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Abstracts of Oral and Poster Presentations

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**28th Annual Academic Sessions of the
College of Community Physicians of Sri Lanka**

Abstracts of Oral and Poster Presentations

The College of Community Physicians of Sri Lanka (CCPSL) is the oldest and the first medical professional body which has been established under an Act of Parliament for public health professionals in Sri Lanka. The Annual Academic Sessions of the CCPSL is the largest gathering of public health physicians in the country. This year, the College proudly celebrates 28 years as a pioneer in the field of Public Health and Community Medicine

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ORAL PRESENTATIONS

Psychosocial climate of the Sri Lanka Army in relation to burnout prevention: a qualitative study

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Background: Burnout is one of the most prevalent occupational mental health problems in military. Stressors are influenced by the psychosocial environment at work. Understanding the psychosocial environment is crucial in planning policies for prevention of burnout. The objective of this study was to describe the prevailing organizational psychosocial climate related to burnout in Sri Lanka Army.

Methods: We conducted a qualitative study using in-depth interviews. Senior Army officers who have at least thirty years of military experience familiar with the psychosocial atmosphere were purposely selected. The interview guide was built using the Psychological Safety Climate (PSC) framework. The data analysis employed inductive thematic analysis.

Results: At the theoretical saturation, sixteen participants were interviewed. We identified seven major themes; the importance of leadership, the importance of cohesion, the role of senior Non-Commissioned officers (NCOs), training and career development, identification of psychological issues, welfare and financial mismanagement, and preventive mental health services. Attitudes of leadership were important and problematic behaviours of leadership created a non-hosting atmosphere for mental well-being. The time-trend issues in the Army affected the leadership as well as cohesion. The weakening of the role of NCOs downgraded the psychosocial climate. The participants claimed the need to change the recruitment and training as well as the detection of psychosocial issues. The current salaries, financial mismanagement and suboptimal welfare influenced distress. Targeted preventive mental health promotion was a suggestion.

Conclusions: Existing psychosocial climate in the Army assimilate vulnerability to developing burnout. Early attention and proper action along identified themes is strongly recommended.

Keywords: Psychosocial climate, Sri Lanka army, Burnout prevention

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Measuring personality trait domains with Substance Use Risk Profile Scale (SURPS) tool: to predict substance use

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Background: After the COVID-19 and economic crisis, usage of substance is in rising trend in Sri Lanka. School going adolescents also affected by this issue. To plan curative or/and preventive interventions, without asking embarrassing straight questions, identifying vulnerability through a psychometric tool may be an alternative way. Substance Use Risk Profile Scale (SURPS) is, already validated among Sinhala Speaking adolescent students, a widely used psychometric tool to predict substance use. Aim of this study was to find predictive validity of SURPS with substance users among school going adolescents.

Methods: A descriptive probability proportionate to size sampling done among grade eleven and twelve students in the Anuradhapura district. Total of 958, 1073 boys and girls were participated. Multiple logistic regression was done with binary outcome substance use with scores of four domains (Hopelessness, impulsivity, sensation seeking and anxiety sensitivity) of SURPS tool and sex, which is a prominent risk factor globally with substance use.

Results: Significant odds ratio increases were noticed with one score change with the following three psychometric domains, hopelessness (OR=1.063; 95% CI=1.009, 1.12; p=0.023), impulsivity (OR=1.124; 95% CI=1.06, 1.191; p<0.001), sensation seeking, (OR=1.23; 95% CI=1.168, 1.296; p<0.001). Anxiety sensitivity was shown odds ratio reduction with one score increase but not significant (OR=0.984; 95% CI=0.933, 1.039; p=0.569). Being a male is a strong biological factor risking substance use (OR=4.03; 95% CI=2.879, 5.634; p<0.001).

Conclusions: The SURPS tool can be used to predict substance use. Hopelessness, impulsivity, sensation seeking domains are predicting. While planning intervention special attention must be given to males.

Keywords: Substance use, Psychometric tool, SURPS

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Knowledge, attitude, and practices on health promotion at schools and its associated factors among primary school teachers in the Divisional Education Area of Kegalle

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Background: Health-promoting practices at schools enhance the health status of the school community, benefit academic performance and reduce risk behaviours. Attitude and knowledge of teachers on health promotion directly influence the level of implementation of its practices. This study describes the knowledge, attitude, and practices on health promotion at schools, and its associated factors among primary school teachers in the divisional education area of Kegalle.

Methods: A cross-sectional descriptive study was carried out in 42 government schools in the divisional education area of Kegalle including 320 permanent primary school teachers. All four types of schools were included in stratified proportionate random sampling and a structured self-administered questionnaire used to collect data. Data analysed using SPSS version 21 and Chi-squared test used to determine the associations.

Results: Majority were females (91%), median age 45 years, married (81.9%), and graduates (34%). Of the teachers, 59.4% had good knowledge, 72.6% had favourable attitudes and 60.1% had good level of practices of health promotion at school. The teachers who had participated in health promotion awareness programmes showed significantly better knowledge ($p=0.001$), and practices ($p=0.02$) on health promotion. Favourable attitude was significantly associated with good knowledge ($p=0.014$) and good practices ($p=0.042$). Significantly better attitudes were observed among teachers below the age of 50 years ($p=0.04$) and with a higher level of education ($p=0.006$).

Conclusions: Findings highlight the importance of compulsory exposure to health promotion awareness programs to improve the knowledge, attitudes, and practices of teachers on health promotion at school.

Keywords: Health promotion, School teachers, Knowledge, Attitudes, Practices

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Morbidity profile, management, cost of medicines and non-medical out-of-pocket cost of adult outpatients between a primary care and a tertiary care facility in the Kandy District: a comparative study

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Background: Evidence is limited on morbidity, management and costs in Sri Lankan outpatient departments (OPDs). This study aimed to describe and compare the morbidity profile, management, cost of medicines and non-medical out-of-pocket cost (non-medical OOPC) of adult outpatients between a primary and a tertiary care OPD in the district of Kandy.

Methods: A descriptive, cross-sectional study was conducted by recruiting 737 adult outpatients visiting Divisional Hospital Katugastota and National Hospital Kandy via random and consecutive sampling methods. A self-administered questionnaire and a data sheet were used to collect outpatient and prescription data.

Results: Total sample comprised mainly of females (61.7%) and the mean age was 49.4 years. The most common systemic complaint in primary care OPD was respiratory symptoms (32.4%) whereas it was dermatological symptoms (30.4%) in tertiary care. The difference in the median duration of presenting symptom between primary care outpatients (3 days) and tertiary care outpatients (10 days) was statistically significant. The difference in the mean number of medicines per encounter between primary care OPD (3.8) and tertiary care OPD (3.4) was statistically significant. There were also statistically significant differences in the proportions of prescribed corticosteroids, anti-allergic drugs and vitamin supplements between the OPDs. The difference in the cost per prescription between the OPDs was not statistically significant. The difference in non-medical OOPC between primary care OPD (Median: Rs. 100.00) and tertiary care OPD (Median: Rs. 280.00) was statistically significant.

Conclusions: The morbidity profile, outpatient management and non-medical OOPC at primary care OPD differed from tertiary care. However, the direct cost of medicines did not differ. Further research is required to establish the causes for these differences.

Keywords: Morbidity, Management, Cost, Out-of-pocket cost, Outpatient, OPD

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Factors associated with adherence to healthy lifestyle among hypertensive patients at primary medical care institutions (PMCI) of Batticaloa District

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Background: Among all NCD risk factors, hypertension (HT) is one of the main metabolic risk factors contributing to premature deaths. Lifestyle modification helps to reduce uncontrolled hypertension among those on antihypertensive drugs. Objective of this study was to assess factors associated with adherence to healthy lifestyle among hypertensive patients attending medical clinics of primary medical care institutions (PMCI) of Batticaloa District.

Methods: Hospital-based cross-sectional study was conducted in October 2022 among 427 hypertensive patients attending medical clinics in five randomly selected PMCIs, recruited using systematic sampling method after obtaining informed written consent. Data were collected by trained data collectors using a pretested interviewer-administered questionnaire to assess sociodemographic data, health profile and behavioural risk factors. The results were analysed by SPSS-25.

Results: Response rate was 100%. Mean age of participants 62.13 years (SD=10.07) within 34-90 years. They comprised of 313 (73.3%) females, 281 (65.8%) currently married, 330 (77.3%) Hindus, 361 (84.5%) Tamils, 191 (44.7%) educated up to grade 1-5 category, 265 (62.1%) unemployed, 287 (67.2%) with less than RS. 15000 monthly family income and 160 (37.5%) diagnosed as hypertensive for one-to-five-year period. Adherence to recommended level of physical exercise was seen in 56.9% (n=243), non-smoking in 97.9% (n=418), alcohol non-consumption in 92% (n=393), consumption of five servings of fruits/vegetables in 34.7% (n=148), salt intake of 5 g/day in 44.3% (n=189) and BMI of 18.5–22.9 kg/m² in 29.3% (n=125). Only 3.5% (n=15) had adhered to all six recommendations. Females (OR=2.2; 95% CI=1.41, 3.43) and primary or below level of education (OR=1.67; 95% CI=1.13, 2.46) were significantly associated with adherence to healthy lifestyle (p<0.05).

Conclusions: Overall adherence to healthy lifestyle among hypertensive patients was low. Health care providers should focus on implementing interventions to overcome gaps in adherence.

Keywords: Hypertension, Adherence to Healthy lifestyle

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Availability of essential services for people living with non-communicable diseases and its effect on health-related quality of life of people living with non-communicable diseases in Attanagalla Divisional Secretariat

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Background: People living with chronic non-communicable diseases (PLWNCD) are a vulnerable group needing uninterrupted treatment and follow up. During COVID-19 pandemic, essential NCD services were disrupted affecting their health-related quality of life (HRQoL). The objective of the study was to describe availability of essential services for PLWNCD during COVID-19 pandemic

Methods: A descriptive cross sectional household survey was conducted in 2021, in 22 selected Grama Niladhari Divisions in Attanagalla Divisional Secretariat. Probability proportionate to population size cluster sampling method was used to recruit 440 eligible participants. An interviewer administered pre-tested questionnaire on socio-demographics, availability of essential health services and WHO QoLBREF questionnaire were used by trained data collectors. Statistical analysis was done using SPSS software.

Results: Response rate was 95%(n=418). A majority were females (50.5%; n=211) and 37.6% (n=157) were in the 61-70 years age group. Of them 56.7% (n=237) had hypertension, 47.8% (n=200) diabetes mellitus, 15.1% (n=63) cardiovascular disease and 11.7% (n=49) chronic respiratory disease. Medical consultations were available for 85.2% (n=356), out-patient services for 80.9% (n=338), in-patient services for 31.1% (n=131) of the total population, essential medicines for 86.4% (n=361) and laboratory facilities for 71.8% (n=300). Of them, 80.4% had access to three or more service components. Reasons for inability to obtain services included personal, forgetting and financial constraints. Overall HRQoL was higher among respondents who had good access to essential NCD service (p<0.05)

Conclusions: Availability of essential NCD services and the accessibility to those were satisfactory. Importance given by PLWNCD for regular treatment and follow up was poor. Overall HRQoL was affected by unavailability of essential NCD services. Interventions are required to emphasize the importance of regular treatment and follow-up.

Keywords: Availability of essential services, HRQoL, people living with NCDs, COVID-19 pandemic

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Knowledge and practices on prevention of T2DM and the associated factors among post-natal WWGDM in selected medical officer of health (MOH) areas in Gampaha District

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Background: There is a significant risk of developing type 2 diabetes (T2DM) in women with a history of gestational diabetes (WWGDM) and evidence-based interventions are recommended to for the prevention or delay of development T2DM. Post-natal period is considered suitable for such interventions.

Methods: A descriptive cross-sectional study was carried out in 2021 in randomly selected nine MOH areas in Gampaha District. Multistage sampling technique was used to recruit 404 WWGDM. Data were collected with pre-tested interviewer administered questionnaire from WWGDM on knowledge and practices. Data were collected by trained data collectors: Knowledge and practices were categorized as good, or poor based on a cut off of 60% on calculated scores. Descriptive statistics and significances were calculated through SPSS software version 21.

Results: Women with GDM the age, parity, employment status and postnatal period had no significant association ($p>0.05$) with their practices. There was a significant association with the knowledge and the practices of the women with GDM ($p<0.05$).

Conclusions: There is a significant association of knowledge and practices of WWGDM, improvement of their knowledge can produce better practice.

Keywords: Gestational diabetes, post-natal care, type two diabetes

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Promotion of expressing breastmilk to safeguard exclusive breastfeeding within the economic crisis in teaching hospital Anuradhapura, Sri Lanka

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Background: Exclusive breastfeeding (EBF) is the most cost-effective intervention to reduce childhood mortality in low socioeconomic settings. Support mechanisms, including expressing breastmilk (EBM), are yet to receive appraisal in the pivotal initial days of breastfeeding. Our objective was to describe postnatal support for the promotion of EBM and its implications in Teaching Hospital Anuradhapura (THA).

Methods: We used a novel mixed-method approach. Medical undergraduates trained in qualitative research conducted 24-hour participant observation for 10 continuous days in the postnatal wards. In the subsequent cross-sectional study, we assessed maternal perceptions of breastfeeding support using a self-administered questionnaire. We thematically analysed observations and used proportions to describe maternal perceptions.

Results: We identified two major themes supporting EBM; appropriate breastfeeding education and timely practical support. Instructions for EBM, highlighting the importance, were supportive. Support for EBM played a key role, which included; practical demonstrations, augmenting maternal emotions, support for breast problems, assistance for cup feeding, and breastfeeding unit referrals. However, some mothers were overly concerned about cup feeding. A total of 301 mothers participated in the survey. Although 57.9% of mothers (n=172) reported breastfeeding difficulties, EBF was reported by 93.3% (n=280), showcasing significant support. There was a significant association between the type of delivery and EBM, with post-Caesarean section mothers having higher rates (p=0.03). Of the mothers, 46.2% reported obtaining support for EBM.

Conclusions: EBF is safeguarded by quality breastfeeding support in postnatal wards, especially by promoting expressing breast milk which is exemplary in a situation of economic crisis.

Keywords: Participant observation, breastfeeding support, early postpartum period

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Gender-Based Violence in Sri Lanka: experiences of care seekers from Mithuru Piyasa: Gender-Based Violence Care Centres in Western Province, Sri Lanka

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Background: Gender-based violence (GBV) is a serious human rights violation and a global public health issue. Family Health Bureau (FHB) has established 81 GBV care centres named “Mithuru Piyasa (MP)” in state hospitals island wide. MPs offer immediate medical attention and first-line support and link survivors to other health and non-health assistance. The objective of this study was to study the characteristics, GBV experiences, help-seeking behaviours and services received by the MP clients of Western Province of Sri Lanka in 2019.

Methods: This retrospective cross-sectional study was conducted extracting data from the client records of 2019 from all 11 MPs of Western Province. The records of all the GBV clients were analysed.

Results: In 2019, a total of 1763 GBV survivors sought support from MPs in Western Province, 97.2% (n=1714) of them were females, and 29.8% of them were pregnant. The majority (67.9%) of were referred from the hospital wards or OPDs. Among the clients, 90%, 70.4%, 48.7% and 33.5% reported emotional, physical, economical, and sexual violence respectively. Alarming, 16.7% had suicidal tendencies. Mean age of male survivors (n=49) was 36 years. Most of them (37.3%) were self-referred to the MPs and 90.2% presented with emotional violence. All clients were managed within the MP, with services within the hospital, and some were referred to other institutions.

Conclusions: Most of the MP clients were females and some had suffered serious consequences including suicidal tendencies. The collaboration between other health services including public health, and non-health services, with MPs is essential to provide the quality care for the survivors. For a positive outcome, it is recommended to strengthen the capacity of MP services including an intervention to identify GBV during the antenatal period.

Keywords: Based Violence, Mithuru Piyasa, Client record

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Knowledge, attitude on nutritional supplements among pregnant women attending antenatal clinics in medical officer of health (MOH) area, Kolonnawa and their compliance

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Background: Nutritional supplements (NS) as micronutrient and supplementary food are provided to pregnant women free of charge by the government. Proper knowledge and attitude on NS and, compliance may lead to reduce maternal anaemia, low birth weight and some congenital anomalies.

Methods: A descriptive cross-sectional study among 271 pregnant women was conducted using probability proportionate to the size of clinic visits using the clinic attendance register and systematic random sampling was used to select the desired sample in each clinic. A pretested interviewer administered questionnaire was used to collect data and, the knowledge, attitude, practices and compliance for micronutrients and Thripasha was assessed using a scoring system with a predetermined cutoff value.

Results: Mean age of the study participants was 28.4 years (SD=5.49) while the mean period of amenorrhoea at booking visit was 8.2 weeks (SD=3.6). The mean Hb at booking visit was 11.75g/dl (SD=1.44). Among the participants 26.6% (n=72), 70.1% (n=190), 51.7% (n=140) had good knowledge, attitude and practices on NS intake, respectively. The association between compliance and practices related to NS ($\chi^2=23.04$; $p<0.001$) found statistically significant but not with knowledge and attitude on consumption of NS ($\chi^2=3.162$; $p=0.075$ and $\chi^2=2.851$; $p=0.091$, respectively).

Conclusions: Only 28% (n=76) of pregnant women had a good compliance with NS. Their knowledge, attitude and practices on NS intake were also not satisfactory. Hence, there is a need to educate them to improve compliance with NS during pregnancy.

Keywords: compliance, supplements in pregnancy, nutritional supplements

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Factors associated with screen time among one to three-year-old children in an urban setting in Sri Lanka

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Background: Excessive screen usage is an upcoming issue in the world, associated with many negative impacts on developing brains of children. The factors that are associated with the excessive screen time can be categorized as parental, child-related, and environmental factors. The study aims to determine the factors associated with screen time of one to three-year-old children in an urban Sri Lankan setting.

Methods: This study is a clinic-based descriptive cross-sectional study, done in Kolonnawa. The study population consisted of 511 the primary caretakers of the children aged one to three years of age, selected using cluster sampling method. Screen time of the children and associated factors were assessed using a self-administered questionnaire. Data analysis was done using the Statistical Package for Social Sciences. Chi-square tests were used to find the associations. A probability (p-value) of 0.05 was used to determine the statistical significance.

Results: There were a total of 385 (75.3%) children who had excess screen time than their recommended amount. The factors that were associated with excessive screen time are the child's age, maternal occupation, maternal excessive screen time, both maternal and paternal high educational levels, high family income and the availability of internet access in the household. The mother being a housewife showed as a protective factor to reduce excessive screen time.

Conclusions: The prevalence of excessive screen usage was high among the children of study participants, with most of the children spending one to two hours in front of screens. Further research should be promoted to establish the temporal relationship of the associations found in the study.

Keywords: Factors associated, Primary caretaker, Screen time, Urban setting, young children

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External breast prosthesis use, its influencing factors and impact on the quality of life among postmastectomy patients in Sri Lanka

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Background: External breast prostheses (EBP) have been identified for improving the quality of life (QOL) following mastectomy in other countries. Studies have also been conducted on the QOL of postmastectomy women in Sri Lanka, but not in relation to their EBP use or its impact. Thus, the study objective was to describe EBP use, its influencing factors and the impact on QOL among cancer patients in Sri Lanka.

Methods: A cross-sectional study was conducted among non-metastasized biopsy-proven breast cancer patients who have undergone mastectomy at least six months ago. They were recruited systematically from outpatient clinics at Apeksha Hospital, Maharagama. An interviewer-administered-questionnaire obtained data on socio-demographic characteristics, EBP use and QOL assessed under several domains using a valid tool. The influencing factors were assessed using chi-square test at 0.05 significance.

Results: The sample (N=188) comprised current EBP users (64.5%), former users (4.1%) and never users (31.4%). The commonest reason for using EBP was to mimic the natural breast, while that against EBP use was poor awareness, accessibility and being embarrassed to use EBP. Young (66.7% vs. 64.1%), single (83.3% vs. 61.2%), employed (76.2% vs. 62%) and wealthy (60% vs. 75%) women were more likely to use EBP than others, although these differences were not significant ($p>0.05$). Compared to previous/never users, a higher proportion of current EBP users were satisfied with their QOL- overall and in individual domains ($p<0.01$).

Conclusions: Knowledge of EBP and an uninterrupted EBP supply should be integrated into postmastectomy rehabilitation programs to improve their QOL.

Keywords: Breast Cancer, External Breast Prostheses, Quality of Life, National Cancer Control Programme

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An intervention to improve occupation related respiratory conditions among granite quarry workers in Sri Lanka

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Background: Sri Lanka's granite/stone crushing industry has significantly improved over the years and crushing activities are done using machinery. As granite/stones contain silica, occupational exposure of workers to a varying concentration of dust particles containing respirable crystalline silica is associated with respiratory symptoms/conditions. The objective of this study was to determine the effectiveness of an educational intervention on the use of personal protective devices and the provision of N 95 masks in protecting the respiratory system among granite quarry workers in Kurunegala District.

Methods: In a cluster randomized study, the intervention was delivered over six months and its impact evaluated. Out of 138 quarry sites installed with mechanical crushers, 36 clusters were selected as sampling frame. A sample size of 178 workers each was selected for the intervention and control group, using cluster sampling method with probability proportional to size. Pre- and post-assessment of respiratory symptoms and attitudes towards respiratory health were done using the British Medical Research Council Questionnaire on respiratory symptoms and attitudinal questionnaire. Health education for workers were done in groups and N 95 masks were provided free of charge following fit testing. Compliance was assessed as using the masks throughout the shift (>20 working days) using a checklist by trained supervisors.

Results: Following the intervention, 70.2% of quarry workers in the intervention group wore masks throughout the shift vs. 9.6% in the control group ($p < 0.001$) and a significant improvement was observed in the attitudes towards respiratory health in the intervention group. There was a significant reduction in the prevalence of cough (91% vs. 56.2%), phlegm (76.4% vs. 48.9%), chronic cough (56.2% vs. 19.7%), chronic phlegm (44.4% vs. 23.6%), asthma (41% vs. 17.4%) within the intervention group (all $p < 0.001$). No significant reduction was observed in the control group (92.7% vs. 89%; 77.5% vs. 78.7%; 53.4% vs. 42.1%; 41% vs. 32.6%; 39.3% vs. 38.8%, respectively).

Conclusions: Given the large health improvement achieved and the high respiratory disease burden amongst all participants at the start of the study – a better respiratory protection of quarry workers seems highly advisable

Keywords: Respiratory conditions, Granite worker, Health education, Personal protective devices

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Health related characteristics associated with voice disorders among primary school teachers

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Background: Teachers being the largest group of occupational voice users are more prone to suffer from voice disorders. With a high prevalence of voice disorders of 49% among primary school teachers in the Colombo District, the associated factors are poorly addressed. The objective of this study was to assess the health-related factors associated with voice disorders among primary school teachers in the Colombo District.

Methods: A school-based cross sectional study among 790 primary school teachers in the Colombo and Sri Jayewardenepura Education Zones of the Colombo District was conducted. They were selected by stratified random sampling method. The validated VHI-30, DASS 21 and a self-administered questionnaire were used for data collection. Data analysis was by bivariate method with chi squared and logistic regression.

Results: Among the participants 407 (51.5%) were suffering from a disease related to voice disorders. Having any disease related to voice disorders (OR=2.265; 95% CI=1.701, 3.015), having a disease related to respiratory system (OR=1.135; 95% CI=1.135, 3.016) and respiratory allergies (OR=2.571; 95% CI=1.351, 4.895) were significantly associated with voice disorders, while having diabetes mellitus (OR=0.524; 95% CI=0.295; p=0.933) was protective for voice disorders. Among the musculoskeletal problems assessed, 533 (67.4%) suffered from lower back related problems and was significantly associated with voice disorders (OR=2.445; 95% CI=1.769, 3.379), while 580 (73.4%) suffered from neck and/ or shoulder related problems which was also associated significantly with voice disorders (OR=2.812; 95% CI=2.068, 3.824). On assessing stress, anxiety and depression with DASS 21 revealed having some level of anxiety was a significant protective factor for voice disorders (OR=0.414; 95% CI=0.219, 0.780).

Conclusions: The association of voice disorders with health-related characteristics among teachers were similar to the findings of other studies. However, the association with diabetes mellitus and having some level of anxiety being protective were unusual findings and need further exploring.

Key words: disease related, disease associated, voice disorders, primary school teachers

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Organization-related work-stress and its associated factors among police constables in the general police force in the district of Colombo

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Background: Work-stress is rising globally. The prevalence and associated factors of organization-related work-stress among police constables in Sri-Lanka are unknown. The objective was to describe the prevalence and associated factors of organization-related work-stress among police constables in general police in Colombo district.

Methods: A cross-sectional study was conducted recruiting 1390 police constables (PCs) via random proportionate sampling among all stations in the Colombo district using the validated self-administered Police-Stress-Questionnaire-Organizational-Sinhala(PSQ-OrgS) and factors-associated questionnaire. Cut-off values for work-stress levels were obtained by using ± 1 standard deviation around the mean work-stress score. Bivariate analysis followed by logistic regression determined the significant associated factors.

Results: The mean (SD) for organization-related work-stress score was 2.96 (0.96) and differed significantly by the police range ($p=0.013$). The “high”, “moderate”, “low” and “overall high” organization-related work-stress prevalence (95%CI) were 18.5% (16.4, 20.5), 63% (60.4, 65.5), 18.5% (16.4, 20.5) and 81.5% (79.4, 83.5), respectively. After adjusting for confounding, significantly associated personal factors were avoidant coping (adjusted odds ratio (AOR)=3.6), Sinhala ethnicity (AOR=8.15), lower self-efficacy (AOR=1.94), less weekly leisure-time (AOR=1.79). Family-life factors were dissatisfaction with support for housework (AOR=5.46), poor family support (AOR=3.04) and paying back a loan/mortgage (AOR=2.22). The work-life factors were working in a unit that has more office-related work (AOR=2.54), job-tasks clarity (AOR=6.42), cannot take leave (AOR=2.59), conflicting work-tasks (AOR=2.16), worry over transfer (AOR=2.17), threatened at workplace (AOR=8.08) and work experience of 16.7 years or more (AOR=2.74).

Conclusions: More than 4/5th of the population had moderate or high organization-related work-stress while number of personal, family and work-life-related factors were significantly associated with it. To modify organization-related work-stress and associated factors coping skills, self-efficacy development, economic support and family-counselling and policy and structural reforms within the police organization specially to address work-life factors are recommended.

Keywords: Occupational-stress, police-stress-questionnaire-organizational-Sinhala, Sri Lanka

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Psychological stress and associated factors among work from home-based software engineers during COVID-19 travel restrictions in Sri Lanka

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Background: Due to travel restrictions of COVID-19, customary office work setting shifted to a home work environment with work from home (WFH) practices. Aim of the study was to describe level of psychological stress among WFH software engineers (WFH-SE) and its associated factors.

Methods: A descriptive cross-sectional study was conducted among 822 WFH-SE selected using probability proportionate to size cluster sampling (cluster size= 25, cluster number= 33, design effect= 1.5). Data was collected via an online questionnaire which consisted of Professional Life Stress Scale to assess psychological stress. Bivariate analysis performed with chi square test and significance level was considered as $p < 0.05$. Results were expressed as odds ratios (OR) and 95% confidence intervals.

Results: Response rate was 72% (n=586). Male: female ratio was 3:1. Prevalence of psychological stress was 38.2% (n=224) with the commonest category being moderate level of stress (n=201; 34.5%). Majority had dedicated workspace (n=490; 83.6%), comfortable working furniture (n=483; 82.4%), quality network (n=486; 82.9%), adequate light (n=571; 97.4%) and good ventilation (n=525; 89.6%). Distractions at home was reported by 416 (71%) and negative impact of distractions on work performance was reported by 66.9% (n=392). Presence of psychological stress was significantly associated with lack of following: dedicated workspace (OR=2.3; 95% CI=1.5, 3.6), comfortable working furniture (OR=3.7; 95% CI=2.4, 5.7), quality network (OR=2.4; 95% CI= 1.5, 3.5) and good ventilation (OR=3.5; 95% CI=2.0, 6.5).

Conclusions: More than one third of WFH-SE had psychological stress which had significant associations with factors in home work environment.

Keywords: Work from home (WFH), software engineers, work environment, psychological stress

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An intervention to improve occupation related eye conditions among Granite Quarry Workers in Sri Lanka

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Background: Sri Lanka's quarrying and granite/stone crushing industry has shown a significant improvement in production over the last thirty years. However, stone/granite quarry workers form an unorganized sector of industry, in which they are exposed to dust particles which can cause impairment of vision due to eye conditions/injuries. The objective of this study was to determine the effectiveness of an educational intervention on the use of personal protective devices and the provision of polycarbonate goggles in protecting the eyes among granite quarry workers in Kurunegala District.

Methods: This cluster-randomized study was conducted over six months. A cluster sampling method was applied with a sample selection of probability proportional to cluster size. Of 138 quarry sites, 36 clusters were selected as sampling frame; 178 workers participated in each group (intervention vs control). Pre and post assessment of eye conditions and attitudes towards eye health were done using a validated questionnaire. Health education was done in groups and polycarbonate goggles were provided free, following fit testing. Compliance was assessed as using goggles throughout the shift (>20 working days) by trained supervisors using check lists.

Results: Following the intervention, 48.3% of quarry workers in the intervention group vs 7.9% in control group wore goggles throughout the shift ($p < 0.01$). A significant improvement was observed in the attitudes towards eye health in the intervention group. Prevalence of redness in the eyes (54.5% vs. 15.2%), gritty feeling (9.0% vs. 2.2%), tearing (52.8% vs. 10.7%), itching (52.8% vs. 11.7%) showed a significant reduction in the intervention group. A significant decline was not seen in the control group (55.6% vs. 52.8%; 7.9% vs. 8.4%; 55.1% vs. 52.2%, 55.1% vs. 50%, respectively).

Conclusions: A reduction in sickness and improvement in productivity should make this intervention; provision of polycarbonate goggles together with education, having a positive return of investment and be adopted across the industry.

Keywords: Eye conditions, Granite worker, Health education, Personal protective devices

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Association of knowledge and digital device usage practices with digital eye strain among banking assistants in Thimbirigasyaya Divisional Secretariat area

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Background: Digital eye strain (DES) has surfaced as the most common occupational hazardous condition in the modern world. This study aimed to assess knowledge, to describe digital device usage practices and their associations with the presence of DES among banking assistants in Colombo district.

Methods: A descriptive cross-sectional study was done among 372 banking assistants selected with systematic sampling among randomly selected banks in the Thimbirigasyaya divisional secretariat area. Data were collected using a structured pretested self-administered questionnaire. Statistical-Package-for-Social-Sciences (SPSS) version 21.0 was used in analysis. Associations of DES were evaluated with Chi-square test at 5% significance level.

Results: The response rate was 94.08%. The male: female ratio of the sample was 1:0.7. Among participants 65.4% had a “satisfactory knowledge” and 42.6% had “favourable practices” regarding digital device usage. There was a wide variation in the accuracy of responses given for knowledge and practice components. Possessing a satisfactory-level of knowledge regarding DES ($p<0.001$), duration of digital devices usage ($p=0.001$), level of digital device ($p=0.014$), frequency of taking breaks ($p<0.001$), voluntarily blinking when using digital devices ($p<0.001$), using a glare filter ($p<0.001$), using computer glasses ($p<0.001$), adjusting screen brightness ($p=0.001$), cleaning the screen of the digital device daily ($p=0.009$) and having a refractive error ($p<0.001$) were found to be significantly associated with the presence of DES.

Conclusions: Study found satisfactory knowledge in two third but less than half had favourable practices on digital device use. Targeted interventions and further evaluations of observed associations of DES with multivariable analysis is recommended.

Keywords: Digital eye strain; banking assistants; knowledge on digital eye strain, practices on digital eye strain

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Audit on assessment of 10 year-Coronary Vascular Disease (CVD) risk of Healthy Lifestyle Centre (HLC) attendees aged >35 years in Sri Lanka

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Background: CVD-risk assessment is needed to be conducted in all the HLC attendees >35 years of age in view of their risk stratification for further management. The aim of the audit was to improve the coverage of CVD-risk assessment at HLCs.

Methods: With the consensus of experts, a standard was set at assessment of 10 year-CVD risk in at least 90% of the of HLC attendees aged >35 years per quarter at district/national level. Descriptive cross-sectional study was conducted using secondary data of the national database at the Directorate of Non-Communicable Diseases (NCD) in first quarter of 2021 using a data-extraction sheet. The percentage of CVD-risk-assessment were determined for districts and national level. The root-causes were identified through key-informant interviews with district medical officers of NCD (MO-NCD) and direct observations at selected HLCs. Each root-cause was weighted with number of districts it was present. A pareto-analysis was conducted to identify the major contributors. Tailor-made multifaceted interventions were developed and implemented. A re-audit was conducted in first quarter of 2022.

Results: Out of 27 health districts, only 48.1% (n=13) had met with set standard at the audit. The Pareto analysis of root causes revealed that 80% of this issue was due to lack of knowledge of MOs, unavailability of cholesterol meters/strips and CVD-risk charts. The interventions comprised of development and conduct of Training of Trainers programs on 10 year-CVD risk assessment and streamlining distribution of cholesterol meters, strips, and CVD charts. Re-audit revealed that 66.7% (n=18) of districts and national figure had met with the set standard following the interventions.

Conclusions: Audit process is helpful in improving the quality of care at HLCs.

Keywords: Audit, 10-year-CVD-risk-assessment, HLC

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Academic procrastination, problematic internet usage and factors associated with academic procrastination among 3rd year engineering undergraduates of a selected university in Sri Lanka

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Background: Academic procrastination is widely prevalent among undergraduates. With rapid digitization internet usage has increased greatly leading to problematic internet behaviour among young adults which in turn could aggravate academic procrastination. Hence, this study was carried out to describe academic procrastination, problematic internet usage and factors associated with academic procrastination among third year engineering undergraduates in a selected university in Sri Lanka.

Methods: A descriptive cross-sectional study was done among 339 third year engineering undergraduates selected using systematic sampling from each department of the faculty following the proportional allocation of the sample to these departments. Academic procrastination was assessed using the Procrastination Assessment Scale – Students. Problematic internet usage and factors associated were assessed using a self-administered questionnaire.

Results: The response rate was 91.62%. Prevalence of academic procrastination was 22.1%. Majority (51.0%) were found to be internet over users. Majority (67.6%) visited adults' sites. Of the study sample, 27.4% had initiated romantic relationships with a person met online. The internet had been used by 13.9% of the study sample to attack individuals or groups. A statistically significant association was found between academic procrastination and the number of family members ($p=0.003$), religion ($p=0.043$), the number of hours spent on internet, ($p=0.022$.) and the money spent on internet services, ($p=0.002$).

Conclusions: The prevalence of academic procrastination among the particular study population was moderate. Majority of them were over using the Internet. The study identified factors that could be modified through interventions to improve academic procrastination in the study population.

Keywords: Internet overuse, academic procrastination, young adults

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Prevalence of psychosocial problems among adolescents of army war widows in post-war Sri Lanka

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Background: Psychosocial problems are more prevalent during adolescence than during childhood. Even with compelling evidence existing on the impact of environmental exposures on children, direct and indirect effects of war on adolescent mental health remain an area less ventured by the global research community. The impact of war on the children of service members is even less investigated. The aim of the present study was to determine the prevalence of psychosocial problems among adolescents of army war widows in post-war Sri Lanka.

Methods: A community-based cross-sectional study was conducted among 348 adolescents of army war widows aged 10-19 years in Sri Lanka to estimate the prevalence of psychosocial problems. Participants were screened using the validated S-PSC and S/PSC-Y tools and the prevalence was based on clinical diagnoses by a consultant child and adolescent psychiatrist.

Results: The overall prevalence of psychosocial problems among adolescents of army war widows aged 10-19 years in Sri Lanka was 14.4% (95% CI=10.9, 18.5). The most prevalent broadband subtype was internalizing problems where the prevalence was 5.7% (95% CI=6.5, 8.8). The prevalence in males was 20.2% (95% CI=14.7, 26.7) and that of females was 7.5% (95% CI=3.9, 12.7) with a sex ratio of 1:2.7 indicating male preponderance.

Conclusions: Approximately, one in seven adolescents (14.4%) of army war widows in Sri Lanka have psychosocial problems that require clinical management reflecting the magnitude of the problem. The study's findings highlight the need to prioritize the strengthening of adolescent mental health services, especially in families of demised army personnel.

Keywords: Psychosocial problem; Adolescents; Army war widows

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Factors influencing the maternal choice of packaged snacks for 6-10 years old children: A cross sectional study from medical officer of health area Balangoda

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Background: Childhood overweight and obesity due to unhealthy diet results in several adverse effects. Mothers play a major role in selecting snacks for younger children. This study assessed the factors associated with the choice of packaged food/beverage snacks among mothers of 6-10 years old children in Balangoda Medical Officer of Health (MOH) Area.

Methods: A community-based descriptive cross-sectional study was conducted among 450 mothers having 6-10 years children, through two-stage, stratified, simple random sampling technique, in randomly selected 10 PHM areas of MOH area Balangoda, using an interviewer-administered questionnaire. Factors associated with maternal practices on packaged snack selection was assessed through chi square test, at $p < 0.05$ significance level.

Results: Response rate was 99.3% ($n=447$). Children were commonly provided with biscuits (94.4%) and flavoured milk (44.7%), daily (66.4%), at home (93.5%). Majority The majority of mothers had poor practices on selecting packaged snacks (88.8%) but, good knowledge (62.9%) and favourable attitudes (93.5%) on packaged snacks. Maternal Sinhalese ethnicity ($p < 0.0001$); secondary or higher education ($p < 0.0001$); having one child ($p = 0.003$); residing in a rural or urban area ($p = 0.011$); and having favourable attitudes ($p = 0.002$) were associated with poor maternal practices on packaged food/beverage snacks selection.

Conclusions: Though maternal knowledge and attitudes on packaged snacks were good, their practices on selecting packaged snacks were poor. Maternal ethnicity, educational level, number of children, area of residence and attitudes were significantly associated with their selection of a packaged snack. Implementation of focused community-based health promotion programmes to empower mothers on selection of healthy packaged snacks are recommended.

Keywords: Packaged snacks, mother, choice, children, Balangoda

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Attitudes and the associated factors among patients admitted with acute coronary syndrome to secondary care hospitals in Kalutara District

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Background: Sri Lanka is one of the Asian countries which has a higher genetic risk of Acute Coronary Syndrome (ACS). A gradual increase of number of patients with ACS has been evident in Sri Lanka in recent years. Patients' attitudes are important in the prevention and timely management of ACS. This study was done to assess the attitudes and associated factors of the patients admitted with ACS to secondary and tertiary care hospitals in the Kalutara district.

Methods: A descriptive cross-sectional study with consecutive sample technique done in 2ry and 3ry healthcare hospitals in Kalutara district. Using a sample size estimated by a statistical formula, 437 in-ward ACS patients who got admitted to above study settings were recruited. A pre-tested interviewer-administered questionnaire was utilized. An attitudinal score was calculated and its associated factors were assessed with Chi square test at 5% significance level.

Results: The response rate was 91 %. Out of 437, 21.3% had unstable angina, 41.9% & 26.8% had Non-ST Elevation Myocardial Infarction (MI) and ST-Elevation MI respectively. In overall, 42.2% had unfavourable attitudes. Around 91% (n=402) believed that ACS will negatively affect their working capacity and may affect their life styles. Attitudes did not have any statistically significant association with education (p=0.479), age (p=0.733) gender (p=0.377), level of employment (p=0.601) nor with total knowledge score (p=0.151).

Conclusions: In general, the participants had unfavourable attitudes regarding ACS. It will be beneficial to arrange attitudinal-change programme for all ACS patients irrespective of their age, employment and level of education.

Keywords: Acute Coronary Syndrome; Attitude on Acute Coronary Syndrome; Kalutara district, Association of Attitudes

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Occupation related respiratory conditions and lung functions; comparison among stone/granite quarry workers and general population in Sri Lanka

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Background: Granite is a coarse-grained stone which contains silica and being quarried for use in construction industry. Workers in granite/stone quarries are exposed to a variable concentration of air borne dust (1µm to 100µm) that can cause a number of respiratory conditions.

Methods: A cross-sectional study was carried out to compare the prevalence of occupation related respiratory conditions and lung functions among quarry workers (20-60 years), working (>6 months) with mechanical granite/stone crushers in the Kurunegala District. Comparison group selected from the general population working as labourers (>2 km radius from a quarry site). Participants were selected by cluster sampling method with selection probability proportional to cluster size; 290 participants from each group. Interviewer administered questionnaire based on the British Medical Research Council questionnaire for respiratory symptoms was used. Lung functions were measured using a portable ST 95 spirometer. Differences in prevalence of symptoms were expressed as proportions. Results were expressed as odds ratio with 95% confidence interval.

Results: On comparison, quarry workers vs general population; prevalence of cough (95.9% vs. 62.1%); OR=14.1 (95% CI=7.5, 26.4), phlegm (75.9% vs. 52.8%); OR=2.8 (1.9, 4.0), chronic cough (30.3% vs. 9.0%); OR=4.4 (2.6, 7.3), chronic phlegm (37.9% vs. 10.7%); OR=5.1 (3.2, 8.1), asthma (41% vs. 15.5%); OR=3.7 (2.5, 5.6) was significantly higher among quarry workers. In relation to age: mean values for Forced Vital Capacity (FVC) L (2.5 vs. 2.7), Forced Expiratory Volume (FEV1) L/sec (1.9 vs. 2.1) and Peak Expiratory Flow Rate (PEFR) L/min (349.5 vs. 389.2); and service in years: FVC L (2.5 vs. 2.7), FEV1 L/sec (1.9 vs. 2.1) and PEFR L/min (348.5 vs. 388.2) were lower in quarry workers respectively.

Conclusions: Prevalence of occupation related respiratory symptoms/conditions were alarmingly high among quarry workers and lung functions were impaired with increased age and longer service in the industry which calls for urgent preventive measures.

Keywords: Granite worker, Respiratory conditions, Ventilatory functions

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Knowledge on complementary feeding and its associated factors among mothers of 12-month-old children in Jaffna district

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Background: Maternal knowledge on complementary feeding potentially have a critical influence on the quality of the nutritional intake infants receive from six months of age. The aim of the study is to assess the knowledge on complementary feeding and its associated factors among mothers of 12-month-old children in Jaffna district.

Methods: A cross-sectional study with an analytical component was done at Child Welfare Clinics (CWC) in Jaffna district with a sample size calculated using a statistical formula. Study population included 12-month-old baby-mother dyads. Cluster-sampling was done with a cluster being a CWC. An interviewer-administered questionnaire and a data-extraction-tool were used. Chi-squared test at 5% significance level was used with Odds Ratio and its confidence interval as the effect measure.

Results: The response rate was 82.7% with 418 baby-mother dyads being recruited. Majority of the mothers had good knowledge on starting complementary feeding at completion of 6 months of age (n=337; 80.6%), responsive feeding (n=361; 86.4%) recommended frequency (n=323; 77.3%), volume (n=394; 94.3%), and consistency (n=380; 90.9%) of the meals. Among mothers, 56.5% (n=236) had “knowledge score above mean”. Mothers’ lower educational status (OR=1.49; 95 CI%=1.01, 2.19) and being occupied (OR=1.63; 95% CI=1.05, 2.52) were significantly associated with a higher maternal knowledge.

Conclusions: The proportion of the sample with knowledge-deficiencies ranged from 10-25% for the five domains on complementary feeding. The relatively lower knowledge observed among working mothers and those with a higher education level must be explored with multivariable analysis in future research.

Keywords: Complementary feeding; knowledge on complementary feeding; Jaffna, IYCF recommendations; responsive feeding

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Prevalence and associated factors of low birth weight reported in private hospitals in Sri Lanka: A secondary data analysis

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Background: Low birthweight (LBW) is defined as a birth weight of less than 2500 grams, and it is a key determinant of perinatal mortality and morbidity. Evidence on the prevalence of LBW among newborns delivered in private hospitals in Sri Lanka is not widely available. Family Health Bureau (FHB) collects the data (eRH MIS2 system) on all deliveries occurring in Private hospitals from 2019. This paper analysed the secondary data collected by the eRH MIS2 system.

Methods: Complete data set available in the eRH MIS2 system on livebirths occurred in 21 private hospitals since 2019 was extracted and the entries without the birth weight were excluded. Entries of 42,739 live births were considered in the final analysis. Bivariate analysis followed by logistic regression analysis was performed to identify the associated factors.

Results: The mean birth weight of was 2973 g (SD=449) and the prevalence of LBW was 12.2% (95% CI=11.9, 12.5). Maternal mean age was 31.2 years (SD=4.5) and the percentage of Lower Segment Caesarean Sections performed (LSCS) was 76.3% (n=32,326). Antenatal haemoglobin level less than 10.9g/dL (adjusted odds ratio (AOR)=1.21; p=0.009), period of amenorrhea (POA) at the time of delivery less than 38 weeks (AOR=5.2; p<0.001), LSCS (AOR=1.1; p=0.025,) and female sex (AOR=1.32; p<0.001) were associated with LBW. Gestational diabetes mellitus (AOR=0.87; p=0.002) was inversely associated with LBW.

Conclusions: Important modifiable factors like the mode of delivery (LSCS), POA and maternal haemoglobin level are associated with LBW in the private sector. In order to prevent the stagnant LBW rates in the country, more focused primary research is required in all sectors to identify other related correctable factors.

Keywords: Low birth weight, Private hospitals, Live births, Deliveries

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Perception of primary caregivers on factors affecting home-based intervention for children with autism spectrum disorder attending tertiary care centers of Western Province

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Background: Home Based Intervention (HBI) is the mainstay of intervention for autism spectrum disorder (ASD) in Sri Lanka. This study analyses the facilitators, barriers, and associated factors of HBI, as perceived by the primary caregiver. Caregiver factors have been divided into two subdomains; family and living environment related factors.

Methods: A descriptive cross-sectional study was carried out among 103 primary caregivers of children under 6 years, diagnosed with ASD, attending outpatient clinics in three tertiary care hospitals in Western Province, Sri Lanka. An interviewer administered questionnaire was utilized. Student's t test at a 95% confidence interval was used to evaluate associations.

Results: Extended family support (n=102; 99.02%) and adequate living space (n=95; 92.23%) were the most significant facilitators. Distance from residence to clinic (n=71; 68.93%) was the most significant barrier. Use of public transport (n=40; 38.84%) and having other children (n=30; 29.12%) did not have a significant impact on HBI. Out of the sample, 27.18% (n=28) held full-time jobs, while 76.70% (n=79) had extended family support. The percentage of caregivers who lived more than 20kms away from the clinic was 74.76% (n=77). Significant associations were observed among population characteristics and perceptions such as extended family support and perception of full-time job (p=0.05) as well as distance to clinic and perception on extended family support (p=0.012).

Conclusions: Caregivers of children with ASD face many barriers. They will benefit from formal and informal support routes when providing HBI. Cohesion between service providers, administrators and policymakers would strengthen the delivery of services.

Keywords: Primary caregiver, Home Based Intervention, Autism Spectrum Disorder, Facilitators, Barriers

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Effectiveness of a social media-based intervention in improving health literacy

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Background: The prevalence of Limited Health Literacy (LHL) is defined as unsatisfactory level of capacity to obtain, process, understand and apply health information to make appropriate health decisions. The possibility of improving health literacy through social media has not been tested in Sri Lanka. This study assessed the effectiveness of social media-based intervention to improve health literacy among adults in Kalutara District.

Methods: Validated European Health Literacy Survey Questionnaire (HLS-EU-Q47) was used. The intervention was designed using the UK MRC framework and its effectiveness was assessed by a cluster randomized control trial. The intervention and the control groups were assigned to two separate Facebook groups. The intervention continued for nine months, and it was shared only in the intervention group. The General Health Literacy Index (GHLI) and the prevalence of LHL were the primary outcome measures. Several lifestyle related factors were used as secondary outcome measures. Each arm included 19 clusters. There were 266 and 269 participants in intervention and control arms respectively. The analysis was done using Generalized Estimating Equations.

Results: At the end, 259 and 255 participants remained in intervention and control arms respectively. There were no baseline differences between the two groups. GHLI was significantly ($p<0.001$) higher in the intervention group (31.79, SD=7.5) compared to the control group (29.81, SD=8.2) after the intervention. The prevalence of LHL was not significantly different. The habit of adding salt when cooking rice was significantly reduced ($p<0.001$) in the intervention group (32.3% $n=86$) than the control group (42% $n=113$).

Conclusions: Social media can be effectively used to improve health literacy and certain health related behaviours among adults.

Keywords: Health literacy, HLS-EU-Q47, social media, Facebook, Cluster randomized trial

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Trend of caesarean section rate in Sri Lanka: 2005 - 2021

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Background: The caesarean section (CS) rate continues to rise across the world. Although CS ensure health benefits as a mode of delivery, in certain situations it increases the morbidity and mortality, including the possibility of long-term health effects to both women and children, some of which are not fully understood. This study aimed to determine the trend of CS in Sri Lanka from 2005 to 2021.

Methods: Secondary data on the CS rate in each year reported at the national level was extracted from the publications of family health bureau, Ministry of Health, Sri Lanka. The trend was analysed by a join point regression model using the join point regression software version 5.0.1. Based on the final selected model the CS rate was forecasted to 2030 using the average annual percentage change of trend.

Results: The CS rate has almost doubled over the last 15 years from 22.8% in 2005 to 43.1% in 2021. There was a statistically significant rising trend with no join points with an average annual percentage change of 4.2% (95% CI=4.0, 4.4%; $p<0.001$). The forecasting revealed that the CS rate will be 63.1% (95% CI=63.0, 63.3%) by 2030.

Conclusions: According to the current trend, nearly two thirds of all births will occur through CS in Sri Lanka, by the year 2030. Monitoring CS rates, indications and outcomes are essential to ensure optimal use of CS to improve maternal and neonatal outcomes.

Keywords: Caesarean Section, Trend analysis, Sri Lanka

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Antenatal weight gain among pregnant women according to BMI trajectories in remote Sri Lanka

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Background: The recommended antenatal weight gain is crucial in each BMI category. Evidence supports the association of both excessive and inadequate antenatal weight gain with increased foetal and maternal complications. Inadequate knowledge and monitoring of this is observable in Sri Lanka. This study describes the antenatal weight gain according to BMI categories among women delivered in Teaching Hospital Anuradhapura, Sri Lanka

Methods: A hospital record based cross-sectional study among 676 pregnant women as a part of a long-term cohort was conducted. Data collected in January 2022 using a data extraction sheet were analysed descriptively and to find the correlation at 0.05 level of significance.

Results: The sample comprised mostly Sinhalese (90%) with mean age at conception, 27.9 years (SD=5.5) with 7.6% of teenage pregnancies and 89.6% having had education beyond grade 10. The mean BMI of the sample was 23.7 kg/m² (SD=5.0). The mean antenatal weight gain of the sample was 9.1 kg (SD=16.5; Range=-38.0, 60.0). Mean antenatal weight gain (expected range of weight gain) was as follows in each BMI category: Underweight: 24.57 kg (12.5-18.0), Normal weight: 15.32 kg (11.5-16.0), Overweight: 5.96 kg (7.0-11.5) and Obese: 1.81 kg (=<6.8 Kg). Assuming as a normal distribution, the calculated Pearson's correlation coefficient was -0.66 (p<0.001).

Conclusions: The majority had a mean antenatal weight gain within the recommended range and obese had a weight loss. Pre-pregnancy BMI and antenatal weight gain showed a negative correlation. Further studies will be needed on rigorous monitoring and individualized nutrition counselling for optimal weight gain in pregnancy.

Keywords: Antenatal weight gain, Pregnancy, obesity, overweight, BMI, Pre-pregnancy BMI, Nutrition

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Socio-demographic characteristics and clinical presentations of Leptospirosis cases and deaths reported in Galle district in 2022

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Background: High incidence of Leptospirosis in the Galle district warrants focused preventive programs, targeting high risk populations. This study intended to describe socio-demographic characteristics and clinical presentations of Leptospirosis cases and deaths reported in Galle District in 2022.

Methods: A descriptive analysis of all the "Leptospirosis special investigation forms" (LSIF) reported to RDHS Galle in 2022 was done. A data extraction sheet was prepared including appropriate variables. The area PHI is supposed to fill and submit LSIF following every confirmed case. A BSc Nursing Undergraduate collected data after obtaining administrative approval from RDHS.

Results: A total of 394 Leptospirosis cases were taken for the analysis. Mean age was 44.1 years (range=3-97; SD=17.9) and 87.1% of whom were males. Majority of the cases were manual laborers (27.4%) and farmers (25.2%). There were 11.9% of construction workers and 9.2% of students. However, 45.7% reported paddy fields as the possible source of contamination. Most of the cases were presented with fever (97.0%) and headache (89.1%). Myalgia was only present in 67.8% cases. Among the cases only 0.9% had prophylaxis. There were nine deaths and eight of them were males (88.9%) and four of them were manual laborers (44.4%). Mean age was 44.1 (SD=17.9) among these casualties.

Conclusions: Economically active males are at a higher risk of getting Leptospirosis while working in paddy fields was reported as the commonest source of contamination. High incidence was noted among manual laborers, farmers and construction workers. Fever, headache and myalgia are the commonest presenting complaints. However, protection given by the prophylaxis was evident. Mortality is high among males and manual laborers. Preventive programs should be focused on middle aged males and these high-risk occupational categories.

Keywords: Leptospirosis, high risk, occupations

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Risk factors of latent tuberculosis infection among health care workers of selected government hospitals in Colombo district, Sri Lanka

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Background: Management of Latent Tuberculosis Infection (LTBI) was implemented at national level among high-risk groups. Health Care Workers (HCWs) risk for LTBI has not been researched locally.

Methods: A case control study (CCS) was conducted in 2021. Cases to control ratio was 1:1 with 128 cases and 128 controls decided by formula for unmatched CCS based on odds ratios for known risk factors. The cases and controls were selected by a screening program conducted among HCWs of government hospitals in Colombo district during 2021, using Mantoux test. LTBI cases are defined as Mantoux positives ($\geq 10\text{mm}$) without a history of TB, immune-competent, excluded of Pulmonary TB. From the screened, cases and controls were randomly selected. Logistic regression was conducted using SPSS (version 25) to identify risk factors.

Results: The risk factors for LTBI among HCWs were age ≥ 40 years (adjusted odds ratio (AOR)=2.4; 95% CI=1.283, 4.474; $p=0.006$) duration of service ≥ 6 years (AOR=2.92; 95% CI=1.469, 5.821; $p=0.002$), not maintaining distance (AOR=2.83; 95% CI=1.432, 5.587; $p=0.003$) and not wearing face masks when dealing with suspected TB patients (AOR=3.55; 95% CI=1.804, 7.001; $P<0.0001$) and settings with inadequate TB infection control practices (AOR=3.47; 95% CI=1.854, 6.475; $p<0.0001$).

Conclusions: The study found personnel and occupation-related risk factors for LTBI among HCWs. We recommend training HCWs, provide adequate personal protective equipment, to improve infection control measures; to screen HCWs for LTBI initiating among ≥ 40 years of age or with a service duration ≥ 6 years.

Keywords: Latent Tuberculosis, Health Care Workers, Risk factors

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The burden of the treatment of Cutaneous Leishmaniasis (CL) in rural Sri Lanka

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Background: Cutaneous leishmaniasis (CL) is a neglected tropical disease with an arduous treatment process. This study aims to describe the burden associated with the treatment of CL in a rural community in Sri Lanka.

Methods: We conducted a multimethod qualitative study in the Anuradhapura district, Sri Lanka, from January 2021 to January 2022 comprising 1) an ethnographic study with two components; participant observation and an auto-ethnographic diary study with community co-researchers, 2) a qualitative study on people with CL using a Participant Experience Reflection Journal (PERJ) and Post-PERJ interviews. Data were thematically analysed.

Results: We identified five thematic areas; 1) The long, painful treatment process, 2) Fear of the side effects of treatment, 3) The burden of attending a government hospital clinic, 4) Treatment interfering with day-to-day life, 5) Relapses, resistance and suspicion about treatment and complete cure. The pain due to intra-lesion injections and fear due to the belief that the treatment causing bodily weakness and internal damage were significant. Attending the clinic caused distress and sadness. This was due to the long distance, crowded nature of the clinics, discrimination by healthcare workers, unavailability of transportation means, and cost. Treatment failure and relapses added to the treatment-related burden. The everyday life of people was affected economically and socially because of the nature of the treatment.

Conclusions: The treatment burden of CL is high, multifaceted, and unique in rural Sri Lanka. This will considerably impact the patient's adherence to treatment and treatment-seeking behaviours. These should be considered in developing public health interventions, new treatment modalities for CL, and designing clinical trials.

Keywords: Cutaneous Leishmaniasis, NTD, Treatment burden, Qualitative study

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Knowledge, attitudes and practices related to preventive measures for Leptospirosis among farmers in Pelmadulla Medical Officer of Health Area

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Background: Sri Lanka continues to have a high case burden of leptospirosis despite rigorous efforts in disseminating preventive messages. This study was done to describe the knowledge, attitudes, and practices on preventive measures among farmers in the Medical Officer of Health (MOH) area, Pelmadulla.

Methods: A descriptive cross-sectional study with a sample size of 436, applying a design effect of 1.3 for cluster sampling was conducted. A single farmer-community was considered as a cluster. Seven clusters out of 28 registered farmer-communities and required sample size of 65 per cluster from registered farmers were chosen applying systematic sampling. Data were collected using an interviewer-administered questionnaire. Knowledge, attitudes and practices were based on a scoring system which ranged from 0-10, 0-10 and 0-20 respectively; and the cut-off values of 7, 7 and 15 respectively, to determine satisfactory levels. Results were analysed as proportions and expressed as percentages with 95% confidence intervals.

Results: Response rate was 97% (n=426). The highest proportion (53.2%; n=227) was between 40-59 years of age. There was male preponderance (n=388; 91.1%). Majority (n=297; 69.7%) had secondary education. Proportions with satisfactory knowledge, attitudes and practices were 81.9% (95% CI=80.03, 83.77%; n=349), 72.8% (95% CI=70.64, 74.96%; n=310) and 16.4% (95% CI=14.61, 18.19; n=70), respectively.

Conclusions: Knowledge and attitudes on leptospirosis prevention were satisfactory among farmers, though practices were poor. Behavioural-modification focused awareness-programmes need to be planned to address the identified gaps.

Keywords: Leptospirosis; farmers; preventive practices on leptospirosis, knowledge on leptospirosis, attitudes on leptospirosis

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Patient pathways, outcomes at first contact point and the delays: a survey among TB patients attending District Chest Clinics in Sri Lanka

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Background: Timely diagnosis and treatment of TB patients is crucial. This largely depends on the treatment seeking behaviour and the diagnosis made at the first contact point. This study aimed at describing different care pathways of presumptive TB patients, outcomes at the first contact point and the delays caused.

Methods: A cross-sectional descriptive study was conducted among 880 new smear positive pulmonary TB patients attending all district chest clinics from September 2019 to February 2020. Patients were recruited on registration via consecutive sampling; data were collected using an interviewer administered questionnaire and a checklist; and the results were presented as proportions, median and inter quartile range (IQR).

Results: Response rate was 93% (n=743). Median age (IQR) of the study participants was 51 (25) years, two thirds (n=507; 68.4%) were males. Majority (n=676; 91%) had cough as the first symptom, chosen government sector (n=455; 61.2%) as the first contact point. When it comes to provider, majority has selected part time private practitioners as the first contact point (n=203; 27.3%). At initial contact, 40.5% (n=301) was given symptomatic treatment without investigations, 21.2% (n=158) was admitted for inward care, 18.3% (n=136) was investigated as outpatient, and 11.9% (n=86) was referred to other healthcare institutions. Proportion of patients diagnosed at the first contact point was 44.2% (n=329). Median patient delay (IQR) was 21 (16) days while it was 7 (9) and 14 (23) days for the government and private sector respectively.

Conclusions: Diagnosis of presumptive TB patients at first contact point is not satisfactory. Empowerment of primary care providers on TB diagnosis is needed.

Keywords: Tuberculosis, Patient pathways, TB diagnosis

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COVID-19 vaccine acceptance, adverse events and perception about vaccination programme: experience of older adults residing in a selected medical officer of health area of Colombo Municipal Council

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Background: COVID-19 vaccination targeted vulnerable groups including older adults (persons aged 60 years and above). This study aimed to describe COVID-19 vaccine acceptance, adverse events and perception of vaccination programme among older adults living in Colombo Municipal Council (CMC) area.

Methods: A descriptive cross-sectional study was conducted among 512 older adults in the district 5 of CMC recruited through a systematic sampling technique. A pretested interviewer administered questionnaire was used to collect data, analysed and presented as frequencies.

Results: The response rate was 95% (n=487). Vaccine acceptance (receipt of all three vaccine doses) was 90.8% (n=442). Of all recipients (n=487), 52.6% (n=256) experienced one or more adverse events following immunization. Of the total events (n=948), 35.3% (n=355) was reported after the first dose, and 51.6% (n=490) was injection site pain. Of the recipients, 10.7% (n=52) experienced either COVID-19 or COVID like symptoms after vaccination, 86.6% of them (n=44) following the second dose. Majority (41%; n=198) waited one to two hours to receive the first dose, but 30 minutes to one hour for the second dose (52.7%, n=252) and the third dose (60%, n=264). Around 81.7% (n=398) and 71% (n=337) did not get a chance to clarify their doubts after the first and second doses, respectively, but 51.5% (n=228) had the chance after booster dose. After the first dose, 49.7% (n=242) was observed for 20 minutes, this increased up to 55.8% (n=267) after the second and 72% (n=318) after the booster doses.

Conclusions: COVID-19 vaccine acceptance among older adults was good, reported minor adverse events, and the campaign quality improved with time.

Keywords: vaccine acceptance, side effects

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POSTER PRESENTATIONS RESEARCH

Knowledge, attitudes, practises and associated factors related to non-communicable diseases among army personnel presenting for the medical examination at the Army Base Hospital - Panagoda

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Background: Non-communicable diseases (NCDs) are chronic debilitating diseases. This study assessed the knowledge, attitudes, practices related to NCDs and their associated factors among army personnel presenting for the medical examination at Army Base Hospital Panagoda.

Methods: A hospital-based descriptive cross-sectional study was conducted among 422 commissioned officers and other rankers in active service, excluding all medical corps and >55 years professionals, using probability proportionate sampling. A self-administered questionnaire was used; blood pressure, height, weight, fasting blood sugar and total cholesterol values were assessed. Associations were determined using chi square test, at $p < 0.05$ significance level.

Results: Response rate was 100%. Of the study participants, 71.8% had poor knowledge, 74.8% unfavourable attitudes and 71.5% poor practices related to NCDs. Of them, 17% were already diagnosed with NCDs; and 1.2% were hypertensive, 25.1% overweight/obese, 4.3% hyperglycaemic and 51.7% had hyperlipidaemia. Although not statistically significant, age >35 years (75.3%), males (76%), lower educational level (78.6%) and higher monthly income (79.3%), Officers (76.4%), >5 years of service (75.1%), <2years operational areas service (75.5%), no battle injuries/disability (75.1%) and living out of the camp (76.7%) influenced poor practices on NCDs. There was no significant association with poor knowledge (74.2%) or unfavourable attitudes (73.2%) with practices on NCDs.

Conclusions: The knowledge, attitudes and practices related to NCDs were poor among the Army personnel although the socio-demographic factors, service-related factors, poor knowledge and attitudes on NCDs were not significantly associated with the practices of NCDs. Implementation of health education promotion programmes among army personnel are recommended.

Keywords: Non-communicable diseases, knowledge, attitudes, practices, army personnel, Sri Lanka

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Audit on Public Health Midwives' Knowledge on developmental assessment in Mahara Medical Officer of Health Area

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Background: Age-appropriate development is essential for a child. It predicts child's learning capacity, academic performance, economic success, relationships and social participation. Developmental assessment is an integral component in providing early childhood care development (ECCD) by public health midwives (PHM), as grass root level workers of public health system of Sri Lanka. The aim of this audit was to assess the knowledge on developmental assessment among PHMM in Mahara MOH area.

Methods: Sinhala versions of ECCD Handbook and standards for Sri Lankan infants and toddlers published by Family Health Bureau for primary care givers in 2014 & 2013 were used as audit standards. A self-administered 65 true-false type questions extracted from aforementioned resources was given to all PHM (n=52) participated at in-service training.

Results: The response rate was 80% (N=41). The mean and median score for overall knowledge on developmental assessment were 63.7% (SD=8.4); 65.2% (IQR=10.3%), respectively. The mean and median for knowledge on basic anatomy and assessment on primary reflexes were 49.8% (SD=15.3) and 54.5% (IQR=27.2); gross-motor 67.8% (SD=11.2) and 67.4% (IQR=11.7); fine-motor 68.4% (SD=13.2) and 73.6% (IQR=15.8); vision 73.1% (SD=12.7) and 75% (IQR=16.7); hearing 62.4% (SD=13.5) and 60% (IQR=40); speech 72.5% (SD=17.3) and 75% (IQR=18.7); behaviour 76% (SD=16.4) and 77.7% (IQR=25); food manners 72.4% (SD=15.1) and 71.4% (IQR=28.6); grooming 69.3% (SD=19.3) and 71.4% (IQR=28.6); toilet habits 63.4% (SD=24.4) and 75% (IQR=25); and knowledge on cut-off ages on achieving milestones was 32.9% (SD=14.5) and 31.8% (IQR=13.7), respectively. None has responded to the question on handedness/hand preference.

Conclusions: PHMM's overall knowledge on developmental assessment was above average. However, understanding on specific areas like cut off ages on achieving milestones needs improvement. A capacity building programme and a reaudit would improve the quality-of-service provision by PHMM.

Keywords: Audit, Public Health Midwife, Knowledge, Developmental Assessment

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Knowledge on waste management among female householders in medical officer of health, Millaniya

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Background: Waste is identified as a major public health problem. Knowledge on waste management is important in taking decisions with regard to planning. The study aims to describe the knowledge on waste management and associated factors among female householders in the Medical Officer of Health (MOH), Millaniya.

Methods: A descriptive cross-sectional study was conducted among 428 female households in Millaniya MOH Area. Thirty clusters were selected as used the WHO EPI coverage survey. Knowledge was assessed by using a pre tested interviewer administered questionnaire. Each correct response was given one mark and incorrect response was given zero mark. Median knowledge score was taken as cut off value.

Results: Median knowledge score was 77% (SD=13.44). Only 14.1% answered correctly as reduced waste generation which is the best method of waste management. Majority 84.2% (352/418) believed that waste can generate money, 86.4% (361/418) knew that burning of waste at household was harmful to human, 59.3% (248/418) thought that bathroom and kitchen waste water can be disposed directly to external environment, 99% believe that improper disposal of waste increases dengue breeding places, 12.7% that polythene and plastic can be used to generate fire for cooking. There was a significant association between knowledge level and younger age. those educated more than ordinary level, and higher education level of spouse ($p<0.05$). There was statistically significant association between knowledge and good practice($p<0.05$).

Conclusions: It is necessary to improve the knowledge on reduce, reuse and recycle which was found inadequate.

Keywords: knowledge, waste management, female households

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Cybersex behaviours and risk of addiction among adult internet users in Sri Lanka

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Background: Internet sex (IS) behaviours had become more prevalent as the internet could provide a 'safe' environment for sexual exploration with less social and physical danger than real-life activities. Aim of this study was to describe cybersex (CS) behaviours, its addiction (CSA) risk and associated factors.

Methods: A descriptive cross-sectional online study was conducted using a pretested self-administered questionnaire with culturally adapted Internet sex screening test (ISST) with valid cut-off to categorize as at low, moderate & high risk, among 460 adult internet users in Sri Lanka using snowball sampling. Data were analysed with descriptive statistics and binary logistic regression. Ethical clearance was obtained from ERC, Faculty of Medicine, Colombo.

Results: The response rate was 78% (n=357). Among the respondents, median age was 38.0 years (IQR=8.0) and majority were males (60.2%; n=215), Sinhalese (88.0%; n=314), Buddhist (80.4%; n=267) and with postgraduate qualifications (48.7%; n=174). Among the respondents, 14.6% (n=52) had moderate-high-risk of CSA with 13.7% (n=49) IS interfered with their life, 18.5% (n=66) made promises to self to stop IS, 8.7% (n=31) felt anxious or angry when unable to access IS, 8.4% (n=30) had self-punishment for using internet for sexual purposes, 8.7% (n=31) had self-belief as an IS addict, 18.5% (n=66) participated at sexually related chats, 35.3% (n=126) masturbated while on the internet and 9.8% (n=35) spent >5 hours per week for IS. Being at moderate-high risk of CSA was significantly (p<0.05) associated with gender, online duration, smoking and use of telegram-application.

Conclusions: There is a considerable percentage at risk of CSA with potential to be a public health issue.

Keyword: Cybersex behaviours, Cybersex addiction, Internet-sex, Sri Lanka, associated factors.

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Hazardous healthcare waste management practices in selected government hospitals in Regional Director of Health Services Area, Ampara and factors associated

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Background: Waste generated by healthcare facilities and any healthcare procedures is named healthcare waste. Hazardous healthcare wastes are 10-25% of all healthcare waste. Minimizing waste generation, segregation, collection, transportation, storage, treatment, and disposal are the key steps in healthcare waste management. This study was conducted to describe hazardous healthcare waste management practices in government hospitals in the Regional Health Service area, Ampara and factors associated.

Methods: A cross-sectional study was conducted in 26 secondary and primary care hospitals in the Regional Health Service area, Ampara. All 26 heads of the institutions and 581 healthcare workers in the hospitals were recruited for the study. An observational checklist and self-administered questionnaires were used for data collection. Relative frequencies and mean scores were used for descriptive analysis. Significant associations were assessed by the chi-square test and Fisher's exact test.

Results: The study recorded a 100% (n=26) response rate for the head of the institutions and a 94.3% (n= 548) response rate for healthcare workers. Healthcare waste management status of the hospitals was significantly associated with the availability of a healthcare waste management plan in the hospital (p=0.018), availability of a focal point on healthcare waste management activities (p=0.031), availability of a mechanism for regular staff training (p=0.046) and attitudes of healthcare workers (p=0.034).

Conclusions: Developing healthcare waste management plans, nominating a focal point, establishing a regular training mechanism, allocating a separate budget, and establishing healthcare waste management committees in hospitals were recommended.

Keywords: Hazardous waste, Generation pattern, Healthcare waste management, Government hospitals

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Development and validation of Quality of Work Life Scale – Elderly Worker

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Background: Quality of work life (QoWL) is the employee satisfaction on personal and working needs through participating in the work while achieving the goals of the organisation. In Sri Lanka the elder's participation in the labour force is 26% of the total labour force. Improving the QoWL will increase the psychological well-being of the elderly workers leading to a healthy ageing. Since there is no elderly specific QoWL measuring tools available a tool was developed and validate to assess the QoWL among the elderly working population in Sri Lanka.

Methods: Elderly worker and QoWL of elderly worker definitions were operationalized. Items generated from literature review, key informants and in-depth interviews. After item reduction the draft QoWL tool was formulated, translated into Sinhala and pretested. Principal Component Analysis done among 275 elderly workers by using the Statistical Package for Social Science (SPSS) version 21. Face, content and consensual validity assessed. Construct validity study done among 250 elderly workers was assessed by confirmatory Factor Analysis using Lisrel 8.8. Multi stage purposive sampling used to select study participants. Reliability assessed through internal consistency and test retest.

Results: The newly developed QoWLS -E tool consisted of 35 items with 9 domains. The domains are physical health, psychological, facility, safety, Job content, Co-worker, supervisor, flexibility, autonomy. Model fit indices showed satisfactory values (CFI=0.96; PGFI=0.51; PNFI=0.58). Cronbach's alpha coefficient value is 0.76 and overall correlation coefficient is 0.82

Conclusions: The QoWLS-E is a valid and reliable instrument to measure QoWL of elderly workers.

Keywords: Quality of Work Life, Elderly worker

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Prevalence of Quality of Work Life and associated factors among the elderly workers in a selected district of Sri Lanka

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Background: With rising elderly population, work engagement by the elders is inevitable. The quality of work life (QoWL) of elderly workers becomes an important concept to be assessed and improved. The objective of this study was to assess the QoWL and its associated factors among elderly workers in Gampaha district in Sri Lanka.

Methods: A community-based cross-sectional study was conducted among 835 elderly workers selected from Gampaha district in Sri Lanka using multistage cluster sampling where a Grama Niladhari division was considered as a cluster. Elderly worker definition was operationalized with consensus of experts. QoWL was assessed using a “Quality of Work Life Scale – Elderly Worker” newly developed and validated tool and associated factors were assessed through interviewer-administered questionnaire. QoWL score was dichotomized in to ‘good’ and ‘poor’ using pre-determined cut offs and associated factors were determined using Chi-square test followed by binary logistic regression.

Results: The prevalence of good QoWL among the elderly workers was 32.1% (95% CI=29.0, 35.3). Earning more than LKR 30,000 per month (adjusted odds ratio (AOR)=2.1; 95% CI=1.42, 3.12; p<0.001) was a personal factor positively associated with good QoWL however, spending on own food (AOR=0.16; 95% CI=0.07, 0.38; p<0.001) and having arthritis (AOR=0.65; 95% CI=0.43, 0.98; p=0.04) were negatively associated. Of the work-related factors, being employed before 60 years (AOR=1.12; 95% CI=1.04, 1.2; p<0.001) was positively associated, while experiencing work-related accidents (AOR=0.39; 95% CI=0.21, 0.74; p<0.001) was negatively associated with good QoWL. Out of the psycho-social factors, having adequate social support (AOR=1.76; 95% CI=1.05, 2.96; p=0.03) were positively associated with good QoWL.

Conclusions: QoWL was low among the elderly workers and was associated with multiple factors. These factors should be considered when developing elderly-friendly work settings.

Keywords: Quality of Work Life

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Attitude and compliance towards COVID-19 vaccination among nursing officers in a selected hospital in Sri Lanka

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Background: Despite being a priority target group, COVID-19 vaccination was low among Asian nurses and less explored in Sri Lanka. This study aimed to describe the attitude and compliance towards COVID-19 vaccine among nurses in a government hospital in Sri Lanka.

Methods: A descriptive cross-sectional study was conducted in January 2022 among 415 nursing officers selected using stratified sampling in District General Hospital Matara. Data was collected using a pre-tested, self-administered questionnaire. Uptake of first two doses and one booster dose of COVID-19 vaccine was considered full compliance. The attitude score was calculated through 12 statements using a five-point Likert scale. The non-favourable attitude was categorized using Bloom's cut-off (<60%). The association was calculated using chi-square test and $p < 0.05$ considered statistically significant. The odds ratio was calculated with a 95% confidence interval (CI).

Results: The response rate was 91.1% (378/415). The median age was 41 years (IQR=37-48 years) with a female majority ($n=355$; 93.9%). Most ($n=196$; 51.8%) reported full compliance. The attitude score ranged from 36.7% to 88.3% with a mean score of 65.8% (SD=7.3%). A non-favourable attitude was noted among 18.3% ($n=69$). Only 31.5% ($n=119$) had stated vaccine trial data was adequate and 28.3% ($n=107$) were willing to accept a fourth dose. Though nurses with non-favourable attitude were less likely to be fully compliant, this association was not statistically significant (OR=0.6; 95% CI=0.4, 1.1; $p=0.07$).

Conclusions: A gap in COVID-19 vaccine compliance was present among study participants. Concerns on vaccine trials and booster doses are recommended to be targeted in future vaccination programs.

Keywords: COVID-19 vaccine, attitude, compliance, nurses

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Exploring associations of risk factors not included in the cardiovascular disease risk prediction models: a Sri Lankan study

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Background: Framingham Risk Score and WHO/ISH are methods used to predict an individual's 10 year risk of developing cardiovascular disease (CVD). Other factors known to cause CVD such as BMI, family history of CVD, physical activity levels, dietary patterns and psychosocial index are not included in the prediction methods. The objective of this study was to explore associations of risk factors that are not included in the risk prediction models for predicted CVD risk among an adult population of Kurunegala district, Sri Lanka.

Methods: A cross-sectional study was carried out among adults of Kurunegala district to calculate CVD risk with WHO ISH and Framingham risk scores. Association of risk factors not included in the risk prediction models were explored.

Results: Antihypertensive medication (adjusted odds ratio (AOR)=1.97; 95% CI=1.05, 3.68), inadequate daily fruit consumption (AOR=3.09; 95% CI=1.42, 6.7) and high triglycerides (AOR=1.83; 95% CI=1.03, 3.42) were significantly associated with high-risk individuals by WHO-cholesterol method. Inadequate fruit consumption (AOR=1.578; 95% CI=1.22, 1.94) and high triglyceride levels (AOR=1.709; 95% CI=1.217, 2.399) were associated with high-risk individuals by Original Framingham CVD risk score. High risk predicted by recalibrated Framingham CVD risk equation was associated with triglyceride levels (AOR=1.51; 95% CI=1.01, 2.24), inadequate vegetable consumption (AOR=1.697; 95% CI=1.491, 1.91) and high waist circumference (AOR=1.355; 95% CI=1.149, 1.559).

Conclusions: Inability of CVD risk prediction methods to represent some CVD risk factors might imply deficiencies in the risk scores.

Keywords: Non communicable diseases, Cardio vascular risk, CVD risk prediction models

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The COVID-19 pandemic was pushing the rural households with pregnant and postpartum women into poverty in Sri Lanka

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Background: This study aimed to find the impact of the COVID-19 pandemic on the household economies of pregnant and postpartum women in rural Sri Lanka

Methods: This cross-sectional study was conducted among the women registered for the Rajarata Pregnancy Cohort in the Anuradhapura district, Sri Lanka. Household economic and health service utilization details during the COVID-19 pandemic were gathered through telephone interviews. Household financial data during the pandemic were compared with the baseline data and tested whether families were pushed under the poverty line during the pandemic.

Results: A total of 1,460 women participated in this study. The monthly household income was reduced (median (IQR)=159.29 (106.20-212.39)) in 50.5% (n=592) families during the pandemic ($Z=-8.555$; $p<0.001$). Only 10.3% (n=61) of the affected families had received financial assistance, and it was only 46.4% of the affected income. The nutritional expenditure of pregnant women was reduced ($Z=-2.023$; $p=0.043$) by 6.7%. During the pandemic, 103 (8.8%) families were pushed into poverty. Of the total sample, 7.9% (n=104) and 3.0% (n=40) of pregnant and postpartum women reported missing clinics [median (IQR)=1 (1-2)] due to the COVID-19 pandemic. Most women (n=1096; 83.3%) were satisfied with the services provided by the public health midwife.

Conclusions: During the early stages of the pandemic, healthcare utilization of pregnant women was minimally affected. The household economies of pregnant women in rural Sri Lanka were adversely affected, pushing families into poverty due to the pandemic. The impact of COVID-19 and the aftermath on pregnant women will have many consequences if the policies and strategies are not revised to address this issue.

Keywords: COVID-19 pandemic, Health services, Poverty, Pregnant women

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Key epidemiological parameters of Chickenpox in Colombo district, Sri Lanka

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Background: Varicella, also known as chickenpox, is caused by the varicella-zoster virus. While this infection typically provides lifelong immunity, it can become dormant in the central nervous system and later can result in a painful condition called herpes-zoster. Sri Lanka reports 5,000-7,000 chickenpox cases annually, with a clear seasonality from February to April. It is important to understand the disease dynamics in order to inform vaccine strategies, despite the availability of effective vaccines. This study aims to estimate the key varicella epidemiological parameters in Sri Lanka using data from a 2013 serosurvey conducted in the Colombo district.

Methods: The annual force-of-infection, and the average age at infection were determined using a catalytic model. The basic and effective reproduction numbers were estimated using next generation matrix method. Population was divided to young (0-19 years), adults (20-39 years) and elders (40+ years).

Results: Only 0.8% had a prior vaccination against chickenpox. The annual force-of-infection was estimated to be 2.81% (95% CI=2.6, 3.05), with age-specific annual force-of-infections of 1.32% (95% CI=1.06, 1.62), 3.74% (95% CI=3.1, 4.45) and 1.12% (95% CI=0.53, 1.73) among three distinct age groups. The estimated mean age at infection was 33.1 years. The estimated basic and effective reproduction numbers were 5.73 and 2.53. A Susceptible-Exposed-Infected-Recovered model suggests chickenpox prevalence in the Colombo district was 14.5 per 100,000 population amounting to 17,467 annual new caseload. Only one case out of 35 cases had been reported.

Conclusions: The estimated parameters provide chickenpox's pre-vaccine endemic state epidemiology in the Colombo district. It is recommended that a nationwide serosurvey be conducted to obtain more robust epidemiological parameters of chickenpox in Sri Lanka to track the disease dynamics.

Keywords: Varicella, Chickenpox, Force of infection, Basic reproduction number, Next generation matrix

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Effectiveness of a multimodal intervention in promoting physical activity among sedentary elderly population in socially and economically constrained settings in Puducherry, South India - A quasi-experimental study

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Background: Regular physical activities help to improve overall health and well-being of elderly and delay complications of chronic illnesses. The objective of this study was to evaluate the effectiveness of a multimodal intervention on their level of physical activity and determine effectiveness of peer support in ensuring compliance among sedentary elderly living in socially and economically constrained settings in Puducherry.

Methods: This three-arm quasi-experimental study was conducted among elderly individuals aged sixty or above. Screening initially was done using International Physical Activity Questionnaire and those with low physical activity/ sedentary were enrolled. Informed written consent was sought from all subjects. The participants were assigned to three arms namely, E1, E2 (intervention arms) & C (control arm) and 32 individuals included in each. Both E1 & E2 received a multi-modal intervention which comprised of an interactive health education session, simple yoga exercises, and the distribution of pictorial pamphlets. Only E1 was instructed to do the exercises with an “exercise partner” while E2 was instructed to do the same by themselves. Number of the days of physical activity per week and duration of physical activity per day were assessed in each arm and comparison was done using one-way ANOVA test.

Results: The mean number of days of physical activity per week post intervention in E1, E2, and C are 3.73 (SD=1.17), 3.05 (SD=1.32) and 2.31 (SD=1.20), respectively with statistically significant improvement ($p < 0.05$) in E1.

Conclusions: The multi-modal intervention was found to be effective. Having an exercise partner is a good strategy for ensuring compliance.

Keywords: Multi-modal intervention, Quasi-experimental study, Physical activity, Sedentary, Elderly.

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Road Rage and its association with occupational stress among bus drivers in government owned transport service in Sri Lanka

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Background: Road rage is defined as “a violent anger caused mainly by the stress and frustration of driving in heavy traffic”. It can cause road traffic accidents and lose lives. The objective of this study was to assess prevalence of Road Rage and its association with occupational stress.

Methods: A cross-sectional analytical study was conducted among twelve government owned bus depots in Colombo. Bus drivers of 631 were recruited through simple random sampling method. Self-administered questionnaire on “Road Rage” was used to detect the prevalence of Road Rage. Frequency distribution was denoted by percentages. Prevalence of job stress was measured by the Effort-Reward Imbalance questionnaire. Association between Road Rage and occupational stress was assessed by univariate analysis. Chi square test was used and p value set at <0.05. Odds ratio (OR) was calculated.

Results: The response rate was 99.8%. (n=630). All participants were males. A proportion of 52.1% (n=328; 95% CI=52.6, 51.6) were perpetrators of road rage. Prevalence of occupational stress was 52.1% (95% CI=50.7, 53.6). A number of 326 (99.39%) who experienced occupational stress had road rage. Likelihood of having occupational stress among road rage perpetrators were 16 times higher than their counterparts. It is of statistical significance (p<0.001).

Conclusions: Road rage among bus drivers was a trend and it has an effect on their work-related stress.

Keywords: Road rage, job strain, road traffic accidents

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Are mothers satisfied about developmental screening and early childhood stimulation services?

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Background: Maternal knowledge and satisfaction on child development and related services reflects psychosocial potentials of forthcoming generation of a country. The objective of this study was to determine the levels of knowledge and satisfaction on early childhood development screening, psychosocial stimulation, and related public health services among mothers in the Damana Medical Officer of Health area and factors associated.

Methods: A descriptive cross-sectional study was conducted among mothers of children aged 4, 6, 9, 12, 18 and 36 months attending poly clinics in Damana MOH area. By using consecutive sampling method, 311 mothers fulfilling the eligibility criteria were recruited to complete the sample. A structured and pre-tested interviewer administered questionnaire was used.

Results: Majority (78.5%; 95% CI=74.0, 83.0; n=244) of mothers had a good level of knowledge on child development milestones. Only 56.3% (95% CI=51.0, 62.0; n=175) mothers had a good knowledge level on psychosocial stimulations (95% CI=0.51, 0.62). However, poor level of knowledge on overall child developmental screening was noted among 87.1% (95% CI=83.0, 90.0; n=271) mothers. Additionally, 58.8% (95% CI=53.0, 64.0; n=183) mothers reported a poor knowledge level on available child developmental services in the area. Overall satisfaction on services was reported by 98.4% (95% CI=96.0, 99.0; n=306) mothers. Being educated beyond O/L has shown a significant association with good level of knowledge in psychosocial stimulation ($p=0.017$). Mothers who were employed had a significant association with good level of knowledge on psychosocial stimulation ($p=0.03$).

Conclusions: Even though poor level of knowledge on available services and developmental screening was identified by this study, mothers were satisfied with the services by public health staff on ECCD. Thus, further studies are needed to assess discrepancies in maternal perceptions on services and the actual quality of care they received.

Key words: Early Childhood Development, developmental screening, psychosocial stimulation, maternal knowledge and satisfaction

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Factors associated with knowledge, attitudes, practices on road safety among school-going adolescents in suburbs of Colombo District

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Background: Road safety is salient with escalating road networking led by global development. Annually around 1.35 million premature deaths caused by RTA, accounting for majority of adolescents' deaths. School is an appropriate setting for identifying existing knowledge, attitudes, practices on road safety, and gaps, to plan programs to prevent RTAs.

Methods: A cross-sectional descriptive study was conducted among 600 grade 10 students in educational division Homagama, with the aim of determining factors associated with knowledge, attitudes, practices on road safety. Multistage stratified cluster sampling was used. Data collection was done using a self-administered questionnaire developed by principal investigator. Associations between selected factors and knowledge, attitudes, practices were tested using Chi-squared test.

Results: The study revealed overall good knowledge on road safety among 68% of study participants, positive attitude among 61%, and good practices among 51.7% of study participants. Sex was significantly associated with knowledge on road safety ($\chi^2=6.758$; $p=0.009$) among grade 10 students. Monthly family income ($\chi^2=21.327$; $p<0.001$) and previous exposure to RTA ($\chi^2=5.186$; $p=0.023$) were significantly associated with attitudes on road safety. Sex ($\chi^2=39.019$; $p<0.001$), parental educational level ($\chi^2=7.442$; $p=0.006$) and presence of safety infrastructure ($\chi^2=9.648$; $p=0.008$) were significantly associated with practices on road safety.

Conclusions: Despite overall positive attitudes, there were deficient areas. The researcher recommends continuous school-based teaching, focusing on deficient areas and further analytical studies with objective assessment of variables.

Key words: Road safety, knowledge, attitudes, practices, factors

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One size does not fit all: Perception towards reintegration and service needs of returnee migrant workers in the Kurunegala District

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Background: Upon their return, temporary migrant workers largely remain invisible and undervalued for their contribution to society, with Sri Lanka being no exception. Reduced vulnerability of returnee migrant workers through addressing their service needs are less-researched yet, a profound necessity to raise their levels of resilience for facing reintegration stressors. Accordingly, this study aims to explore perceptions towards reintegration and service needs of returnee migrant workers.

Methods: This qualitative study utilized Focus Group Discussions (FGDs) among both male and female returnee Middle-East migrant workers employed under heterogeneous manpower levels and their family members residing in the Kurunegala District. A pre-tested semi-structured moderator was used for data collection. A total of six FGDs among 51 respondents was conducted to reach data saturation and Thematic analysis was done.

Results: Sub-themes emerged under the main theme perception towards reintegration were: reintegration is an essential stage of temporary migration, active process, time-bound process, migrant-friendly reintegration assistance programmes, and mechanisms to address access barriers. Service needs emerged include the necessity of a migrant-friendly health system because: health is an essential dimension of reintegration; migrant workers are more vulnerable, responsiveness to migrant health needs, and inclusion of returnees into the primary healthcare system. Other service needs include access to job-oriented vocational training, children's education, justice and rule of law.

Conclusions: Reintegration is an essential component of the labour migration cycle, and returnees have many unmet service needs. Enhancing health system responsiveness to returnees' needs and access to migrant-friendly public services are essential to make fair make sustainable reintegration a reality.

Keywords: Reintegration, Returnee migrant workers, temporary migration, service needs

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Healthcare system response in Cutaneous Leishmaniasis patient journey in rural Sri Lanka: patient and healthcare worker perspectives

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Background: Healthcare system response at different stages of the patient's journey is important for managing neglected tropical diseases. We explored patients' and healthcare workers' perspectives to identify the characteristics, factors and implications of the healthcare system response at different stages of the patient journey of cutaneous leishmaniasis (CL) in Anuradhapura, Sri Lanka.

Methods: We conducted a qualitative study using self-reported patient experience reflection journals and post-journal interviews with CL patients, and in-depth interviews with healthcare workers. We conducted thematic analysis on journals and interview transcripts.

Results: Thirty CL patients and 13 healthcare workers participated in the study. We identified four major themes pertaining to healthcare system response at different stages in CL patient journey: 1) Challenges in diagnosis, 2) Treatment unavailability at peripheries, 3) Favourable compliance and 4) Decision of treatment cessation. While patients described instances of early clinical suspicion and misdiagnosis of CL, healthcare workers mentioned that their knowledge and experience, overcrowding of out-patient departments, patients' dissatisfaction with referral, availability, and enthusiasm of medical staff in training can affect early diagnosis. Although patients face many difficulties in accessing treatment, healthcare workers mentioned that treating CL need expertise and emergency care, which are unavailable in peripheries. Medical advice, supportive nature of healthcare staff, belief in complete cure, and fear of severe health consequences have increased CL treatment compliance. According to healthcare workers, treatment completion is decided with the expertise, yet some patients were doubtful at treatment cessation.

Conclusions: CL-related healthcare system response can be optimized to improve CL patient journey in rural Sri Lanka.

Keywords: neglected tropical diseases, healthcare system, misdiagnosis, treatment compliance, qualitative research, Sri Lanka

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Knowledge, attitudes and practices on household waste management among women attending clinics in Bope-Poddala Medical Officer of Health Area

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Background: Improper disposal of household waste led to hazardous health outcomes. Practicing proper waste management at household level is essential to overcome these health hazards. This study aimed to assess the knowledge, attitudes and practices on household waste management among women attending clinics in Bope-Poddala Medical Officer of Health (MOH) area.

Methods: A cross-sectional study was conducted among 384 women attending clinics in Bope-Poddala MOH area using a self-administered questionnaire. Knowledge, attitudes and practices on waste disposal were assessed using three sets of questions with a scoring system. Cut-off scores (determined based on expert opinion) were used to define good knowledge, attitudes and practices.

Results: Majority of the participants (65.1%) were below 40 years of age. Knowledge on household waste management was poor among 61.2% and most (53.3%) showed poor attitudes. In contrast, 74.7% showed a satisfactory level of practices. A good knowledge on household waste management was associated with being unemployed ($p<0.05$) and peri urban residential area ($p<0.05$). A good attitude on waste management was associated with rural residential area ($p<0.001$), living in the area for longer duration ($p<0.001$) and having ownership of the house ($p<0.05$). Proper waste management practices were associated with younger age ($p<0.05$), rural residential area ($p<0.05$) and longer duration of living there ($p<0.05$). There was a strong association between knowledge and attitude of waste management ($p<0.001$), and the attitude and practices ($p<0.001$).

Conclusions: The knowledge and attitudes on waste management needs further improvement, indicating the necessity of targeted efforts to create awareness and establish sustainable waste management at household level.

Keywords: household waste management, women attending clinics, knowledge, attitudes, practices

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Prevalence of behavioural risk factors for non-communicable diseases and their associated factors among returnee Middle-East migrant workers in the Kurunegala District

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Background: Non-Communicable Diseases (NCDs) show a rising trend among South Asian migrant populations, and the scarcity of evidence on Behavioural Risk Factors (BRFs) for NCDs among the Sri Lankan migrant population is a perceived evidence gap. The objective of the study was to describe prevalence of BRFs for NCDs and associated factors among returnee Middle-East migrant workers.

Methods: This community-based, cross-sectional study was conducted among 680 returnee Middle-East migrant workers in the Kurunegala District, selected using multi-staged cluster sampling. A pretested interviewer-administered-questionnaire was utilized for the data collection.

Results: Response rate was 94.4% (n=642). Estimated prevalence of BRFs: daily smoking 12.3% (95% CI=9.8, 15.1), current use of alcohol 8.8%; 95% CI=6.8, 11.3), inadequate consumption of fruits and vegetables 89.3% (95% CI=86.6, 91.6), inadequate physical activity 31.4% (95% CI=27.8, 35.2). The associations for BRFs with socio-economic and migration-related characteristics were: For daily smoking- period since return below 3 years (adjusted odds ratio (AOR)=5.0; 95% CI=1.5, 16.2) and having accumulated savings (AOR=3.5; 95% CI=1.6, 7.9); For current alcohol use- being male (AOR=36.0; 95% CI=10.6, 122.7) and educated up to grade 11 or below (AOR=2.5; 95% CI=1.3, 4.7); For inadequate consumption of fruits and vegetables- having a household income below LKR 50,000 (AOR=4.4; 95% CI=2.2, 8.5) and having accumulated savings (AOR=0.4; 95% CI=0.2, 0.8); For physical inactivity- being male (AOR=0.2; 95% CI=0.1, 0.4), being a skilled-semiskilled employee in Middle-East (AOR=0.4; 95% CI=0.3, 0.7) and having chronic diseases/disabilities (AOR=1.9; 95% CI=1.2, 3.0).

Conclusions: Socio-economic and migration-related characteristics of returnee migrant workers were associated with the BRF for NCDs. It is recommended to develop migrant-friendly interventions to modify BRF to promote healthy lifestyles among migrant workers.

Keywords: migrant worker, NCDs, behavioural risk factors

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Utilization of and skill in using information technology by Public Health Midwives in Galle District

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Background: Public health midwives are the key category of field workers in delivering MCH services in Sri Lanka. Empowering them with IT skills is essential to improve efficiency of MCH services. To describe the utilization of and skill in using information technology by PHMs in Galle District.

Methods: A survey was done as part of the service improvement project. A self-administered questionnaire had been given to all the PHMs in Galle District, which was consisted of 22 items covering domains; availability of IT facilities, general utilization of IT, involving IT for service provision, and self-reported IT skills. Administrative authority was sought from RDHS Galle to utilize the data.

Results: A total of 250 valid responses were taken for the analysis. Mean age of the sample was 44.3 years (SD=10.3). Only 23.6% reported the practice of regular internet browsing to improve service provision and 38.0% knew how to send an e mail. Ability of English typing was reported by 64.4% while 50.4% were competent in typing in Sinhala. Only 22.0% reported ability to draw graphs using MS Excel while only 24.4% could prepare a MS power point presentation. Less than 40 years age group showed better utilization and skills.

Conclusions: Basic IT skills like internet browsing, typing, 'e mail' handling, and use of Microsoft applications were very low. PHMs requires capacity building in utilizing IT to improve services and special attention should be given to above 40 age group.

Keywords: Information technology, Public Health Midwives, utilization

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Knowledge, attitudes, practices, and factors associated with adequate physical activity promotion of school going adolescents among school teachers in state sector schools in Kalutara

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Background: Teachers are influencers for students to promote healthy lifestyles, such as physical activity (PA) in schools. This study assessed the knowledge, attitudes, practices, and factors associated with adequate physical activity promotion of school-going adolescents among government school teachers.

Methods: A descriptive, cross-sectional study was conducted among 604 government school teachers of grade 6 to 11 classes in the Kalutara education zone using a multistage stratified cluster sampling method. A school was considered a cluster. Data was collected using a pre-tested self-administered Questionnaire. The components were socio-demographic, occupation-related, knowledge, attitudes, practices promoting physical activities, and school environment-related factors. Cut-offs were derived using mean scores. Significance was determined using the chi-square test and p-value <0.05 the cut-off.

Results: There were 400 (66.2%) females and 204 (33.8%) males. The mean age was 40 (SD=9.69) years. The majority had more than ten years of experience. The majority reported an inadequate knowledge of PA promotion (n=337; 55.5%). The mean score was 22.14 (SD=1.907; 95% CI=21.99, 22.29). Nearly 56% (n=339) had favourable attitudes toward PA promotion. The proportion of teachers who promoted PA was 11.1% (n=67). Functional type of school, teaching for grade 07, teaching subjects of drama/health/ physical education/ Sinhala/ English, favourable attitudes, and presence of a period for physical education were the factors that were significantly associated with adequate PA promotion.

Conclusions: Overall knowledge and practices were inadequate, while attitudes were favourable towards promoting PA among school children. The teachers should be made aware and all schools should create a conducive environment to promote PA.

Keywords: physical activity promotion, school going adolescents, school teachers, knowledge and attitudes, practices

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Infant deaths occurred in teaching hospital, Karapitiya from 2020 to 2022 and related factors

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Background: Increase in number of infant deaths was observed in Teaching Hospital (TH) Karapitiya during last few years. Purpose of this study was to describe infant deaths in TH Karapitiya and related infant, maternal and institutional factors.

Methods: A descriptive cross-sectional study was conducted at TH Karapitiya during the period from January 2020 to December 2022. All infant deaths occurred during this period was taken as the sample. Maternal, infant and institutional factors were assessed using an information sheet with the information gathered during the monthly review meetings and available records.

Results: Total number of infant deaths was 177 which is 2.1% of all infants admitted during period. Out of them 58.1 % were neonatal deaths and 41.8 % were late neonatal deaths. Males, females and ambiguous gender proportions were 49.2%, 49.2% and 0.6%, respectively. Mean age at the time of death was 60 days. Prevalence of congenital abnormalities, infections, prematurity and low birth weight were 62.1 %, 61%, 44.1% and 54.8%. Maternal factors observed were complicated pregnancies (40.1%), primi parity (31.1%) and elderly mothers (19.2%). 72.9 % were transferred infants and ICU care was given to 80.2% of them.

Conclusions: The observed increase in infant deaths could be due to higher number of transfers; availability of ICUs and tertiary care facilities at TH Karapitiya could be the reason for this. Most of the infant and maternal factors are preventable with proper interventions at field and institutional level

Keywords: Infant deaths, TH Karapitiya, related factors

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Health related quality of life and factors associated with health-related quality of life in people living with non-communicable diseases during COVID-19 pandemic.

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Background: Being a vulnerable group, people living with non-communicable diseases (PLWNCD) definitely are to experience the changes in their health-related quality of life (HRQoL) during COVID-19 pandemic due to the restrictions imposed in order to control COVID-19. The objective of this study was to describe HRQOL and factors associated with HRQoL in PLWNCD during COVID-19 pandemic.

Methods: A descriptive cross-sectional household survey was conducted in 2021, in 22 selected Grama Niladhari Divisions in Attanagalla Divisional Secretariat. Probability proportionate to population size cluster sampling method was used to recruit 440 eligible participants. An interviewer administered questionnaire with components: socio-demographics and WHOQOL-BREF questionnaire was used by trained data collectors. Statistical analysis was done using SPSS version 21.

Results: The response rate 95% (n=418). Sample consisted of 50.5% (n=211) females, 37.6% (n=157) in 61-70 year age group, 88.0% (n=368) married, 97.8% (n=408) Sinhalese; 50% (n=209) employed; 86.6% (n=362) with secondary education; and 56.7% (n=237) having hypertension, 47.8% (n=200) diabetes mellitus, 15.1% (n=63) cardiovascular disease (CVD) and 11.7% (n=49) chronic respiratory disease. Highest HRQoL was observed in the psychological health domain (72.85; SD=5.02) whereas lowest in the social relationships' domain (69.96; SD=8.79). HRQoL in environmental health domain (72.75, SD= 4.86) and physical health domain (71.51; SD=5.98) lied in between. Old age (61-70 years), unemployment, primary level education, absence of a partner, having multiple comorbidities, having diabetes, having CVD were significantly associated with poor HRQoL in at least one HRQoL domain (p<0.05).

Conclusions: HRQoL in social relationships was significantly affected during COVID19 pandemic compared to psychological, environmental and physical health domains. Key words: HRQoL, People living with NCDs, COVID-19 pandemic.

Keywords: HRQoL, People living with NCDs, COVID-19 pandemic

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Knowledge on breast cancer, practice on self-breast examination and identification of breast lumps among working women in Battaramulla MOH area

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Background: Breast cancer is the leading cancer among women in Sri Lanka and every year nearly 3000 women were diagnosed. Nearly 24% of patients had stage 1 disease. Early detection through self-breast -examination and proper treatment has a good survival rate. The objective of this study was to describe the knowledge on breast cancer, practices on self-breast examination and identification of breast lumps among working women above 30 years of age participated in a well women clinic in Battaramulla MOH area.

Methods: A cross-sectional study was conducted among 79 working women who were working in government institutions in the Battaramulla MOH area. Convenience sampling method was used. All women were screened for breast lumps and other breast abnormalities and semi-structured questionnaire was used to assess the knowledge and practices on self-breast examination. The results were given in percentages.

Results: The response rate was 100%. All the participants were aware of breast cancer and breast lumps. Awareness about risk factor, positive family history was 86.0% (n=68). Knowledge on the correct technique of breast examination was 31.6% (n=25) and practicing self-breast examination once a month was 25.3% (n=20). Number of breast lumps detected 45.6% (n=36).

Conclusions: The majority of women were aware of breast cancer and breast lumps. Knowledge and practice of self-breast examination were poor. Hence, awareness programs on self-breast examination for working women in the government institutions in the MOH area are important.

Keywords: Knowledge, Self-breast examination, Breast Cancer

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Practices related to iron supplementation use and their effect on mid-pregnancy anaemia among women in Anuradhapura district

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Background: Iron supplementation is a key intervention in Sri Lanka to prevent and control anaemia during pregnancy. The objective of this study was to identify the practices regarding the storage and usage of iron supplementation and their effect on mid-pregnancy anaemia.

Methods: All first-trimester pregnant women registering for antenatal care in the Anuradhapura district during the third quarter of 2019 were invited to participate in a maternal cohort. They were followed up at 24-32 weeks of gestation. We assessed full blood count and used an interviewer-administered questionnaire for the data collection in baseline and follow-up.

Results: Out of the 1474 women attended the follow-up, eight (0.5%) were not on any iron supplementation. Of the women, 18.3% (n=268) were on double-dose iron therapy. Among the practices, Iron tablets were stored in dark bottles (27.6%), transparent bottles (11.6%), or wrapped in paper (14.2%). Collectively, only 18.7% (n=274) stored iron tablets in the recommended manner of the participants, 11.7% (n=400) reported at least one missed dose last week. The majority (n=991; 67.9%) took iron tablets not within two hours of a main meal and 1377 (94.1%) took calcium tablets separately. However, 39.7% of those taking double-dose iron would take both tablets together. Commonest side effects of iron were bad taste in mouth and nausea (%). Proper storage ($\chi^2=0.32$; $p=0.56$) and compliance ($\chi^2=0.18$; $p=0.66$) were not significantly associated with mid-pregnancy anaemia.

Conclusions: Despite the constant advise by health staff, practices and compliance to iron supplementation and therapy still need to be improved in Sri Lankan pregnant women.

Keywords: Iron supplementation, Practices, Pregnancy

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Prevalence of latent tuberculosis infection among healthcare workers of selected government hospitals in Colombo district, Sri Lanka

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Background: The estimated global prevalence of Latent Tuberculosis is 25%. Health care workers (HCWs) are at higher risk. The burden among HCWs has not been researched locally.

Methods: A descriptive cross-sectional study was conducted to determine the prevalence of LTBI among HCWs of selected hospitals in Colombo in 2021. A sample of 811 HCWs were selected by applying multistage stratified cluster sampling method, screened for LTBI by Montoux test (Positive ≥ 10 mm) after exclusion of pulmonary TB.

Results: The prevalence of LTBI among HCWs was 18.1% (95% CI=15.46, 20.9). The prevalence of LTBI increased from 6.2% to 42.4% as the age advances from 20-69 years. Its higher among males (19.4%; 95% CI=15.4, 24), married group (19.9%; 95% CI=17, 23), educated below A/L (23.3%; 95% CI=19, 28), living in urban council areas (20.8%; 95% CI=16, 27), HCWs with co-morbidities (22.3%; 95% CI=17, 28), current smokers (33.3%; 95% CI=22, 47), ex-smokers (26.9%; 95% CI=16, 41), current alcohol consumers (22.2%; 95% CI=17, 29), obese 21% (95% CI=15, 29), health care assistants (20.6%; 95% CI=17, 24), who were not trained on TB infection control (22%; 95% CI=19, 26), did not practice standard precautions like distance maintenance (36%; 95% CI=30, 42), separation (36%; 95% CI=31, 43), wearing face masks (39%; 95% CI=32, 45), with inadequate provision of hand washing facilities (28%; 95% CI=21, 37) and medical masks (23%; 95% CI=19, 28) and the hospitals with inadequate infection control measures (22%; 95% CI=18, 26).

Conclusions: The prevalence of LTBI was lower than the global estimation, yet it was relatively high for a low TB burden country like Sri Lanka. The risk factors should be determined to reduce the risk of LTBI among HCWs.

Keywords: Latent Tuberculosis, Health Care Workers, Prevalence

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Risk factors of glaucoma among 0–14-year children attending paediatrics eye clinics in Sri Lanka

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Background: Childhood glaucoma is the one of the main reasons for blindness in childhood. Early diagnosis and treatment of glaucoma help in preventing blindness during their early stages of life. A study was conducted to identify the risk factors associated with glaucoma in 0–14-year-old children in Sri Lanka and assess the awareness of the diseases among parents of children with glaucoma.

Methods: A hospital-based case control study was conducted among 101 diagnosed children with glaucoma and randomly selected 300 controls attending selected four paediatric eye clinics. An interviewer-administered questionnaire was used to collect data on risk factors. Odds ratios were calculated with their level of significance. Multiple logistic regression analysis was done to remove confounding.

Results: Being a Sinhalese (OR=2.219; 95% CI=1.119, 4.398; p=0.0224), being a Buddhist (OR=2.537; 95% CI=1.285, 5.009; p=0.0073) and family income less than Rs.50000 (OR=2.866; 95% CI=1.743, 4.711; p<0.0001) were significant risk factors for glaucoma. Female gender, age between 7.1-14 years, antenatal and natal complications, wasting, history of eye trauma, parental consanguinity and paternal farsightedness were found as risk factors for glaucoma, but not significant. Descriptive analysis showed that majority of parents had knowledge on the disease, management, and complications of the disease.

Conclusions: The study revealed that being a Sinhalese (ethnicity), being a Buddhist (religion) and family income less than Rs.50000 are significant risk factors of having glaucoma. Low income may have delayed health seeking behaviour. Future studies should focus more on identifying cultural and social risk factors. Community prevalent study should be done to assess disease burden in the country.

Keywords: Glaucoma, childhood, blindness, risk factors

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Narrative review of psychological well-being and its relationship with resilience and coping strategies among youth

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Background: The concept of well-being can be broadly placed in two categories as *hedonic* or subjective well-being which focuses on attainment of happiness and avoidance of pain and *eudaimonic* or psychological well-being (PWB) which implies fulfilling of one's potential, optimum level of functioning and realizing one's true nature. This is especially significant among emerging adults or youth who are prone to greater instability due to frequent fluctuations in their environment. How resilience and coping strategies can affect PWB in youth is also significant. The objective of this study was to evaluate global literature on importance of PWB and relevant measures including its relationship with resilience and coping strategies among youth.

Methods: A review of relevant literature was undertaken using databases PubMed, Science Direct, Embase, Google Scholar, Web of Science. Search strategy consisted of free text and MeSH terms related to key words, specifically PWB, resilience, coping and youth.

Results: Several scales to measure PWB have been used in studies as well as assessing its relationships with other lifestyle factors among different populations including youth. Studies have also revealed that resilience is significantly associated with PWB while use of positive coping strategies has been shown to improve PWB. Research into usage of PWB related therapy in improvement of mental health was also identified.

Conclusions: Emphasis on improving PWB should be considered in mental health promotion among youth. Incorporation of methods to improve resilience and development of appropriate coping strategies to improve PWB would be beneficial.

Keywords: Psychological well-being, resilience, coping strategies

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Knowledge, attitudes and practices related to menstrual hygiene, and their associated factors among grade 10 school students in Minuwangoda Educational Division

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Background: Misconceptions, taboos, and cultural beliefs mask menstrual hygiene. The objective of this study was to assess knowledge on menstruation, menstrual hygiene, attitudes and practices on menstrual hygiene, and associated factors related to knowledge, attitudes, and practices among grade 10 school students in Minuwangoda Educational Division.

Methods: A cross-sectional study was conducted among grade 10 female students in Minuwangoda Educational Division. Multistage stratified cluster sampling was conducted to gather 610 students. A self-administered-questionnaire gathered data. Data were analysed using SPSS. Knowledge and practices were categorized as satisfactory and unsatisfactory. Total score for knowledge and practices were 10 for each, and if a student scored above 50%, it was categorized as “satisfactory knowledge.” and “satisfactory practices.” Chi-square assessed statistical associations, and $p < 0.05$ was used as the cut-off.

Results: Sixty-percent had satisfactory knowledge of menstruation and menstrual hygiene. Almost 70% had unfavourable attitudes regarding menstruation and menstrual hygiene. Twenty-five percent of the students reported satisfactory practices. Practices such as changing sanitary pads and maintaining hygiene during menstruation at school and home were unfavourable. Mother’s educational level was significantly associated with good attitudes toward menstruation ($p = 0.005$). Satisfactory knowledge of menstruation and menstrual hygiene was significantly associated with satisfactory practices ($p = 0.047$). The commonest source of information was family members (81.3%) and source of information was significantly associated with satisfactory knowledge ($p < 0.0001$).

Conclusions: Grade 10 female students of Minuwangoda Educational Division had unfavourable attitudes and unsatisfactory hygienic practices towards menstrual hygiene despite adequate knowledge. Thus, it is recommended to improve adequate practices, mainly addressing the essential facilities to maintain menstrual hygiene.

Keywords: knowledge, attitudes, practices, menstruation, menstrual hygiene, adolescent females

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Screen usage patterns and primary caretakers' knowledge on screen time of young children in an urban Sri Lankan setting

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Background: The excessive screen usage is becoming a global issue with many negative impacts on children. However, many young children are being exposed to screens worldwide. Current study aims to describe the screen usage patterns of young children and to assess the primary caretakers' knowledge on screen time of their young children in an urban setting.

Methods: This is a descriptive cross-sectional clinic-based study done in Kolonnawa. The study participants were primary caretakers of one to three-year-old children, selected using cluster sampling technique. A self-administered questionnaire was given to assess the screen usage patterns of the child and knowledge of primary caretakers on their children's screen time. Data analysis was done using Statistical Package for Social Sciences. Chi squared test was used to find the associations. A probability of 0.05 was used to determine the statistical significance.

Results: Out of 511 participants, there were 385 (75.3%) children who had excess screen time. The average screen time of the children was 75.2 minutes (SD=66.7). Out of the primary caretakers, 57.9% (n=296) of them were aware of screen time recommendations for children. In the knowledge score, out of total of 10, the participants achieved a mean score of 5.7 (SD=2.24). There were 190 (37.1%) participants above the cut-off value.

Conclusions: The prevalence of excessive screen usage was high among the children. On knowledge assessment, most of the primary caretakers had scored below the cut-off level. This highlights the need of public health interventions to increase the awareness on screen time among caretakers.

Keywords: Screen time, screen usage patterns, knowledge, young children

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Assessment of stigma related to leprosy using Stigma Assessment and Reduction of Impact (SARI) scale in Puttalam district

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Background: Leprosy is a major health concern worldwide, with more than 200,000 people affected every year. Even after being successfully treated, individuals with leprosy still face discrimination that makes it difficult for them to reintegrate into society and spend normal lives. Assessment of stigma among leprosy patients in the community will provide insight into the magnitude of the problem in Sri Lanka.

Methods: Sinhala translated, culturally adapted, and validated tool of Stigma assessment and reduction of impact (SARI) was used to assess the stigma among leprosy patients in 2019. Total stigma scores range from 0 to 51. A total of 147 diagnosed leprosy patients before 31st of December 2017 who were >18 years of age in Puttalam District were enrolled in the study.

Results: Most of the study participants were female (n=76; 51.7%). The majority were Sinhalese (n=90; 61.2%) followed by Moor (n=48; 32.7%). The majority were married (n=109, 74.1%). Mean scores for the subscales such as experienced stigma, disclosure concerns, internalized stigma, and anticipated stigma were 1.97, 6.38, 3.34 and 3.67, respectively. The mean score of the overall stigma was 15.36 (95% CI=14.1, 16.62). High level of total stigma was observed in 55.1% of the sample. No significant association was observed between total stigma score and selected socio-demographic parameters.

Conclusions: High level of leprosy-associated stigma was observed among the majority of persons affected with leprosy in Puttalam district.

Keywords: Leprosy, stigma, SARI

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Factors associated with practices on prevention of NCDs among medical postgraduate trainees attached to selected hospitals in Colombo District

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Background: Optimum health among medical postgraduate trainees is critical in enabling a healthy generation of medical specialists in Sri Lanka. This study was done to describe factors associated with practices on prevention of NCDs among medical postgraduate trainees.

Methods: A descriptive cross-sectional study was conducted among 393 medical postgraduate trainees in selected institutes in Colombo. Participants were selected through convenient sampling. Judgmentally-validated online self-administered questionnaire with selected standard tools was administered. Data were analysed using Statistical Package for Social Sciences. Descriptive statistics and Chi-squared test at 5% significance were used.

Results: Majority was between 31-40 years (87.5%; n=344), married (84.5%; n=332) and MD trainees (62.3%; n=245). 'Good' dietary practices were associated with >35 years (p=0.018), Sinhalese (p=0.027), females (p<0.001), being MSc or MD (p<0.001), living in own house or annex (p<0.001) and working ≤ 8 hours per day (p<0.001). 'High' physical activity levels were associated with being married (p<0.001), females (p<0.001) postgraduate MSc (p<0.001), living in own house (p<0.001) and working >8 hours per day (p<0.001). Alcohol consumption was associated with being a male (p<0.001), postgraduate MSc (p=0.011), living in apartment/annex (p<0.001) and working >8 hours per day (p<0.001). Smoking was associated with being single (p=0.007) and males (p=0.007). Regular weight-checking was associated with being single (p=0.001) and female (p=0.001). Checking blood-pressure, sugar and cholesterol levels was regularly associated with >35-years (p<0.001), males (p<0.05), working >8 hours per day (p<0.05).

Conclusions: Personal, family and work factors associated with preventive practices were identified. Screening promotion and provision of opportunities are recommended to improve practices on prevention of NCDs.

Keywords: Medical postgraduates, non-communicable disease prevention, practices

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Overweight/obese women perspective on the barriers to participation in physical activity: a qualitative study

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Background: Being overweight and obese is a global epidemic and physical inactivity may be a partial determinant. Multiple factors negatively can influence engaging in physical activity. Knowing the barriers to physical activity among the target population is necessary to curb the burden of overweight and obesity to combat the epidemic of non-communicable diseases. The current study aims to explore the perceived barriers to physical activity among 35- 44 years old overweight and obese women.

Methods: A qualitative study was conducted using an inductive approach in the Medical Officer of Health area Panadura in the District of Kalutara, Sri Lanka. A total of 18 in-depth interviews were conducted among overweight & obese women. The audio-recorded data were transcribed, coded and analysed thematically. Coding was decided following a discussion with two independent experts in the field of public health. Content analysis of the qualitative data was conducted manually.

Results: The study identified three main themes which included personal, social & cultural and environmental as key perceived barriers to physical activity. Under the personal factors: Inadequate knowledge, time limitation, lack of motivation, and skills were identified as subthemes. Social and cultural barriers included two subthemes: immediate family influence and social norms while environmental barriers included two subthemes: build & natural environment.

Conclusions: This study highlights the challenges and perceived barriers to physical inactivity. Public health measures aimed at overweight/obese women by understanding their barrier profiles can be benefited to develop an effective and appropriate prevention program.

Keywords: qualitative study, barriers, physical activity, overweight, obese, women

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Occupational health literacy among paddy farmers in the Monaragala gistrict: literacy level, associated factors

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Background: Agriculture is among the three most hazardous occupations in the world. Being in the informal sector, having good occupational health literacy (OHL) level is very important to paddy farmers to lead a productive work life. The objective of this study was to determine the level of OHL and its associated factors among paddy farmers in the Monaragala district.

Methods: Development and validation of OHL tool Sinhala was the first component. Construct validity and reliability were assessed. In second component, cross-sectional study was conducted among 807 (Response rate 99.6%) paddy farmers. Binomial logistic regression was performed to identify the associations.

Results: The OHL tool Sinhala was found to be a reasonable fit model ($\chi^2=993.4$; $df=337$; $p=0.0$) for assessing the OHL. Most paddy farmers ($n=566$; 70.1%) had satisfactory OHL while 241 (29.9%) had limited OHL. Eight factors were retained in the model (model $\chi^2=103.934$; $p<0.000$) as significant associations. 'Not taking safety information from farmers' (adjusted odds ratio (AOR)=2.078; 95% CI= 1.428, 3.025) and farm experience (AOR=1.015; 95% CI=1.001, 1.030) were the risk factors for the limited OHL.

Conclusions: Nearly 30% of paddy farmers had limited OHL and effective long-term intervention is needed and interactions with fellow farmers need to be improved.

Keywords: occupational health literacy, paddy farmers, associated factors

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Service provision, patient satisfaction and its associated factors among non-communicable diseases (NCD) clinic attendees of Colombo South Teaching Hospital amidst the COVID-19 pandemic

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Background: Routine NCD services were affected during the COVID-19 pandemic globally and in Sri Lanka. This study explored the service provision, service satisfaction and its associated factors among non-communicable disease (NCD) clinic attendees at Colombo South Teaching Hospital (CSTH) amidst COVID-19 pandemic.

Methods: A descriptive cross-sectional study was conducted among 422 NCD clinics attendees of CSTH using stratified, probability proportionate, systematic sampling. An interviewer administered questionnaire assessed the NCD services provided during the pandemic and patient satisfaction was assessed through a Likert scale. Factors associated with service satisfaction was assessed using Chi squared test at $p < 0.05$ significance level.

Results: With 100% response rate, findings revealed routine NCD clinics weren't held during the pandemic. For majority, blood-pressure wasn't measured (88.2%), routine investigations were done at the clinic (82%) and 95% received medication from clinic, through mail (84%) while, Insulin was collected from hospital (100%). Majority (60%) were unsatisfied with NCD service provision during the pandemic. Being Sinhalese ($X^2=6.06$; $df=1$; $p=0.014$), secondary or more education ($X^2=52.02$; $df=1$; $p < 0.0001$), current unemployment ($X^2=8.19$; $df=1$; $p=0.004$), family income less than Rs. 50,000 ($X^2=3.88$; $df=1$; $p=0.049$), living away from Colombo ($X^2=7.25$; $df=1$; $p=0.007$), with >10 km to CSTH ($X^2=4.08$; $df=1$; $p=0.043$) and diagnosed with more than one NCD ($X^2=4.79$; $df=1$; $p=0.029$) were significantly associated with patient unsatisfaction on NCD services provided during the pandemic.

Conclusions: Routine NCD services were adversely affected and majority of patients were unsatisfied with the NCD services provided during the pandemic. Policy makers and hospital administrators need to plan and implement measures to provide continuum of care for NCD patients, to face such a disaster in the future.

Keywords: NCD, COVID-19, patient satisfaction, NCD service provision, medication

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Comparison of male and female Leprosy patients in Sri Lanka from 2000 to 2015.

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Background: Males tends to have poor health seeking behaviours. Even though global data shows that leprosy is more common among the males.

Methods: The leprosy patients who registered for the multi drug therapy from 2000 to 2015 in Sri Lanka were analysed with the used of the National data base of the Anti-Leprosy Campaign. The difference between the male and female leprosy patients were analysed in relation to the age, type of leprosy, delay in receiving care and the associated disabilities. Chi squared test and Z test for proportions were used and p value of < 0.05 was taken as significant.

Results: Total 30,544 individuals with leprosy were included for the analysis. Among them significant proportion were males 57.6%. In comparing the age males (33.5%) affected with leprosy below the age of 20 years significantly than the females (22%). Significant proportion of males (51%) diagnosed to have multi-basillary leprosy than the females (34%) and a significant proportion of the male leprosy patients (33%) had associated disabilities than the females (22%) when they were start with the treatments. There was no significant difference in delay in identifying the illness in between the two sexes.

Conclusions: Majority of leprosy patients who registered for the treatment are males and had Multi Bacillary leprosy. Associated disabilities were more common among the males. Hence, interventions need to be more focus on males in Sri Lanka.

Keywords: Leprosy, male, female

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Factors and perceptions associated with COVID-19 vaccination among pregnant women attending antenatal clinics in Karadeniya Medical Officer of Health Area

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Background: Pregnant women were prioritized for vaccination during the recent COVID-19 pandemic, but with poor uptake. Exploring the reasons for this is important in planning future pandemic responses. Hence, this study was planned to determine the vaccine coverage, associated factors and explore perceptions on vaccination among pregnant women.

Methods: A mix-method study, including cross-sectional and qualitative components, was conducted among 389 mothers attending antenatal clinics in Karadeniya MOH area. An interviewer administered questionnaire based on the health belief model and in-depth interviews were utilized for data collection. Vaccine coverage was calculated and associated factors were determined with bivariate statistics. Qualitative data were subjected to thematic analysis.

Results: Among 389 pregnant women, only 73 (18.8%) were completely vaccinated with all three doses of the COVID-19 vaccine. Complete vaccination coverage was significantly associated with advanced maternal age, perceived susceptibility to infection through daily activities, fear of mortality, believing booster dose reduces risk of contracting COVID-19, high concern of vaccine affecting foetus, high perceived vaccination cues, and perceived ability to handle side-effects ($p < 0.05$). Qualitative component revealed that an increase in COVID-19 cases, foreign travel and government mandates would influence uptake of vaccine doses.

Conclusions: A significant proportion of pregnant women have not taken the recommended number of COVID-19 vaccine doses thus making them vulnerable to a possible resurgence of COVID-19. Hence, targeted and multipronged grassroot level approaches are recommended to increase acceptance of vaccination among pregnant mothers in an emerging pandemic.

Keywords: Health Promotion, Health Systems and Non-Communicable Diseases

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Employed women's knowledge, adherence to preventive measures and associated factors during the pandemic in medical officer of health area, Homagama.

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Background: COVID-19 pandemic has had a tremendous influence on working women. In local context, females are employed in 62% of jobs related to health and social work thus facing increased health risks to themselves as well as to their families. Against the above background, this study aims at assessing the knowledge, adherence to preventive measures and associated factors at workplaces and homes during the pandemic in Medical Officer of Health (MOH) Homagama.

Methods: A cross-sectional survey conducted among 300 employed women attending polyclinics at MOH area Homagama using a self-administered questionnaire following a consecutive sampling technique. Data analysis done with SPSS.

Results: Out of 300 workers, 255 responded with a response rate of 85%. Majority 186 (72.9%) were in 19-35 age group, married 249 (61.9%), had A/L and above 213 (83.5%), had children 159 (62.4%), pregnant 78 (30.6%), used family planning method 90 (35.3%), had family planning unmet needs 70 (25%), worked in private sector 132 (51.8%), had management related jobs 51 (20%) and had working hours of 8 hours 198 (77.6%). Majority 153 (60%) showed satisfactory overall knowledge and inadequate component wise knowledge reported on caring for elderly 27 (10.6%) mental stress 15 (5.9%) during pandemics. while overall adherence to health measures was 150 (59%). Age above 35, education O/L and below, being service assistance and other were significantly associated with low adherence scores ($p < 0.05$)

Conclusions: The study revealed averagely adequate knowledge and health adherence among employed women during pandemic situations. while a deficit of knowledge in elderly care and mental health.

Keywords: employed women, adherence, preventive measures, knowledge, pandemic

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Incidence and case fatality of stroke in Trincomalee and Kinniya Divisional Secretariat area

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Background: Stroke is defined as rapidly developed clinical signs of focal (or global) disturbance of cerebral function, lasting more than 24 hours or leading to death, with no apparent cause other than of vascular origin. Stroke remained as the second leading cause of death with an annual death of about 6.55 million globally. Global incidence of stroke was 258 per 100,000 per year. The objective of this study was to determine the incidence of stroke over a one-year period and the case fatality rate at 30 days in Trincomalee and Kinniya Divisional Secretariat areas.

Methods: A population based prospective longitudinal study was conducted over the period of one year in Trincomalee and Kinniya Divisional Secretariat areas to determine the incidence of stroke and case fatality at 30 days. WHO STEPS wise approach was employed for case detection. Validated automated verbal autopsy tool was applied among Hospital deaths and community deaths to detect deaths caused by stroke.

Results: Crude incidence of first-ever stroke was 1.09 per 1000, mean age of first-ever stroke cases was 62.08 (SD=13.45) years, 15 deaths occurred within 30 days of the onset of symptoms of a stroke. Among first ever stroke patients, 79.8% were Ischemic stroke, 17.8% were Intra cranial haemorrhagic stroke and 0.5% were sub-arachnoid haemorrhagic stroke. Unspecified stroke accounts for 1.8%. Average hospital stay of the patient was 3.5 days.

Conclusions: Incidence of stroke of first ever stroke cases of Trincomalee and Kinniya Divisional secretariat was 1.09 /1000 population. This figure is similar to other countries. Case fatality rate was 6.7% and that was lower than the neighbouring countries.

Keywords: Stroke, Incidence, Case fatality

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Prevalence of alcohol consumption among adult males in Colombo district

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Background: Alcohol consumption is linked to a variety of diseases and socioeconomic consequences. There is a rising trend in the overall per capita consumption and associated economic and disease burden in South-East Asian countries, including Sri Lanka. The objective of this study was to describe the prevalence of alcohol consumption among adult males in Colombo district.

Methods: A community-based analytical cross-sectional study was conducted among 1160 adult males in the Colombo district, selected using multi-stage cluster sampling to represent all 13 Divisional secretary areas in the district. Data were collected by pre-intern medical officers, using a pre-tested interviewer-administered questionnaire. Data was collected from 58 clusters and 20 study units were selected per cluster.

Results: A total of 1106 adult males (with a mean age of 45.7 (SD=17.4) years) participated, of which the majority (n=859; 77.7%) were urban residents, while 228 (20.6%) were from rural areas. The majority of the population (52.4%; n=579) had an average monthly household income of Rs. 45000 – 65000. The prevalence of ever drinkers among adult males in the Colombo district was 53.4% (n=591; 95% CI=50.5, 56.4). The prevalence of drinkers who consumed alcohol within last 30 days was 29.3% (n=324; 95% CI=26.7, 32.0), while those who consumed alcohol within last year was 38.2% (n=423; 95% CI=35.4, 41.1). There were 6.1% (n=68; 95% CI=4.8, 7.7) current daily drinkers in the population.

Conclusions: The prevalence of ever-drinkers among adult males in the Colombo district is high. Future prevention programs on alcohol should strengthen awareness of alcohol-related issues among alcohol consumers.

Keywords: Alcohol, prevalence, Colombo

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**POSTER PRESENTATIONS
PUBLIC HEALTH CASE STUDIES**

Innovative approach to improve breast cancer screening in Medical Officer of Health area Bambaradeniya

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Background: The most common cancer among women in Sri Lanka is breast cancer, however early identification and diagnosis could enable complete cure by interventions. Even though we are promoting self-breast examination, during last four years, we have identified only one case in 2021. Hence, we wanted to confirm the situation was true or otherwise case reporting rate was low.

Case study: Following a lengthy discussion during the monthly conference, the responsible team decided to initiate several strategies to explore the scenario. A refresher training workshop with practical sessions was conducted for public health midwives (PHM) and female office staff. Following the training, PHMs disseminated messages on the importance of breast examination through social media to mother support groups, antenatal and postnatal mothers and well women target groups. Mother support groups came forward and organized awareness programmes on self-examination of breast for their membership followed by a clinic session. The programme was reviewed during the monthly conference of the PHM area, by assessing whether all mother support groups were involved in the programme using output indicators (number of clients participated in sessions, number with breast abnormality).

Results: More than 300 females over 20 years including 25 health staff underwent breast examination. Out of them, 10 were identified with lumps and skin changes. Finally, three breast cancer cases were diagnosed and treated over five months duration.

Lessons learnt: By motivating health staff, empowering target population and getting involvement of community groups will enhance the coverage of this type of sensitive issues.

Keywords: breast cancer, screening, self-breast examination

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Strategies used to improve the under 5 year weighing coverage of Medical Officer of Health area Poojapitiya during the nutrition month 2022

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Background: Nutrition month has been conducted annually to improve the weighing coverage in addition to the routine weighing of the children. Data from the nutrition month considered as more reliable due to the high weighing coverage. It was revealed that the low weighing coverage (40%) of the Public Health Midwife (PHM) area, Galhinna is the key factor for the overall low weighing coverage of the Medical Officer of Health area Poojapitiya.

Case study: After a discussion at the monthly conference about the issue, **the** following strategies were used. Increased public awareness on importance of weighing under 5year children through multiple communication strategies. Parents, preschool teachers, Grama Niladhari officers, religious and members of trade associations were the target groups for lecture discussions which were conducted in both Sinhala and Tamil languages. Exact date for weighing was announced and 10 PHMs were allocated to five weighing centres to cover the entire PHM area. Under 5 year weighing coverage was compared before and after implementation of special programme in the PHM area. To identify the reasons for not turning up for weighing was done by home visits.

Results: Weighing coverage was improved from 40% to 60% in Galhinna PHM area which contributed to achieve total coverage as 95% for MOH area. It was confirmed that those who were absent for the weighing were not living in the Galhinna PHM area.

Lessons learnt: Improved communication, proper planning and easy accessibility will improve the weighing coverage of under 5year children.

Keywords: Strategies, under 5year, weighing coverage

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Achieving high coverage of infant weighing in Medical Officer of Health area – Udapalatha, Gampola during year 2023

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Background: Growth monitoring by weighing can identify nutritional problems among children, which needs early intervention to prevent short- and long-term complications. Regular weighing can monitor the effects of medical and nutritional interventions. Therefore, 100% coverage of weighing is important. It was observed that public health midwife (PHM) areas with 100% infant weighing coverage was only in 4 PHM areas out of 29 with a percentage as a 13.7%.

Case study: After a discussion with all PHMs during the monthly conference, a training workshop was conducted, during which the importance of weighing as part of growth monitoring was emphasized. All PHMs were motivated to achieve 100% infant weighing coverage in their respective areas. Community empowerment was done by strengthening the mother support groups to get all mothers with infants to the weighing sessions. A social media group was created among mothers with infants for easy communication. The area PHM reminded them via the group about weighing date, time and place. All PHMs monitored the attendance of individual infants for weighing sessions on a monthly basis with the weighing register. During the monthly conference, progress was monitored in individual PHM areas.

Results: The proportion of PHM areas with 100% weighing coverage of infants increased from 13.7% in December 2022 to 55% by the end of February 2023.

Lessons learnt: Infant weighing coverage can be improved through motivation of PHMs, active involvement of mother support groups, the use of social media and close monitoring at different levels.

Keywords: Infant weighing, mother support group, social media

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Reduction of Japanese Encephalitis and Measles, Mumps, Rubella vaccine wastage in Medical Officer of Health area Kundasale during year 2022

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Background: The Medical Officer of Health (MOH) area Kundasale has achieved high vaccine coverage during past years through successful implementation of the National Immunization Program. However, in 2021, the wastage of Japanese encephalitis (JE) vaccine was 9.5% and of measles, mumps, rubella (MMR) vaccine was 9.1%, due to the opening of multidose vials for a small number of clients. Since the MOH Kundasale constantly strives for improvement of the quality and cost effectiveness, a plan was implemented to reduce wastage during 2022.

Case study: The clinics and draining public health midwife (PHM) areas with highest wastage were identified following the analysis of data of the vaccine movement register. Relevant PHMs were made aware of the problem and improved their knowledge through in service training. A notebook was introduced to each PHM to record details of the children pending JE and MMR vaccination. A separate book was introduced to record details of the children who received those vaccines in the respective clinics. A pre-planned number of clients were given vaccines at each clinic. A JE vial was opened for 4 or 5 clients, and an MMR vial for 8 to 10 clients. Wastage was calculated monthly in each clinic using the vaccine movement register. Details were obtained from the PHMs to ensure age appropriate vaccination of each child. Client's feedback was received through the logbook at each clinic.

Result: Wastage for JE and MMR vaccines was reduced to 6.7% and 6.44% respectively for the year 2022. High client satisfaction was observed as there was no negative feedback in the clinic logbook.

Lessons Learnt: Reduction of vaccine wastage is possible with proper planning and implementation along with increasing awareness among staff and clients.

Keywords: vaccine wastage, Japanese Encephalitis, Measles Mumps Rubella

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Innovative approaches to increase participation of pregnant mothers for all three antenatal classes in Medical Officer of Health area Galaha

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Background: Antenatal education sessions are expected to improve the knowledge, attitudes and practices of mothers during and after pregnancy. Attendance of couples for antenatal classes has not been optimal since its inception. It has been observed that participation was well below the expected level in the Medical Officer of Health area, Galaha till the month of December 2020.

Case study: This issue was discussed in detail during several monthly conferences and the field health team was motivated to improve the attendance of both pregnant mother and her spouse for all three antenatal classes highlighting its importance. All staff agreed to implement several innovative strategies: increase the number of venues from 3 to 9 to improve the accessibility for clients, multimedia presentations used in both Sinhala and Tamil languages where relevant to attract the audience, each PHM created a social media group with all pregnant mothers in her area for easy communication. Online platforms were also used for husbands who were unable to participate physically. Attendance of both partners was closely monitored by the PHM area at each monthly conference. Each PHM evaluated the participation of couples individually at each local conference and reported back to monthly conference.

Results: Percentage of couples who attended all three antenatal classes increased to 50% during the year 2022 compared to 30.3% in 2021.

Lessons learnt: Motivation of staff, improving accessibility of clients, proper communication and improved quality of the classes will increase the participation of both pregnant mother and her spouse.

Keyword: Antenatal classes, attendance, couple

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Reduce in teenage pregnancies through novel community engagement method and capacity building of MOH staff in Medical Officer of Health area Medamahanuwara

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Background: A high number of teenage pregnancies is one of the major public health problems in the Medical Officer of Health (MOH) Area, Medamahanuwara. During the year 2021 and first two quarters of 2022, 29 and 23 teenage pregnancies were reported, respectively. As an outcome, miscarriages during first trimester, anaemia and low birth weight of infants were observed.

Case study: This problem was discussed at the monthly conference and the MOH staff decided to take immediate action to reduce teenage pregnancies. As an initial step, staff capacity building was done through an in-service training session for the public health midwives (PHM). To strengthen community engagement, volunteers were recruited and trained for each field weighing centre to create awareness about risk and disadvantages of teenage pregnancies and to assist PHMs in early identification of high-risk teenage girls. Family planning counselling was done for these teenagers during home visits and preconception sessions. The existing mother supportive groups were also trained and used for early identification and referral of the girls to relevant PHM. Parallely, life skills sessions were done in schools targeting the prevention of teenage pregnancies with support of the department of education. The number of teenage pregnancies reported by PHM area was monitored during the monthly conference.

Results: Reduction of teenage pregnancy was observed by reporting only three teenage pregnancies for the 1st Quarter of 2023.

Lessons learnt: Well-planned strategies with community engagement through volunteers and mother support groups are effective in tackling the problem of teenage pregnancy.

Keywords: Teenage Pregnancy

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The feasibility of implementing a novel technology-based bi-weekly continuous professional development programs for public health staff

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Background: Continuous professional development (CPD) is an essential element in ensuring good medical practice. The Western Provincial Directorate of Health Services (PDHS-WP) hosts 47 medical officer of health (MOH) areas that serve about 30% of the national population, making a sustainable CPD programme a high priority. Service requirements of MOH areas get frequently revised making the CPD activities of its staff members a challenge.

Case study: A collaboration was set up with the PDHS-WP and the College of Community Physicians of Sri Lanka to formulate a sustainable methodology for a regular CPD programme with high coverage of the staff. A logistical assessment was done in identifying barriers, which were addressed. A methodology of a virtual CPD programme with staff members gathering at MOH office bi-weekly (Fridays during 12.15-1.15 pm) was introduced through official channels. District focal points were appointed and a communication strategy was laid. The fulfilment of the logistics, participation of the staff members and their feedback were identified as process and output indicators.

Results: The CPD programme is currently ongoing with a timely expert discussion and peer experience-sharing session followed by a question and answer session. Four sessions have now been completed from 3 February 2023 on the domains “dengue control”, “micronutrients”, “community engagements” and “quality of immunization-services”. The expert sessions were done by relevant national coordinating institutions. The Piliyandala, Mathugama, Attanagalla and Ja-ela teams have shared their experiences. Staff members from all MOH offices participated using multi-purpose speakers and projectors and interacted giving favourable inputs.

Lessons learnt: It is feasible and seemingly effective to conduct technology based sustainable CPD programmes at provincial level. This enables uniform delivery of health updates.

Keywords: Continuous Professional Development; MOH offices; Virtual CPD program; Western Province PDHS office

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An inclusive case-scenario training approach in ensuring the continuity of quality service delivery of offices of Medical Officer of Health

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Background: In medical officer of health (MOH) offices, performance of all staff categories affects the overall quality of service delivery in several service domains such as vaccination, data management, disease control, school health as well as in deciding the level of client satisfaction. Hence, the clarity of each other's roles is essential in uplifting the service delivery.

Case study: The job roles and each staff category attached to MOH areas were reviewed and areas needing combined efforts were identified. A training in needs assessment was done by consulting different staff categories. A prioritized list of domains that need the refreshing of knowledge was prepared. A package of case scenarios inclusive of group activities, activity templates, information education and communication materials was developed. A one day training program was conducted with the participation of multiple staff categories within the Regional Directorate of Health Services area, Colombo. Selected process and output indicators were defined at the beginning. A qualitative feedback form was also prepared.

Results: The training program was conducted from 19 to 23 December 2022 at the auditorium of MOH Office, Piliyandala and 600 public health staff members were trained with this approach. The qualitative feedback reflected that the staff members were well aware of each other's roles in the selected domains of service delivery and they grasp more technical details from this approach.

Lessons learnt: Inclusive group activity based training sessions with the participation of all relevant staff categories seemingly provide a comprehensive picture of the overall service delivery to the staff members giving them a better perception of the importance the activities they perform.

Keywords: A training-needs-assessment, service delivery

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A collaborative public health effort in rectifying the deficiencies identified in a review on Expanded Programme of Immunization (EPI) services in Ja-Ela Medical Officer of Health area

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Background: Several areas to be improved were highlighted in a review on the Expanded Program of Immunization done in early 2023 in relation to Ja-Ela Medical Officer of Health (MOH) Area based on the performances of 2021. A collaborative effort was planned to rectify the identified deficiencies.

Case study: Following the analysis of data, an action plan with seven steps of activities was developed, which included updating birth and immunization registers, multi-sectoral support, discussion during in-service meetings and monthly conferences, strengthening the school health management information system, reorienting the supportive supervision of supervisory officers, regulating the private sector vaccination and conducting a field survey. Regular visits to the MOH office were carried out to evaluate the activities of each category of staff. Birth and Immunization Registers were analysed. The minutes of in-service meetings and monthly conferences were analysed to identify the improvement in practices. Supportive supervision reports were evaluated to monitor the vaccination coverage improvement.

Results: All planned activities were successfully conducted. Percentage of vaccination coverage improved, for example, from 59% to 81% in Thumpeliya PHM Area for Pentavalent-2, and from 60% to 97% in Kanuwana for Pentavalent-3 vaccines. Reasons not known for delay in vaccination dropped to 0-10 entries and unidentified hospital records for private sector vaccination dropped drastically with improvement in the documentation.

Lessons learnt: Integrated multi-faceted packages of activities are seemingly effective in rectifying the deficiencies identified in service reviews. Resorting to an action plan immediately following a review facilitates the achievement of targets favourably.

Keywords: EPI, Ja-Ela, Documentation of B&I register, Vaccination coverage

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Application of a comprehensive customized uniform supportive supervision series to improve the quality of public health service delivery at grass root level in the Western Provincial Directorate of Health Services

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Background: Complementary to the routine supervisions done on the service delivery by medical officer of health (MOH) offices, an external evaluation through a uniform supportive supervision series was tested in the Western Provincial Health Service Area.

Case study: A supervision tool was developed using KoboCollect after a thorough literature review and expert opinion from national focal points. Pilot testing of the tool was done in two MOH offices. The tool assessed 13 domains including the services pertaining to the prevention of communicable and non-communicable diseases, vaccination, maternal and childcare services, supervision, documentation and planning of MOH staff. Voluntary community medicine trainees were recruited and trained on the supervision tool. Supervision visits were carried out in the months of November and December 2022 in all 47 MOH areas in Western Province. Following the supervision, SWOT analysis was done and action plans were developed. Process and output indicators were used in the evaluation.

Results: Under process indicators, 100% of planned supervisions were done with the participation of 23 trainees. Under output indicators, the SWOT analysis and action plans were developed for 100% of the MOH settings. Comprehensive reports were sent for all 47 MOH areas. Follow up visits have been planned in 3 months. The qualitative feedback of the participants and MOH staff was satisfactory.

Lessons learnt: Customized targeted supportive external supervisions can be implemented uniformly. When these supervisions are followed by specific reports with planning concepts the recipient satisfaction is increased.

Keywords: Supportive supervision; SWOT analysis; Action plan; MOH offices

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Community empowerment for health promotion in Kaliyammahara GN division-Piliyandala MOH area

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Background: Given the current situation in the country, it is crucial to seek the support of community groups in identifying health issues and implementing timely interventions. The major health concerns identified were on maternal and child nutritional issues. The primary goal of this project is to empower the community to understand health-related issues and develop intervention plans at the grassroots level.

Case study: In the Kaliyammahara GN division, we identified 100 household premises and designated 10 volunteers as group leaders. We conducted capacity-building programs for these leaders, and each one was assigned to oversee 10 households. Through a brainstorming exercise, we identified the problems in the village and began a nutritional intervention focused on reducing sugar, salt and oil consumption. We also encouraged home gardening among the villagers and distributed materials and plant seeds to five households with the help of Sarvodaya. We arranged nutritional programs at the community level for pregnant mothers with low income and organized mother support groups to conduct additional programs. We monitor these activities at monthly conferences and evaluate PHM area-wise activities. We also create opportunities for sharing good practices with other public health midwives. As a result of the active participation of community leaders, we have improved the weighing coverage of under-5 children.

Result: The post-survey revealed that out of the 100 households, all 100 were implementing strategies to reduce sugar, oil, and salt consumption at home, and 24 households had begun home gardening activities.

Lessons learnt: Community engagement and empowerment played a crucial role in the success of the project, as the community was able to understand health-related issues and develop strategic plans on their own. We recommend that this type of community activity be encouraged in other MOH areas.

Keywords: Health Promotion, Nutritional, Community Empowerment

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Impact of social marketing campaign in improving case detection of leprosy

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Background: The World Health Organization certified Sri Lanka in 1995 as a country that had eliminated leprosy as a public health problem. But annually about 2000 new leprosy cases being reported. Social media is a powerful platform which can be used for general public awareness. About 7.5 million population in Sri Lanka use such accounts. Leprosy case detection was low in the first 8 months of 2022. Only 600 new cases were diagnosed with case detection rate of 4.2 per 100,000 population. The objective was to increase new leprosy case detection rate through social marketing campaign on social media.

Case study: LIFE Sri Lanka (Leprosy Initiative for Elimination) Social Marketing Campaign was launched by the Anti-Leprosy Campaign in mid-August 2022. Leprosy awareness posts and video clips were designed. LIFE Sri Lanka social media accounts were created at the national and district Levels. Life Sri Lanka web-based media channel was also launched. The created posts were widely disseminated in LIFE Sri Lanka web page and channel. Further, posts and video clips were shared through these platforms with no cost. Continuous awareness programs were conducted throughout the year.

Result: The new leprosy case detection increased up to 11.4 per 100,000 with detection of 800 new leprosy cases within the last four months in 2022. Compared to the first eight months, case detection has increased in 23 districts.

Lessons learnt: Social marketing is a cost-effective strategy that can be implemented to increase awareness and case detection of leprosy in low resource settings.

Keywords: Leprosy, Social Marketing, LIFE SL

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Identification of hot-spots of Leprosy cases by serial GIS mapping in Polonnaruwa District

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Background: In Sri Lanka, leprosy is a neglected tropical disease. Sri Lanka was recognized by the World Health Organization to have eliminated leprosy in 1995. Nevertheless, about 2000 new leprosy cases have been reported in Sri Lanka each year. Polonnaruwa District represents 3.5 % of the leprosy burden in Sri Lanka. Early diagnosis and treatment are crucial to preventing permanent disabilities due to leprosy. The objective was to identify leprosy hot spots in Polonnaruwa District by Serial Mapping.

Case study: The Excel file of GPS coordinates of the patients reported during 2018–2022 was obtained and converted to CSV format to create a location shape file. This file was then converted to KML file format and uploaded into Google mymaps platform. The Grama Niladhari divisions of Polonnaruwa District shape file was also converted into KML file format and uploaded into same Google mymaps platform to visualize both layers in the same map.

Result: Majority (80%) of the cases were reported in Hingurakgoda, Medirigiriya, Thamankaduwa and Dimbulagala Divisional Secretariate Divisions. In addition, hotspots were identified where serial cases reported in consecutive years within the buffer zones. However, appearing of cases within the same year may be due to contact tracing of the index cases.

Lessons learnt: Serial spatial mapping helped to identify emerging clusters of leprosy enabling to implement public health programs in targeted areas than implementing throughout the district in equal manner.

Keywords: GIS Mapping, Leprosy Hotspots

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Spatial distribution of missed leprosy patients during COVID -19 pandemic in Kalutara District

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Background: Leprosy case detection has reduced by 50% due to the COVID-19 pandemic between 2020-2022. Undetected cases could result further spread of the disease. The objective was to identify high risk leprosy pockets to implement targeted control programmes in Kalutara District.

Case study: Data on leprosy patients in the Kalutara district for the previous ten years were extracted from the Anti-Leprosy Campaign database. Geocoding was done by using ArcGIS Online which is used to import CSV file of leprosy patient locations (addresses). The shape file was downloaded and opened in ArcMap. 200m buffer zone was created around the point locations of leprosy patients and the patient cluster areas identified. Data were represented in Google my maps for easy viewing. As outcomes, the estimated number of missed leprosy patients for the three years was calculated. Average number of leprosy cases detected in each Divisional Secretary Division (DSD) in Kalutara District during 2001-2019 was used to estimate the missed number of leprosy patients. Missed cases was calculated by subtracting the actually detected cases from the expected value.

Results: GIS maps enabled to identify the cluster areas where the missed leprosy cases could be located to implement the targeted control programs in Kalutara District. The calculated missed leprosy cases in Kalutara District was 344. Out of 14 DSDs, 5 divisions represented 88% of the missed leprosy cases during the COVID-19 pandemic.

Lessons learnt: Utilization of GIS technology helped to guide control activities in the identified five high risk DSD areas enabling direction of resources in a targeted manner.

Keywords: Leprosy, Covid Pandemic, Missed Leprosy cases

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Establishing mothers' support groups for improving food security in the medical officer of health, Welimada

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Background: Malnutrition among children, adolescents and pregnant women is a significant issue in Welimada Medical Officer of Health (MOH) area. The Sustainable Development Goals infer that strong leadership, resilient communities and sustainable management are critical to achieving food security. Establishment of mother support groups (MSG) is a powerful initiative in this regard to improve the nutritional status in communities. Our goal was to produce a sustainable food security programme in Welimada MOH Area by establishing MSGs and incorporating strategies for improving food security such as home gardening and self-employment.

Case study: An action plan was developed, commencing from November 2022, with the following objectives: a) performing an audit on the knowledge and attitudes regarding food security among pregnant mothers, b) establishing one MSG per PHM area by January end 2023, c) conducting training programmes on home gardening and self-employment and d) establishing five home gardens in each MSG by March 2023.

Results: Results of the audit revealed that over 80% faced inadequate food security in relation to their monthly income. Several awareness programmes on the importance of functioning MSGs were conducted in the MOH. Number of functioning MSGs increased from one to 33. Several training programmes including practical sessions on home gardening and self-employment were done by relevant officers.

Lessons Learnt: In the context of the current economic crisis, utilizing groups such as MSGs for health promotion activities in communities is a win-win situation as it reduces both direct and indirect costs for the health system as well as the society.

Keywords: Mothers' Support Groups, Food security

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Epidemiological evaluation of chronic complications of Lymphatic Filariasis in Sri Lanka

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Background: Sri Lanka eliminated lymphatic filariasis as a public health problem in 2016. Lymphedema is the main complication of the disease that can lead to elephantiasis. Absence of a diagnostic method to confirm diagnosis of lymphedema due to filariasis is a major limitation in achieving the sustainable development goal of zero patients. This work aimed to see the epidemiological distribution of patients with lymphedema in endemic districts to plan targeted interventions to reach the target.

Case study: Lymphedema patients are registered and followed up in lymphedema management clinics in eight endemic districts. All patients are being offered the basic care package to manage lymphedema, thereby preventing progression. Secondary data collected from the newly introduced online platform was analysed using descriptive statistics.

Results: Around 50% of 553 newly registered patients were reported from the districts of Gampaha, Kalutara and Matara. One third (34%) of patients had a history of filariasis. The majority were middle-old age (81%). Only 3% of patients were less than 20 years. Sex distribution was equal. The majority were presented at early stages of the disease (79%). There were 6193 subsequent follow-up visits to lymphoedema management clinics. Only a few patients (2%) showed complications of lymphedema during follow-up.

Lessons Learnt: Despite elimination, the country reports large numbers of lymphoedema patients. Lack of confirmatory test urges registering of all patients referred. Early identification and regular follow-up are essential to prevent progression of lymphedema into elephantiasis. Referral of all patients with lymphedema island wide to morbidity management clinics is important to improve outcomes of the disease.

Keywords: Lymphatic filariasis, lymphedema, epidemiology

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Establishment of estate health voice communication platforms with medical officer of health and estate management

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Background: Both preventive and curative healthcare for estate sector in Sri Lanka is provided by the Ministry of Health. However, some plantation companies provide basic curative care services through health workers recruited by the companies for their worker population. Lack of effective communication and understanding of medical officer of health (MOH) level staff and plantation management, may adversely affect healthcare provision to already deprived estate population.

Case study: Estate Health Voice is a team formed at MOH level, to carry out public health related health promotion activities for the estate community. The EHV consists of 6-10 members, comprising of estate manager, MOH and supervisory level field health staff as compulsory members. Also, it has well-wishers and supportive other individuals as optional intermittent members. They meet regularly to discuss health related issues relevant to estate population under care. EHV is dependent on good communication between committee members. The MOH and estate management work in partnership to identify and solve health problems in estate community using low cost or free solutions. Health related activities conducted are reported monthly by estate manager to the MOH and the Regional Director of the Plantation Human Development Trust in a special format for transparency. A qualitative assessment was carried out to assess the performance at MOH and medical officer of maternal and child health (MO MCH) levels.

Results: Sixty-two MOHs developed communication platforms. They carried out many activities with the support of the estate management without any cost. However, monthly returns were not sent by most of the estate managers.

Lessons learnt: Regular monitoring and re-enforcements needed for the sustainability of EHV

Keywords: Estate Health Voice, MOH, Estate Manager, Communication platform

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One Health in practice: applying integrated bite case management in controlling wildlife Rabies outbreak in Kalutara District

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Background: Sri Lanka has set a coordinated, country-centric strategy to eliminate human deaths from dog-mediated rabies by 2030. Emerge of wildlife rabies outbreaks imposes an extra burden for eliminating dog-mediated rabies and creates profound epidemiological and public health implications.

Case study: There have been several notifications of jackals with abnormal behaviours invading human habitats of Millaniya, Madurawala, Ingiriya and Horana Medical Officer of Health (MOH) areas in Kalutara District since early 2020. The first human attack by jackals was reported in mid-May 2020 and within the next 3-4 months, there have been over a hundred jackal attacks resulting in two human rabies deaths. Eighteen out of 19 jackal samples tested were confirmed for rabies.

Intervention: Multiple-sectors within the Ministry of Health, Department of Animal Production and health (DAPH), Wildlife, Local Government, Education, etc. collaborated in implementing Integrated Bite-Case Management (IBCM) to manage emerging wildlife rabies outbreak in Kalutara District. Key activities implemented under IBCM were; opening a hotline and other data sources for real-time data collection, timely dissemination of information among stakeholders, implementing integrated bite-case detection, effective bite-case management, enhancing community awareness, enhancing mass dog vaccinations and ring vaccination to create herd immunity against rabies in dogs. Continuous surveillance of jackal attacks, bite cases and rabies positivity rates among humans, jackals and other animals were closely monitored.

Results: With the implementation of IBCM in controlling the outbreak, all the indicators including jackal attacks and animal rabies positivity rates dropped significantly. Only nine jackals and no human rabies cases were reported during the next 4-5 months

Lessons Learnt: Implementing IBCM through multistakeholder commitment is an effective strategy for controlling rabies outbreaks.

Keywords: Rabies, Outbreak, Integrated Bite-Case Management, multistakeholder commitment

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A success story: role of public health officers in preventing alcohol promotion among youths, Kandy District, Sri Lanka

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Background: Alcohol consumption is a major public health problem with physical, psychological, and social ramifications. The National Authority on Tobacco and Alcohol (NATA) provides a legal framework for regulation and control of alcohol, including restrictions on proliferation and sales, by enforcing the NATA Act.

Case study: On 7 January 2023, information was received regarding a possible violation of the NATA Act at a musical show scheduled for 20 January, in which the organizers have advertised of free beer provided at the event. Upon receiving this information, the Kandy Regional Director of Health Services formed an action committee of 14 members. A situation analysis was conducted over three meetings in consultation with the NATA legal officers and letters were sent to the event organizers and other relevant parties regarding this possible violation. Through the meetings with NATA officials, the K-RDHS staff was familiarized with the NATA Act, possible course of action, and follow-up actions in similar situations. Official letters were sent through the K-RDHS to the event organizers, premises manager, and other city officials, regarding the potential consequences of a violation.

Results: The organizers changed their publicity material to comply with the NATA Act. The K-RDHS officers, premises manager and municipal commissioner ensured that alcohol was neither offered free nor sold to the participating young adults at the event within the premises.

Lessons Learnt: Public health officers can help create a supportive environment to reduce alcohol-related harm and promote healthy behaviours among young people in Sri Lanka.

Keywords: Health Promotion, Public Health Officers, NATA Act

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WhatsApp group for continuous medical education; a novel approach for learning 'wound management'

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Background: Chronic wounds are one of the commonest causes of presentations at the primary care level and this leads to significant morbidity and impaired quality of life. However, the knowledge and skills of managing chronic wounds seems to very low among medical staff in primary care. This warrants novel approaches to increase the knowledge.

Case study: A social media group has been created as a shared learning platform where participants can post photos of any chronic wound with special significance. This was managed by the Quality Management Unit, RDHS, Galle and one medical officer and/or nursing officer from all the primary care hospitals in the district were connected. A protocol was set up to upload inquiries. A group of surgeons was involved as resource persons to provide expert opinion on optimum assessment and management of the given wound. The response was seen by all the participants in the group and that creates the opportunity of shared learning. Monitoring and evaluation system has set up.

Results: A total of 47 members were there in the group. Since the inception of the program in September 2022, an average number of inquiries of 2-3 per week had been received. The average time for responding by the expert panel was less than 24 hours. Using social media for continuous medical education enables peer learning in an efficient and interactive manner, by enabling participants to provide real-time feedback and active engagement.

Lessons Learnt: This model can be used to other areas of clinical learning.

Keywords: Continuous Medical Education, Wound Management, WhatsApp

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