Could the Food Neophobia Scale be adapted to pregnant women? A confirmatory factor analysis in a Portuguese sample

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ABSTRACT

Background: The Food Neophobia Scale (FNS) is widely used in different countries, however appropriate psychometric analyses are required to allow cross-cultural comparisons. To our knowledge, most studies have been conducted among children and adult populations, with no reference to pregnant women. The objective of this study was to translate and test the psychometric properties of a Portuguese version of the FNS, and to identify clusters of food neophobia during pregnancy.

Methods: The FNS was translated into Portuguese by three health researchers, and back-translated into English by an independent native English speaker and professional translator. The scale was self-administered in a sample of 219 women from the baseline evaluation of the Taste intervention study (HabEat project: http://www.habeat.eu/), who attended medical visits in two hospitals from Porto, Portugal, reporting food neophobia during the last trimester of pregnancy. The FNS consists of 10 items with a 7-point rating scale. An exploratory analysis was performed to evaluate the scale's dimensionality, followed by a confirmatory factor analysis to test the fit of the previous model by using different indexes. Cronbach's alpha coefficient was calculated to evaluate the internal reliability of the scale. The construct validity was assessed by comparing the FNS scores by categories of education, age and fruit and vegetables intake by ANOVA. A Model-based clustering was used to identify patterns of food neophobia; the number of latent classes was defined according to the Bayesian information criterion.

Results: A two-factor model solution was obtained (after excluding item 8 with a factor loading <0.4), explaining 51% of the total variance. Cronbach's alpha was 0.75 for factor 1 (5 items) and 0.71 for factor 2 (4 items). Items 1, 4, 6, 9 and 10 loaded into the first factor (i.e. more willingness to try new foods; less neophobic traits) and items 2, 3, 5 and 7 loaded into a second factor (i.e. more neophobic traits). A good global of fitness of the model was confirmed by fit indexes: TLI = 0.876, CFI = 0.911, RMSEA = 0.088 and SRMR = 0.051. The higher the education, age, and fruit and vegetables intake the lower the neophobic tendency, measured by the Portuguese FNS. Three patterns (i.e. clusters) of food neophobia, characterizing neophobia traits of pregnant women were identified: Moderate Neophilic, Moderate Neophobic, and Extreme Neophilic (cut-off points were provided).

Conclusion: The Portuguese version of the FNS has the basic requirements of a valid and reliable measure of food neophobia and permits the identification of clusters of neophobic traits during pregnancy.