

Health, Personal, and Environmental Correlates of Self-efficacy with using a Manual Wheelchair in Community-Dwelling Adults Aged 50 and Over

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Objective: Individuals with lowered self-efficacy with wheelchair-use may experience participation and mobility benefits after receiving targeted efficacy-enhancing interventions. The objective of this study is to investigate health-related and socio-demographic risk factors of lowered self-efficacy. It is hypothesized that health-related, personal and environmental (wheelchair, social, and physical) factors will each independently predict the self-efficacy construct in community-dwelling adults aged 50 and over.

Methods: This multi-site, cross-sectional study included 124 community-dwelling wheelchair-users (60% male), ≥ 50 years of age (mean=59.7 years, sd=7.5). The Wheelchair-Use Confidence Scale assessed the self-efficacy dependent variable. The socio-demographic information form, Functional Comorbidity Index, Seating Identification Tool, Interpersonal Support and Evaluation List, and the Home and Community Environment instrument captured the independent variables. The ICF framework guided the hierarchical multiple regression analyses in which blocks of health condition, personal, and environmental variables were entered sequentially into the model.

Results: The regression model to explain self-efficacy ($R^2=0.44$) included 5 personal variables (Age, $\beta=-0.18$, 95% CI=-0.82--0.09; Sex, $\beta=-0.26$, 95% CI=-15.50--4.54; Daily hours of wheelchair-use, $\beta=0.20$, 95% CI=0.28-1.50; Wheelchair-use training, $\beta=0.20$, 95% CI=2.93-16.66; and Wheelchair-use assistance, $\beta=-0.34$, 95% CI=-20.01--8.10), and 1 environmental variable (Need for a seating intervention, $\beta=-0.18$, 95% CI=-12.16--1.47).

Conclusion: The results partially support the study's hypothesis. Older, female wheelchair-users, who require assistance with wheelchair-use, are at risk of lowered self-efficacy. The same is true for individuals with no formal wheelchair-use training, who are in need of a seating intervention, and report few hours of daily wheelchair-use. These wheelchair-users may benefit from efficacy-enhancing interventions.