

How to handle ordered responses with floor and ceiling effects in SEM using small samples?

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Briefly Explain Your Question (max. 100 words)

In order to decrease the high response costs related to the assessment of multiple constructs in the elderly population, we developed single-item measures for 17 constructs related to motivation for physical activity. Our aim is to provide validity evidence for the new measures comparing two nomological networks via SEM: one based on the single-item measures and the other based on the full questionnaire (69 items). Seventy elderly people responded using a 5-point Likert-Scale (1 = Totally disagree, 5 = Totally agree). Response distributions showed ceiling and floor effects in the short and the long form questionnaires.

Scientific field(s) of the author(s)

Psychometrics, motivation

Relevance to conference theme (max. 50 words)

This study is motivated by the difficulties in assessment with questionnaires of our target group: the elderly who practice physical activity with a trainer. Data collection has high response and administrative costs and sample sizes are typically small. Testing relations between multiple constructs in SEM is pestered with lack of statistical power, non-convergent solutions and parameter instability.

Keywords (max. 3)

Structural equation modeling, nomological network, the elderly

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