 pandemic. But reported incidences theft & robberies, child abuse and domestic violence has reduced during COVID-19 than pre COVID-19 period. But according to the perception of the police officers, reported incidences of drug abuse, child abuse and domestic violence has increased during COVID-19 and theft & robberies and cybercrimes only have slight increase. Associated factors such as age, gender, educational level, occupation, economic status, marital status of the criminals, time of the day and provinces have behaved differently in different crime types.

# Keywords

COVID-19, Associated factors, Perception, Police officers, Drug abuse, Theft and Robberies, Cybercrimes, Child abuse, Domestic violence, pre-COVID-19, during COVID-19, Criminals.

# Group 19

Knowledge and practices among parents on iron overload and used of the Deferral pump in children with Beta Thalassemia Major at the Teaching hospital Anuradhapura and their associated factors M.A.K.V.Wickramapala, D.K.R.Samaranayake, Y.D.Karunarathne, H.A.Packiyanathan, K.U.Dilmini

# Background

Thalassemia major is a hereditary blood disorder . All the children who are being treated for thalassemia major are having complications of iron overload . So if primary caregivers having good knowledge on iron overload and good practice of using Desferal pump it will minimize complications .

# Objective

To describe knowledge on iron overload and practices of using Desferal pump among parents who having children with Beta thalassemia major at the Teaching Hospital Anuradhapura and their associated factors.

# Method

A descriptive cross sectional study was conducted among 279 parents of beta thalassemia major children who are being treated in Thalassemia Unit of Anuradhapura Teaching Hospital, using pretested self administered online questionnaire. We assessed the knowledge and practices of parents .Data were analyzed using SPSS software version.25 "P" value less than 0.05 was considered as significant.

# Results

Majority of caregivers could identify the child is suffering from iron overload (98.6%) Significant information that we collect from this was 100% participants knew about complication of iron overload. Majority mentioned 25 gauge as the size of butterfly cannula(83.9%) and everyday it should be changed(73.6%) and size of syringe was 10cc(87.7%). Majority mentioned that needle, syringe and Desferal bottle should be stored in room temperature(83.6%, 96.4%, respectively). Highest education, occupation, monthly income of primary caregiver, any other children having this disease in family ( p=0.0000) found to have significant association with knowledge on iron overload. highest education (P=0.001), occupation (P=0.0000), attending training session(p=0.012) found to have significant association with practices of using Desferal pump.

# Conclusion

A significant proportion of caregivers have good knowledge on iron overload and practices of using Desferal pump. Education level, occupation, income, any other children having disease in family found to associated with knowledge on iron overload. Same as, educational level, occupation, income, attending training session found to associate with practices of using desferal pump.

# Key words

Beta Thalassemia Major, Desferal pump, Iron overload, Complications, Proportion

# Group 20

Knowledge regarding cirrhosis, attitudes towards cirrhotic patients and factors associated with knowledge and attitudes among adults aged 18-30 years in the Western province B.H.T.Sandasepali, P.G.D.S.Bandara, U.H.D.N.Gunawardhana, W.R.S.D.M.Kumari, J.G.I.Malshan

# Background

Cirrhosis is one of the major health problems in the world. Although cirrhosis is a highly prevalent disease, there are gaps in the knowledge in general public. Although cirrhosis commonly occurs in elderly people, it is important for young people to have adequate positive attitudes towards cirrhotic patients. There are several factors associated with knowledge regarding cirrhosis and attitudes towards cirrhotic patients.

# Objective

The objective was to describe the knowledge regarding cirrhosis, attitudes towards cirrhotic patients and factors associated with knowledge and attitudes among adults aged 18 - 30 years in the Western province.

#### Material and method

A descriptive cross-sectional study was carried out. Data was collected through a selfadministered online questionnaire (google form). This questionnaire was distributed in an equal proportion in Colombo, Gampaha and Kalutara districts through our group members. Stratified and snowballing sampling methods were used. Probable snowballing method was used within a district (The link to the questionnaire sent to adults aged 18-30 years in the Western province that the group members had connections. We asked them to share it with their friends and neighbours in relevant age category in the Western province). A probable stratified sampling method used among 3 districts. A total of 420 people participated. Questionnaire was composed of three main sections. First section consisted of population selection and overall consent of the participants. Second section assessed the socio-demographic factors, and the section three assessed the knowledge regarding cirrhosis. The last section consisted of attitudes towards cirrhotic patients. Data was analyzed using SPSS version 25. Chi square was performed. P value less than 0.05 was considered as significant.

## Results

Response rate exceeded 100%. There was a significant female predominance among the study subjects (61.2%). Mean age was 23.52 years. The study population has a moderate knowledge regarding cirrhosis (good knowledge - 48.8% and poor knowledge - 51.2%). Out of our participants 73.1% has identified that alcohol is not the only risk factor for cirrhosis. Majority were aware about liver transplantation (82.4%) and it is available in Sri Lanka (75.2%). Majority did not know that salt consumption should be taken as usual (76.1%). There were positive attitudes towards cirrhotic patients in the immediate family, whereas attitudes have become more towards negative in known patients and totally unknown patients. There was a significant association between the experience in dealing with cirrhotic patients and knowledge regarding cirrhosis and there was a significant association between age and attitudes towards cirrhotic patients.

#### **Conclusions and Recommendations**

Although cirrhosis is a major health problem, the awareness about the disease in our population is moderate. There was a positive attitude towards cirrhotic patient among immediate family whereas attitudes were more towards negative in known patient and totally unknown patient. There was a significant association between experience in dealing with cirrhotic patients and knowledge regarding cirrhosis. There was a significant association between age and attitudes towards cirrhotic patients also. But there was no significant association between gender, residential district, ethnicity, educational level and occupation and knowledge or attitudes towards cirrhotic patients.

Our results proven that awareness regarding cirrhosis in the society was moderate. Therefore, it might be useful if health educational programs are arranged to improve the knowledge regarding cirrhosis.

#### Key words

Knowledge, attitudes, associated factors, alcoholic cirrhosis, NAFLD, risk factors

# Group 23

Parental knowledge, practices and associated factors related to prevention of household poisoning among children from 2-10 years in the Western Province K. K. C. N. Kannangara, K. H. Madubhashinie, S. R. Bopitiya, L. A. D. S. S. Athukorala, D. C. L. Anuradha

# **Background:**

Acute poisoning in the paediatric age group is one of the commonest causes for childhood mortality and mobility in Sri Lanka. Almost every case reported was in the household environment. Therefore, parents play a key role, thus it is important that they have a good understanding about poisoning conditions.

# **Objective:**

To describe parental knowledge, practices and associated factors related to prevention of household poisoning among children from 2-10 years in the Western Province

# Methods:

A descriptive cross-sectional study was carried out in the Western Province among 348 parents who had children aged between 2-10 years using convenient sampling. A self-administered google questionnaire was used for data collection. Knowledge and practices were assessed through 7 & 8 questions respectively with stems developed by the research team, with one mark was allocated to each question. These two categories were divided into two categories as good and poor, and the cut off values were determined by a mean score obtained in a pilot study. Chi square test and Fisher's exact test were used to examine associated factors. Level of significance was considered as p<0.05

#### **Results:**

Out of the 348 participants 251(72.1%) were females. Most of the participants 295(84.8%) were in the age of 30 years and above. 161 participants (46.26%) were graduates. A majority (n=258, 74.1%) had good knowledge on household poisoning and knowledge on chemical poisoning was greater than on plant poisoning. Out of plants, oleander was chosen by 291 participants (83.6%) as the best-known plant poisoning agent. A considerable number of participants (n=291, 86.4%) were not aware about the contact number of national poisoning center. Also 315 participants

(90.5%) had good practice. More than 50% of participants agreed on taking their child to hospital immediately after poisoning. Association between knowledge with regards to the current employment status(p=0.006), the occupation of parents(p=0.016), working hours(p=0.029), working within country(p=0.006) and home visits (p=0.006) was statistically significant. Association between practice with regards to working hours(p<0.001), working within country(p<0.001) and home visits (p<0.001) also were statistically significant. Level of significance was taken as p<0.05.

# **Conclusions:**

Overall knowledge and practice on preventing household poisoning among parents were good. However, knowledge on identifying poisonous plants needed improvement.

# **Recommendations:**

Conduct an island wide study on poisoning, increase island wide awareness among parents in the vulnerable age group.

# Key words:

Household poisoning, Prevention, Knowledge, Childhoodand Practices.

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Panel 02 (Medical Education and Environmental Health)

Dr.Sithara Dissanayaka, Dr. C.S. Fernando

Panel 03 (Mental Health and Youth)

Dr. Aruni De Silva, Dr. D.L.U. Amarakoon

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