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*LOCALLY TAILORED KNOWLEDGE, ATTITUDE AND PRACTICE TOWARDS DIET SUSTAINABILITY QUESTIONNAIRE:
DEVELOPMENT AND VALIDATION AMONG UAEU ADULTS*

by

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Abstract

Food production is a major contributor to global environmental change and sustainability. Sustainable diets can be defined as “diets with low environmental impacts which contribute to food and nutrition security and healthy life for present and future generations”. The United Arab Emirates (UAE) aims to enhance its food security to meet the current local demand and future needs of an increasing population. Before determining a sustainable diet pattern for the UAE population, it is foremost more important to understand the perception of sustainable diet production and consumption. A thorough comprehension of the knowledge, attitudes, and practices of the United Arab Emirates population is crucial for the development of targeted programs aimed at promoting sustainable diets. **Rationale:** To the best of our knowledge, no detailed validated questionnaire that measures the attitudes and behaviors toward sustainable diet production/ consumption exists as these tools are vital in analyzing the gap between current practice and optimal practice and determining future trends. **Aims:** to design and validate adapted tools and to assess the knowledge, attitude, and practice (KAP) of adults toward adopting a sustainable diet in the United Arab Emirates population. **Method:** A cross-sectional study has been conducted at UAEU in 2023. The study was conducted over two phases. Phase 1 was about generating the items, designing the questionnaire, and pilot testing of the questionnaire on a smaller group of participants by using Kaiser-Meyer-Olkin’s (KMO), Bartlett’s Tests, Cronbach’s α , Confirmatory Factorial analysis, and Fit Indices. In phase 2, the same tests mentioned earlier in phase 1 were used beside item-to-total correlation to validate the questionnaire on a larger group of participants. Reliability was assessed in phase 2 and test-retest reliability was done by using the Mann-Whitney test, Bland-Altman Analysis, and Cronbach α . Knowledge, attitude, and practice toward diet sustainability have been assessed by using a questionnaire that has been tailored from an existing English questionnaire. It was filled online by 389 participants from the United Arab Emirates University. Sociodemographic data were collected including age, gender, BMI, employment status, educational level, income, nationality, marital status, family size, diet counseling, nutrition education, and nutrition knowledge. The questionnaire was administered twice to the participants with a one-month interval between two administrations for reliability assessment purposes. Statistical analysis was done to compare the diet practices of the UAEU participants with the EAT-Lancet recommendations. **Results:** In phase 1, construct validity was done for pilot testing of 86 participants as a pre-test administration with satisfied KMO ranged between 0.720 and 0.852, and Bartlett’s tests of sphericity were statistically significant. All factorial weights in phase 1 were beyond 0.5, and acceptable association between the items and the factor except in domain D which led to item modifications. Internal consistency for 86 participants by measuring Cronbach’s α was acceptable and satisfied. In phase 2, 389 questionnaires were collected from adults (80.70% female) aged 25.0 ± 9.7 on average. Factor analysis revealed that the three-factor model had moderate fit indices. High internal consistencies, Cronbach’s α of 0.900, 0.960, and 0.897 for knowledge, attitude, and practice respectively were observed. Data of test-retest reliability using Bland-Altman Analysis shows the reliability between 2 responses. Results showed that participants had poor knowledge, and practice, with a positive attitude toward food sustainability compared with EAT-Lancet recommendations of high consumption of fruits and vegetables, moderate dairy products, white meat, and fish, and very low consumption of red and processed meat, and sugars. Significant correlations between domain response and all sociodemographic characteristics ($P\text{-value} \leq 0.05$) were found, except BMI with knowledge domain. **Conclusion:** the questionnaire of the present study is reliable, valid, and can be used as the best tool compared to others for the UAE adult population. Moreover, reliable data preferably from validated present questionnaire will be needed to develop interventions, awareness campaigns, and programs accordingly in the future.

Keywords: KAP questionnaire, confirmatory factor analysis, reliability, construct validity, sustainable diet

