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Original research

# Effectiveness of a Wheelchair Skills Training Program for Powered Wheelchair Users: A Randomized Controlled Trial

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## Abstract

### Objectives

To test the hypothesis that powered wheelchair users who receive the Wheelchair Skills Training Program (WSTP) improve their wheelchair skills in comparison with a control group that receives standard care, and secondarily to assess goal achievement, satisfaction with training, retention, injury rate, confidence with wheelchair use, and participation.

### Design

Randomized controlled trial.

## Setting

Rehabilitation centers and communities.

## Participants

Powered wheelchair users (N=116).

## Intervention

Five 30-minute WSTP training sessions.

## Main Outcome Measures

Assessments were done at baseline (t1), posttraining (t2), and 3 months posttraining (t3) using the Wheelchair Skills Test Questionnaire (WST-Q version 4.1), Goal Attainment Score (GAS), Satisfaction Questionnaire, injury rate, Wheelchair Use Confidence Scale for Power Wheelchair Users (WheelCon), and Life Space Assessment (LSA).

## Results

There was no significant t2â€“t1 difference between the groups for WST-Q capacity scores ( $P=.600$ ), but the difference for WST-Q performance scores was significant ( $P=.016$ ) with a relative (t2/t1  $\bar{A}$ — 100%) improvement of the median score for the intervention group of 10.8%. The mean GAS  $\hat{A}$ ± SD for the intervention group after training was 92.8% $\hat{A}$ ±11.4%, and satisfaction with training was high. The WST-Q gain was not retained at t3. There was no clinically significant difference between the groups in injury rate and no statistically significant differences in WheelCon or LSA scores at t3.

## Conclusions

Powered wheelchair users who receive formal wheelchair skills training demonstrate modest, transient posttraining improvements in their WST-Q performance scores, have substantial improvements on individualized goals, and are positive about training.



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## Keywords

Motor skills; Randomized controlled trial; Rehabilitation; Wheelchairs

## List of abbreviations

ANCOVA, analysis of covariance; GAS, Goal Attainment Score; IQR, interquartile range; LSA, Life Space Assessment; WheelCon, Wheelchair Use Confidence Scale for Power Wheelchair Users; WST-Q, Wheelchair Skills Test Questionnaire; WSTP, Wheelchair Skills Training Program

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