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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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