Advocating for and Researching Early Pediatric Mobility

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**Why Belmont?**

Using Belmont as my primary site and agency contributed to my development of the following advanced practice skills:
- Scholarship
- Leadership

Belmont was the best location to develop these practice skills for the following reasons:
- Access to faculty mentor for advice and direction throughout the EC process
- Opportunity to collaborate with peers
- Space and tools required for completing research
  - Library resources and research databases
  - Statistical analysis tools (NVivo 10, SPSS)
- Proximity to other educational departments
  - School of Law: Able to provide advice on non-profit development
  - School of PT: Collaborated with professor and residency student throughout research process
- Opportunity to mentor second-year OT students through the thesis process

**EC Goals**

1. Advance knowledge of non-profit agency development, operations, and funding status
2. Contribute to the current evidence on effects of early power mobility through completion of a research project
3. Advocate for the occupational potential, performance, and engagement of infants and children with mobility impairments, along with their families and the organizations designed to support these individuals
4. Collaborate with children with mobility impairments, their families, and stakeholders and other interested parties of the Nashville chapter of Go Baby Go! to identify ways to overcome system limitations and barriers to accessing early mobility and play
5. Disseminate findings to relevant audiences in the form of presentations, papers, and/or posters

**Population Needs**

In the United States:
- 7.1% or 20.6 million of the population have an ambulatory disability
- Estimated 12.7 million wheelchair users 15 and older and 121,000 under the age of 15 (WHO, 2011)
- In Davidson County:
  - Estimated 7.1% of individuals have an ambulatory difficulty
    - 325 are between the ages of 5 and 17
  - Estimated 520 children under the age of 5 with a disability (U.S. Census Bureau, 2014)

Why is early independent mobility important?
- Current practice standards dictate most children do not receive mobility before the age of 3 (Lynch, Agrawal, & Galloway, 2009; Ragonesi & Galloway, 2012)
- Independent mobility facilitates development of:
  - Play skills (Welsh & Bailey, 2010)
  - Social skills (Rosen et al., 2009)
  - Cognition (Rosen et al., 2009)
  - Vision (Rosen et al., 2009)

**Outcomes**

- Created executive summary outlining potential solutions for increasing the sustainability of Go Baby Go! Music City
- Completed single-subject case study on effects of early power mobility
- Increased knowledge of the non-profit sector, early pediatric mobility, and wheelchair seating and positioning through attendance of classes, conferences, and literature reviews
- Collaborated with Vanderbilt engineering students to complete a Go Baby Go! Build
- Presented research at Graduate Week on the Hill and the International Seating Symposium

**Research Abstract**

**Aims**

Children with mobility impairments experience barriers to occupational performance. Adapted ride-on cars (ROC) may be an alternative to power mobility devices that support children with mobility impairments’ ability to engage in occupation. This study aims to explore the behaviors demonstrated by a child when introduced to self-initiated mobility through use of an adapted ROC.

**Methods**

A 37-month-old child with cerebral palsy was provided with an adapted ROC and observed over nine weeks during adapted ROC use and researcher-directed mat play. Researchers coded the child’s behaviors into eight themes and identified trends in observed behavior. An adapted power mobility skills checklist was used to assess the child’s functional performance in operating the device.

**Results**

Results indicated positive trends in attention regulation and environmental interaction behaviors during adapted ROC use, while socialization behaviors remained the same. The child demonstrated improved scores on the power mobility skills checklist.

**Conclusions**

This study supports previous literature that access to self-initiated mobility via adapted ROC use may contribute to increased attention, environmental interaction, and socialization. Further research should aim to improve upon the methods used in order to further explore these findings.

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**References**

Reference list available upon request