DR01 - Needs Analysis for Renal Diet Applications in Malaysian Dialysis Setting: A Mixed-Method Study Among Patients and Dietitians

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Objective: Mobile health applications (apps) have emerged as a potential approach to enhance patients self-management. This study aimed to determine the perception and expectation of patients and dietitians on the utilization of renal diet apps in dialysis care.

Methodology: A mixed-method study with concurrent triangulation design was conducted. The quantitative arm involved 184 hemodialysis (HD) patients through face-to-face interview and 120 dietitians via anonymous online survey. While the qualitative arm consisted of 10 in-depth interviews (HD patients) and 8 email interviews (dietitians). Descriptive and thematic analyses were used, and the results were compared.

Results and Discussion: Approximately 69.6% of HD patients owned a smartphone. More than half (53.9%) of the smartphone users had the experience of searching health information especially nutrition-related (91.3%) using smartphone. Majority of them (78.9%) perceived renal diet apps as very important and were willing to use (80.5%). They expected that renal diet apps can help them in preventing nutrition complications (82.0%), planning menu (78.9%) and monitoring nutrient intakes (82.8%). Whereas, in the context of practising dietitians, about 60.8% of them aware of the existence of renal diet apps but only 38.3% of them would recommend existing renal diet apps to their patients due to lack of local content (42.5%) and unsure credibility (37.5%). Most of them (88.3%) perceived that Malaysian-based renal diet app is needed and agreed that it can enhance dietetics care in HD population (90.8%). Top functions and features anticipated by both patients and dietitians included dietary care plan, individualised assistance, usability (ease of use) and nutrition tracker.

Conclusion: Dietary self-management via mobile health apps seems to be feasible in Malaysian dialysis population given the high smartphone penetration, strong desire to use and positive perceptions from patients and dietitians. Features valued by patients and dietitians should be integrated into the design of the apps to promote acceptance and usage.

DR02 - The Influence of Socioeconomic, Clinical, Nutritional and Functional Determinants on Post-stroke Malnutrition among Stroke Survivors under Rehabilitation Care

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Objective: Stroke is a significant public health burden. The incidence rate is increasing in Malaysia, contributing to the third leading cause of death (6.9%). One of the main challenges faced by stroke survivors was malnutrition which results in poorer responses and recovery to rehabilitation in stroke survivors. This study aims to determine the prevalence of post-stroke malnutrition and its associated factors.

Methodology: In this cross-sectional study, a total of 172 community-living stroke survivors in Terengganu were recruited during the rehabilitation phase from the rehabilitation clinic or centre, using purposive sampling. Socio-demographic data, clinical, anthropometric measurements, dietary intake, lifestyle histories, and functional status were recorded using questionnaires. Post-stroke malnutrition was defined by having a low body mass index (BMI) (BMI

Results and Discussion: Stroke survivors consisted of 54.7% men and 45.3% women, with a median age of 60.00 (15.00) years (age range 26 to 82 years). Most of them had ischemic stroke (75.0%), first-ever stroke (84.9%), hypertension stage 2 (51.2%), and mild cognitive impairment (29.1%). The median of post-stroke duration was 12.00 (23.00) months. The prevalence of post-stroke malnutrition was 13.4%. Age, low socioeconomic status, stroke types, hypertension, cognitive impairment, high risk of malnutrition, Functional Independence Measure (FIM) total score, handgrip strength, and dietary intake showed significant associations with post-stroke malnutrition in stroke survivors. Final regression model verified that age, high risk of malnutrition, and carbohydrate intake were the significant predictors of post-stroke malnutrition.

Conclusion: Early detection of malnutrition in stroke survivors, especially in those who are at high risk of malnutrition, from the elderly population, and poor dietary intake, should serve as a foundation in developing strategies for preventing post-stroke malnutrition across all populations and demographics.

DR03 - A pilot teaching using SimMan to familiarise inpatient dietetics learning in International Medical University (IMU)

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Objective: Simulation is an instructional technique to imitate the real world by providing guided, participative experiences to students to learn skills. It is a common educational tool in healthcare and literature has shown favorable outcomes in students learning, yet limited data is reported in dietetics education. This paper aims to describe the simulation teaching/learning using SimMan, a high fidelity patient simulator, to familiarise IMU final year dietetics students with inpatient nutrition care process skills.

Methodology: At the initial stage of the basic clinical dietetics training, 52 students attended the simulation workshop using SimMan at the IMU Clinical Skills and Simulation Centre (CSSC). SimMan is a computer-controlled mannequin which uses authentic supplies and mimics real-life physical responses of a patient. Students were divided into small groups of 10, and briefed by a facilitator on a case scenario of a patient with a caregiver in the medical ward to commence enteral nutrition. Students were required to conduct nutrition assessment on the patient while other students and clinical educators observed through a one-way mirror in the next room. Each student subdivided tasks- gathering information from medical folder, interviewing and obtaining history from the simulated caregiver and nurse, facilitated by a clinical educator. A debrief was conducted at the end of the session and feedback were provided by the students, simulated caregiver, nurse and facilitator.

Results and Discussion: The facilitators role is crucial to guide the students throughout to achieve the learning outcomes. For both groups of active and non-active students, feedback was positive that the activity has helped them to familiarise with the real setting and prepare them mentally on the expectations.

Conclusion: This pilot teaching using SimMan achieved the objective of preparing students for real patient contact.

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DR04 - Direct and Indirect Influence of Health Literacy on Dietary Adherence in Hemodialysis Patients: A Preliminary Analysis

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Objective: Limited health literacy has been identified as a contributing factor of treatment non-adherence in patients with chronic kidney disease. This study aimed to investigate the influence of health literacy on dietary adherence in the context of dietary knowledge, health belief and self-management skill in hemodialysis (HD) patients.

Methodology: This cross-sectional study recruited 168 HD patients in Klang Valley based on predetermined inclusion and exclusion criteria. Health literacy, dietary adherence and self-management of the patients were assessed by European Health Literacy Questionnaire (HLS-EU-Q), End-Stage Renal Disease Adherence Questionnaire (ESRD-AQ) and Perceived Kidney/Dialysis Self-Management Scale (PKDSMS), respectively. Whereas, validated self-developed questionnaires were used to assess dialysis-related dietary knowledge and 5 health belief constructs based on Health Belief Model, namely perceived benefits, perceived barrier, perceived seriousness, perceived susceptibility and perceived self-efficacy. Relationships between the variables of interest were examined by Pearsons correlation, multiple linear regression and Sobel test.

Results and Discussion: About 35.1% of Malaysian HD patients were found to have inadequate health literacy. Health literacy was the only predictor of dietary adherence (B=0.954, p=0.001) after adjusting for sociodemographic factors. Health literacy was significantly correlated (all p0.05). Despite significant correlations existed among variables of interest, Sobel tests indicated that the influence of health literacy on dietary adherence was mediated only by self-management skills (z=3.798, p<0.001).

Conclusion: Health literacy is a strong and independent predictor of dietary adherence in Malaysian HD patients. Health literacy-enhancing interventions targeting patients perceived benefit and perceived self-efficacy of dietary adherence as well as self-management skills should be considered in promoting dietary adherence in HD population.

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DR05 - Investigating Effects of Ramadan Fasting on Nutritional and Functional Status among Maintenance Haemodialysis Patients: A Prospective Observational Study

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Objective: Studies investigating the effects of prolonged Ramadan intermittent fasting (RIF) on nutritional and functional status among Muslims hemodialysis (HD) patients reported heterogenous findings. This study aimed to evaluate the effects of RIF on nutritional and functional status of maintenance HD patients.

Methodology: This prospective observational study was carried out concurrently at three HD centres in Klang Valley, Malaysia. Patients on maintenance HD who planned to fast during Ramadan were recruited (n=87). Nutritional and functional status assessment was carried out two weeks prior- (V0), at the fourth week during- (V1) and one month after Ramadan (V2). Nutritional status parameters such as anthropometry (body mass index (BMI), interdialytic weight gain (IDWG), waist circumference (WC), mid-arm circumference (MAC), mid-arm muscle area (MAMA), triceps skinfold (TSF), body fat percentage (BFP), fat tissue mass (FTM) and lean tissue mass (LTM), blood chemistry (albumin, renal profile, lipid profile and inflammatory marker), blood pressure, dietary intake and handgrip strength (HGS) were included. Differences in outcome measures between the three time-points were analyzed using repeated measures ANOVA.

Results and Discussion: Subjects who fasted

Conclusion: RIF leads to temporal changes in nutritional status parameters and pose non-detrimental nutritional risk for maintenance HD patients.

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DR06 - A Smartphone-Based Personalized Nutrition Education and Blood Glucose Management in Women with Gestational Diabetes Mellitus

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3. Dept of Obstetrics and Gynecology, Faculty of Medicine, Universiti Kebangsaan Malaysia.

Objective: The present study aims to elaborate on the development of Diet4diabeticmum, a smartphone-based personalized nutrition education for women with Gestational Diabetes Mellitus (GDM) and to assess its acceptability among women with GDM and related health care professionals (HCP).

Methodology: Diet4diabeticmum apps was developed using user centered approach to assist HCPs in nutrition education and blood glucose management in women with GDM. Diet4diabeticmum comprises of 6 modules in the form of interactive and information sections. This application was assessed by a group of 20 GDM patients and 10 HCPs of two primary health clinics in Malaysia using the Tools to Evaluate Materials in Patient Education (TEMPtEd) and System Usability Scale (SUS).

Results and Discussion: Mean TEMPtEd score among professionals was 66.2 whereby among GDM patients was 61.4 in which both scores indicate good acceptance. The mean SUS score among professionals was 70.3 and 67.1 among GDM patients. These scores indicate that the apps evaluated was within the acceptable range of usability. Suggestions for improvements of the apps include rephrasing of sentences, shorter sentences and improvement of apps navigation.

Conclusion: Diet4diabeticmum app is an acceptable tool to be used as assistance in nutrition education and monitoring of GDM patients. Improvements to the apps according to GDM patients and HCP comments need to be addressed before its usage in intervention study for GDM patients.

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DR07 - CHALLENGES FACED BY MALAYSIAN DIETITIANS WHEN FORMULATING THE MOST APPROPRIATE NUTRITION DIAGNOSIS

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Objective: Nutrition Care Process (NCP) was implemented by Malaysian dietitians in 2003. Its implementation aims to assist in the delivery of quality nutrition care. Identification of the most appropriate nutrition diagnosis, the second step of the NCP is crucial in order to provide effective dietary intervention. The aim of the study is to determine the challenges faced by Malaysian dietitians when formulating nutrition diagnosis (ND).

Methodology: This was a two-month, cross-sectional study conducted online using Survey Monkey platform. Participants were required to provide demographic details, current practice on ND and challenges faced when identifying the most appropriate ND, using a 5-point Likert scale, from strongly disagree to strongly agree. Link to the survey was shared to 910 ordinary members of the Malaysian Dietitians Association (MDA) through e-dietitian and MDA facebook page. A token of appreciation was given to participants who completed the survey.

Results and Discussion: 101 (93%) of the 109 respondents have implemented ND in their practice. 77 (70%) respondents found constructing ND to be difficult. Etiology was identified by these respondents as the most difficult component to determine, mainly due to language barrier. Time consuming (53%), lack of experience in formulating ND (47%) and personal-related challenges (42%) such as lack of motivation and lack of confidence were reported to be the main challenges faced by dietitians when formulating ND. Current study has shown encouraging improvement in the implementation of ND among Malaysian dietitians. Future NCP training should aim to address the challenges reported by the respondents in the study.

Conclusion: NCP is well implemented in Malaysia and dietitians are positive towards its implementation. Continuous professional development training on NCP would be required to address the challenges faced by the dietitians.

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DR08 - Hidden Patient Safety Threat: Dietary Errors of Therapeutic Diet in Hospital

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Objective: Hospital staffs may tend to think of avoiding medication errors, infections or post-operative complications when addressing patient safety. However, the dietary error is another element to patient safety that often goes overlooked. A diet-related error such as providing wrong diet to hospitalized patients may cause harmful healthcare complications like impaired blood sugar. Therefore, we conducted a study at Hospital Sultan Ismail, Johor Bahru to identify the causes and events of dietary errors in therefore diet and hence to propose remedial measures to reduce the occurrence of dietary errors.

Methodology: A descriptive, non-experimental cross sectional study was conducted from January to February 2019. Meal observation was done during lunch and dinner, beginning from the process of diet order until the diet delivered to the patients who required therapeutic diet for consecutive three days. The event and contributing factor of each dietary error were recorded.

Results and Discussion: From 221 servings of therapeutic diet being observed, a total of 23 events (10.4%) of dietary errors were identified. Wrong diet indent was the main contributing factor in dietary errors (65%), following by wrong diet type (31%) and wrong food tray (4%). Hands-on staff training was given to all involved staffs as a remedial measure to reduce the events of wrong diet consistency.

Conclusion: This study shows that dietary errors of therapeutic diet are caused by human errors which are preventable. Therefore, continuous staff education is the first line of defense to reduce human errors. Regular monitoring and audit are required to evaluate the effectiveness of remedial actions and the sustainability of improvement.

DR09 - Nutritional Status and Quality of Life among Gynecological Cancer Outpatients in Multidisciplinary Clinic, National Cancer Institute.

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Objective: Malnutrition is associated with poorer outcomes following treatment for Gynecological Cancer (GC) patients. This study aims to evaluate nutritional status and the relationship exist between nutritional status and quality of life (QOL) among GC patients at Multidisciplinary Clinic (MDC), National Cancer Institute (NCI).

Methodology: All new cases from December 2017 till September 2018, presenting to MDC were screening using Malnutrition Screening Tool (MST). A total of 69 GC patients with MST ≥ 2 with signed consent were further assess using the scored Patient Generated Subjective Global Assessment (PG-SGA) to determine their nutritional status. A validated European Organization for Research and Treatment of Cancer Questionnaire was used to measure the patients QOL.

Results and Discussion: The majority of patients were Malay, with a mean age of 52.7 13.3 years and had been diagnosed with Ovarian cancer. Mean energy intake was 956 244 kcal/day and protein intake was 39.6 10.56 g/day. Severely malnourished (SGA C) patients had statistically significantly reduced in global health status score ($p = 0.008$), physical functioning ($p= 0.002$), role functioning ($p = 0.009$), emotional functioning ($p= 0.042$), compared to moderately malnourished (SGA B) patients. Besides, majority of symptoms scales score were better in moderately malnourished (SGA B) patients compared to SGA C patients. There is relationship exist between PG-SGA and main domains of the QOL namely global health status ($r = -0.407$, $p= 0.001$). Besides, PG-SGA was moderately correlated with other domains of QOL: physical functioning ($r = -0.587$, $p< 0.001$), fatigue ($r= 0.536$, $p< 0.001$) and appetite ($r =0.637$, $p< 0.001$).

Conclusion: The better the nutritional status, the higher the QOL score. The scored PG-SGA is associated with QOL among GC Outpatient, NCI.

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DR10 - Knowledge, attitude and salt related behaviour among health care staffs and visitors in Sarawak General Hospital

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1. Dietetic and Food Service Department, Hospital Umum Sarawak

Objective: This study aim to investigate the association of knowledge, attitude and the salt-related behaviour with socio-demographic factors, among health care staffs and visitors in Sarawak General Hospital

Methodology: Using a self-administered multicomponent questionnaire, we conducted a cross sectional survey based on convenience sampling. A total of 97 respondents aged 18 to 75 years participated in this study. Knowledge score was calculated based on the number of correct answer to knowledge questions, ranging from 0 to 22 with the higher the score the higher the knowledge. An attitude score was based on the number of favorable attitude statements, ranging between 0 and 3 with the higher the score the more favorable attitude toward reducing salt intake. Differences in proportion between categorical variables were tested using chi-square. Multivariate regression model was used to examine factors associated with salt related behavior

Results and Discussion: Majority of the respondent are female (78.4%) and younger age group (18-35 years, 55.7%). Based on univariate analysis, gender appears to be a factor in salt-related behavioral practices, showing a significant (p

Conclusion: Gender and educational level may contribute to the knowledge and attitude towards salt intake. Identifying knowledge and attitudes gaps are important in the planning for any intervention to reduce salt consumption among population

DR11 - ADIPONECTIN AND ITS ASSOCIATED FACTORS AMONG MALAY ADOLESCENTS IN KUALA NERUS, TERENGGANU

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Objective: This study aim to determine total adiponectin level (TAL) among adolescents, and to investigate the relationship between sleep duration, total screen time and diet component with TAL among 76 Malay adolescents aged 13 16 year old in Kuala Nerus.

Methodology: Anthropometric measurement comprised weight, height and body mass index was calculated. Serum TAL was obtained from centrifuged blood sample by enzyme-linked immunosorbent assay kit. Socio-demographic characteristics were obtained through parents self-report questionnaire, sleep duration, total screen time and three days dietary intake were determined through validated questionnaires.

Results and Discussion: Subjects comprised 76 adolescents with 73.7% females and 26.3% males. Median TAL was 5.61 (3.74) g/mL. No significant difference in TAL among male and female ($p=0.77$), however, median of TAL of female was higher than male [5.61 (3.75) g/mL versus 5.43 (3.74) g/mL.]. There were no significant association between sleep duration ($p=0.98$), total screen time ($p=0.42$) as well as diet component [carbohydrate ($p=0.82$), protein ($p=0.7$) and fat ($p=0.98$)] and TAL.

Conclusion: The TAL of adolescents in Terengganu was relatively low. No significant association was found between TAL and its associated factors. This preliminary study provides a baseline data in exploring the TAL among adolescents in Kuala Nerus. Larger scale studies related to TAL should be conducted in the future, in order to publish a suitable cut-off of TAL among adolescents in Malaysia.

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DR12 - Nutritional Status among Head and Neck Cancer In-patients before radiotherapy in National Cancer Institute, Putrajaya.

Neoh May Kay1, Zalina Abu Zaid2, Zuwariah Binti Abdul Rahman1, Norshariza Binti Jamhuri1, Zuliehaiza Binti Kahairudin1, Siti Noraini Binti Ahmad Samwil1, Aeininhayatey Binti Abdullah1, Ho Chiou Yi1, Betti Sharina Binti Haniff Lai1, Ng Wai Han1, Aini Masitah binti Mohammad1

Objective: Malnutrition can negatively affect management of cancer for Head and Neck Cancer (HNC). In addition, little is known about the relationship between nutritional status, dietary intake, albumin level and nutrition impact symptoms (NIS) among HNC inpatients in National Cancer Institute, Putrajaya.

Methodology: Nutritional status of the patients was determined using scored PGSGA. NIS of the patients was evaluated using validated Head and Neck Symptoms Checklist (HNSC). A total of 50 HNC patients receiving radiotherapy (RT) were included in this study with informed consent.

Results and Discussion: The majority of patients were male, with a mean age of participants was 56.6 1.8 years, Half of the patients (56%) were malnourished with 20% had severely malnourished at the beginning of RT. There were low rate of dietitian referral (46%) before treatment and significantly affects nutritional status (p=0.027). Well-nourished patients had a statistically significantly better HNSC scores and albumin level; less pre-treatment weight loss; higher total energy intake, dietary and protein intake with compared to malnourished patients (p< 0.05). There was a significant negative relationship between nutritional status and albumin (r=0.315, p=0.026), total energy intake (r=0.427, p= 0.002), dietary intake (r=0.492, p =0.0001) and protein intake (r=0.478; p= 0.0001) indicating the better nutritional status. There was a significant positive relationship between nutritional status and pre-treatment weight loss (r=0.681, p=0.0001), the higher the pre-treatment weight loss, the lower total mean score of PGSGA. A significant strong association with nutritional status was observed for the NIS score: (r=0.731, p

Conclusion: Early identification of patients at presentation ensures optimal nutritional status to improve treatment outcomes and the importance of dietary management in HNC patients.

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DR13 - Mobile Applications for Weight Reduction: A review from Dietitians perspective.

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1. UKM

Objective: To review the content of mobile applications for weight reduction based on the description provided by the developer.

Methodology: A search was conducted between March to April 2019 of from Google Play Store. Data from all included mobile applications were abstracted into three major criteria, evidenced-based strategies, health care expert involvement, and scientific evaluation. Evidenced-based strategies included: self-monitoring, goal-setting, physical activity support, healthy eating support, weight and/or health assessment, personalized feedback, and motivational strategies. Inclusion criteria: 1) Mobile applications for weight reduction only. 2) Updated at least by 2017. 3) Have diet features, exclude if only for exercise purposes. 4) Malay or English language mobile applications only.

Results and Discussion: A total of 30 apps were included in this review. 13/30 (43%) applications describe involvement of expert. From that, 4 applications were in premium features that user need to pay for that. The others offer involvement of expert as in articles format. Only 3/30 (10%) applications involved expert in the development of the application. From that, only 1 application from Malaysia. For the second criteria which is evidenced-based strategies, 27/30 (90%) applications had healthy eating support features, followed by self-monitoring 23/30 (77%), goal-setting 21/30 (70%), physical activity support 20/30 (67%), weight assessment 20/30 (67%), motivational strategies 16/30 (53%), and personalized feedback 9/30 (30%). Only 5/30 (17%) underwent scientific testing. Limitation of this study were the data only extracted from developers description. There were possibility that "self-claimed" expert to involve in the applications instead of real certified expert. Fad diet also perhaps to be mixed in the healthy eating support element.

Conclusion: Mobile applications available for weight reduction lack important evidence-based features, do not involve health care expert, and have not undergone scientific testing. Collaborative efforts between developers and expert are needed to develop the evidenced-based mobile applications for weight reduction before being used by public.

DR14 - Feasibility Study of Smartphone Application to Promote Self-Monitoring Dietary Intake among Cancer Patients

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2. Department of Chemical Engineering, Xiamen University Malaysia, Sepang, Malaysia

Objective: Dietary monitoring is an important component in nutrition care process. A "smartphone application" (Intelligent Dietitian Support Apps, iDSA) was developed to act as a tool to assist cancer patients in term of dietary monitoring. This feasibility study aimed to examine the use of iDSA to improve self-monitoring dietary intake using mobile technology over traditional pen-and-paper based method among cancer patients.

Methodology: Convenient sampling was used and iDSA was installed into eligible participants smartphone for self-recording and monitoring of daily dietary intake at home. A dietitian follow-up appointment was scheduled in 2 weeks time to monitor nutritional status where weight and dietary intake were reviewed. Questionnaire about feasibility and usability of iDSA was completed to determine degree of satisfaction, convenience and efficacy.

Results and Discussion: A total of 14 participants (6 male; 8 female) were enrolled with mean age 36.4 10.1 years. There were significant improvement (p

Conclusion: Self-monitoring dietary intake via iDSA was feasible and acceptable among cancer patients. With compliance to iDSA, nutritional status improved after two weeks. iDSA usability was rated as good and further study is recommended.

DR15 - Technology-enhanced assessment: Implementation of OSCE using online assessment system for dietetics education in International Medical University (IMU)

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Objective: Objective Structured Clinical Examination (OSCE) evaluates learners competencies based on direct observation of clinical skills using standardised patients. An Online Assessment System (OAS) was introduced in IMU to allow evaluation of students performance and monitor the conduct of assessments in real time. This paper aims to discuss the implementation of an online assessment system for OSCE in the dietetics undergraduate programme in IMU.

Methodology: The process for the OSCE conduct using OAS includes i) online user account set up for OSCE coordinator, ii) assignment of authors to construct the clinical case scenario and marking rubric, iii) questions vetting, iv) actual conduct of OSCE where examiners use tablets and input marks online instead of on answer sheets, v) examiners input comments or feedback on the online platform regarding the students performance. The OSCE coordinator is stationed at the central hub and monitors the marks entered for each station on real time in order to spot any inconsistency or problem. Upon completion of the exam, the results are generated immediately and released to students after endorsement. Students can then log on to the OAS to obtain their results and feedback.

Results and Discussion: The OAS features such as questions banking, analysis, blueprinting based on learning outcomes, standard setting, immediate individualised feedback show that it is an integrated, systematic, secure and reliable system to collect, review and use assessment information. Nevertheless, several challenges were identified- instability of internet connectivity resulting in slow processing of input, small tablet interface causing difficulty to read and enter marks, and time constraint to enter the marks for examiners who are not technology savvy.

Conclusion: The use of online assessment system in OSCE ensures efficiency, preserves the integrity of assessment, reduces administration overload and allows individualised feedback to students on real time.

DR16 - SENIOR FRIENDLY WEBSITE FOR A HEALTHIER MIND: WESIHAT 2.0

Divya Vanoh1, Suzana Shahar2, Intan Hafizah Ishak2, Zahara Abdul Manaf2, Rosdinom Razali3, Nazlena Mohamad Ali4, Shahrul Azman Mohd Noah5

1. USM
2. UKM
3. PPUKM
4. UKM
5. UKM

Objective: To develop a senior-friendly website focusing on the screening of MCI and educating older adults of the modifiable risk factors of MCI. Further, this study addresses the issues faced by older individuals on the initial version of WESIHAT 2.0 and determine the cost saved using this website as compared to traditional educational material such as pamphlet.

Methodology: The website known as WESIHAT 2.0, abbreviation of Warga Emas Sihat 2.0, is a senior friendly website developed targeting Malaysian older adults. It has four major components namely the personal information homepage, TUA-WELLNESS screening tool, ten memory enhancing guidelines, health diary and healthy food. TUA-WELLNESS had ten items for screening user`s the risk of cognitive impairment. The health diary allow users to enter and monitor their blood test readings. Healthy food focuses on ethnic-based healthy menu recipes, smart shopping tips and nutrition quiz. Before the website is launched, feedbacks of the WESIHAT 2.0 were obtained from 71 subjects.

Results and Discussion: TUA-WELLNESS screening tool has high sensitivity (83.3%), specificity (73.4%), area under the curve (0.84) and Youden`s Index (0.57). Comments given by the subjects on the initial version of website were smaller font size (27.3%), addition of more pictures (27.3%), using simpler terms (36.4%) and changing certain design for better view of older people (18.2%). Amendments were made based on the feedback given, before the website is ready to be launched. Besides that, WESIHAT 2.0 can save cost of improving disability and social support by MYR 6.92 and MYR 13.52 as compared to pamphlet.

Conclusion: WESIHAT 2.0 can be a cost saving method for educating older adults of the modifiable risk factors of cognitive impairment. Effort is being conducted to convert the web-based WESIHAT 2.0 into mobile enabled application and further implemented it to be used at health clinics and Pusat Aktiviti Warga Emas

DR17 - Brain Based Instructional Strategies: A Toolbox for Teaching and Learning Innovation

Zenaida Velasco1

1. Nutritionist-Dietitians' Association of the Philippines

Objective: The aim of this paper is to present various brain-based instructional strategies to improve students learning outcomes anchored on the principle that learning can be accelerated and improved if educators recognize latest scientific research about how the brain learns.

Methodology: Brain-Based Learning Strategies are ways of making connection with learners that promote long term memory and recall. Creating meaning using the five senses, asking the right questions, understanding similarities and differences will result to better recall. Teaching other learners and performing the task through demonstration will increase memory by 92% (Gary Phillips, National School Improvement Project). Inserting well timed transitions or breaks within the lesson will retain information better.

Results and Discussion: Most importantly, learning is emotion. Research has shown that happiness has a positive effect on learning, memory and social behavior. Conversely, negative emotional states, such as anger and sadness, have been shown to have a negative impact on learning and motivation

Conclusion: If indeed attention follows emotion, then educators need to use that knowledge in helping learners make connections to stories that sustain their interest and to include lessons that are relevant to their lives.

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DR18 - Determining The Nutritional Status of The Hospitalized Elderly by Using Mini Nutritional Assessment - Short Form (MNA-SF) and Its Associated Factors in Hospital Serdang, Selangor.

Nur'Aiman TG and Noraida O.

Department of Nutrition & Dietetics, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia.

Objective: This cross-sectional study aimed to determine the nutritional status of the hospitalized elderly by using Mini Nutritional Assessment-Short Form (MNA-SF) and its associated factors in Hospital Serdang, Selangor.

Methodology: A face-to-face interview was conducted to each of the subjects to complete the self-developed questionnaire, 24-hour diet recall, Mini Nutritional Assessment-Short Form (MNA-SF) and Hospital Stress Rating Scale (HSRS).

Results and Discussion: There were 130 elderly patients were recruited with 45% were male and 55% were female with total mean age of 70.15 7.63 years. Based on MNA-SF, 51.5% were at risk of malnutrition, 26.2 % were at normal nutritional status and 22.3% were malnourished. Among the subjects, 76.2% having hypertension, 55.4% and 13.1% having Type-2 Diabetes Mellitus and dyslipidemia respectively. According to 24-hour dietary recall, 51.50% of the subjects consumed adequate calorie with the mean intake of 1084.07 400.98 kcal/day and only 49.20% out of them consumed adequate protein with mean 49.08 24.10 g/kg of body weight. Besides, only 23% of the subjects receiving oral diet with ONS while 77% were receiving fully oral hospital diet. A total individual HSRS score was 37.72 7.14, 91.5% of them were on medium stress, 7.7% were low stress and 0.8% were on high stress. The finding of this study found age, the number of comorbidities and length of stay were associated with the nutritional status of hospitalized elderly patients. However, stress level due to hospitalization, calorie and protein adequacy, presences of oral nutritional supplement (ONS) were found not to be associated.

Conclusion: In conclusion, the nutritional status of hospitalized elderly should be improved in order to lower the risk of mortality and morbidity.

DR19 - Boosting Self-Efficacy using Features of a Mobile App - Dietitians Perspective

Alina Ita A1, Charmaine Lavinia1, Pheh Huang S1, Siti Nurhana AW1, Kar Foo N1, Seow Wei N2

1. International Medical University
2. Naluri Hidup Sdn. Bhd.

Objective: Self-efficacy is crucial in behaviour change. Outside of face-to-face diet consultations, opportunities to enhance consumption consciousness and support positive eating habits is imperfect. In this report, we share our experience as dietitians in using 'Naluri', a smartphone health app, using technology to provide on-the-go personalised diet intervention, focused on active reflection to precipitate positive behaviour change.

Methodology: The 'Naluri Food Journal' is a photo-based food logging feature that aims to not only capture food images for feedback but to develop healthy eating habits based on reflection. The feature allows dietitians to provide qualitative feedback of users daily meals and snacks. Dietitians are notified of food journal posts pending reviews via email and when logging into the system. Personalised commentary is provided using an open comment box; however, due to the growing number of users and posts, commentary transitioned to traffic light rating (red - Poor, amber - Moderate, green - Good) indicating diet quality, followed by quick-replies from a pull-down menu of healthy eating principles. Motivational phrases were incorporated into each statement for each rating to encourage progress and behaviour change.

Results and Discussion: Posts showed an imbalanced diet: (1) excessive portions, (2) inadequate intake (or absence) of certain food groups, (3) high fat, and/or (4) high sugar content. Upon feedback, users showed positive changes - Over time, users posts showed less 'red' unhealthy choices, throughout the day and day to day. Manual commentary and/or ratings with appropriate dietary advice had increased users self-awareness, prompting change.

Conclusion: Photo-based food journaling as a visual self-monitoring tool can support self-reflection, both through personalised commentary and personal dietary insights. When facilitating change, the medium to exert action and progression needs to be simple and fast. Collaboration between app developers and dietitians are imperative to build dietitian-user engagement through improved response time, scalability, and optimising the feedback process.

DR20 - Handgrip Strength and Nutritional Status in Hospitalized Elderly Patients

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Objective: Handgrip strength is often used as an indicator of overall muscle strength for aging adults, and low HGS is associated with poor health outcomes or poor nutritional status. This study aims to investigate the association between handgrip strength and nutritional status of aging adults who were admitted to Hospital Sultan Ismail, Johor Bahru.

Methodology: This cross-sectional study was conducted among 40 patients aged 60 years old. Nutritional status was assessed using Mini Nutritional Assessment (MNA) while handgrip strength was measured using electronic hand dynamometer. All data were assessed for normality using the Shapiro-Wilk test. Continuous variables were described by means and standard deviation or medians and interquartile range as indicated. Spearman test was used to determine the association between handgrip strength with other nutritional parameters. The statistical significance was reported at $p < 0.05$.

Results and Discussion: A total of 40 elderly patients (18 male and 22 female) were recruited in the study with the mean age of 66.73 5.88 years. The median handgrip strength of the subjects was 15.6 kg (9.8 21.0) which indicates the majority of them had low handgrip strength. Based on MNA category, 60% of study participants were at risk of malnutrition (n=24), 15% were malnourished (n=6) and 25% had good nutritional status (n=10). Body weight and MNA score were positively correlated with handgrip strength (p

Conclusion: This study highlights the importance of early identification of aging adults who are malnourished or at risk of malnutrition and suggests the use of handgrip strength measurement as a feasible nutritional screening tool to identify elderly patients who are at risk of malnutrition.

DR21 - A framework for improving information quality requirements for online health information systems

Mohamed Aden Ighe1 Siti Asma Mohammed 2

1 2 DCS, KICT, IIUM

Objective: The recent demand of accessing online health information has increased sharply due to the mass production of information and their value strongly depends on the quality of information that is inside the content of the system. However, many of the online health information systems provide poor information quality to its users, due to the improper implementation of IQ requirements dimensions in the earliest stages of the development process. Moreover, information quality frameworks focus more on technical aspects instead of social aspects, which is the actual use of information by users and can guide better implementation of IQ requirements in online health information systems. The objective of this research is to investigate the dimensions of IQ requirements during the system development process in online health information systems and to adapt a framework that guides the IQ requirements in the field of online health information systems.

Methodology: This will be done by identifying and analyzing the existing frameworks available for IQ requirements through literature review while collecting data through expert reviews of software engineers and nutritionists. It will focus on a nutrition health information system, since there is a growing interest of Malaysian internet users searching such information relating to personal health, mainly diets and nutrition.

Results and Discussion: The outcome of this research will introduce a consistent IQ requirements model based in the field of online health information that meets the needs of the stakeholders.

Conclusion: The research should help understand the practitioners and administrators about the gaps in their content that should overcome and put into consideration.

DR22 - Nutritional Status of Community Dwelling Elderly Clients with Dementia in Singapore

Ler Yi Bin

St Luke's ElderCare Pte Ltd

Objective: To assess the nutritional status of elderly clients with dementia, who utilize St Luke's ElderCare day care services in Singapore

Methodology: The Mini Nutritional Assessment-Short Form (MNA-SF) was used. Six screening items include: Weight loss Psychological stress or acute illness Mobility Food intake Calf circumference Neuropsychological problems Inclusion criteria: Clients with dementia who utilise day care centres for at least 3 months Exclusion criteria: Absence for more than 2 weeks during the period of study; incomplete weight records.

Results and Discussion: Results of this exploratory study showed: A lower prevalence of malnutrition (13.7%) among community dwelling dementia elderly as compared to a general Singapore study of hospital elderly patients (5-21%)4. More females are at risk and malnourished nutritionally than males. Discussion: The prevalence of malnutrition among SLEC clients is low, however the risk of malnutrition is relatively high. These elderly can be easily screened and identified using the MNA-SF, with early intervention and prevention at the community level.

Conclusion: Nutritional screening of the elderly is important and beneficial to the organization. Specifically, continuous nutrition monitoring by the in-house dietitian is necessary to improve the nutritional status of the elderly as well as to prevent/shorten their hospitalization.

DR23 - Improving Nutrition Screening Process for Inpatients from Manual System to Online System

Geetanggili S1, Mei Kee C1, Mastari M1, Pui Hing F1, Siti Farhath SA1, Vatana S1, Manvinder K1, Norazurin T1, Mei Hui N1, Yi Xin T1

1. Institut Jantung Negara

Objective: Objective of this study is to evaluate the implementation of online nutrition screening system from manual system. Percentage of nutrition screening done correctly by the nurses and percentage of patients at nutrition risk referred to dietitians were assessed to study the outcomes.

Methodology: Monthly audits were conducted by dietitians in the wards using an audit form. Ten samples were selected from each ward using convenience sampling excluding paediatric and ICU wards. Comparison was done for 676 samples collected using manual system from March to August 2017 and 726 samples collected from September 2017 to February 2018. Data was analyzed using SPSS 25.0 at significance level $p<0.05$.

Results and Discussion: The average percentage of correct nutrition screening done by the nurses increased from 57% to 70% (p

Conclusion: Online nutrition screening system is effective in improving the nutrition screening process by reducing the manual errors and increasing referrals to dietitians.

DR24 - Nutritional Status, Lifestyle Practices, and Stress Risk Factors of Selected Filipino Working Adults

Agdeppa, Imelda1

1. Food and Nutrition Research Institute

Objective: This study evaluated the nutritional status, nutrient intakes, lifestyle practices and stress risks factors of selected Filipino working adults

Methodology: This was a cross-sectional survey of 1264 selected Filipino working adults aged 19 to 59 years old from randomly selected work sectors: business process outsourcing (BPO), factory, hospitality and foods, administration, sales, and healthcare. Weight and height were measured using standard methods to calculate BMI. Food and beverage intakes were collected using 24-h dietary recalls. Usual nutrient intakes were estimated using PC-Side program. The Philippines Dietary Reference Intakes were used to calculate proportions of inadequate intake using Estimated Average Requirement. Energy adequacy was evaluated using the equation of the Institute of Medicine for Estimated Energy Requirements. Lifestyle behavior was assessed using the WHO questionnaire. The Perceived Stress Scale and Ardell Wellness Stress Test (AWST) were used to measure stress level. Physical activity level was determined using the WHO STEP Guidelines

Results and Discussion: About 47.2% were overweight and obese, highest percentage is among BPO sector (54.0%). All respondents did not meet their daily Estimated Energy Requirement, however the percentage contribution of fats (58%) and proteins (34%) to energy were excessively high. Folate (97%), calcium (ranging from 88% to 99%) and iron (99%) were the most inadequately consumed micronutrients. About 22% are current smokers, 71% drinks alcohol, and 59% are considered physically inactive. Smoking and alcohol drinking were highest in the BPO sector. Across sectors, BPO has the highest prevalence of perceived stress (10.34%) and results of AWST showed that BPO sector (21.26%) got a score of 0 to -24, indicating that training on how to deal with stress is needed

Conclusion: Overweight and obesity is common in all sectors but highest rate in the BPO sector. Majority of the respondents have poor lifestyle practices and physical inactivity which are the risk factors of non communicable diseases. Stress level is high and is highest in the BPO sector. These problems must be addressed to achieve improved productivity.

DR25 - Risk Assessment and Cut-off Value for Sugar Intake and Cognitive Impairment Among Multi-ethnic Malaysian Older Adults

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Objective: Sugar is widely consumed by Malaysian, and excessive intake has been associated with lower cognitive functions. However, the association between sugar intake and cognitive impairment among Malaysian older adults has yet to be determined. The objective of this study is to evaluate associations between types and sources of sugar intake and cognitive functions and to identify the risk and cut-off value in predicting cognitive impairment (MMSE score <24).

Methodology: A total of 1,209 respondents aged ≥60 years were recruited through multistage random sampling from selected states. Dietary intake was derived using a 7-day dietary history questionnaire (DHQ) and food frequency questionnaire (FFQ) for added sugar intake. Risk assessment was conducted using Binary Logistic Regression and optimal cut-off values were determined using receiver operating characteristic (ROC) analysis.

Results and Discussion: Mean total sugar intake was 51.3333.91g (10 tsp), and free sugar intake was 40.031.23g (8 tsp). Higher intake of total sugars, free sugars, sucrose, lactose, sugar-sweetened beverages, sugar-sweetened cakes and dessert were significantly associated with lower MMSE score, after adjusting for covariates. On the other hand, the consumption of cooked dishes and fruits were significantly associated with better MMSE score. Adjusted OR for risk of cognitive impairment (MMSE score

Conclusion: In conclusion, excessive sugar consumption among older adults showed association with poor cognitive functions, but longitudinal studies and clinical trials are needed to clarify the direction of causality and to investigate the underlying mechanism.

DR26 - The potential of a free pedometer mobile application in assessing physical activity status and its association with body composition among International Islamic University Malaysia (IIUM) students

Izzah Atirah MN1, Che Ku Nur Aishah CKA1, and Nor Azwani MS1

1. IIUM

Objective: Many young people nowadays have sedentary lifestyle which might contribute to obesity prevalence. With the technology advancement, free mobile applications (apps) are now available to assist them to be more physically active. Thus this study aimed to determine: i) the relative agreement between an objective assessment (pedometer app) and a conventional self-reported method (International Physical Activity Questionnaire, IPAQ) in determining physical activity (PA) status, and ii) the association between step counts and body composition.

Methodology: IIUM Kuantan Campus students (n= 86) aged 18 to 27 years were recruited using convenient sampling. Anthropometric measurements including height, weight and body composition were taken using SECA stadiometer and OMRON body fat analyzer. Participants were requested to use a free-of-charge mobile pedometer app (Accupedo Pedometer) and the IPAQ to record their PA over three days (two weekdays and one weekend day). Classification of the PA status based on pedometer and IPAQ were referred to Basset (2004) and IPAQ (2005), respectively. Relative agreement between both data were analyzed using Kappa statistics, cross-classification, and Pearson correlation.

Results and Discussion: It was found that 74% (based on IPAQ) and 91% (based on pedometer app) of the participants were categorized as low active. The Kappa value was k=0.126 (p=0.016) indicating a slight but significant agreement between these two methods. Cross-classification demonstrated that ~40% (n=34) of the participants were correctly classified into the same third whereas ~16% (n=14) were grossly misclassified. In addition, the average steps count perday (by pedometer app) was significantly correlated (r=0.235, p=0.03) with total MET-minutes/week (by the IPAQ). However, no association between steps count and BMI or percent body fat was found.

Conclusion: The pedometer app was comparable to the self-reported IPAQ in assessing PA status. This shows that a cost-free and convenient mobile app is applicable to be used for daily PA assessment among young people.

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DR27 - Mentoring: A tool for professional enhancement. The CVSKL Experience

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1. Dietetics and Food Services, Cardiac Vascular Sentral Kuala Lumpur

2. Consultant, Dietetic and Food Services

Objective: Mentoring is a formal relationship where a person with significant experience provides guidance and counsel to someone who has less experience in a field. I faced a lot of challenges when I started working in a specialist hospital. My previous experience was inadequate for me to handle the challenges in the hospital. Managing a dietetic department with food services and coaching a junior dietitian are among the major challenges. Greater challenges came when the hospital set to achieve Malaysian Society for Quality in Healthcare (MSQH) accreditation for Dietetics and Food services within one year.

Methodology: Recognizing my shortcomings, I requested for support from the Medical Director and CEO. They appointed an experienced qualified mentor to work with me from March to September 2019. The mentoring sessions started with building rapport, agreeing on the mentoring schedule and format, then discussing on the goals and objectives of the mentoring. The mentor helped me to overcome the challenges especially on the food services. We met the nurses, foodservice provider and the foodservice staff to improve communications.

Results and Discussion: We noticed changes in the food service staff behavior and attitude as we spent time training and motivating them. Patient satisfaction survey increased 7% from January to April. My mentor also guided me on how to conduct meeting, training and presentation professionally. This enhanced my interpersonal skills and built my confidence and was noticed by other colleagues.

Conclusion: In conclusion, mentoring is a great tool for career enhancement, especially for dietitian who works alone in the private setting or who just got employed or wish to expand their career. This presentation will highlight how I benefited from mentoring for professional development and practice improvement.

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DR28 - Early Aggressive Nutrition Intervention for Critically Ill Patients Who are Mechanically Ventilated in Sunway Medical Centre

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2. Department of Clinical Research Centre, Sunway Medical Centre

Objective: Influence of early aggressive nutrition intervention on clinical outcomes (length of intensive care unit (ICU) stay and duration of mechanical ventilation) of mechanically ventilated (MV) patients in ICU remains controversial. This study aimed (1) to investigate the prevalence of high and low nutritional risk patients among MV patients in Sunway Medical Centre (SunMed) using modified-Nutrition-Risk-in-Critically-ill (mNUTRIC) score and (2) to evaluate relationship of meeting the energy-protein target in first 3 days against the clinical outcomes in ICU patients.

Methodology: A retrospective cohort study was conducted among adult critically ill patients, intubated and MV within 48 hours of ICU admission and stayed in ICU for at least 72 hours. Nutritional risk status was examined using mNUTRIC score. Daily nutritional intake during ICU stay, duration to achieve spontaneous ventilation and ICU length of stay (LOS) were recorded. Relationship between meeting the recommended energy-protein target as per nutritional risk status compared to the length of mechanical ventilation and LOS in ICU were examined using Mann-Whitney-U-test and two-sample-t-test.

Results and Discussion: Of 101 eligible patients (median age 61 year-old, 58% male), 83% (n= 84) were categorized at high nutritional risk (mean mNUTRIC score was 5.47). In high nutritional risk patients, no difference was found in length of ventilation (p=0.54) and LOS in ICU (p=0.69) for patients who achieved energy-protein target within 3 days compared to those not meeting target in 3 days. For low nutritional risk patients (n=17), patients who achieved targets within 3 days had similar length of ventilation (p=0.7) but shorter LOS in ICU (p

Conclusion: Prevalence of patients at high nutritional risk in ICU was 83% in SunMed. Achieving energy-protein targets within 3 days shorten LOS in ICU for patients at low nutritional risk.

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DR29 - Design and Validation of a Food Frequency Questionnaire Catering for Multi-ethnic Haemodialysis Patients in Malaysia

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5. School of Biosciences, Faculty of Health & Medical Science, Taylors University Lakeside Campus, Malaysia

Objective: The food frequency questionnaire (FFQ) is appropriate to rapidly quantify macronutrients and micronutrients consumed but is lacking for the Malaysian haemodialysis (HD) population. Therefore, this study sought to develop and validate an HD-FFQ specific to the Malaysian HD patients.

Methodology: In Phase 1, three days dietary recall (3DDR) of 388 HD patients were used to construct a food database. In Phase 2, face validation (n=10) and content validation (n=10) were carried out. The final HD-FFQ consisted of 123 food items. Phase III evaluated relative validity (n=121) by comparing HD-FFQ with 3DDR. Pearsons correlation, paired sample t-test, cross-quartile classification, and Bland-Altman plot analysis were done to validate the HD-FFQ.

Results and Discussion: Face validation of the HD-FFQ indicated most food groups were well understood by laypersons and nutrition experts with the exception of cooked rice group (p< 10% for total energy, macro- and micronutrients when comparing absolute intakes assessed by HD-FFQ and 3DDR. Bland-Altman plots showed > 90% of patients were scattered within the limit of agreement for all the nutrients between HD-FFQ and 3DDR.

Conclusion: The HD-FFQ is appropriate to an in assessing habitual dietary intake of Malaysian HD population but interpretation must consider its tendency to overestimate.

SR01 - Fat versus Lean Mass Ratio: A New Anthropometric Indicator in Predicting Metabolic Syndrome Among UniSZA Malay Students

Lim JY 1, & Wee BS 1

1. School of Nutrition & Dietetics, Faculty of Health Sciences, Universiti Sultan Zainal Abidin, Kuala Terengganu

Objective: This study aimed to address the literature gap on the interactive effect of fat mass (FM) and lean body mass (LBM) by developing a cut-off value for fat versus lean mass ratio (FLMR) in predicting MS and to investigate the association between this indicator with MS and its components.

Methodology: Subjects comprised 238 Malay adolescents (21% male, 79% female) aged 18 to 19 years old. Anthropometric comprised weight, height and waist circumference. Body composition was measured using bioelectrical impedance analysis (BIA) techniques and blood pressure was measured. Fasting blood glucose (FBG), total cholesterol (TC), triglycerides (TG), high-density lipoprotein cholesterol (HDL-c), low-density lipoprotein cholesterol (LDL-c) were determined from an overnight fasting blood sample. MS was diagnosed based on IDF (2007) definition for adolescents aged 16-year-old and above.

Results and Discussion: Receiver Operating Characteristics (ROC) curve analysis revealed that the optimal cut-off value for FLMR was 0.441 with AUC of [0.874 (95% CI: 0.825, 0.913)]. FLMR were significantly associated with high WC (p

Conclusion: In conclusion, FLMR possess good discriminatory ability in predicting MS among adolescents. Significant association exists between FLMR with MS and some of its components. This is the first study conducted among Malaysian adolescents to develop a cut-off value for FLMR. Intervention programme is needed urgently to reduce the level of body adiposity among UniSZA Malay students.

SR02 - High Prevalence of Food Insecurity among Malaysian Students in Brisbane

Nadzatul Aqmar A1, Norazmir MN1

1. UiTM

Objective: College students are among subgroup population that is vulnerable to food insecurity where their academic performance is at stake. However, lack of study assesses the food security status of international students where culture and religion differences is among the main challenge faced by them. Therefore, the focus of this study is to determine the status of food security among overseas Malaysian students and to identify its predictor variables.

Methodology: This study is a cross-sectional study design that applied a quantitative method whereby a total of 132 students participated in this study. Online questionnaires derived from Latin American and Caribbean Household Food Security Measurement Scale (ELCSA) and Australian National Health Survey (NHS) were distributed to the participants via social media such as E-mail, Facebook and WhatsApp.

Results and Discussion: The prevalence of food security among overseas Malaysian students in Brisbane, Australia was 16.7% and food insecurity was 83.3%. There was no significant predictor variable found in this study. However, high prevalence of food insecurity can be found among students who lived in a shared accommodation meanwhile culture and religion was not significantly associated with food security status although majority of the participants did reported on having difficulties in that area.

Conclusion: Although there were no significant association found between survey items and food security status, it was noted that there were other characteristics that more prominent among food insecure students. For example was the nature of a living arrangement that requires the students to pay for other living necessities such as household expenses has a significant impact on food security. Food security has been significantly associated with negative impacts on academic performance thus resulting in undesirable outcome for international graduates.

SR03 - Association between Hand Grip Strength and Health-related Quality of Life among Malaysian Middle-aged Adults

Kang Shun Qian1, Sakinah Harith1

1. School of Nutrition & Dietetics, Faculty of Health Sciences, Universiti Sultan Zainal Abidin, Terengganu, Malaysia

Objective: To determine the association between hand grip strength (HGS) and health-related quality of life (HRQoL) among Malaysian middle-aged adults.

Methodology: A cross-sectional study was carried out among 106 non-academic staffs aged 3060 years old in UniSZA, Terengganu. Out of total sample, 37.7% of respondents were males and 62.3% were females. The mean age of respondents was 38.44 7.78 years. Sociodemographic characteristics, anthropometric measurements (weight, height, HGS), protein intake, physical activity level and HRQoL were assessed.

Results and Discussion: More than half (53.7%) of respondents was overweight/obese. Prevalence of respondents to have normal right HGS was 79.2% and normal left HGS was 69.8%. Only 42.5% and 34.9% of respondents have adequate protein intake and high physical activity level respectively. Respondents were classified as healthy and unhealthy group according to the EQ-5D index score. Prevalence of healthy group was 67.9%. Significant difference was only found in HGS, protein intake and physical activity between gender, while significant association was only found between HGS and physical activity with HRQoL. This finding suggests that HGS is associated with HRQOL. Significant differences showed in EQ-5D score when group was split into weak and strong HGS, suggesting that muscle strength is important in influencing HRQoL.

Conclusion: Low HGS is associated with impaired status of HRQoL by EQ-5D index score and VAS score in Malaysian males and females. More research is needed to evaluate the specific plausibility between HGS and HRQoL.

SR04 - Appetite Status and Its Associated Factors Among Hospitalized Geriatric Patients in Hospital USM

Chong Rui T1 and Nur-Fazimah S1

1. Nutrition and Dietetics Programme, School of Health Sciences, Universiti Sains Malaysia, Kelantan

Objective: This cross-sectional study was purposely conducted to determine the appetite status and its associated factors among hospitalized geriatric patients admitted to Hospital USM.

Methodology: The Simplified Nutritional Appetite Questionnaire (SNAQ) and Mini Nutritional Assessment - Short Form (MNA-SF) were used to measure appetite and nutritional status respectively. Nutritional factors including anthropometric and biochemical parameters, sociodemographic, psychological and clinical factors were collected to determine its association with poor appetite status. Study had involved 105 geriatrics (57.1% men and 42.9% women) aged 60 to 87 years with a median (IQR) age of 67 years (10).

Results and Discussion: Result showed that there was high prevalence of poor appetite (76.2%) than good appetite (23.8%) among subjects. The median (IQR) SNAQ score significantly lower among women (10 scores (5), compared to men (12 scores (7) at (p

Conclusion: In conclusion, associated factors found can further facilitate early recognition of this nutritional issue. Thus, a systematic module of nutritional intervention to improve appetite among hospitalized geriatrics is mooted to be implemented to support the efficiency and effectiveness of overall clinical interventions given.

SR05 - Causative factors of eating problem among adolescents with type 1 Diabetes Mellitus: A Qualitative Study

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4. *Department of Paediatric, University of Malaya, Kuala Lumpur*

Objective: To determine the causative factors of eating problem among adolescents with type 1 Diabetes Mellitus in University Malaya Medical Centre (UMMC).

Methodology: Fifteen adolescents from a total of 43 respondents, who scored more than twenty marks in the Diabetes Eating Problem Survey-Revised (DEPS-r) questionnaire were invited for an in-depth interview to understand factors causing eating problem. A set of semi-structured interview questions were asked based on their response from the questionnaire. The interview sessions were recorded, transcribed verbatim, and thematic analysis was used to analyse the interview transcription to identify the causative factors of eating problem.

Results and Discussion: Five main themes emerged which included stress, physiological factor, psychological factor, behaviour in managing diabetes and fear. New codes that have been identified from this study were not hungry and stress from school life.

Conclusion: Adolescents with type 1 diabetes mellitus are more prone to have eating problem due to various factors. Early referral to a child psychologist would assist with early identification of risk factors towards the development of eating problem.

SR06 - The timing of carbohydrate ingestion during a meal and its effect on postprandial glycaemia among normal weight Indian adults: a controlled, randomised crossover trial

Tan JL1, Lee CL1, Sangeetha S1

1. IMU

Objective: Glycaemic control an important consideration in diabetes care, is affected by postprandial glycaemia. While the effect of quantity and type of carbohydrate on postprandial glycaemia has been widely studied, little is known in this context about the timing of carbohydrate ingestion. This study aims to investigate the effect of the timing of carbohydrate ingestion on postprandial glycaemia among normal weight Malaysian Indian adults.

Methodology: A randomised controlled crossover study (within subjects) was used. Subjects completed isocaloric test meals over three random study visits: carbohydrate first followed 10-minutes later by protein and vegetables (CF), protein and vegetables first followed 10-minutes later by carbohydrate (CL), and two portions of composite meal consisting of carbohydrate, protein and vegetables spaced out over 10-minutes (CM). Capillary blood glucose was measured at premeal (baseline) and 30, 60, 90 and 120 minutes after meal consumption.

Results and Discussion: The 14 subjects had a mean SD age, BMI, and fasting blood glucose of 22 2 years, 21.0 1.2 kg/m2, and 4.98 0.56 mmol/L, respectively. CL subjects had the lowest peak blood glucose (7.03 0.23 mmol/L) compared to the CF subjects (8.77 0.30 mmol/L, p < 0.001) and CM subjects (8.03 0.26 mmol/L, p = 0.040). CL subjects had a longer time to peak blood glucose (81.43 7.33 min, p = 0.030) compared to the CM subjects (51.43 7.33 min). CF subjects had the highest iAUC (272.43 26.68 mmol/L x min) compared to the CM subjects (206.21 30.30 mmol/L x min, p = 0.031) and CL subjects (122.00 14.83 mmol/L x min, p < 0.001).

Conclusion: The carbohydrate last meal pattern (CL) was an effective strategy to reduce postprandial glycaemic excursions. Modifying the timing of carbohydrate ingestion may be a simple strategy to manage postprandial glycaemia.

SR07 - The timing of carbohydrate ingestion during a meal and its effect on postprandial glycaemia among overweight and obese Indian adults

Lee ZY1, Lee CL1 and Shyam S1

1. Nutrition and Dietetics Division, International Medical University, Kuala Lumpur

Objective: Current nutritional strategies target carbohydrate intake to control postprandial glycaemia. However, there is limited information about postprandial glycaemia response to different carbohydrate ingestion sequence during a meal. This study aims to determine the effect of the timing of carbohydrate ingestion on postprandial glycaemia among Indian adults with overweight and obesity.

Methodology: In this randomised controlled, crossover study, 17 subjects were recruited. Subjects consumed the isocaloric test meals on three study visits based on randomised sequences: carbohydrate first, followed by protein and vegetable (carbohydrate first (CF)); protein and vegetable first, followed by carbohydrate (carbohydrate last (CL)); and a composite meal containing carbohydrate, protein, and vegetable eaten in two sequences (composite meal (CM)). At each visit, meal sequence was separated by a 10- minute interval. Capillary blood glucose was measured at baseline, 30, 60, 90, and 120 minutes after starting of the meal.

Results and Discussion: Subjects had a mean SD age, BMI, and fasting blood glucose of 25.5 5.3 years, 29.0 4.2 kg/m2 and 4.89 0.62 mmol/L, respectively. The CL sequence resulted in a lower peak blood glucose (6.69 0.30 mmol/L) compared to CF (7.73 0.32 mmol/L, p< 0.001) and CM (7.41 0.33 mmol/L, p= 0.025) sequences. The CL sequence resulted in a longer time to peak blood glucose (98.82 4.99 minutes) as compared to CF (54.71 5.29 minutes, p< 0.001) and CM (52.94 7.94 minutes, p= 0.001) sequences. iAUC of CL (113.64 15.31 mmol/L ꓥminutes) was lower than CF (193.18 23.15 mmol/L ꓥminutes, p= 0.001) and CM (160.09 21.65 mmol/L ꓥminutes, p= 0.065).

Conclusion: The timing of carbohydrate ingestion during a meal has a significant effect on postprandial glycaemia of the study subjects. Eating carbohydrate after protein and vegetables may be a useful approach in improving postprandial glycaemic control.

SR08 - PROTEIN INTAKE AND COGNITIVE PERFORMANCE AMONG KINDERGARTEN CHILDREN IN INDERA MAHKOTA, KUANTAN

AMIERAH AIZZAH A1

1. UIAM

Objective: 1. To identify the type of protein intake among kindergarten children. 2. To identify the frequency of protein intake among kindergarten children. 3. To assess the cognitive performance among kindergarten children. 4. To examine the association between protein intake and cognitive performance among kindergarten children.

Methodology: The study will be carried out at several private kindergarten in Indera Mahkota, Kuantan. Indera mahkota (IM) is a small town located in Kuantan. Since IM is one of main residential are in Bandar Kuantan, there is numerous kindergarten developed in this place. There are few private kindergarten involved in this research, such as Tadika Indera Pintar, Tadika Pintar Al-Quran Muip and Taski Abim Ar-Rayyan. The source of population will involve children aged 6 years old from several private kindergarten in Indera Mahkota, Kuantan. The study design use is cross-sectional study since the aim of this study is to identify protein intake and its association with cognitive performance among kindergarten children in Indera Mahkota, Kuantan. Convenience sampling method will be used to approach the participants. This non-random sampling technique used to create sample as it will be more easier to access, readiness to be a part of the sample and readily available at a given time slot. In order to assess the protein intake of the children, the questionnaire of protein intake will be distributed to parents or caregivers at the kindergarten and a cognitive performance test will be conducted with the kindergarten children.For the cognitive performance, the children will be assessed by using Test of Nonverbal Intelligence fourth edition (TONI-4).

Conclusion: In conclusion, there is insufficient evidence to support the association between protein intake specifically tyrosine and tryptophan with cognitive performance in healthy kindergarten children. in terms of type and frequency of protein intake among the children, it shows that the only a few types of foods that frequently be eaten by the children due to their acceptance as well as their parents choices to give their children certain types of food. However, the result indicates that only sardine and peanut that shows the significant outcome toward the cognitive performance due to the omega-3 fatty acids and leucine content in those foods respectively. Undoubtedly, there is need for further well studies in this area of research in order to give a better health planning to this generation.

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SR09 - Assessment of Physical Activity Level among Patients Undergoing Peritoneal Dialysis at a Government Hospital in Muar

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1. Universiti Putra Malaysia, Serdang, Selangor.
2. Hospital Pakar Sultanah Fatimah, Muar, Johor.

Objective: To determine the association of socio demographics, clinical factors, dietary intakes and physical functioning with PAL among PD patients in Muar.

Methodology: This was a cross sectional study. A total of 78 CAPD patients were purposively recruited. Interviewer-administered questionnaire was used to obtain socio-demographic data. Patients co-morbidities and dialysis vintage were obtained from medical record. Total energy intake (TEI) and Dietary Protein Intake (DPI) was assessed using 3-day dietary recalls accounted for calories contributed from the dialysate exchanges. Handgrip strength (HGS) was measured on the dominant hand by using Jamar Plus Digital Hand Dynamometer. Physical functioning domain was assessed using physical functioning subscale from physical component summary in SF-36. International Physical Activity Questionnaire short version was used to assess PAL. The relationships between variables of interest were examined using Pearsons correlation of chi-square test, whenever appropriate.

Results and Discussion: The mean age and HGS for the patients were 53.51±14.84 years old and 17.9±48.2kg, respectively. Most of the patients (96.2% and 89.7%) failed to achieve the target TEI and DPI, respectively About 55.1% of the patients reported low level of physical activity. Age was negatively correlated with PAL (r=-0.25, p=0.027). There was no association between dietary intakes (TEI & DPI) with PAL (r=-0.006, p=0.961). Interestingly, there was a positive significant association between handgrip strength and physical activity (r=0.381, p=0.001).

Conclusion: Physical inactivity is very prevalent in more than half of PD patients in this institution. Patients with higher PAL have better HGS indicating preservation of lean body mass and muscle function thus warrant potential equipoise of physical activity intervention.

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SR10 - Assessment of Physical Function using Handgrip Strength among Chronic Kidney Disease Patients in a Government Hospital

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1. Universiti Putra Malaysia, Serdang, Selangor.
2. Hospital Pakar Sultanah Fatimah, Muar, Johor.

Objective: To determine HGS of chronic kidney disease (CKD) patients in Hospital Pakar Sultanah Fatimah (HPSF) Muar, Johor and its association with socio-demographic factors, lean body mass (LBM) and dietary intake.

Methodology: This cross-sectional study was conducted in Nephrology Clinic, Hospital Pakar Sultanah Fatimah whereby CKD patients were conveniently selected based on the inclusion criteria. Socio-demographic factors were assessed through interviewer-administered questionnaire. Body composition monitor was used to determine the LBM of the patients. Dietary intake were assessed using 3-days dietary recall while HGS was evaluated using Jamar handgrip dynamometer and classified into weak and normal based on the manual of Jamar handgrip dynamometer. Relationship between variables of interest were examine using Pearsons correlation or chi-square test, whenever appropriate.

Results and Discussion: A total of 122 patients were recruited comprising 63(51.6%) male and 59(48.4%) female subjects. Mean age of the subjects was 56.212.7 years old and majority of them (58.2%) aged <0.01).

Conclusion: This study showed that majority of the CKD patients (90%) were having weak handgrip strength (HGS). The factors found to be significantly associated with HGS were age, TEI and LBM which warrants further investigation in this aspect.

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SR11 - Assessment of Lean Body Mass and Its Associated Factors among Chronic Kidney Disease (CKD) Patients at a Government Hospital in Muar, Johor.

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1. Universiti Putra Malaysia, Serdang, Selangor.
2. Hospital Pakar Sultanah Fatimah, Muar, Johor.

Objective: To determine the LBM of CKD patient in Hospital Pakar Sultanah Fatimah (HPSF), Muar, Johor and identify the associated factors.

Methodology: This cross-sectional study was conducted in HPSF, with purposeful sampling based on the inclusion criteria. Sociodemographic factors were derived from interviewer-administered questionnaires whilst medical history and biochemical markers of patients were obtained from medical records. Anthropometric data were measured and dietary energy intake (DEI) and dietary protein intake (DPI) was obtained from 3 days dietary record. Handgrip strength (HGS) of patients was measured using Jamar Hand Dynamometer as a surrogate for functional status. LBM was assessed using a whole-body bio-impedance spectroscopy device, body composition machine (BCM).

Results and Discussion: A total of n=121 was recruited with a mean age of 56.312.79 years old. A majority (46.3%) had secondary education and unemployed (69.4%). Only one-fourth of patients had monthly income above RM 2000. Hypertension (83.5%) and diabetes (68.6%) were the most common comorbidities. Most of the patients (92.6%) had inadequate DEI, but adequate DPI (66.9%). A total of 49.6% (n=60) of patients fell in the lowest tertile of LBM. Gender, educational level, working status, and monthly income were significantly associated with LBM. In addition, eGFR was negatively correlated with LBM among patients (r=-0.224, p< 0.05). LBM was positively correlated with both DEI and DPI, respectively (r=0.312, p< 0.01; r=0.262, p< 0.01). HGS was also positively correlated with LBM (r=0.541, p< 0.05).

Conclusion: Appropriate intervention strategies to preserve LBM on CKD patients should be individualized taking account of their CKD stage, gender, educational level, and income status.

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SR12 - Good Dietary Adherence Associated with Better Glycemic Control Among Patients with Type 2 Diabetes: A cross-sectional study

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Objective: This cross-sectional study determined the association of socio-demographic characteristics, medical profiles, dietary characteristics and dietary adherence with glycemic control among patients with T2DM attending Medical Outpatient Clinic, Hospital Serdang.

Methodology: Socio-demographic characteristics and medical profiles were completed by respondents. Glycemic control as assessed using HbA1c was retrieved from the medical record. Dietary characteristics were assessed using a Food Frequency Questionnaire and dietary adherence was assessed using the Summary of Diabetes Self-Care Activities (SDSCA) questionnaire.

Results and Discussion: A total of 80 respondents (mean age 58.8 12.4, 57.5% female, mean duration of diabetes 11.91 9.4 years) participated in the study. Mean HbA1c was 8.9 2.7% with 81.2% of them unable to achieve the target treatment goal (≤ 6.5%). About 43.7% were on a combination treatment of diet and oral anti-diabetic agents (OAD). Respondents did not achieve minimum daily recommendation for fruits, vegetables, fish and milk except for cereal, meat and legume. The overall dietary adherence rate was relatively low with only 7.5% of them adhered to the dietary recommendations. Although the total dietary adherence score was not associated with glycemic control, the SDSCA sub-items for followed healthful eating plan (r = -0.249, p= 0.026) and eat fewer sweets (r= -0.230, p= 0.04) were associated with glycemic control. Besides, diabetes treatment was also associated with glycemic control (x2 = 6.249, p= 0.044).

Conclusion: As a conclusion, factors significantly associated with glycemic control include diabetes treatment and adherence to healthful eating plan and eat fewer sweets. Hence, a dietitian should highlight the importance of adhering to a healthful diet and reducing sugar intakes in achieving optimal glycemic control in patients with T2DM.

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SR13 - Factors associate with glycemic levels among hyperglycemic non-critically ill patients in medical wards, Hospital Serdang.

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Objective: There has been limited review on the glycemic levels among non-critically ill patients with hyperglycemia in Malaysia. Hence, this study was to determine the association of personal characteristics and dietary intake with glycemic levels among hyperglycemic non-critically ill patients in medical wards, Hospital Serdang.

Methodology: A cross-sectional study conducted among the non-critically ill in the medical wards, Hospital Serdang. Patients were recruited if they had at least 2 glycemic level >7.8 mmol/L. The factors included personal (sociodemographic and clinical) characteristics and dietary intake. Glycemic levels were the average of 3 pre-prandial point-of-care glycemic level. The optimal glycemic level was set at a cut off

Results and Discussion: A total of 83 patients were recruited with a mean age of 58.69 12.85 years. The mean glycemic level was 10.88 3.10 mmol/L with 54.2% of the patients with non-optimal glycemic levels (>10 mmol/L). The energy intake was relatively low (951.96 315.37 kcal) with 52% of the patients did not meet their energy adequacy. Factors that significantly associated with glycemic levels included mean BMI (r=0.254, p=0.020), body weight (r=0.255, p=0.020), admission glycemic levels (r=0.258, p= 0.038), known diagnosis of T2DM (x=6.339, p=0.012), diabetes treatment (x=15.059, p=0.000) and types of diet prescribed (x=15.809, p=0.000).

Conclusion: In this study, inpatient glycemic levels among the non-critically ill was non-optimal. Factors that significantly associated with glycemic levels included BMI, body weight, admission glycemic levels, known diagnosis of T2DM, patients on diabetes treatment and patients specifically with prescribed diabetic diet. Therefore, patients with diabetes at admission should be monitored closely.

SR14 - Factors associated with knowledge on Ramadan practices among Type 2 diabetes mellitus patients

Adi Farizzul MK1, Barakatun Nisak MY1

Objective: To determine the factors correlate with Ramadan nutrition-related knowledge in patients with diabetes mellitus in Hospital Serdang, Selangor.

Methodology: Cross-sectional study conducted in Medical Outpatient Clinic, Hospital Serdang. Face to face interview was done to completed the questionnaire that consists of sociodemographic characteristics, medical and nutritional status, practices during previous Ramadan and knowledge on Ramadan nutrition. Data regarding medical and nutritional status were obtained from the medical records

Results and Discussion: A total of 52 T2D (age 57.3 13.4 years old, 60% female) participated in the study. Their mean duration of T2D diagnosis was 10.4 8.9 years with most of them had a family history of T2D. Majority of the subjects (69.2%) were either overweight or obese (Mean: BMI 29.3 6.8 kg/m2) with 80.8% had HbA1c level of > 6.5% (Mean: .11 2.85 %). They fasted about 24.29 9.58 days during previous Ramadan with 81.0% fasted > 15 days throughout Ramadan. Only few subjects (27%) seek nutrition advice prior to Ramadan fasting. Almost half of the subjects (46.2%) did not break their fast when experiencing hypoglycemia episodes during Ramadan. Mean score for knowledge on Ramadan practices among the subjects was 59.44 16.84 % and 69.2% had a considerably high score (score > 50%). Moreover, 53.8% had appropriate practices during last Ramadan fasting. Past practices during previous Ramadan was significantly associated with the level of knowledge on Ramadan nutrition among T2D patients (r= .353 and p= .010 value).

Conclusion: T2D patients with satisfactory level of practices during previous Ramadan had a better score in knowledge on Ramadan nutrition. While the level of knowledge on Ramadan nutrition was relatively good, some component of practices was inappropriately performed suggesting the needs of having proper nutrition intervention during Ramadan for T2D.

SR15 - Plate Waste Study Among Patients Receiving Texture-Modified Diet(TMD) In Hospital Canselor Tuanku Muhriz (UKM Medical Centre)

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1. Dietetics Programme, Centre for Community Health, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Kuala Lumpur.

Objective: Plate waste is defined as the served food left remains uneaten by patients and its occurrence may due to many reasons. Several studies have shown that there is a high percentage of plate waste and low satisfaction level from patients towards diet provided by hospitals. However, plate waste study and satisfaction level for texture-modified diet (TMD) were limited. Locally, no study on these has ever been conducted. Hence, this study aims to determine the percentage of plate waste together with the satisfaction level among patients prescribed with TMD and identify the contributing factors leading to plate waste.

Methodology: This study was conducted in Hospital Canselor Tuanku Muhriz (UKM Medical Centre) on three types of TMD (blended diet, mix porridge, minced diet) during lunch and dinner. Weighing method and Comstock visual method were utilised in which the leftover was weighted by using a digital food weighing scale and photographed by using a camera respectively. Face to face interview was also carried out to gain information on patients satisfaction level towards food quality and food services provided.

Results and Discussion: The mean percentage of overall plate waste for 95 patients receiving TMD was 47.5% (49.2% for lunch, 45.9% for dinner). Blended diet was identified as the most wasted diet among the three types of TMD studied. Satisfaction level among patients receiving TMD was moderated (3.50.6) and significantly correlated with plate waste in a negative manner. Patients appetite (r= -0.261, p=0.011) was found as the most prominent factor contributing to TMD plate waste.

Conclusion: A reciprocal relationship between the percentage of plate waste and satisfaction level of patients receiving TMD (r= -0.208, p=0.043) suggests that actions are needed to reduce the wastage of TMD that will lead to better nutritional status and clinical outcomes among these patients.

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SR16 - ASSOCIATION OF SOCIODEMOGRAPHIC, MEDICAL HISTORY, ANTHROPOMETRY DATA, HAND GRIP STRENGTH, PHYSICAL ACTIVITY LEVEL AND DIETARY INTAKE WITH MALNUTRITION STATUS AMONG COLORECTAL CANCER PATIENT IN NATIONAL CANCER INSTITUTE, PUTRAJAYA

Mirza Aiman Z1, Zalina AZ1

1. UPM

Objective: To determine the prevalence of malnutrition and the associations between sociodemographic factors, medical history, hand grip strength, physical activity level and dietary intake with malnutrition status among colorectal cancer patients

Methodology: A cross sectional study with sample size of 40 colorectal cancer patients in National Cancer Institute, Putrajaya. Data collection was carried out between March 2019 and April 2019. Nutritional status of the respondents was assessed using PG-SGA. The information about sociodemographic characteristics, medical history, anthropometry data, hand grip strength, physical activity and dietary intake were obtained.

Results and Discussion: The prevalence of malnutrition was moderate with percentage of 47.5%. In addition, there was 32.5% of the respondents had BMI categorised as overweight and obese, 87.5% with inadequate food intake and 72.5% with inadequate protein intake. The mean value of both dominant and no dominant hand grip strength were 17.86 ± 7.62 kg and 16.79 ± 6.92 kg. There were no association between variables with malnutrition status.

Conclusion: Malnutrition was prevalent among this population. Hence, early nutritional screening and appropriate nutritional intervention are needed to health condition of colorectal cancer.

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SR17 - Associations of anthropometry measurement, dietary intake, functional status and sleep quality with anxiety among preoperative patients scheduled for elective surgery in Hospital Serdang, Selangor.

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1. Universiti Putra Malaysia, Serdang, Selangor.

Objective: Preoperative anxiety is defined as a subjective feeling of fear, discomfort and prominently among elective surgery patients. There were several factors associated with the occurrence. Hence, this study aimed to determine the associations of socio-demographic characteristics, anthropometry measurement, dietary intake, functional status and level of sleep quality with anxiety among preoperative patients scheduled for elective surgery in Hospital Serdang, Selangor.

Methodology: This is a cross-sectional study among 43 preoperative patients which met the inclusion criteria and recruited through convenience sampling. The validated questionnaires and instruments were used. Anthropometry measurement was a focus in determining body mass index (BMI) while 24-hours diet recall was used in accessing the energy and protein intake. Hand-grip strength (HGS) was used as the indicator of functional status, Pittsburgh Sleep Quality Index (PSQI) was used to identify sleep quality and Hospital Anxiety and Depression Scale - Anxiety (HADS-A) was used in determining the anxiety and its severity/level.

Results and Discussion: There were 26 male patients (60.5%) and 17 female patients (39.5%) with mean age 50.28 16.73 years old participated in this study. Prevalence and level of anxiety were high (74.4%). Age was significantly correlated with anxiety ($r=-0.338$, $p=0.027$). Energy and protein adequacy reported being significantly associated with anxiety ($x2=6.069$, $p=0.010$), ($x2=4.208$, $p=0.031$). Functional status and sleep quality (total score of PSQI) also significantly associated with anxiety among preoperative patients ($x2=3.361$, $p=0.039$), ($r= 0.350$, $p= 0.021$).

Conclusion: Therefore, anxiety among preoperative surgical patients need to be handled by controlling all the factors that might contribute to its occurrence in the future. Proper intervention necessary to be made to reduce the prevalence of anxiety among preoperative surgical patients.

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SR18 - Comparison of Threshold for Sucrose Detection and Sugar Intake between Normal Weight and Overweight/Obese Malaysian Indian Adults

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1. Department of Nutrition and Dietetics, International Medical University, Kuala Lumpur, Malaysia

Objective: Sugar may promote weight gain when consumed in excess, leading to obesity. Sucrose detection threshold (SDT), which is the ability to detect sweetness, is one potential determinant of sugar intake, and subsequently body weight. Malaysian Indians population is known to consume high sugar with the highest obesity prevalence. This study aimed to study the associations among SDT, sugar intake and body weight among Malaysian Indian adults aged 18 to 50 years.

Methodology: This is a comparative study between normal weight and overweight/obese groups according to the Asian-Pacific Body Mass Index (BMI) cut-off points. SDT was estimated using 8 sucrose concentrations (i.e. 0.72 g/L, 2.12 g/L, 4.28 g/L, 8.56 g/L, 17.12 g/L, 34.23 g/L, 68.46 g/L and 102.69 g/L) using constant stimuli method. A validated Malaysian Food-Frequency Questionnaire (FFQ) was used to estimate added sugar intake. Socio-demographic and anthropometric data (i.e. age, gender, blood pressure, waist circumference and percentage body fat) were compared.

Results and Discussion: Each group had 25 subjects, making up 50 subjects in total. Both normal weight and overweight/obese groups had similar mean age and gender distribution. The median SDTs for normal weight group and overweight/obese group were 3.76 g/L and 4.27 g/L respectively (p = 0.197). The median added sugar intakes for normal weight group and overweight/obese group were 41.60 g/day and 50.34 g/day respectively (p = 0.327). Although overweight/obese group had higher SDT and sugar intake, there were no significant differences between two groups. There was no association between SDT and sugar intake among the subjects (rs = -0.17, p = 0.906).

Conclusion: The findings suggested that inter-individual differences in SDT, sugar intake and body weight status are not associated with one another. Yet due to the nature of the study, it is recommended to further research on this area to determine the causal relationship among the variable of interest.

SR19 - Prevalence and Associated Factors of Pressure Ulcers among Geriatric Patients in Hospital Serdang, Selangor.

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1. Department of Nutrition & Dietetics, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, Selangor.

Objective: To determine the prevalence of pressure ulcers and its associated factors among geriatric patients in Hospital Serdang, Selangor.

Methodology: A cross-sectional study was conducted among 129 subjects. A self-developed questionnaire was generated to assess socio-demographic background; medical background, biochemical data, pressure ulcer were obtained from secondary data; Mini Nutritional Assessment-Short Form (MNA-SF), Hospital and Anxiety Scale (HADS) were used to determine nutritional status as well as anxiety and depression level respectively. Adequacy of dietary intakes and nutrition care was conducted using 24-hour dietary recall and analyzed using Nutritionist Pro Software. Data were analyzed using the Statistical Package for Social Sciences (SPSS) version 24. Associations were made through Chi-square test and the significant level set at p-value <0.05.

Results and Discussion: Mean age and length of stay was 70.05±7.587 years and 15.28±17.570 days respectively. A total of 80.6% of subjects were low albumin level and 67.4% had a low haemoglobin level. 72.1% of the subjects were at risk of malnutrition/ malnourished; 12.9% and 11.3% of the subjects had abnormal anxiety and depression level. Prevalence of pressure ulcers was 12.4%. Factors associated with pressure ulcers included length of stay (p=0.001), number of comorbidities ($x2=8.118$, p=0.004), combination of other diseases system (p=0.035), referral to dietitian (p=0.001), albumin level (p=0.040), haemoglobin level ($x2=4.471$, p=0.034), MNA-SF (p=0.008), nutritional care (p=0.001), anxiety and depression level (p=0.016 for both).

Conclusion: Prevalence of pressure ulcers in the current study is comparable with local and international studies. Increased length of stay, number of comorbidities, multiple diseases state, referral to dietitian, low albumin and haemoglobin level, malnutrition, anxiety and depression level as the associated factors and deserve closer attention by healthcare providers. Prevention and treatment of the pressure ulcers are recommended to follow the international guidelines.

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SR20 - Factors associated with body weight status among children with autism spectrum disorder in selected autism rehabilitation centres of central region Malaysia

Ameerul AA1, Chin YS1

1. Universiti Putra Malaysia

Objective: Body weight status (BWS) is a vital indicator of the nutritional status of children with autism spectrum disorder (ASD). The present study aimed to determine the factors associated with BWS among children with ASD in selected autism rehabilitation centres of central region Malaysia.

Methodology: A total of 85 pairs of children with ASD and their parents, from 13 selected autism rehabilitation centres in Selangor, Putrajaya and Kuala Lumpur, were participated in the present study. Parent-proxy questionnaires were used to assess the socio-demographic background, eating behaviour, physical activity level and sleep quality. Anthropometric measurement was conducted by the researcher by measuring the height (cm) and weight (kg) of the affected children.

Results and Discussion: As a result, a majority of the respondents were Malays (91.8%),boys (83.5%), and aged 4-12 years old. The prevalence of overweight, obesity, thinness and severe thinness were 18.8%, 17.6%, 1.2% and 2.4%, respectively. Lifestyle factors including satiety responsiveness (r= -0.242, p= 0.026) and sleep duration (r= 0.216, p= 0.047) were correlated with BMI-for-age, except for physical activity level (r= 0.047, p= 0.666). However, no significant associations were found between socio-demographic background including sexes (t= 0.134, p= 0.893), ethnicity (F= 0.308, p= 0.819), age (r= 0.124, p= 0.258), rank among siblings (r= -0.117, p= 0.284), number of siblings (r= -0.128, p= 0.244), fathers education level (F= 1.411, p= 0.22), mothers education level (F= 0.749, p= 0.612), fathers occupation (F= 0.400, p= 0.917), mothers occupation (F= 0.356, p= 0.877) and total household income (F= 0.570, p= 0.685) with BMI-for-age.

Conclusion: In conclusion, about one quarter of the children were overweight and obese. Further, poorer satiety responsiveness and longer sleep duration were associated with higher BMI-for-age among children with ASD. Therefore, there is a need to conduct a prospective cohort study to determine the factors of overweight and obesity issue among children with ASD

SR21 - Associations between socio-demographic factors, eating behaviours, gastrointestinal symptoms, body weight status and health-related quality of life among children with autism spectrum disorder in selected rehabilitaton centres, central region Malaysi

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Objective: Autism Spectrum Disorder (ASD), a lifelong-disorder that significantly influence an individuals health-related quality of life (HRQOL). This study aimed to determine the associations between socio-demographic characteristics, eating behaviours, gastrointestinal symptoms, body-weight status and HRQOL among ASD-affected children.

Methodology: From 13 autism rehabilitation centres in the central region of Malaysia, 83 pairs of ASD-affected children and their parents/caregivers completed a set of questionnaires on socio-demographic characteristics, eating behaviours and gastrointestinal symptoms. The anthropometric measurements of the children were assessed by the researcher.

Results and Discussion: Current study found that the mean HRQOL score was 65.2 23.8; whereby mean scores for each dimension of HRQOL were 68.0 19.4, 60.4 16.3, 55.6 15.6 and 60.0 13.7 for physical, emotional, social and school functioning, respectively. Furthermore, children whose mothers were working as clerical support workers (85.9 3.1) reported a significantly higher HRQOL compared to mothers working as managers (50.7 3.8), professionals (61.5 8.7), technicians and associate professionals (58.2 12.0), service and sales workers (60.1 9.1) and housewives (61.1 9.9) (F=3.843, p=0.008). A significantly lower HRQOL was found for children with high frequency of pain on stooling (47.0 7.2) compared to their low frequency counterparts (61.9 10.2) (t=2.866, p=0.006). Children with food restriction (59.4 7.1) reported a significantly lower HRQOL than those without (65.3 11.9) (t=2.417, p=0.020). Satiety responsiveness was negatively correlated to HRQOL (r=-0.291, p=0.020). No significant difference was found between body-weight status and HRQOL (F=0.304, p=0.739).

Conclusion: Lastly, ASD-affected children reported with lower HRQOL compared to other study. ASD-affected children with mothers not working as clerks or high frequency of pain on stooling or food restriction or a higher satiety responsiveness resulted a lower HRQOL. Therefore, future interventions involving HRQOL among ASD-affected children should consider the maternal background, eating behaviours and gastrointestinal symptoms.

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SR22 - THE ASSOCIATION BETWEEN SOCIODEMOGRAPHIC AND ECONOMIC STATUS AND DIETARY PRACTICES OF ADULTS WITH TYPE 2 DIABETES MELLITUS IN THE PRIMARY CARE SETTINGS

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Objective: Dietary factors are an integral component of diabetes management, and differences in dietary practices can be seen across sociodemographic economic status. The objective of this study is to determine the association between sociodemographic economic status and dietary practices among adults with Type 2 Diabetes from Klinik Kesihatan Jinjang.

Methodology: A total of 90 subjects were recruited for this cross-sectional study. Sociodemographic economic status was assessed using a researcher-administered questionnaire. Dietary practice (intake and behaviour) was assessed with a dietary history.

Results and Discussion: The subjects had a meanSD age of 59.69.0 years, with more females (57.8%) than males (42.4%). The majority were of Chinese ethnicity (65.6%) followed by Indians (20.0%) and Malays (14.4%). More than half received secondary and tertiary education (58.9%) and had a monthly household income below RM3000 (57.8%). The meanSD household size was 4.4 1.8 people. The meanSD energy intake was 1183390 kcal/day. Females consumed a higher percentage of energy from carbohydrates (50.57.1% EI vs 47.55.6% EI), while males had a higher energy intake (1387371 kcal/day vs 1154331 kcal/day) and percentage of energy from protein (19.05.8% EI vs 16.43.2% EI), when compared to their counterparts (p<0.001).

Conclusion: In conclusion, sociodemographic economic status is associated with dietary practices among adults with T2DM in primary care settings.

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SR23 - Comparison of sweet taste preference and sugar consumption between normal weight and overweight/obese Malaysian Indian adults

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International Medical University

Objective: To study the association of sweet taste preference with sugar consumption and body weight status among Malaysian Indian adults.

Methodology: This comparative study recruited 50 subjects, with 25 subjects each in the normal weight and overweight/obese group. This is a comparative study between the normal weight group and the overweight/obese group. A total of 50 subjects were recruited with 25 subjects in each group. The weight, height and waist circumference of subjects were obtained. Five concentrations of sucrose solutions (0mM/L, 50mM/L, 100mM/L, 200mM/L and 400mM/L) were prepared as stimuli for the test. Subjects sweet taste preference were determined from rating on three scales, the hedonic generalized labelled magnitude scale (gLMS), Just-About-Right scale and intensity gLMS, respectively. A validated Malaysian sugar food frequency questionnaire (FFQ) was administered to determine sugar consumption. Finally, a restraint eating questionnaire was given and used as a covariate when analyzing the data.

Results and Discussion: The mean body mass inde (BMI) of normal weight and overweight/obese group were 20.71.3 and 27.73.7 kg/m2, respectively. Both groups have similar mean age, gender distribution. There was no significant difference in sweet taste preference rating and sugar consumption between the normal weight and overweight/obese group (p>0.05). Nevertheless, there was a significant association in hedonic rating for the test solutions with higher sugar concentrations (S4 and S5 solutions) with sugar consumption, where a weak positive correlation for S4 (R2= 0.113, p=0.020) and S5 (R2= 0.085, p=0.006) with sugar consumption was found.

Conclusion: The findings suggested greater liking towards sweet taste was associated with higher sugar consumption, regardless of subjects body weight status.

SR24 - Recognition, Attitude and Knowledge related to Fruits and Vegetables among Malay Children.

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Objective: Low consumption of fruits and vegetables among children is a problem faced locally and globally. Children are more likely eat foods which they are familiar with. Good nutrition knowledge and positive attitude are also known to influence dietary practices among children. A cross-sectional study was conducted to assess the recognition, attitude and knowledge (RAK) regarding fruits and vegetables among Malay children.

Methodology: This study was conducted among 134 Malay children (70 males, 64 females) aged 9 to 12 years from 3 selected primary schools in Kuala Lumpur. A validated self- administered questionnaire for RAK regarding fruits and vegetables was used.

Results and Discussion: The recognition of fruits and vegetables among children was at moderate level (76.818.1%). The most recognized fruits were orange, apple and banana while the least recognized fruits were kiwi, guava and pear. Tomato, carrots and cucumber were the most recognized vegetables while capsicum, water spinach and string bean were the least recognized. Banana, watermelon and apple were the most liked fruits while pear, guava and kiwi were the least liked fruits among the children. The most liked vegetables were carrots, cucumber and broccoli while the least liked vegetables were eggplant, string beans and capsicum. The children have moderate level of knowledge (73.6 17.5%) and positive attitude (70.319.9%) towards fruits and vegetables. However, acceptability to try new vegetables is lower (68.7%) compared to fruits (75.4%).Over 30% of children were not aware about health benefits of fruits and vegetables consumption which might influence children's poor fruits and vegetables intake.

Conclusion: The children showed moderate recognition, knowledge and positive attitude toward fruits and vegetables. While the attitude and acceptability to try new fruits and vegetables was low. This study recommends intervention program to improve recognition and awareness on health benefits of consuming fruits and vegetables to increase acceptability and intakes of fruits and vegetables among children.

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SR25 - BREASTFEEDING KNOWLEDGE AMONG MALE SUPPORT STAFF IN UNIVERSITI SAINS MALAYSIA (USM) AND ITS ASSOCIATED FACTORS

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Objective: To evaluate the knowledge on breastfeeding and its association with sociodemographic factors and sources of information on breastfeeding among male support staff in USM.

Methodology: A cross-sectional study was conducted among male support staff in USM from December 2018 to February 2019. A self-administered questionnaire containing items to assess the breastfeeding knowledge and sociodemographic data was given to respondents. The questionnaire used was developed by a team of Hospital USM paediatric nurses with consent received. This questionnaire consists of ten domains to assess the knowledge of breastfeeding with one additional domain of sources information obtained regarding breastfeeding. Data were analysed using SPSS version 24.

Results and Discussion: 112 male support staff with mean (SD) age 37.6 (10.25) were involved. Mean (SD) percentage score of knowledge on breastfeeding is 52.3% (17.60). Domain of effective breastfeeding had highest mean (SD) score of 93.3% (18.40) followed by the domain of advantages to babies and 77.7% (24.20). Meanwhile, the problematic issue on breastfeeding aspect domain had low score. Sociodemographic factor of age (p=0.01) and marital status (p=0.008) were found significantly associated with breastfeeding knowledge. Besides, breastfeeding knowledge also significantly associated with sources of information gained from mass media (p=0.040) and health professional (p<0.001).

Conclusion: Knowledge on breastfeeding was influenced by many factors such as sociodemographic and sources of information. Hence, a more extensive exposure and breastfeeding education should all be encouraged to ensure the effectiveness of breastfeeding practices.

SR26 - Ethnic and socio-cultural perception in relation to dietary practices of adults with Type 2 Diabetes in the primary care setting

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Objective: Maintaining a healthy diet is important in managing diabetes and a persons ethnic background has an influence on his/her dietary practices. The objective of this study is to describe ethnic differences in relation to dietary practices among Indian, Malay and Chinese adults with Type 2 Diabetes Mellitus in the primary care setting.

Methodology: This cross-sectional study involved 90 subjects from Klinik Kesihatan Jinjang. Diet history was used to obtain information on dietary intake and eating behaviour. An in-depth interview was administered to explore subject experience of diabetes control.

Results and Discussion: The 90 subjects recruited had a meanSD age of 59.6 9.0 years, with more females (57.8%) than males (42.4%). The majority were of Chinese ethnicity (65.6%) followed by Indians (20.0%) and Malays (14.4%). Indians consumed the most carbohydrates (Indian: 537% EI; Chinese: 486% EI, Malay: 498% EI) while Chinese the most protein (Indian: 142%EI; Chinese:195%EI; Malay:173%EI) (p

Conclusion: This study showed that Indian, Malay and Chinese subjects with Type 2 Diabetes Mellitus have differences in dietary intake and dietary practices.

SR27 - Good knowledge but moderate attitude and practice towards vitamin D in urban Malay female indoor workers in Kuala Lumpur, Malaysia

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Objective: Limited data on knowledge, attitude and practice (KAP) related to vitamin D among pre-menopausal women in Malaysia are available currently. This cross-sectional study aimed to assess the KAP and lifestyle factors related to vitamin D among female indoor workers in Kuala Lumpur.

Methodology: A total of 141 Malay female indoor workers aged 20-55 years were recruited from Universiti Kebangsaan Malaysia, Kuala Lumpur Campus. They answered few questionnaires such as KAP related to vitamin D, sun exposure, dietary vitamin D intake and physical activity. Skin colour was measured on the upper inner right forearm using a handheld chromameter (CR-400, Konica Minolta).

Results and Discussion: More than half of the participants (57.6%) had skin type II (light skin colour) with no participants had skin type V (brown) and VI (tanned). Median dietary vitamin D intake (5.2 g/d) was lower than the recommendations (15 g/d) with only 9 participants (6%) achieved the recommendations. Most of the participants exposed face and hands with long-sleeve clothes when outdoors except when doing outdoor activities at home where they tended to wear short-sleeves. Using an umbrella was not popular among the participants (4%). Nearly half of the participants had good knowledge (43%), but moderate attitude (75%) and practice (68%) towards sunlight exposure and dietary vitamin D intake. Concern about the hot weather in Malaysia was the most prevalent reason given for sun avoidance (70%). Knowledge was positively associated with attitude (r = 0.28, p0.05).

Conclusion: Despite of having good knowledge, female indoor workers in Kuala Lumpur has moderate attitude and practice towards vitamin D. Public health campaigns on the awareness of sunlight exposure for cutaneous synthesis of vitamin D are warranted.

SR28 - Association of Sociodemographic, Medical History, Nutritional Status, Functional Status and Quality of Life with Malnutrition among Breast Cancer Patients

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Objective: Malnutrition was adversely affected the health status among breast cancer patients. This study aimed to determine the prevalence of malnutrition and the associations between sociodemographic factors, medical history, nutritional status, functional status and quality of life with malnutrition among breast cancer patients.

Methodology: A cross sectional study which recruited 33 breast cancer patients in National Cancer Institute was carried out between March and April 2019. Nutritional status was assessed using Patient-Generated Subjective Global Assessment (PG-SGA). The information about sociodemographic characteristics, medical history, anthropometry data, dietary intake, functional status and quality of life were obtained.

Results and Discussion: The prevalence of malnutrition was 48.3%. The mean age of the participants was 53 years old. Majority of them diagnosed with breast cancer in within 1 year. 60.7% of the respondents had BMI categorised as overweight and obese and 36.4% of the respondents increased their weight. Weight gain became major issues among breast cancer women after cancer treatment. Moreover, 39.4% had inadequate food intake and 72.7% had inadequate protein intake. The mean value of hand grip strength was 9.32 4.72kg. Higher PG-SGA score was found among participants that loss weight (r = 0.486, p = 0.048). Significant association shown between energy adequacy with PG-SGA categories (x = 6.945, p = 0.008). Besides, hand grip strength was negatively associated with PG-SGA score (r = -0.485, p < 0.001). Results revealed that high PG-SGA score were significantly associated with systemic therapy side effects (r = 0.576, p < 0.001), breast symptoms (r = 0.410, p = 0.018) and arm symptoms (r = 0.392, p = 0.024) in quality of life (QOL).

Conclusion: Prevalence of malnutrition was high followed by rapidly increased in breast cancer incidence. Hence, early nutritional screening and appropriate nutritional intervention are needed to improve QOL and health condition of breast cancer patients.

SR29 - Associations of Anthropometry Parameters, Biochemical Markers, Malnutrition and Dietary Intake with Frailty among Hemodialysis Patients

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Objective: To determine the association of anthropometry parameters, biochemical markers, malnutrition and dietary intake with frailty among hemodialysis patients.

Methodology: This was a cross-sectional study involved 68 eligible hemodialysis patients aged 18 years old and above. Anthropometry measurements were performed according to standard protocols while the risk of malnutrition was ascertained using Dialysis Malnutrition Score (DMS). Biochemical parameters were retrieved from medical records as secondary data while dietary intakes were assessed for two days (diet recall for non-dialysis day and food record for dialysis day, respectively). Frailty status of patient was ascertained according to the universal Fried Phenotype. Data were analysed using the Statistical Package for Social Sciences (SPSS) version 24 with significance level set at $p < 0.05$.

Results and Discussion: The mean age of patients was 52.3513.76 years old and 52.9% with excessive inter-dialytic weight gain. Percentages of respondents with abnormally low serum albumin, elevated serum potassium and phosphorus were 7.4%, 36.8%, 77.9% respectively. Approximately 9 in 10 of the patients had polypharmacy, 97.1% were mildly malnourished and 1.5% were moderately malnourished. A high proportion of respondents did not meet energy (91.2%) and protein (77.9%) recommendations. The prevalence of frailty and pre-frail was 44% and 50% respectively. Factors associated with frailty were age ($r = 0.43$, p

Conclusion: Frail and pre-frail were prevalent among hemodialysis patients, which deserve attention from the relevant authorities. The identification of the modifiable factors with frailty should be considered in the formulation of appropriate intervention to reduce frailty among the hemodialysis population.

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SR30 - Associations of Knowledge, Attitude and Practice on Fluid Intake and Burden of Caregivers with Fluid Adherence among Hemodialysis Patients

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Objective: This study aimed to determine the association of knowledge, attitude and practice (KAP) on fluid intake and burden level of caregivers with fluid adherence among hemodialysis (HD) patients.

Methodology: A total of 81 respondents (34 males, 47 females) were recruited in this cross-sectional study. A set of pre-tested interviewer administrated questionnaire was used to collect the socio-demographic characteristic included age, ethnicity, marital status, education level and estimated household income. Fluid Control in Hemodialysis Patients Scale (FCHPS) developed by Cosar (2016) had been adapted and modified to access the KAP of HD patients. Burden of care among caregivers was ascertained using Novak and Guest Care Giver Burden questionnaire. Interdialytic weight gain (IDWG) was retrieved from medical record and used as surrogate measure for fluid adherence in this study.

Results and Discussion: Mean age of respondents was 52.8 13.7 years old. A majority of them were Malays, with secondary education, married, retired, and fall under the B40 middle-income group. Slightly more than half of the respondents depicted good adherence to fluid restriction, with 98.8% of them possess high knowledge level, while only approximately a quarter of them possess high attitude and practice level on fluid intake. Contrary to earlier studies, only less than 20% of the caregivers perceived high level of burden. There was significant positive association between age ($r=0.591$, p

Conclusion: In short, findings in this study suggest that fluid adherence among HD patients was unsatisfactory and deserve more attention. Conversely, the high knowledge level on fluid intake in this study was not reflected on attitude and practice which deserve further investigation. Despite several limitations, the study provided clearer findings for the policymakers and healthcare professionals in planning future interventions.

SR31 - Associations of socio-demographic factors, anthropometry data, functional status, dietary intake and quality of life with malnutrition among pre-operative surgical patients in Hospital Serdang, Selangor

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Objective: This cross-sectional study aimed to determine the associations between socio-demographic factors, anthropometry data, handgrip strength, dietary intake, quality of life and malnutrition among pre-operative surgical patients in Hospital Serdang, Selangor.

Methodology: Socio-demographic information was obtained through self-administered questionnaire while anthropometry data and handgrip strength were performed by the researcher. Quality of life (QOL) was assessed through SF-36 Questionnaire. Dietary intake were assessed through 24-hour diet recall through interview. Malnutrition of the subjects was assessed by using 7-point Subjective Global Assessment (SGA).

Results and Discussion: A total of 43 subjects (60.5% male and 39.5 % female) with mean age 50.28 16.73 participated in this study. Mean Body Mass Index of the subjects were 25.22 5.62 kg/m which falls in overweight category. Subjects consumed 1466 469 kcal/day and 51 15 g protein/day. For QOL, subjects scored the highest (64.59 19.81) in social functioning domain and lowest (29.65 45.73) in role limitations due to physical health domain. Energy and protein intake(r=0.334, p=0.029; r=0.355, p=0.019), handgrip strength (r=0.537, p<0.001).

Conclusion: Majority female were malnourished (76.5 %) and had a lower score of 7-point SGA (4.47 1.13). Proper and early intervention plan can be made to prevent later post-operative complications and recovery phase.