

### **Article Title**

Scoterling is More Than Fun: Exploration of a Feasible Approach to Improve Function and Fitness

Commentary on "Scoterling for Children and Youth Is More Than Fun: Exploration of a Feasible Approach to Improve Function and Fitness"

### **Article Citation**

Wright, M., Twose, D.& Gorter, J. M. (2021). Scooterling is More Than Fun: Exploration of a Feasible Approach to Improve Function and Fitness. *Pediatric Physical Therapy*, 33(4):218-225. doi: 10.1097/PEP.0000000000000829.

Chiu, H.C. (2021). Commentary on "Scoterling is More Than Fun: Exploration of a Feasible Approach to Improve Function and Fitness". *Pediatric Physical Therapy*, 33(4):226. doi: 10.1097/PEP.0000000000000831.

### **Adaptive Sport/Recreation Categories**

- Physical activity

**Study Type:** Prospective observational study, Commentary

### **Summary**

This research used the physical activity of scooterling to determine muscle requirements using VICON motion capture systems and the relationship to the F words (fitness, function, family, friends, fun and future) in 5 children aged 5-14 years with cerebral palsy (CP) within Gross Motor Function Classification System (GMFCS) Level I-II. Results showed that scooterling has the potential to address fitness, function, family, friends, fun and future and be used as a replacement for sedentary behavior for children with disabilities. Results from motion analysis showed that scooterling provided relevant essential gait attributes in children with cerebral palsy.

### **Article Strengths**

- Diverse research methods were used to integrate findings from a scooterling physical therapy program to the F words.
- Scooterling is a feasible and fun activity without significant adverse effects.
- Scooterling aligns well with the F-words, indicating it meets the need of family as a participation in physical activity choice.
- Scooterling provides relevant essential gait attributes, such as plantarflexion and hip extension during the terminal stance or knee flexion during swing phase.

### **Article Weaknesses**

- Information about the therapy scooterling programme is not provided and would be useful and interesting for clinicians.
- This is an observational study (with fitness and function not measured quantitatively) and warrants further studies in a randomized controlled trial or a pre-post design.

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Journal Article Digest Sub-Committee

- Limited evidence for the effect of scootering at various aspects of every day mobility, such as short-/long-distance walking speed.
- Very small sample (n = 5 CP, n = 7 typically developing peers).
- Ankle muscle firing was reported, but no information for the recruitment of other muscle groups during scootering.
- Motion analysis was limited to an indoor, smooth surface setting which is likely to result in different findings than a real world setting.

### **Take Home Messages**

- Dose of intervention: Incorporated into daily accumulation of 60 mins of moderate to vigorous physical activity.
- Participants: Applied to children with cerebral palsy within GMFCS Level I and II.
- Scootering can be promoted outside of the clinic as a community based physical activity that is accessible that meets the F words.

### **Impacts on Clinical Practice:**

- Results of this observational study based on motion analysis.
- Scootering has the potential to improve mobility for children with disabilities.
- Scootering could be applied to children with cerebral palsy within GMFCS Level I to III.
- Protective equipment and appropriate supervision should be provided to avoid possible injuries, such as falls.