

## **The SCI Exercise Self-Efficacy Scale (ESES): development and psychometric properties**

### **Abstract**

#### **Background**

Rising prevalence of secondary conditions among persons with spinal cord injury (SCI) has focused recent attention to potential health promotion programs designed to reduce such adverse health conditions. A healthy lifestyle for people with SCI, including and specifically, the adoption of a vigorous exercise routine, has been shown to produce an array of health benefits, prompting many providers to recommend the implementation of such activity to those with SCI. Successfully adopting such an exercise regimen however, requires confidence in one's ability to engage in exercise or exercise self-efficacy. Exercise self-efficacy has not been assessed adequately for people with SCI due to a lack of validated and reliable scales, despite self efficacy's status as one of the most widely researched concepts and despite its broad application in health promotion studies. Exercise self efficacy supporting interventions for people with SCI are only meaningful if appropriate measurement tools exist. The objective of our study was to develop a psychometrically sound exercise self-efficacy self-report measure for people with SCI.

#### **Methods**

Based on literature reviews, expert comments and cognitive testing, 10 items were included and made up the 4-point Likert SCI Exercise Self-Efficacy Scale (ESES) in its current form. The ESES was administered as part of the first wave of a nationwide survey (n = 368) on exercise behavior and was also tested separately for validity in four groups of individuals with SCI. Reliability and validity testing was performed using SPSS 12.0.

#### **Results**

Cronbach's alpha was .9269 for the ESES. High internal consistency was confirmed in split-half (EQ Length Spearman Brown = .8836). Construct validity was determined using principal component factor analysis by correlating the aggregated ESES items with the Generalised Self Efficacy Scale (GSE). We found that all items loaded on one factor only and that there was a statistically significant correlation between Exercise Self-Efficacy Scale (ESES) and Generalised Self Efficacy Scale (GSE) (Spearman RHO = .316;  $p < .05$ ; n = 53, 2-sided).

#### **Conclusion**

Preliminary findings indicate that the ESES is a reliable instrument with high internal consistency and scale integrity. Content validity both in terms of face and construct validity is satisfactory.

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