

# 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