

Examining User Product Compatibility to Enhance Functional Mobility among Users of Wheelchairs

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Project Description & Sites

To identify user compatibility of the adaptive door opener designed to help users of wheelchairs enhance independence in functional mobility when opening manual doors. Clients who utilize wheelchairs can experience difficulties when traveling throughout the community as doors that do not open automatically can create a physical barrier.

Area of Study: Research, Advocacy

Area of Practice: Rehabilitation and Disability

Sites: Huntington University & Silver Birch Assisted Living of Fort Wayne



Needs Assessment | Literature Review

Needs Assessment:

Approximately 1.5 million people in the United States use a manual wheelchair (MWC) (Kaye et al, 2002). The task of propelling a wheelchair forward through a door while keeping the door open can be challenging for some users of wheelchairs, especially while using a manual wheelchair, because users of manual wheelchair need to hold the door open with one hand while propelling forward with the other hand during community mobility (Abdullah & Mohammed 2017).

Literature Review:

Evidence demonstrates more than 1 billion individuals globally have a form of disability. Ten percent of this population includes clients with lower-limb amputations who utilize manual wheelchairs for functional mobility to complete activities of daily living (ADLs) (Ebrahimi et al., 2016). For individuals who utilize wheelchairs research indicates independent mobility to be a critical factor for all regardless of age to engage in an active social life (Abdullah & Mohammed, 2017). Thus, without adequate engagement in functional mobility, it can lead to a decline in the participation of meaningful activities and quality of life (QOL).

Christ | Scholarship | Service

“Do not neglect to do good and to share what you have, for such sacrifices are pleasing to God”.

– HEBREWS 13:16

Project Completion and Outcomes

Outcome Measure #1: Student will develop advocacy skills measured by the creation of an educational website aimed to enhance knowledge for clients and staff to improve occupational participation in functional mobility.

Outcome Measure #2: Student will develop an in-depth understanding of research as evidence by the completion of a final research manuscript on user compatibility.

Mission & Vision Statements

Mission Statement:

To research user compatibility and provide functional mobility skill enhancements for clients who utilize wheelchairs.

Vision Statement:

To increase quality of life and participation in daily activities for individuals who utilize wheelchairs.

Deliverables

- ❖ Educational website aimed to enhance knowledge of functional mobility resources
- ❖ Training Video focused on improving functional mobility with the use of specialized adaptive equipment
- ❖ Finalized Product Logo
- ❖ User Instructional Manual
- ❖ Survey Analysis Document
- ❖ Research Manuscript
- ❖ Presentation of research findings

Table 3. Themes regarding usefulness

Theme Category	Illustrative Quotations
Product promotes improved independence for users of wheelchairs	“I think it would be of great benefit to increase independence of w/c users”. “When will this be on sale? AMAZING!”

Table 4. Themes regarding ease of use

Theme Category	Illustrative Quotations
Product simplicity	“Looks very straightforward and easy to use”. “I like the simplicity of the solution”



Future Implications for OT

Assisting individuals with enhancing functional mobility by utilizing an OT approach can provide knowledge of the present device to increase home and community mobility

Increasing awareness of accessibility and independence for people who use wheelchairs

Future analysis of user compatibility among users of the device can provide additional insight to the outcomes of increasing the quality of life.

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KEY REFERENCES
*Full reference list and image reference list available upon request