

The influence of self-efficacy with using a wheelchair on life-space mobility in older, community-dwelling manual wheelchair-users

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Objective: To estimate the direct effect of self-efficacy with using a manual wheelchair on life-space mobility and to investigate the mediating effect of wheelchair skills.

Methods Individuals were recruited from British Columbia, and Quebec, Canada, to participate in this cross sectional study. Participants were community-dwelling manual wheelchair users (n=124), 50 years of age and older (mean = 59.7 years, range 50-84), who had at least 6 months experience with using a manual wheelchair on a daily basis. Sixty percent were male.

The 20-item Life Space Assessment, the 65-item Wheelchair Use Confidence Scale, and the 32-item Wheelchair Skills Test-Questionnaire. Multiple regression analyses with bootstrapping were used to investigate the direct and mediated effects.

Results: After controlling for sex, number of comorbidities, geographic location, assistance with using a wheelchair, and education, self-efficacy had a statistically important direct effect on life-space mobility. This model accounted for 39.0% of the variance in life-space mobility and the unique contribution of self-efficacy was 4.3%. The mediated effect through wheelchair skills was statistically important (point estimate = 0.21, 95% bootstrapped CI = 0.02, 0.42), and accounted for 91.0% of self-efficacy's direct effect on life-space mobility. The mediated model accounted for 41.2% of the variance.

Conclusion: Self-efficacy with using a manual wheelchair has an important direct effect on life-space mobility mediated through wheelchair skills. Interventions targeted toward improving self-efficacy may lead to improvements in both wheelchair skills and life-space mobility. More research is needed on strategies aimed towards improving the mobility of those who have difficulties with using their wheelchair.

