



IMPACT OF PARENTS' TRAINING MATERIAL ON WHEELCHAIR SKILLS OF ADOLESCENCE WITH DIPLEGIC CEREBRAL PALSY – PILOT STUDY

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Background

Many NGOs and Government organizations are providing wheelchairs at free of cost and subsidiary rates for the beneficiaries under Community Based Rehabilitation. But unfortunately, effort is not taken for providing proper training for the wheelchair beneficiaries and their parents. So, in this study, the effects were taken to find out the importance parents training materials on wheelchair beneficiaries' wheelchair mobility skills.

Key Words: *Wheelchair Mobility Skills, Community Based Rehabilitation, Wheelchair Manual.*

Introduction

“Cerebral palsy” means a group of non-progressive conditions of a person characterized by abnormal motor control posture resulting from brain insult or injuries occurring in the pre-natal, peri-natal or infant period of development. (1) People who have mobility impairment, access to an appropriate wheelchair are an important step towards social inclusion and participation. (2) The severity of impairments varies greatly and the children's mobility ranges from independent walking to totally dependent wheelchair mobility and almost one third is non-ambulant (3).

Assistive devices such as wheelchairs can provide independent mobility to children with disabilities, allowing them to explore their environment (4,5,6 &8). Mobility devices improve activity, participation, user satisfaction and quality of life (9). According to Elisabet et al, 73% of GMFM level III and 45% of GMFM level IV cerebral palsy children are independent manual wheelchair users (9).

Paediatric rehabilitation considers Family-centred service (FCS) as a way to increase participation of children with a physical disability in daily life. An important principal is that parents greatly contribute to their child's participation at home, and in the community (10). Hence, the aim of this study was to find the effect of parent's awareness materials in rehabilitation proces

Objective

This pilot experimental study intended to find the effect of an educational material for parents to help them assist their adolescent child with cerebral palsy.

Study design: Quasi Experimental Study - Pilot Study.

Methodology

Conventional sampling was used for this study. 10 Diplegic cerebral palsy wheelchair beneficiaries were selected for this study. The beneficiaries, who had received wheelchair (manual) for the first time in their life and in addition, their GMFM level were to be 3 or 4. To obtain the wheelchair skill of beneficiaries, initial assessment was taken on the date of wheelchair issued by using Wheelchair skill test – Indoor Domain. Orientation, instruction and training were given about wheelchair and Indoor mobility skills to wheelchair beneficiaries and parents at camp site. The beneficiaries were randomly divided into two groups; one group was provided only with the initial training, the second group, along with the initial training a parent manual was provided, which explains the basic maneuver of wheelchair skills. After a month, Indoor wheelchair skills were reassessed to find out the effect of parents educational materials and to find the level of beneficiaries' wheelchair skills. SPSS version 16.0 was used for the statistical analyses.

Inclusion criteria:

- Male and female adolescence with cerebral palsy
- Wheelchair as a primary mode of mobility
- Who follow up simple instructions

Exclusion criteria:

- Mental retardation
- Epilepsy



- Previous experience with wheelchair
- Fractures

Tool Description

The WST is a standardized evaluation method that permits a set of representative wheelchair skills to be simply and inexpensively documented. It is an ordinal type scale; the scoring is 2, 1 and 0. It will take 30 minutes to administer the all three domains of the scale. The domains are indoor, outdoor and advanced activities. The raw scores will be calculated into Total Capacity Score, Goal Attainment Score and Special Purpose Score as mentioned in manual

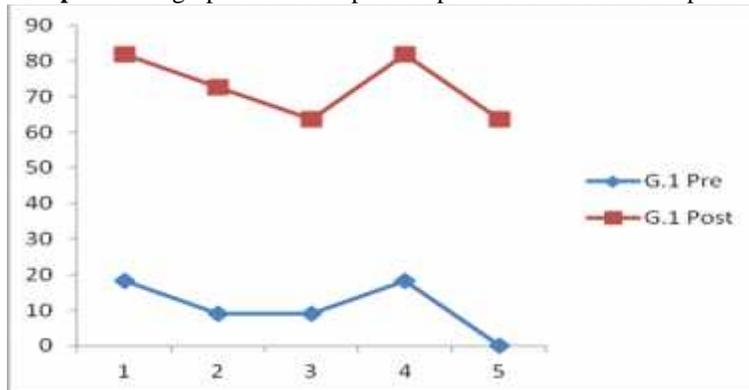
Data Analysis

By using the Wheelchair Skills Test, pre and post test scores were taken for both groups. The raw score Goal attainment score (%) was calculated for only the indoor skills.

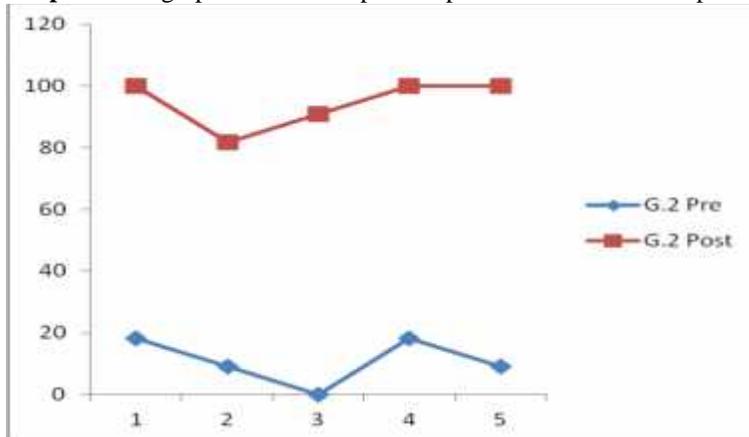
Table 1: It shows the raw score of Goal attainment score (%) of Group one and Group two.

S.No	Group 1		Group 2	
	Pre Test	Post Test	Pre Test	Post Test
1	18.18	81.81	18.18	100
2	9.09	72.72	9.09	81.81
3	9.09	63.63	0	90.90
4	18.18	81.81	18.18	100
5	0	63.63	9.09	100

Graph 1:This graph shows the pre and post test scores of Group one.

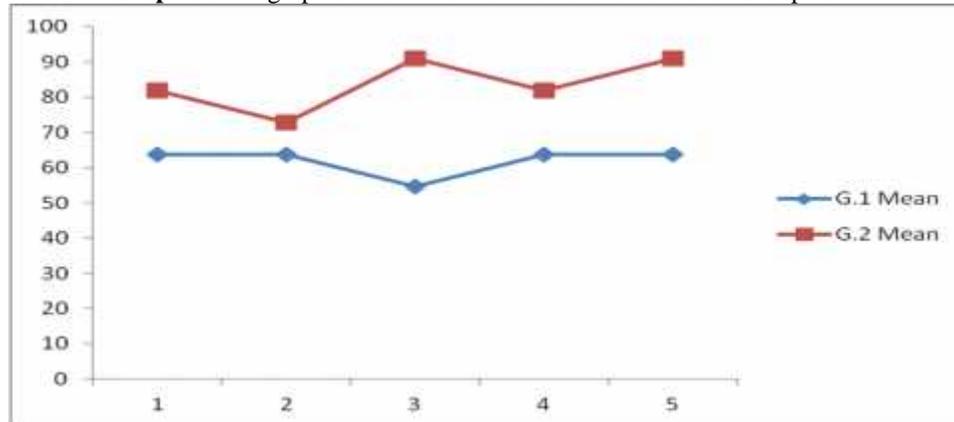


Graph 2:This graph 2 shows the pre and post test scores of Group two.





Graph 3: This graph 3 shows the mean difference score of Group 1 & 2



Result

The data were analyzed by using Mann Whitney U test and found that the Group two, the beneficiaries whose parents were provided manual, got good improvement than the other group in their post wheelchair skill test. The mean rank of Group one and Group two is respectively 3.00 and 5.00. Asymptomatic significant (2-tailed) value is 0.008.

Conclusion

This is to our knowledge, this study result shows range of positive outcomes, it is concluded that parents' educational materials (manual) has given good impact on the wheelchair skills of cerebral palsy children. This study describes the importance of orienting and provides training for the cerebral palsy children's parents and describes the effect of their involvement in the rehabilitation process. As it was a pilot study, in future, a study has to conduct with large population to generalize the conclusion.

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