

ORAL PRESENTATIONS • ENVIRONMENTAL, NUTRITION AND POPULATION HEALTH

[OPE1]**DIABETES MANAGEMENT DURING FASTING IN RAMADAN:
ASSESSMENT OF KNOWLEDGE AMONG
CLINICAL MEDICAL STUDENTS IN IIUM Kuantan***Hasnain Bin Tahir¹, Nor Faiza binti Mohd Tohit²**¹Department of Community Medicine, International Islamic University Malaysia Kuantan Campus, Jalan Sultan Ahmad Shah Bandar Indera Mahkota, Kuantan, 25200 Pahang, Malaysia**²Department of Community Medicine, International Islamic University Malaysia Kuantan Campus, Jalan Sultan Ahmad Shah Bandar Indera Mahkota, Kuantan, 25200 Pahang, Malaysia*

Diabetes mellitus is highly prevalent in Malaysia and the majority of Malaysians are Muslims, hence they are at risk for potential complications that could rise during Ramadan fasting. Medical students are expected to have sufficient knowledge regarding this practice as they are future physicians in managing these patients. However, there are still lack of studies to assess the knowledge regarding diabetes management during Ramadan fasting among medical students. Therefore, this study was conducted to assess the level of knowledge regarding diabetes management during fasting in Ramadan and its associated factors among International Islamic University Malaysia (IIUM) clinical medical students.

A cross-sectional study was conducted among 130 IIUM clinical medical students in 2021. Randomly selected respondents were given an online administered questionnaire. The questionnaire consisted of respondents' sociodemographic characteristics, general diabetes mellitus knowledge and the knowledge regarding diabetes management during fasting in Ramadan. Descriptive statistics was done, followed by further analytical statistics conducted using independent t-test, Spearman's correlation test, and one-way ANOVA.

The total mean score on general knowledge of diabetes and the knowledge regarding diabetes management during fasting in Ramadan among IIUM clinical medical students were 13.52 ± 1.63 and 6.65 ± 2.30 respectively. Gender, age, year of study and education on managing diabetes in Ramadan were significantly associated with the knowledge regarding diabetes management during fasting in Ramadan.

This study revealed that IIUM clinical medical students had a high level of general knowledge on diabetes mellitus but lack of knowledge regarding diabetes management during fasting in Ramadan. The findings should be helpful in planning the diabetes curriculum for IIUM clinical medical students.

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[OPE2]**THE EFFECTS OF LOCKDOWN ON DIET BEHAVIOURS,
EMOTIONAL EATING AND PHYSICAL ACTIVITY AMONG
YOUNG ADULTS IN THE KLANG VALLEY**

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The COVID-19 pandemic has disrupted lives and nations since early 2020, including Malaysia which implemented the Movement Control Order (MCO). Restrictions implemented around the world to curb new infections impacted the normal workings of society in terms of daily lifestyles including eating and physical activity behaviours. Our aim was to elucidate how nationwide restriction (MCO 3.0) affected physical activity, emotional eating and dietary behaviour among residents of Klang Valley of different socioeconomic statuses as compared to before MCO 3.0.

A set of questions was developed according to International Physical Activity Questionnaires (IPAQ) and the Emotional Eating Questionnaire (EEQ) and assessed for its reliability (Cronbach's $\alpha = 0.83$). The link to Google form was distributed among residents in Klang Valley via snowball sampling. Demographic information, anthropometric data, dietary and lifestyle habits were collated.

Results suggested that the physical activity level of the population was significantly low during MCO 3.0 as compared to before MCO 3.0 ($p < 0.001$). There was also a highly significant increase in emotional eating among the population during MCO 3.0 ($p < 0.001$). Dietary behaviour was found to be generally similar between before and during MCO3.0. However, there was a notable difference in several food groups and beverages, such as instant noodle and sweetened drinks, whose consumption significantly increased ($p < 0.05$) during MCO 3.0 period. The study showed that MCO 3.0 period also had significantly increased the screen time spent online within the population ($p < 0.001$).

This study helps to unravel the differences in perceived changes which will be important in understanding the physical and psychological effects of restriction measures and help improve the implementation of future public health measures in a way that reduces detrimental effects to a minimum.

ORAL PRESENTATIONS • ENVIRONMENTAL, NUTRITION AND POPULATION HEALTH**[OPE3]****SLEEP AND SUBJECTIVE COGNITIVE COMPLAINTS AMONG OLDER ADULTS IN SEMI-RURAL MALAYSIA*****Yi Wern Ng¹, Yatinesh Kumari², Tin Tin Su^{2,3}, Devi Mohan²****¹Clinical School Johor Bahru, Jeffrey Cheah School of Medicine and Health Sciences, Monash University Malaysia, No. 8, Jalan Masjid Abu Bakar, 80100 Johor Bahru, Johor, Malaysia**²Jeffrey Cheah School of Medicine and Health Sciences, Monash University Malaysia, Jalan Lagoon Selatan, Bandar Sunway, 47500 Selangor, Malaysia**³South East Asia Community Observatory, Jeffrey Cheah School of Medicine and Health Sciences, Monash University Malaysia*

Dementia is a growing public health problem globally and in Malaysia. Recent evidence showed that subjective cognitive complaint (SCC) is associated with increased risk of dementia. Poor sleep is associated with increasing age and cognitive decline. However, there is lack of local evidence assessing this association. This study aimed to examine the association between sleep disturbances and subjective cognitive complaint among older people aged 60 years and above in a semirural population of Malaysia.

This is a secondary analysis of data from the Health Round in South East Asia Community Observatory (SEACO) – a demographic and health surveillance site in Segamat, Malaysia. Subjective cognitive complaints were measured using the cognition component and sleep disturbances were measured using the sleep and energy component of WHO SAGE questionnaire. Data on sociodemographic variables, health behaviours and co-morbidities were also collected. Data analysis was carried out using SPSS 26.0.0.

The mean age of the study participants was 68.8 ± 6.947 years, 53.5% of them were females. After adjusting for other variables, problems with nocturnal sleep (OR = 1.848, 95% CI = 1.596 to 2.139) and difficulty related to daytime function (OR = 2.121, 95% CI = 1.798 to 2.501) were associated with difficulty in concentration and memory. Similarly, nocturnal sleep problems (OR = 1.668, 95% CI = 1.435 to 1.939) and, difficulty related to daytime function (OR = 2.589, 95% CI = 2.192 to 3.058) were also associated with difficulty in learning new tasks after adjusting for other covariates.

Sleep is significantly associated with subjective cognitive complaint in our study sample which is consistent with the current available evidence. Further longitudinal studies using objective measures of sleep and cognition are necessary to affirm this association.

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[OPE4]**A SYSTEMATIC REVIEW OF THE MANAGEMENT OF MULTISYSTEM INFLAMMATORY SYNDROME (MIS-C) IN CHILDREN**

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Coronavirus disease 2019 (COVID-19) is an infectious illness. Globally, with the increased number of confirmed cases of COVID-19, an alert had been raised by the paediatricians about the association between COVID-19 and multisystem inflammatory syndrome associated in children (MIS-C). The clinical presentations seem to mimic atypical Kawasaki disease and toxic shock syndrome. Current knowledge on the management of MIS-C is very limited and physicians do not have a proper guideline to handle this novel syndrome. This review aimed to identify the effective management strategies among MIS-C patients, including therapeutic treatment and critical management.

We conducted an extensive search in four electronic databases (PubMed, Embase, Scopus and Web of Science) following the PRISMA guideline using medical subject heading and keywords under the PECO (P=children, E=COVID-19, O=management of multisystem inflammatory syndrome) concept. We identified relevant articles based on inclusion and exclusion criteria published from December 2019 to July 2021. We assessed the risk of bias of the finally selected articles. Two reviewers extracted the data using a structured form and invited the 3rd reviewer to resolve any disagreements.

A total of 26 articles with 2,565 participants were included. Intravenous immunoglobulin is used as the primary treatment of MIS-C. Systemic corticosteroid is widely used, especially in high-risk patients with the presence of high inflammatory markers or signs of acute left ventricular dysfunction. Remdesivir has been used to suppress the virus replication while empiric antibiotic is given initially for possible toxic shock syndrome. Tocilizumab and Anakinra, which are immunomodulators have been shown to mitigate the cytokine storm that happens during hyperinflammatory.

The systematic review provided a comprehensive summary of the management of MIS-C in terms of supportive and therapeutic treatment. Intravenous immunoglobulin and corticosteroid are the commonest treatments used in MIS-C. Nevertheless, a multidisciplinary approach to patients with MIS-C should always be considered.

[O P E 5]**FACTORS THAT INFLUENCE THE OBSTETRIC AND NEONATAL OUTCOMES OF COVID-19 POSITIVE PREGNANT WOMEN: A SYSTEMATIC REVIEW**

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COVID-19 infection has become a significant population health issue worldwide since Dec 2019. Presently, the COVID-19 pandemic has reported over 100 million cases globally and generated evidence on raising concerns about the added risk of adverse maternal obstetric and neonatal outcomes. Our research question was to identify the factors that influence the effect of COVID-19 on maternal obstetric and neonatal outcomes. Hence, we aimed to review the available evidence systematically to answer the research question under the PECO (P= pregnant women, E= COVID-19, O= maternal obstetric and neonatal outcomes) concept.

We searched four databases (PubMed, Embase, Scopus and Web of Science) using medical subject heading and keywords under the PECO concept. We performed the search following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) method to identify relevant articles based on inclusion and exclusion criteria published from January 1st, 2020 to June 20th, 2021. We also assessed the risk of bias of the finally selected articles. Two reviewers extracted the data using a structured form and invited the 3rd reviewer when they failed to decide.

We found that the factors related to maternal pre-gestational comorbidity and health status, like increased BMI is linked to the development of severe COVID-19, led to increased rates of preterm delivery, caesarean section and Neonatal Intensive Care Unit (NICU) admission among newborns of COVID-19 positive mothers. Trimester is another critical factor as pregnancy loss is increased in women infected with COVID-19 in the first trimester of their pregnancy compared to the 2nd or 3rd trimester.

This systematic review provided extensive evidence to develop effective intervention by population health-related policymakers to reduce maternal and neonatal morbidity and mortality. It provided clinical management guidance to obstetricians and paediatricians when managing COVID-19 positive pregnancies to save the life of mothers and their babies.

ORAL PRESENTATIONS • ENVIRONMENTAL, NUTRITION AND POPULATION HEALTH**[OPE6]****A STUDY TO ASCERTAIN THE EFFECTS OF SUGAR-SWEETENED BEVERAGE (SSB) TAX ON FOOD AND BEVERAGE INTAKE OF MALAYSIANS**

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Sugar-Sweetened Beverage (SSB) Tax is a strategy introduced by the government of Malaysia in 2019 to promote a healthy lifestyle. Two recent systematic literature reviews found a positive link between SSB consumption and obesity. Other studies showed large price responses in school cafeteria experiments that cut the price of healthy snacks and raised the price of unhealthy snacks. These have decreased sugar consumption and improved healthy diet preferences. This research project aimed to study the changes in adult Malaysians' food and beverage intake habits upon the implementation of the Sugar-Sweetened Beverages (SSB) Tax after Budget 2019.

A cross-sectional online survey was conducted on 515 adults with convenience sampling, who fulfilled the inclusion criteria: literate, above age 18 and Malaysian. An adapted, modified Eating Habits and BEVq-15 questionnaire was utilised. This semi-quantitative questionnaire included sections on beverage intake, food intake, open-ended questions and personal demographics. Data analysis was conducted using SPSS 21.0. The data from July 2020 to July 2021 was compared with the baseline data collected from July 2019 to July 2020 from a previous project to evaluate the difference in the Malaysians' food and beverage consumption patterns.

The respondents aged 18 to 30, tertiary education, no income and female gender comprised the largest proportion of respondents with percentages 59.8%, 61.2%, 44.1% and 64.3%, respectively. Christian made up the majority of respondents (41.0%), followed by Buddhist (32.0%), Muslim (16.3%), Hindu (6.6%), and others (4.1%). The overweight and obesity prevalence rates were 14.6% and 24.5%, respectively. In addition, there was a significant reduction between 2020 and 2021 after SSB tax was implemented for food and beverages such as sweetened beverages.

There was a significant difference between the consumption pattern of Malaysians between 2020 and 2021 after the SSB tax was implemented in 2019.

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[OPE7]**PARENTAL KNOWLEDGE AND PERCEPTION ON FOOD PREFERENCE AMONGST MALAY CHILDREN IN KLANG VALLEY, MALAYSIA*****Kah Yen Lim, Pei Ling Yen, Wai Yew Yang, Shu Hwa Ong****Division of Nutrition and Dietetics, School of Health Sciences, International Medical University, Bukit Jalil, 57000 Kuala Lumpur, Malaysia*

Food preference has been observed to influence children's diet quality through their food choices and intakes. Recent evidence showed that the Malay population reported a greater preference for unhealthy food patterns of high salt, sugar, and fat, predisposing them to increased health risks. As the closest environment to the children, parents play a vital role in shaping their eating behaviours and food preferences. To date, limited local studies have been published on the parental knowledge and perception of their children's food preferences. The study aimed to determine the parental knowledge and perception on food preference amongst primary school-aged Malay children in Klang Valley, Malaysia.

A total of 14 Malay parents were recruited using purposive sampling in this semi-qualitative study. A 36-item of 5-point Likert scale Food Preference Questionnaire (FPQ) consisting of 13 food groups [i) cereals, cereal products, and tubers, ii) fruits, iii) vegetables, iv) meat/ poultry, v) fish and shellfish, vi) legumes, vii) milk and milk products, viii) sugar-sweetened beverages, ix) kuih, pastries and cakes, x) snacks, xi) sugars, xii) oils, and xiii) condiments] was administered through an online survey. This was followed by a structured virtual interview, where the parents shared their opinions on their children's food preference based on the six questions asked.

Snacks was perceived to be the most preferred food group amongst the children with a median score (IQR) of 4.5 (1.0) while legumes were the least [2.0 (1.0)]. Food sensory properties was identified to be the key factor influencing their children's food preference, followed by familial influence and food accessibility.

Malay parents reported snacks to be the most preferred food group and legumes to be the least preferred amongst their children. Various factors influenced these preferences, but food sensory properties was the main contributor.

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[OPE9]**REDUCING THE UNNECESSARY CARBON FOOTPRINT OF ASTHMA INHALER PRESCRIBING IN PRIMARY CARE: A STRATEGY IN REDUCING HEALTHCARE'S HARMFUL CONTRIBUTION TO CLIMATE CHANGE***Joanne Igoli¹, Andrew Dallas²**¹School of Medicine, University of Dundee, Ninewells Hospital & Medical School, DDI 9SY**²General Practitioner Partner, Cairn Medical Practice, 15 Culduthel Road, IV2 4AG*

Inhalers are the main pharmaceutical treatment for asthma and chronic obstructive pulmonary disease (COPD) patients. The UK's most prescribed, and the worst carbon emitting, inhaler device types are Metered Dose Inhalers (MDIs). In contrast, Dry Powdered Inhalers (DPIs) have one of the lowest carbon emissions and are the number one inhaler choices in other European countries such as Sweden. These countries have better asthma outcomes than the UK. This study aimed to reduce the carbon emissions of asthma inhaler prescribing by 10% in a GP practice through MDI prescribing reduction and increase of DPI prescribing over 7 months.

A quality improvement project was carried out with tools such as Plan-Do-Study-Act (PDSA) cycles, quality metrics, effect analysis, lean management, and root-cause analysis implementations, for example.

Staff targeted educational sessions and resources alongside patient targeted educational resources and questionnaires were carried out in the PDSA cycles. These helped empower patients and staff to understand the issues and make appropriate and clinically safe changes to inhaler prescribing/use. Data was collected from the GP Vision IT consultation system. Data on salbutamol and all steroid inhalers were analysed.

There was a 9% reduction from baseline percentage data of the whole Practice's asthma MDI prescribing and a 15% reduction similarly from Practice's asthma clinic MDI prescribing. The whole Practice's asthma DPI prescribing increased by 41% compared to baseline inhaler percentages prescribing, whilst the asthma clinic DPI prescribing similarly increased by 100%.

Reducing the Practice's carbon footprint was achieved through targeted asthma inhaler prescribing. Reducing our carbon footprint is not only a crucial healthcare goal (NHS England's goal is to be carbon zero in 2040), but a global need in which this project is deeply embedded.

ORAL PRESENTATIONS • ENVIRONMENTAL, NUTRITION AND POPULATION HEALTH**[OPE10]****REMOTE TEACHING OF CONTRACEPTION
DURING THE COVID-19 PANDEMIC**

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Contraception is an important area of the medical undergraduate curriculum that reduces the rates of unwanted pregnancy, and maternal deaths worldwide. With the emergence of the COVID-19 pandemic, remote teaching of medicine has become a necessary means of delivering educational material. This study was conducted to understand the effects of remote teaching of contraception on students' perception and performance, using Advancing Contraception Teaching (ACT).

An online contraception module was created during the COVID-19 pandemic using the same principles as the successful face-to-face ACT programme done previously. The module used techniques including tutor-led case-based discussions using video-conferencing platforms and self-directed learning with pre-teaching materials. A total of 59 students participated in this module. A post-test was used to quantitatively analyse students' understanding and knowledge, followed by focus groups to qualitatively analyse students' perception of the module. A hands-on practical session for one component of contraception, the long-acting reversible contraception (LARCS) was conducted at a later date when face-to-face classes in small numbers were safe to resume.

Preliminary results showed a significantly higher median score of 41/60 (n=37) in the post-test of the online ACT compared to 34/60 (n=69) in the face-to-face ACT. Recurring themes from our focus group sessions include the modules' effectiveness in delivering educational content of contraception, enhancing communication amongst participants, and better student preparedness for practical sessions. Some of the challenges highlighted included insufficient time, internet connectivity and overload of reading resources.

This online module appears as effective as face-to-face sessions in delivering an important part of Women's Health curriculum in a safe manner. It allows for flexibility in converting and delivering useful medical content and prepares students for hands-on practical sessions at a later date. With the ongoing pandemic, this hybrid approach can be adopted to deliver contraception teaching.

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[OPE11]**THE PSYCHOLOGICAL IMPACT OF COVID-19
ON THE PREGNANT POPULATION: A NARRATIVE REVIEW***Fathima Atheer¹, Rebecca Cavaliere¹, Albatool Khajah¹, Maryam Salman²,**Molly McNee¹, Richard Duffy³**¹Royal College of Surgeons Ireland, 123 St Stephen's Green, Dublin 2, D02 YN77, Ireland**²Royal College of Surgeons Ireland- Bahrain, Al Sayh Muharraq Governorate' Bahrain, No. 2441, Road 2835, Busaiteen 228**³Psychiatry Department, Rotunda Hospital Dublin Ireland, Parnell Square E, Rotunda, Dublin 1, D01 P5W9, Ireland*

We aimed to conduct a review of the available literature focusing on the psychological implications that COVID-19 has had on pregnant women. During our study, we analysed two medical databases (PUBMED and EMBASE) along with other papers, that described the impact that pregnant women faced psychologically as a result of COVID-19.

Thirty-five relevant papers were identified in total, 83% (29/35) of which focused on anxiety, 71% (25/35) suggested depressive signs, 43% (15/35) described fear, 40% (14/35) examined stress and 14% (5/35) mentioned the effect on first-time mothers. Fear of contracting the virus and uncertainty around the pandemic were notable common stressors. Higher levels of education, secure sources of income, and accurate information were some of the protective factors that were identified.

The pandemic has caused a significant burden to pregnant women, in addition to the disproportionate societal adversities they face. They have been recognised as a vulnerable population, currently affected by the pandemic. Significant psychological effects have been noted such as increased levels of anxiety, depression, stress, and fear which are often overlooked. Suicide is another alarming topic that had been exclaimed by some women. Emotional and physical abuse, in combination with social isolation, are presumable significant factors impacting their mental health. Implementing self-care routines like exercise and enhancing social support services need to be considered as they have been shown to reduce the effect severity and alleviate some symptoms.