

Malay Version of Exercise Self-Efficacy: A Confirmatory Analysis among Malaysians with Type 2 Diabetes Mellitus

ABSTRACT

Exercise self-efficacy (ESE) is one of the psychological constructs in the Transtheoretical Model (TTM). The objective of the present study is to assess the validity and reliability of the Malay version of Exercise self-efficacy scale (ESE-M) among Malaysians with type 2 diabetes mellitus (T2DM). A cross-sectional study design with convenience sampling method using a self-administered questionnaire was carried out. Participants were invited to complete the ESE-M with 18 items. Confirmatory factor analysis (CFA) was conducted and composite reliability (CR) was computed using Mplus 8. A total of 331 Malaysians with T2DM with a mean age of 63 years old (Standard Deviation = 0.57) completed the questionnaire. Most of the participants were male (52%) and Malay (89.4%). Two initial CFA models (single factor and three factors) of ESE-M scale were tested and they did not fit to the data well. Several re-specifications of the models were conducted. The final model for the ESE-M showed improvement on the value of model fit indices for the single factor model (comparative fit index (CFI) = 0.952, Tucker and Lewis index (TLI) = 0.938, standardised root mean square (SRMR) = 0.044, root mean square error of approximation (RMSEA) = 0.054) and three factors model (CFI = 0.891, TLI = 0.863, SRMR = 0.049, RMSEA = 0.081). The CR for the self-efficacy factor was 0.921 (single factor), while CR for internal feelings, competing demands and situational (three factors) were 0.762, 0.818 and 0.864, respectively. The final model of single factor ESE-M showed better fit to the data compared to the three factors ESE-M. This indicated that the single factor ESE-M is more suitable to be adopted for future study among Malaysians with T2DM.