

# The Falls Concern Scale for Wheelchair & Scooter Users: Development, Reliability, & Validity Assessment

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Engagement in occupation promotes health and participation, yet for many people using wheelchairs/scooters (WC/S), compromised fall self-efficacy (FSE) leads to activity curtailment. To date, no tool exists to assess FSE among people who use WC/S full-time living with varied health conditions. This study was undertaken to a) develop a new tool, the Falls Concern Scale for Wheelchair and Scooter Users (FCS-WC/S), and b) assess reliability/validity. The FCS-WC/S was informed by findings from 2 focus groups involving healthcare professionals and intended end users (EUs) recruited by invitation. The resulting tool queries EUs about their level of confidence in avoiding falls during 33 daily activities. Participants,  $\geq 18$  years old, with a history of falls in the past three years, used WC/Ss for  $\geq 1$  year and for  $\geq 75\%$  of mobility, were recruited to examine the reliability and validity of the FCS-WC/S. First, 124 participants completed the FCS-WC/S. One week later, a subgroup of 63 participants completed the survey again. Six months later, 21 participants completed the survey a third time. The FCS-WC/S had excellent internal consistency (Cronbach's  $\alpha=.96$ ) and good test-retest reliability (intra-class correlation coefficient (ICC)<sub>21</sub>  $=.89$ ; ICC<sub>31</sub>  $=.82$ ). Principal component analysis and parallel analysis revealed two underlying factors. A high first-to-second eigenvalue ratio (15.1 to 2.8) and 45.8% of total variance captured by the first component suggested unidimensionality. The FCS-WC/S effectively differentiated between low and high levels of fear of falling (OR=10.3, 95% CI, 4.2- 25.1,  $P<.001$ ; Area Under the Curve= .84, 95% CI, .77-.92,  $P=.00$ ). The scale showed a strong positive correlation ( $r^2=.717$ ,  $P<.001$ ) between FCS-WC/S and the Spinal Cord Injury- Fall Concern Scale, indicating strong concurrent validity. Findings impact practice by indicating that the FCS-WC/S is a valid and reliable tool that enables OTs to assess FSE among people who use WC/S.

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