

A latent trait analysis of inventories designed to study health status in elderly

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Abstract

This study explores mechanisms involved in self-evaluation of health in a sample of elderly by making specifications of linkages among various dimensions of health status, physiological measures, social and behavioral factors or characteristics. The proposed structural equation model is tested by using the Taiwan Aging Survey (TAS) data from the Longitudinal Study on Health and Living Status of the Elderly in Taiwan. TAS participants are a nationally representative, probability sample of elders, age 60 years or older in the Household Register. The first wave of the TAS occurred in 1989, the second wave in 1993, and the third wave in 1996.

This study will discuss the following main issues: (1) evaluate the subjective and objective health information to explore better indicators of health behavior in elder based on the longitudinal survey; (2) study the changes of health status and the causes of well-being in elderly so as to promote healthy life style. The aim of this study is to determine the extent to which variations in responses to the health related inventories with physical health reflect an actual association with depression and the extent to which they reflect item-level artifacts.

An important feature of this study is to examine the differences among the structures of CES-D scale, self-evaluation of health, and Life Satisfaction Index, and ADL across the three waves of TAS. Viewing the covariance structure of the items as a function of several parameter matrices, factorial invariance will be analyzed by testing hypotheses involving equivalence constraints on parameter matrices. Analysis of covariance structures is used to assess the factorial invariance. Age, gender, SES, and education differences in the structure of inventories will be examined by means of simultaneous latent trait analysis within the framework of MPLUS or LISREL. In addition, the multitrait-multimethod model (MTMM) for longitudinal analysis will be employed in this study to capture the special feature of the longitudinal data.