

Asia			
South Korea	Korea National Health and Nutrition Examination Survey (KNHANES) [2019]	Serum 25-OHD concentration	Application
Taiwan	Taiwan; Nutrition and Health Survey in Taiwan (NAHSIT)	Estimated intake (microgram) Supplementation usage	Application
China	China Health and Nutrition Survey (CHNS)	Estimated intake (microgram)	Application
Japan	National Health & Nutrition Survey [1994–2020]	Estimated intake (microgram)	Application
Philippines	FNRI National Nutrition Survey [2019]	Serum 25-OHD concentration Estimated intake (microgram)	N/A
India	National Nutritional Survey [2016–18]	Serum 25-OHD concentration	N/A
Africa			
*Vitamin D data was not collected/reported in national nutrition surveys from South Africa (SANHANES), Kenya (KNMS), Nigeria (NNHS), Ghana (GMS), Ethiopia (NBS), Uganda (DHS/NS) & Tanzania (TNNS).			
Oceania			
Australia	Australian Health Survey- Biomedical results for Nutrients [2011–12]	Serum 25-OHD concentration	Open
New Zealand	Vitamin D Status of New Zealand Adults (from New Zealand Adult Nutrition Survey) [2008–09]	Serum 25-OHD concentration	Open

* 25-OHD: 25-hydroxyvitamin D concentration (nmol/L). N/A – raw data not accessible

recorded either serum 25-hydroxyvitamin D (25-OHD) concentration (nmol/L) or estimated Vitamin D intake from interviews/food diaries.

Additionally, Vitamin D data was rarely collected in low-income countries such as Africa. Data mapping has outlined disease reporting standards in countries and has emphasised the systematic differences between healthcare systems.

Conclusion Vitamin D data can be combined with COVID-19 incidence and mortality data, to explore the relationship between Vitamin D and COVID-19. Further research can explore inter-individual differences in Vitamin D requirements, optimal therapeutic doses required and how individual requirements can be determined. Findings will improve disease pathway understanding, support the generation of aetiological hypotheses and contribute to COVID-19 prevention and treatment. Substandard diagnosis and reporting in low-middle income countries underestimates disease rates, compared to high income countries. Studies investigating countries across income levels may therefore be affected by case-ascertainment bias, however also highlight where future resources should be directed to improve overall health and reduce inequalities, as well as reducing the burden of COVID-19.

15 DIETARY PATTERNS AND ITS ASSOCIATION WITH PERCEIVED STRESS DURING COVID-19 PANDEMIC SITUATION: A COMMUNITY-BASED STUDY AMONG BANGLADESHI ADULTS

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Background The world witnessed a dramatic disruption in our daily lives due to COVID-19 pandemic and Bangladesh is no exception. Such kind of public health crisis instigated by pandemics & its repercussion can elicit significant negative emotions, in line with stress, changed dietary patterns and weakened immune system. All these are inter-linked. As there were merely such studies in Bangladesh, this study aimed to find out association between dietary patterns and perceived stress level of urban adults during COVID-19 pandemic.

Objectives This study intended to find out the association between dietary patterns and perceived stress level among adults in Bangladesh as well as their dietary patterns and perceived stress level during COVID-19 pandemic.

Methods A Cross-sectional study was conducted among 300 adults (aged ≥ 18 years) of three urban communities in Dhaka city of Bangladesh from February 2021 to June 2021. A semi-structured questionnaire using purposive convenience sampling based on the Perceived Stress Scale (PSS) and minimum dietary diversity for individual adult, 24 hours recall by face to face interviews ensuring proper protective precautions. Measures included baseline and personal characteristics, perceived stress levels, dietary patterns. Data were analyzed by using latest SPSS software.

Results The results showed moderate level of perceived stress among majority of the population with approximate one-in-ten (12.0%) and one-fourths (22.0%) of the respondents with a low and high level of stress, respectively. It also revealed the association of perceived stress level with several socio-demographic factors such as age group ($p < 0.026$), employment status ($p < 0.001$), monthly income ($p < 0.044$) and sleep quality ($p < 0.001$). Significant association between dietary patterns (egg consumption) and perceived stress level ($p < 0.036$) was identified which is distinguishable to reliance on availability & affordability of the source. Those having poor sleep quality were more likely to get stress and changed dietary patterns (AOR=2.147; 95% CI: 1.153–3.997; $p = 0.00$).

Conclusions As higher stress level is associated with less healthy eating behavior and dietary patterns leading to poor nutritional status, proper evidential reasoning can go a long way to emphasize the concern. It will be a prolific initiative if policymakers merge nutrition-related public health interventions along with stress management programs through multi-sectoral collaboration.

16 NUTRITIONAL EVALUATION OF RECIPE POST ON INSTAGRAM SHARED BY DIETITIANS

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Background Nowadays, dietitians widely use social media tools such as Instagram in order to build their clientele as well as share healthy eating tips and recipes.

Objectives This study aimed to evaluate the nutritional content of recipes shared by dietitians on Instagram.

Methods Instagram accounts of Turkish dietitians who had a blue tick (known as the Instagram verified sticker) in their account and more than 100,000 followers were included. We determined the last 10 Instagram recipe posts of each dietitian and divided them into 7 categories according to their content: main dish, soup, healthy bakery products, breakfast, salads,

drink including smoothies and sweets. Nutritional composition (macro and micronutrients) of the recipes was analyzed based on one serving size. Post demographics including number of likes, hashtags and comments were also recorded.

Results We identified a total of 98 recipes. The majority of the posts were shared as photo (80.6%) whereas the rest of the posts (19.4%) were shared as video. The mean (SD) number of likes was 6108.9 (17971.2). The most shared recipe category was sweets category (36.1%), followed by salads category (17.0%). Salads category had the highest energy (381.4 ± 126.8 kcal), protein (15.1 ± 14.5 g) and fat content (24.0 ± 10.0 g) per one serving. Sweets category had the lowest energy (139.9 ± 63.2 kcal) per one serving. Soup category had the highest carbohydrate content (44.1 ± 24.0 g).

Conclusion Our research provides important information about the nutrient content of the recipes shared by dietitians on Instagram, which is an increasingly popular avenue for the general public, especially for those who do not have an opportunity to see a dietitian. Healthy recipe posts of dietitians on Instagram may be potentially misleading for public who may believe these foods are healthier than the regular alternatives. As such, following healthy recipes may be unlikely to confer any additional health benefits to the individual. There is a need for social media guidelines on how dietitians can effectively communicate via social media with the potential clients as trusted source of information.

17 ADOLESCENT'S FRIENDSHIPS AND NUTRITIONAL STATUS IN VIETNAM: A CROSS-SECTIONAL STUDY

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Background Relation between peer network and adolescent's weight status has been investigated in Western, and high-income countries, yet little was known in low- and middle-income countries, especially in Vietnam.

Objectives The study investigated how peer network structure indicators were associated with adolescent's weight status in Vietnam.

Methods The study obtained data of 1049 children who participated in two different surveys in the Young Lives Study in Vietnam. Sociometric indicators (in-degree, out-degree, reciprocity, reciprocal in-degree, reciprocal out-degree) were generated from class-based networks in the school survey conducted from 2011–12 using UCINET program. Anthropometric measurements and other demographic characteristics were collected in another survey from 2013–14. Nutritional status was categorized into Thinness, Normal weight, and Overweight using International Obesity Task Force BMI cut-off points. Multinomial logistic regression was employed to estimate the relative risks ratio (RRR) of being thin or overweight compared with normal weight adjusted for gender, wealth index, birthweight, class-level network density, friends' gender homophily, and BMI z-scores in round 3. Gender-network attributes interaction was also evaluated.

Results Reciprocity was associated with overweight in adolescents: model 1 (adjusted gender, wealth, birthweight, network density, gender homophily): RRRov=1.82, 95% CI: 1.10, 3.02, p-value <0.05, model 2 (added BMI z-scores round 3): RRRov=1.90, 95% CI: 0.94, 3.87, p-value <0.1). In-degree and out-degree were not related to either thinness or

overweight among adolescents in Vietnam. Interaction analysis showed that teen boys with least reciprocal in-degree were more affected by overweight: RRRov=3.60, 95% CI: 1.09, 11.89, p-value <0.05.

Conclusion Reciprocity in peer relationships has a salient role in adolescents' social life in Vietnam. Teen boys with low level of reciprocal incoming friendships were more affected by overweight. This is the first study to examine the link between peer network and adolescent nutritional status in Vietnam. Future work has many potentials to explore the association at different stages of child development.

18 THE EFFECT OF CHRONIC DISEASE ON FOOD STRESS AMONG THE LOW-INCOME POPULATION IN CYPRUS

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Background Food stress can be defined as the product of the cost of healthy food relative to the income of the household and occurs when households spend 30% or more of their income on food costs.

Objectives To examine the effect of chronic disease on food stress among low-income population in Cyprus.

Methods Three Food Baskets were developed for two different types of households (men and women). Healthy Food Baskets (HFB) were constructed based on the National Guidelines for Nutrition and Exercise. The Gluten Free Healthy Food Baskets (GFHFB) were based on the HFB and all products containing gluten were replaced with gluten free products. The Diabetic Healthy Food Baskets (DHFB) were based on the HFB and the guidelines of the American Diabetes Association (ADA). Affordability was defined as the cost of each basket as a percentage of the Guaranteed Minimum Income (GMI). The value of the GMI is set to be equal to €480 for a single individual and increases with the size of the recipient unit accordance to the Organization for Economic Co-operation and Development equivalence scales.

Results The monthly cost of the HFB for a man is 258.8 euros and for a woman is 187.1 euros. Also, a healthy man on GMI would need to spend 53.9% of his income on the HFB whereas the relative percentage for a healthy woman is to equal to 39%. The monthly cost of the GFHFB is about 16% (47 euros) and about 17% (33.6 euros) more expensive compared to the HFB for man and woman, respectively. Adults with celiac disease receiving GMI would need to spend 59.5% and 41.9% of their income on the GFHFB (man and woman, respectively). Moreover, the total monthly budget for a diabetic man is 16% (37.6 euros less) lower compared to the HFB and the relative percentage for the diabetic woman is about 15% (25.7 euros less). Moreover, for low-income adults with diabetes the proportion of income that would need to be spent on the DHFB is 50.1% and 35% for man and woman, respectively.

Conclusion The HFB, the GFHFB and the DHFB are characterized by low affordability causing food stress among the low-income population in Cyprus. Notably, healthy and non-healthy men seem to experience higher level of food stress compared to women. Moreover, results of the current study indicate that the occurrence of a chronic disease has a different impact on food stress.