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0749 Structural Equation Modeling in Oral Health-related Quality of Life data

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Objective: The aim of this paper was to illustrate the use of structural equation modeling (SEM) to test a conceptual model of oral health-related quality of life (OHQoL). Methods: Questionnaire and clinical data from 372 35-44-year-olds and 248 community dwelling 65-74-year-olds collected in the Hong Kong Oral Health Survey 2001 were used. Six latent variables (constructs) namely, knowledge of dental caries, knowledge of periodontal disease, attitude towards dental health, oral health behavior, clinical oral health condition and OHQoL were constructed from a total of 27 observed variables collected in the Survey. A model to study the effects of dental knowledge and attitude on oral health behavior, the effect of oral health behavior on the clinical oral health condition and their effects on OHQoL was specified and tested using SEM. The analysis was performed using LISREL software version 8.54. Results: Knowledge on periodontal disease was found to have a statistically significant positive effect on oral health behavior (35-44: $\gamma=0.68$; 65-74: $\gamma=0.77$, $p<0.05$). Oral health behavior was found to affect the clinical oral health condition only in 35-44-year-olds ($\beta=-0.78$, $p<0.05$). However, no significant effect of oral health behavior or clinical oral health condition on OHQoL was found in both age groups ($p>0.05$). The specified conceptual model fitted the data adequately in both age groups (RMSEA<0.05, NFI>0.80, CFI>0.80, GFI>0.80). Conclusion: The use of SEM enables researchers to specify the inter-relationships among latent and observed variables in a conceptual model. It can also provide numerous criteria in assessing how good the model fits the data. There is much potential for using SEM in dental, medical and quality of life research.

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