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The Experiences of Routine Powered Mobility Users in an Assisted Living Facility: A Case Study

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The Experiences of Routine Powered Mobility Users in an Assisted Living Facility: A Case Study

Abstract

Background: The purpose of this study was to explore the contrasting experiences of two routine powered mobility device (PMD) users in an assisted living facility (ALF).

Method: A case study approach using three forms of data (semi-structured interview, observation, and media collection of pictures) was used to formulate a comprehensive description of the two PMD user's experiences. Data analysis was completed using line-by-line coding and in vivo to generate possible themes. Process coding, descriptive coding, and analytic memos were then employed to better understand the connection of the data and ensure themes generated were appropriate.

Results: Following data analysis, five themes emerged from the data: (a) "I swore I'd never be in a wheelchair" – Initial disapproval, (b) "Because I lost my leg" – The need to use a power wheelchair, (c) "I don't know what I'd do without it" – Independence and usability, (d) "If somebody tells you STOP! You stop" – Adaptations for safety, and (e) "They just put me in it and let me go" – Lack of training.

Conclusion: The importance of screening users before implementing a PMD and providing training to all PMD users when provided is indicated.

Comments

The author declares that they have no competing financial, professional, or personal interest that might have influenced the performance or presentation of the work described in this manuscript.

Keywords

aging, assistive technology, functional mobility, qualitative, safety, wheelchair

Cover Page Footnote

This study was completed while a Ph.D. student at Texas Woman's University. The author thanks the participants of the study, Catherine Cooper Hay, PhD, OTR, Noralyn Pickens, PhD, OT, FAOTA, and Tina Fletcher, EdD, OT.

Credentials Display

Richelle L. Gray OTD, OTR/L, ATP, CDP

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Residential care communities, such as assisted living facilities (ALF), provide housing for individuals who need assistance with activities of daily living (ADL) and/or instrumental activities of daily living (IADL) but do not require skilled care that would be provided by long-term care facilities (Caffrey et al., 2021). Sixty-nine percent of individuals in ALFs require assistance with functional mobility (Sengupta et al., 2022). Functional mobility, defined as moving from one place to another, is a primary ADL necessary for the successful human performance of everyday occupations (American Occupational Therapy Association [AOTA], 2020). Examples of functional mobility include transfers, in-bed mobility, ambulation, and wheelchair mobility. In the United States, individuals living in ALFs are primarily over 75 years of age (80%), female (67%), and non-Hispanic White (89%; Sengupta et al., 2022). When an individual has difficulty with functional mobility, they can use a mobility aid. Adults 65 years of age or older are 4 times more likely to use a wheelchair compared to any other mobility aid (Taylor, 2018).

A powered mobility device (PMD), such as a power wheelchair or electric scooter, may be necessary for independent functional mobility for persons with mobility limitations in ALFs. Using the PMD can positively impact the user’s quality of life and increase an individual’s independence with personal mobility to participate in desired occupations (Kemmis et al., 2021; Mortenson et al., 2015; Pettersson et al., 2016). Power mobility devices have also been shown to increase activity and occupational participation in older adults (Pettersson et al., 2016).

Although a PMD can provide independent mobility, its use can lead to injury of self and others and facility damage. Clinicians need to ensure the PMD is indicated and that the client can use it safely. In a recent study in Australia, researchers explored retrospective data on PMD use and incidents in the last 12 months at 33 residential facilities (Dickson et al., 2023). They reported that 30 PMD users accounted for 55 incidents. There were 12 PMD users with two or more incidents, with the remaining 18 PMD users only having one incident. By the end of the study, 30% of participants discontinued PMD use before follow-up, either by choice or request, because of safety. Regarding PMD training, 53% had received no formal training, and only 40% underwent a formal assessment. The study concluded that there are benefits and risks to PMD use in residential care settings but that each facility and its staff should explore support structures to promote the safe use of PMDs.

A qualitative study in Canada explored the experiences of PMD users with aging, including seven ALF residents (Korotchenko & Clarke, 2016). A few contrasting themes gleaned from the study included participants feeling they are becoming more disabled by using a PMD, but also that using it increased independence because of body function changes with aging. The researchers found the ALF residents responded to using a PMD differently than community-dwelling participants. The ALF residents described an appreciation for using a PMD for mundane occupations, while community-dwelling participants discussed mostly what they could do in the community. The researchers attributed these findings to the ALF residents’ constraints of living arrangements and possible lower socioeconomic status. They encouraged future studies to explore PMD use in advanced old age, as most participants were between 50 and 60 years of age.

Although prosthetists and orthotists are also trained, occupational therapists and physical therapists are the primary gatekeepers for recommending PMDs (Fung et al., 2020). In the early 1990s, clinicians who prescribed PMDs relied heavily on their clinical reasoning skills to determine if individuals who indicated a need for a PMD could safely operate that device (Calder & Kirby, 1990; Cook & Semmler, 1991). As PMDs became more popular for residents in residential care settings, two dilemmas were
discussed by clinicians: promoting functional mobility while also acknowledging the risks of driving a PMD and liability considerations when prescribing a PMD (Calder & Kirby, 1990; Cook & Semmler, 1991). Assessments were created and validated for this purpose, including the Power-mobility Indoor Driving Assessment, Wheelchairs Skills Test Questionnaire (WST-Q) Version 4.1, and the Wheelchair Use Confidence Scale for power wheelchair users (WheelCon-P) (Rushton et al., 2016; Rushton et al., 2018; Dawson et al., 1994).

The aforementioned assessment tools have facilitated intervention approaches for PMDs, but researchers continue to advocate for clinical practice guidelines for prescribing a PMD. In a qualitative study that involved interviewing PMD stakeholders, researchers concluded the need to have safety measures that focus on mobility and the need to develop practice guidelines (Mortenson et al., 2005; Mortenson et al., 2006). García et al. (2015) found that a good match between the user and the PMD increased the effectiveness and use of that particular device in daily occupations, leading to decreased abandonment. The same authors recommended using outcome measures to further improve and support the referral process. Best and colleagues met to guide future strategic research related to powered mobility and cognition; two of the five solutions discussed to be the most impactful for change were to profile and address individualized needs and develop practice guidelines (Best et al., 2021). For these potential solutions to come to fruition, research is indicated with key stakeholders, including PMD users, to learn about any potential barriers or facilitators to the PMD experience.

This case study aimed to explore the experiences of two routine PMD users in an ALF. For this study’s aim, a routine PMD user was defined as an individual who had been using a PMD for at least 12 months. The research question was, “What are the experiences of two routine PMD users in an ALF?”

**Method**

The primary investigator (PI) recruited two participants to allow for two contrasting case studies in the same context, as both were PMD users in the same ALF. The contrasting case studies allowed the researcher to collect personal experiences from the two users in an ALF environment, which would facilitate answering the research question. The PI intentionally chose a PMD user with a good driving record and a PMD user with a poor driving record, both of whom were part of the PI’s occupational therapy caseload for mobility testing. Before the case study, both drivers completed the Power-mobility Indoor Driving Assessment, which indicated a need for power mobility training for a driver who scored 62% and no further training indicated for a driver who scored 98% (Dawson et al., 1994; Dawson et al., 2006). The PI concluded the driver who scored 62% was an unsafe driver, and the driver who scored 98% was a safe driver. The PI felt using contrasting case studies would provide a small range of experiences that might represent any typical PMD user in this ALF environment. Throughout the study process, the PI was diligent in focusing on each participant’s experience and bracketed assumptions as much as possible (Saldaña & Omasta, 2022).

**PI Lens**

The PI was an occupational therapist who had been working with PMD users for 7 years, primarily with older adults. Specifically, this PI completed custom wheelchair evaluations, administered powered mobility assessments, wrote letters of medical necessity for custom wheelchairs, and provided skilled intervention to all types of wheelchair users. The PI worked at the facility where data collection occurred, had known both of the participants for about 1 year, and had treated both participants in occupational therapy with interventions specific to powered mobility.
Setting and Context

The PI used convenience and purposive sampling at an ALF in a large metropolitan area in Ohio. This particular ALF is a three-story building with individual apartments on each level with two wings. The apartments have a studio set up that includes a 10 ft by 18 ft living/dining room with a 6 ft wide window, refrigerator, sink, microwave, and 4 ft by 2.5 ft closet; a 10 ft by 12 ft bedroom with the same size closet and a 2 ft wide window; and a 6 ft by 10 ft bathroom with a walk-in shower with built-in bench, grab bars, and handheld shower head; raised toilet with grab bars next to it; and a sink that allows for wheelchairs to pull under for ease of use. Each apartment has two call lights, one in the bathroom by the toilet/shower area and one in the bedroom by the bed. Each floor of the building has a common area for mailboxes, a sitting area, a laundry room, and an activity room. The first floor of the building has administrative offices, the nurse’s office, common area bathrooms, a front desk, a therapy gym, a chapel, a resident store, a bird cage/viewing area, and a dining room. All doors in the building are at least 36 in. wide, allowing for accessibility for PMD users.

Participants

Eligibility criteria included being a routine PMD user and living in an ALF. Two participants were recruited using purposive sampling; both agreed to participate in the case study. Participant A was a 78-year-old White female who had been a PMD user for over 5 years secondary to functional limitations resulting from a right above-knee amputation (R AKA), type II diabetes (DM II), and morbid obesity. Participant B was an 84-year-old White female who had been a PMD user for about 2 years secondary to functional limitations resulting from chronic obstructive pulmonary disease (COPD), DM II, congestive heart failure, and morbid obesity. Both participants had lived in the same ALF for over 2 years. Both provided written and verbal consent to participate in the case study project. In addition, approval was received by the facility director for the PI to conduct these case studies at the facility when not working in her clinical role. Consultation with the university’s institutional review board determined that IRB review and approval were not required for this case study approach. Data collection occurred between March and April 2023. For the purposes of this article, Participant A will be referred to as Daphne, and Participant B will be referred to as Evelyn (both pseudonyms) to protect participant anonymity.

Data Collection

Three forms of data collection were used for this case study, including semi-structured interviews, observations, and a digital image portfolio. The original aim was to complete all three forms of data collection with two participants; however, one participant, Daphne, was hospitalized after the semi-structured interview and did not return to the facility. Thus, semi-structured interviews were completed with Daphne and Evelyn, but observation and a digital image portfolio were only completed with Evelyn.

Semi-Structured Interviews

Both semi-structured interviews were audio-recorded and lasted between 25–40 min. The semi-structured interviews were implemented with a guide of open-ended questions to allow the participants to focus on their experience and what they valued the most to be shared (see Table 1).

<table>
<thead>
<tr>
<th>Table 1</th>
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<tbody>
<tr>
<td>Semi-Structured Interview Guide</td>
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<tr>
<td>Tell me about your power wheelchair (PWC).</td>
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<tr>
<td>Tell me about your reasons and others’ reasons for getting you a PWC.</td>
</tr>
<tr>
<td>Tell me about both the benefits and challenges of using your PWC in your apartment.</td>
</tr>
<tr>
<td>Tell me about both the benefits and challenges of using your PWC in the facility.</td>
</tr>
<tr>
<td>The safety of the PWC is important for both the user and the facility. How do you keep yourself and others safe while using your PWC?</td>
</tr>
</tbody>
</table>
Observation

Evelyn was observed for 3 hr and 49 min over 3 days in a 2-week timeframe to allow for observations in a variety of areas, activities, and times of the day. The PI used the Ecology of Human Performance framework to guide observation. This framework emphasizes that the environment is the primary context in which performance needs to be understood. It states that human performance should be viewed through the environment or context, as it cannot be understood outside of it. It also emphasizes the interrelatedness of person, context, and task, which together influence human performance (Dunn et al., 1994). The PI used person, context, task, and human performance as constructs to guide observation of Evelyn using a PMD in her apartment and throughout the facility to understand how context influences human performance. For interactions with Evelyn, the PI used a peripheral role in the first-floor interactions to observe social life as it occurs. The PI used an active role in Evelyn’s apartment to engage in part-time participation in the action of the field setting (Adler & Adler, 1987).

Digital Image Portfolio

A digital image portfolio was the third form of data collection. The initial plan for the digital image portfolio was to provide Evelyn with the facility iPad so she could take digital images of her own experience using the PMD. However, Evelyn was uncomfortable doing this because of a history of resting tremors and instead asked the PI to assist. Per participant preference, the PI took digital images of Evelyn while observation occurred. This allowed the PI to reflect on Evelyn’s performance in different contexts during diverse tasks to synthesize during analysis. The PI also used the Ecology of Human Performance as the lens to understand each digital image with a distinct focus on Evelyn’s human performance within the context of the task of using a PMD.

Trustworthiness

The PI strived to ensure trustworthiness throughout the case study. Triangulation of data was attempted by collecting the following types of data, including two semi-structured interviews, observation, and a digital image portfolio. To ensure an audit trail, the PI recorded (a) field notes during observation, including a site sketch of all environments; (b) an observation log with a descriptive title and the observation; and (c) a table for jottings, objective observation notes, and observer comments. Field notes were critical in synthesizing information later. The PI also included an in-depth description of the study’s ALF setting. This organization allows for the possible transferability of the study to be repeated in other contexts/ settings. To ensure accurate information was conveyed in the results, the PI reviewed both transcriptions of the interviews four times to ensure the accuracy of what each participant stated. With the use of in vivo coding, the PI was able to bracket their own assumptions to stay true to the participant data. Lastly, the PI used multiple avenues to code the data, including line-by-line coding with in vivo, process coding, descriptive coding, and analytic memos. This, along with the use of NVivo 12 Pro™ qualitative software for Windows (QSR International, Burlington, MA), allowed the PI to see the data in multiple ways to develop appropriate themes.

Data Analysis

Interviews were transcribed using Microsoft Word dictation and then reviewed and edited by the PI. Coding was completed using qualitative software (NVivo 12 Pro™) with a focus on coding the lived experiences of routine PMD users. Using the NVivo 12 Pro™ qualitative software, the PI first implemented line-by-line coding using in vivo to generate possible themes using all forms of data collection with direct quotes. The PI then employed process coding to identify the actions, reactions, and interactions of the participants as suggested by the data using all forms of data collection (interview,
observation, digital images) (Saldana & Omasta, 2022). In addition, the PI used descriptive coding to shorten the data topics from all forms of data collection to one word or short phrase. Finally, the PI completed a memo of each theme to better understand the connections of the data and ensure that the themes generated were appropriate. Data analysis examples are provided in Table 2.

**Results**

All data from both of the participants were used to formulate the results of the case study. Overarching themes using in vivo coding were recorded, along with a paired descriptive code, to better understand each theme. These overarching themes were: (a) “I swore I’d never be in a wheelchair”– Initial disapproval, (b) “Because I lost my leg” – The need to use a power wheelchair, (c) “I don’t know what I’d do without it” – Independence and usability, (d) “If somebody tells you STOP! You stop” – Adaptations for safety, and (e) “They just put me in it and let me go” – Lack of training. Direct quotes and examples were extracted from the data to relate to each theme, which was found using in vivo, process, and descriptive coding. Themes derived from data analysis using all forms of data can be found in Table 2.

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Themes Derived from Data Analysis</th>
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<tbody>
<tr>
<td><strong>Theme</strong></td>
<td><strong>Daphne Interview</strong></td>
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<tr>
<td>“I swore I’d never be in a wheelchair”</td>
<td>“I mean, if I had any choice I’d rather be walking on my feet.”</td>
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<tr>
<td><strong>Initial Disapproval</strong></td>
<td></td>
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<tr>
<td>“Because I lost my leg”</td>
<td>“Because I lost my leg”</td>
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<tr>
<td>The need to use a PWC</td>
<td>“Oh, I can just get around so much easier.”</td>
</tr>
<tr>
<td>“I don’t know what I’d do without it”</td>
<td>“I can just get around so much easier.”</td>
</tr>
<tr>
<td><strong>Independence and Usability</strong></td>
<td></td>
</tr>
<tr>
<td>“If somebody tells you STOP! You stop”</td>
<td>“You really gotta watch yourself on the way down to the dining room because people get to talk or somebody calls their name and they go to turn around, so you gotta really be watching what they’re doing more than what you’re doing.”</td>
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<tr>
<td><strong>Adaptations for safety</strong></td>
<td></td>
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<tr>
<td>“They just put me in it and let me go”</td>
<td>“They didn’t even give me a rules book, I mean not a rules book but, um, how, how to work it.”</td>
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<tr>
<td></td>
<td></td>
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<tr>
<td>Lack of training</td>
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“I Swore I’d Never be in a Wheelchair” - Initial Disapproval

Both of the participants initially didn’t want to use PMDs. These feelings seemed to relate to their desire to walk safely and functionally. Daphne stated, “I mean, if I had any choice, I’d rather be walking on my feet.” Evelyn stated, “It ain’t that I don’t like it, it’s just that I don’t like being in a wheelchair. I swore I’d never be in a wheelchair.” By the end of the interviews, it was clear that this disapproval was only initial; the participants found the benefits of the PMD after using it for daily tasks. Once they related the use of a PMD to independence, they were more interested in using a PMD.

“Because I Lost My Leg” - The Need to Use a Power Wheelchair

Experiences of needing to use a PMD were expressed by both participants during interviews and revealed during the observation and digital image portfolio collection for Evelyn. Both of the participants related their reasoning for getting a PMD to their inability to walk. Evelyn stated, “They said I couldn’t walk straight” and “Because I can’t walk.” Daphne stated, “Because I lost my leg.” During observation, it was clear that without a PMD, Evelyn would be unable to get to the first floor without help. Evelyn had increased shortness of breath with activity because of COPD and was unable to propel a manual wheelchair because of previous shoulder injuries. Without a PMD, Evelyn would be confined to her room unless assisted by staff. In the same way, Daphne required a PMD secondary to having a right above the knee amputation and not being functional with a prosthesis. Without her PMD, she would be unable to complete her self-care tasks without assistance, which she could do independently with her PMD. The data analysis made it clear that both of the participants had a need to use a PMD for daily living tasks and that the initial disapproval was only temporary.

“I Don’t Know What I’d Do Without It” - Independence and Usability

Both of the participants commented on how their PMD helped them be independent with valued ADL/IADL routines. Since Evelyn used a walker in her apartment, she valued using her PMD for IADL routines, while Daphne used her PMD for all mobility in her apartment and the community. Observation and digital images of Evelyn revealed what she could do with her PMD. Evelyn clearly demonstrated her ability to get into and out of the elevator safely to get to the first floor for medications and meals. During observation, the PI drew a detailed sketch to demonstrate the areas of the ALF that Evelyn participates in using her PMD. Evelyn used her PMD to get to and from necessary locations to participate in IADLs, including the nurse’s station for medications, the dining room for meals, the laundry room for laundry management, and the front desk for money management, to make hair appointments, and to retrieve her mail. She also participated more in leisure tasks as a result of having powered mobility, including socialization with friends and staff through attending bingo, exercise, church, music, trivia, coffee hour, and bible study. Evelyn related her participation on the first floor to having a PMD.

I use it to go to lunch, supper, if I have to go to the, like, down to the office get my medicines and, uh, to see, like, down here in the main office and that if I go downstairs or I go someplace where I can’t get, like on the elevator and that, I have to use something that I can be sturdy with. I can go in and out of the bathroom down there. I can go in and out of the doors of the office, in and out of your [therapy] doors, in and out of your [therapy] bathroom.

Daphne referred to her independence using her PMD in her apartment, attributing her PMD to independence with ADL tasks.
Oh, I can just get around so much easier. I get up, transfer into it from my bed, and into the bathroom onto the toilet, off of the toilet, back in my bedroom getting dressed, coming out here in the living room to get my face washed, and I put some makeup on and then brush my hair, and then I have a wig, and, um, I can do all my hair stuff in my chair, you know, so . . . I don’t know what I’d do without it, seriously, it’s great. I’d be sitting in my room a lot and a long time waiting to get out of it because nobody comes when you press that button for quite a while.

Both relate independence with functional tasks of choice because of their powered mobility.

“If Somebody Tells You STOP! You Stop” - Adaptations for Safety

During observation and the interview, it was apparent that Evelyn had adapted her role as a PMD user with safety measures through the assistance of staff, therapy, or from her own experiences. Regarding staff, her dining room seat was changed to be closer to the door of the dining room for ease of access. Regarding Evelyn’s apartment door, she stated, “The door is slowed down so when I open it, it takes a while to shut. Maintenance did that for me, so I don’t hit it.” Evelyn also related that she has slowed down her PMD, stating, “I just put it on the lowest one I got because then I know ain’t gonna run into nobody.” In addition, the PI noted during observations that Evelyn only got on the elevator if she was the only one on it. When observing this, Evelyn stated, “I let them go first and wait for the next one because I don’t want to run into nobody.” Lastly, Evelyn took her time with all maneuverability, as demonstrated during observations. She states, “I’m in no rush. I’d rather be safe.” When Evelyn was asked about other things she did to be safe, she related what she learned in occupational therapy.

To look and to listen to what you’re told and don’t do it on your own, like if somebody tells you, STOP!, you stop, you know, do it, because you don’t keep right on going because you wanna keep on going, you just stop, because if you don’t stop, you could hurt somebody.

Evelyn then spoke of her adaptation in the dining room, stating, “I back out a little bit, look both ways to make sure that there’s nobody behind me, then I turn around and make sure there’s nobody in my way, and then I wait, and then I go.” Evelyn’s ability to learn ways to adapt to her environment contributed to her ability to use her PMD safely.

Daphne also spoke of adaptations for safety regarding a crowded area waiting for medication, as well as safety measures taken when driving to the dining room during meals.

When I get off the elevator, I get myself backed up and into a little space where I can sit where nobody’s gonna make me move back and forth. I can stay in one spot before I go into the nurse’s station, but you really gotta watch yourself on the way down to the dining room because people get to talkin or somebody calls their name, and they go to turn around, so you gotta really be watching what they’re doing more than what you’re doing because you know you can do it without even looking.

Of interest is that Daphne related to the ability to be safe with verbal warnings by others in the same way as Evelyn: “I wouldn’t get mad at anybody that’s, like, Daphne, stop, you know, I mean, I would thank them, where some people take offense to that, you know.” The relationship between both participants relating to the idea of someone yelling “stop” contributed to the necessity of this theme.
“They Just Put Me In It and Let Me Go” - Lack of Training

Both of the participants related the desire for everyone that has a PMD to get training in how to use the device secondary to not receiving initial training themselves. Evelyn stated, “They just put me in it and let me go.” Daphne stated, “They didn’t even give me a rules book, I mean not a rules book, but, um, how, how to work it.” While Daphne has never needed training through therapy, she related that it should be completed.

Yeah, make sure that they take you around and show yah, yah gotta slow down here, and you gotta look to your right, and you gotta look to your left or behind you all the time, you know, when you come to such a certain hallway.

Evelyn related that she had training for her PMD in occupational therapy secondary to getting in a few accidents with residents and found it helpful.

It’s easier, it was being smart before but it’s being smarter now because now I do like I’m supposed to do, and I use the chair like I’m supposed to use it. See, in the beginning, I didn’t, nobody showed me how to do it, I never went up and down the hallways or anything in it. If you don’t get the training, you get the wrong way of doing things, and if you get the wrong way of doing things, then it ends up costing, so I’m glad that I came down there and took this class and am taking it, and doing what I'm doing today because at least I know what I am doing and when somebody says STOP! You stop, you don’t keep on going.

It was evident from the interviews that both of the participants felt they would have gotten through the initial use of their PWC easier had they been trained by a professional in assistive technology, such as PMDs.

Discussion

This case study aimed to explore the experiences of two routine PMD users in an ALF. Five themes were derived from the data: (a) “I swore I’d never be in a wheelchair” – Initial disapproval, (b) “Because I lost my leg” – The need to use a power wheelchair, (c) “I don’t know what I’d do without it” - Independence and usability, (d) “If somebody tells you STOP! You stop” - Adaptations for safety, and (e) “They just put me in it and let me go” - Lack of training.

The Ecology of Human Performance was used as a frame of reference for the PI during the data collection and analysis process and contributed to the themes. The result of the interaction between the participants, their context, and their chosen tasks contributed to the ultimate success of their human performance in safely operating a PMD. The PMD was an alternative to having independent mobility, allowing each participant to have a larger window of tasks with which to engage in their own context. Independent mobility provided by a PMD while taking context into consideration is also supported by other studies that report the need for an accessible environment to be successful (Mortenson et al., 2015). Appropriate contextual factors to support the use of a PMD support the provision of powered mobility (Mortenson et al., 2013). Daphne and Evelyn would have been much more dependent on others if they didn’t have independent mobility by means of the PMD (Kemmis et al., 2021).

The theme “They just put me in it and let me go” – Lack of training is also supported by studies that report the complexity of operating a PMD and the need for training. Smith and colleagues (2022) describe 110 distinct skills and abilities that are used when operating a PMD. Being trained in powered mobility skills improves safety and mobility performance (Kirby et al., 2015; Mountain et al., 2014).
Providing training would contribute to a better experience for new PMD users and could facilitate fewer apprehensions about getting and using a PMD.

When developing a training program, it is important to ensure the training program addresses all areas of skill development and can accommodate for limitations a PMD user may experience, such as cognitive impairment (Pellichero, Best, Leblond et al., 2021; Smith et al., 2022). In addition, completing training in a variety of contexts and including caregivers could improve outcomes (Kirby et al., 2015; Kirby et al., 2018). The enhancement of technology may contribute to different training programs, such as (a) the “My Wheelchair Guide” application for PMD users, an application that educates users on how to use their wheelchair; (b) the use of a power wheelchair simulator to practice in a safe environment; (c) blind spot sensor systems to facilitate safety; and/or (d) collision avoidance wheelchair functions, which allow the PMD user to navigate without contacting obstacles that would cause injury (Archambault et al., 2017; Liu et al., 2019; Pellichero, Best, Routhier et al., 2021; Wang et al., 2013).

The theme “If somebody tells you, STOP! You stop”: Adaptations for safety is similar to results from a cross-sectional study that explored the extent that caregivers enhance wheelchair skills and confidence of the PMD user, finding that caregivers provide verbal support (e.g., cueing, coaching, and reporting about the environment) (Kirby et al., 2018). There were several avenues to ensure the safety of PMD use for Evelyn by her caregivers, including maintenance slowing down her door, people in the community yelling “stop,” and her dining room table seating changed for easier access. The contributions from caregivers, paired with occupational therapy intervention for PMD safe mobility training, allowed for increased safety for Evelyn when using her PMD and contributed to a better experience with her device.

Another qualitative study of the PMD users’ perspectives of challenges in the community revealed a similar theme when speaking of the difficulties accessing and using public building facilities (Torkia et al., 2015). Participants explained the difficulties getting on and off a crowded elevator and the apprehensions of hitting someone (Torkia et al., 2015). This relates to the observations and comments provided by Evelyn in this current study, as she would only get on the elevator when no one was on it, stating, “I let them go first and wait for the next one because I don’t want to run into nobody.” It is clear from this study and related studies that PMD users make adaptations for safety in their environment to prevent injury to themselves and others.

**Limitations and Future Research**

Although this case study revealed key themes and answered the research question, limitations exist with future research indicated. Initially, the plan for data collection was to gain data from two participants, with one known to be a proficient powered mobility driver and the other known to be a poor powered mobility driver. Because of unforeseen medical circumstances, observation and a digital image portfolio were not completed for one participant. Data collection with both participants using all three forms of data might have been more in-depth and informative and increased the trustworthiness of the study. The intentional pursuit of choosing a powered mobility user with a good driving record and a powered mobility user with a poor driving record may have been a result of PI bias, as the PI knew the participants. Future research could complete a case series of the experiences of PMD users in institutional settings from both backgrounds, safe and unsafe PMD users, to gain further insight into this study’s results.

Two of the themes generated from this study, “I swore I’d never be in a wheelchair” -Initial disapproval, and “They just put me in it and let me go” – Lack of training, are indicative of future research that could contribute to clinical application for occupational therapists. This case study revealed a clinical
need to train individuals to use their PMD when they get it. Neither of the participants in this case study had any training with their PMD, and it impacted their performance and safety when using their PMD. Future research could explore the value of training new PMD users in different contexts. Providing a window of opportunities to participate in various tasks in different environments would increase the potential not only to accept the use of a PMD but also to learn strategies to implement safety practices while using the PMD.

These case study findings could contribute to the desire to profile and address individualized needs and to develop practice guidelines for PMD users (Best et al., 2021). Practice guidelines could include the use of a proper screening tool to provide to any potential PMD users before completing a standardized assessment or assessing for a PMD. Proper screening before providing a PMD and ensuring the user desires to and can cognitively and physically use the PMD should be considered (Mortenson et al., 2013; Pellichero, Best, Leblond et al., 2021; Smith et al., 2022). Practice guidelines could also include standards for an appropriate amount of training when the PMD is provided.

Conclusion

This case study revealed two routine PMD users’ experiences using a PMD in an ALF. Five themes were generated from three forms of data and several coding strategies. It was found that these two users did not initially want to use a PMD but eventually indicated the need to use one. Proper screening to assess interest could improve the initial experience of PMD users. Once using a PMD, both users indicated increased independence with functional tasks of choice and various ways to use their PMD. One user reflected on the adaptations made for safety, including not only ways she has adapted but also that she was influenced by the changes made to her environment to improve safety with her PMD. Proper training should be provided for all PMD users to allow for the safety of the user and others around them (Kirby et al., 2015; Smith et al., 2022). Both users indicated they did not get any training with their PMD and would recommend training for all new PMD users. Providing training would improve the overall experience of PMD users and increase interest from potential PMD users. Overall, the experiences of these routine PMD users in an ALF were revealed and helped contribute to a better understanding of PMD users’ experiences in the ALF setting.

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References


