

The Natural History and Measurement of Power Wheelchair Use

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Background

Mobility impairment is the number one form of disability for Canadians 50 years of age and older¹ and the use of a power wheelchair is often used to compensate for mobility impairment.

Although there is evidence that power wheelchairs can have a profoundly positive impact on the quality of life of older adults,^{2,3} wheelchairs are among the most commonly abandoned assistive technology devices.⁴

To date, we have little comprehensive understanding of power wheelchair use among older adults and its impact on health and quality of life.

Objectives

- 1) to describe the natural history of power wheelchair use over a two year period in older adults
- 2) to assess the psychometric properties of a 'Power Wheelchair Outcomes Tool Kit'



Method

Design

Longitudinal Multi-Cohort Design
(2 year)

Six
Canadian sites

Vancouver
London
Toronto
Montreal
Quebec City
Halifax

All protocols, forms, and outcome measures available in French and English

Participants and Recruitment

Consecutive sampling strategy (N=150)
(3 cohorts)

Experienced
Power
Wheelchair
Users

Experienced
Power
Wheelchair
Users
Receiving A
New Chair

Brand New
Power
Wheelchair
Users

Inclusion criteria

- ≥ 50 years of age
- Ability to operate their power wheelchair independently
- Able to travel to the testing site for 2 of the 7 sessions

Procedure

Data collection

Baseline Month 1 Month 3 Month 6 Month 12 Month 18 Month 24

Power Wheelchair Outcomes Tool Kit

- Assistive Technology Outcomes Profile
- Life Space Assessment
- Wheelchair Skills Test- Power
- Wheelchair Skills Test-Power-Questionnaire
- Wheelchair Use Confidence Scale-Power

Secondary Outcomes

- Demographics
- Interpersonal Support Evaluation List
- Hospital Anxiety and Depression Scale
- Late Life Disability Index

Lessons Learned so far...

The importance of:

- regular communication strategies
- training and continuous follow up
- flexibility and adaptability
- retention strategies

Implications

Findings of this longitudinal study will advance our knowledge of power mobility use among older adults, build upon previous cross-sectional studies, and provide evidence of the psychometric properties of the outcome measures used.

References

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Acknowledgments

