AGE DIFFERENCES IN THE STRUCTURE OF SELF-REPORTED PHYSICAL HEALTH

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This study attempts to assess the age differences in the factorial structure of a three-dimensional model of self-reported physical health among the young (20-39), middle (40-59), and old (60 and over) age groups. Data for this research came from a survey (n=1,194) conducted in 1985 by the Institute of Public Health at the National Taiwan University. The model was empirically evaluated for the various age groups by structural equation modeling using both the ML estimation in LISREL 7 and the AGLS estimation in EQS/EM version 3.0. Simultaneous factor analysis and the Lagrange Multiplier Test were applied to examine the structural differences between the three age groups. The measurement structure was found to be quite similar across the three age groups. The major difference was found between the young and the old age groups. The causal impact of self-reported conditions on functional status was significantly greater in the old age group. (J Natl Public Health Assoc (ROC): 1993; 12(1): 10-25)

Key words: Health indicators, measurement, structural equation modeling, age differences

INTRODUTION

Although mortality and morbidity are two important health indicators of the health status of a population, their use is limited in providing relevant health information in a low mortality society with large proportions of aged, chronically-ill, and disabled people [1]. Increasingly, the role of health related quality of life has been recognized in all phases of health services research. Accordingly, physical health has been conceptualized by functional status and personal health assessment in addition to the traditional survival and biomedical parameters. Measures of self-reported physical health in terms of quality of life are critical in assessing population health in a community and the effectiveness of clinical trials and medical care outcomes [24]. As a result, many studies have focused on the development and validation of the measurement of self-reported physical health with the objective of increasing its reliability and validity [5-8].

Meanwhile, there is a growing interest in developing a structural equation model for health measurement. By this approach, the factorial structure of health measurement can be examined under the adjustment of measurement error. Recently, Liang and his associates have successfully set up structural models of physical health for the elderly [9-10]. Among these models, chronic illness, functional status, and self-rated health have been identified as crucial dimensions of physical health. Structural linkages among the dimensions and between the observable indicators and latent health constructs has been explicitly specified. The measurement errors of all self-reported measures have been adjusted through structural

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