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The Right to Explore: ON TIME Pediatric Power Mobility

Elizabeth Stuckey

elizabeth.stuckey@pop.belmont.edu

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The Right to Explore: ON TIME Pediatric Power Mobility

Elizabeth Stuckey, OTD/S

Expert Mentor: Dr. Nancy Darr PT, DSc, NCS

Faculty Mentor: Dr. Teresa Plummer PhD, OTR/L, ATP, CAPS, CEAS

Belmont University School of Occupational Therapy



Mission

“ The mission of High Hopes Development Center is to equip children, youth, and their families with the skills necessary to achieve success through education, therapeutic services, and loving support”¹

Needs of the Agency

1. Comprehensive review of the literature relating to pediatric power mobility.
2. Development of an evidence-based protocol to introduce the Explorer Mini.²
3. Further promotion of the use of power mobility among young children, as appropriate, through the generation of additional evidence.
4. The development of family and child-centered educational materials for the use of power mobility.

Goals of Experiential Component

1. Develop a comprehensive understanding of the field of power mobility, especially among the pediatric population, and the components of Power Mobility devices.
2. Contribute to the available evidence on pediatric power mobility.
3. Develop a deeper understanding of assistive technology.

Acknowledgments

- My expert mentor, Dr. Nancy Darr, for her guidance, encouragement, and flexibility.
- My faculty mentor, Dr. Teresa Plummer, for her expertise and passion.
- All the wonderful and dedicated therapists at High Hopes Development Center.
- Karin Leire & Permobil for their innovation & dedication to mobility as a human right.

Outcomes of Experiential Component

1. Review of the literature focused on pediatric power mobility and development.
2. Created a protocol for the introduction of the Explorer Mini device.
3. Drafted an article to be submitted to *OT Practice Magazine*.
4. Contributed to a research project on the use of modified ride-on toys for children with mobility impairments.
5. Developed caregiver handouts on the use of power mobility among the pediatric population.
6. Developed clinician handouts on the use of power mobility among the pediatric population.
7. Completed WHO Basic Wheelchair Service Provider Training.
8. Developed advance practice skills in the areas of pediatric power mobility, assistive technology, and research.

GoBabyGo³ Research

- Modified the cars to fit each participant's needs.
- The Battelle Developmental Inventory⁴ & The Assessment of Life Habits⁵ were administered at beginning and end of intervention period.
- Interim Testing every 2 weeks.
 - 10 minutes of free play
 - 10 minutes of car time
 - Completed a Powered Mobility Skills Checklist⁶
- Developed an interview tool to ensure caregivers are supported and have any concerns addressed throughout the study.
- Analyzed the videos looking for themes including independent mobility, socialization, environmental interactions, looking, and vocalizations.
- Communicated with parents on the use of ride-on cars in the home environment.

Explorer Mini Protocol

- Reviewed available literature on the use of power mobility among young children.
- 3 Stages of the Protocol
 1. Preparatory Stage
 2. Exploratory Stage
 3. Engagement Stage
 - Focused on the child purposefully activating the device.
 - The goal is to allow this process to be child-directed, but the protocol includes options for more assistance from adults.
- Reviewed by various expert mentors.
- This protocol will continue to be tested and reviewed in future research studies. This should include testing the feasibility and effectiveness of the protocol.



permobil

References Available Upon Request

Poster References:

¹High Hopes Development Center. (2018). Annual report.

<https://www.highhopesforkids.org/annual-report>

²Permobil. (n.d.). *Explorer Mini*. <http://permobilus.com/product/explorer-mini/>

³University of Delaware. (n.d.). *GoBabyGo*. <https://sites.udel.edu/gobabygo/>

⁴Newborg J. (2005). *Battelle Developmental Inventory, 2nd edition: Examiner's manual*. Itasca, IL: Riverside.

⁵Noreau, L., Fougere, P., Vincent, C. (2002). The LIFE-H: Assessment of quality of social participation. *Technology and Disability*, 14, 113-118.

⁶Furumasu, J., Guerette, P., & Tefft, D. (1996). The development of a powered wheelchair mobility program for young children. *Technology and Disability*, 5, 41-48.

A comprehensive list of references used throughout this project and additional information about this project are available upon request.