

22nd International Congress on Nutrition and Health

March 22-23, 2023 | Webinar

Volume : 13

Evaluation of the Reliability of the Malaysian Diet Quality Index among Free-Living Adults in Kajang, Malaysia.

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Background: This study retested a previously developed diet quality index among the general Malaysian adult population. A two phase cross sectional study was conducted, where the first phase assessed the reliability and validity of the index among a sample of free-living adults, to assess their diet quality and determine its relation to physical activity, body composition, and socio-demographic factors. Reliability was assessed using internal consistency, test-retest and inter-rater reliability. Validity was assessed through construct validity, concurrent validity, and validity with relation to body weight. In the second phase, confirmatory factor analysis was conducted to determine whether the model fits the data.

Methods: The Cronbach's alpha value of the index was 0.268, while the mean inter-item correlation was 0.032. The intra-class correlation for test-retest reliability was above 0.7. Principal component analysis revealed three dimensions, explaining 18.3%, 14.3% and 10.6% of the variance, respectively. Confirmatory factor analysis showed satisfactory fitting of the model based on GFI, RMR and RMSEA. The fitting results were $\chi^2 = 146.09$; $cmin/df = 2.858$; $GFI = 0.915$; $AGFI = 0.856$; $CFI = 0.732$; $RMR = 0.166$; $RMSEA = 0.092$ and $SRMR = 0.0928$. The possible range of scores was 0 to 60. The mean total score was 34.5 ± 5.62 for the Kajang sample and 35.5 ± 5.03 for the Klang sample. Among the Kajang sample, 23.9% were at risk of poor diet quality, while 76.1% were at lower risk of poor diet quality. Among the Klang sample, 22.1% were at risk of poor diet quality, while 77.9% were at lower risk of poor diet quality.

Results: Diet quality was significantly correlated to age, ethnicity, educational level, employment status, reading nutrition labels and sedentary behavior, but not with BMI, waist circumference, physical activity level and understanding nutrition labels. The index is a valid and reliable instrument to measure diet quality of free-living Malaysian adults.

Conclusion: The index is a valid and reliable instrument to measure diet quality of free-living Malaysian adults.

Biography

Mariem Boughoula is a dedicated and accomplished Ph.D. candidate in the Department of Nutrition and Dietetics at Universiti Putra Malaysia, Malaysia. She has always been passionate about health and wellness, particularly in relation to the impact of nutrition on the human body, where she earned her Bachelor of Science in Nutrition and Dietetics. She then went on to earn her Master's degree in Clinical Nutrition from the Universiti Putra Malaysia, where she developed a keen interest in the study of nutrition and its relationship to health outcomes.

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Abstract received : December 10, 2022 | Abstract accepted : December 12, 2022 | Abstract published : 25-04-2023