



Study And Compare The Efficacy Of Occupational Performance Coaching Of Mothers With Cerebral Palsy Children Over Conventional Occupational Therapy Program For Enhancing Motor Development- Randomized Control Trial

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Abstract

Purpose- The aim of this study was to find out and compare the efficacy of occupational performance coaching (OPC) of mothers with cerebral palsy children (CP) for enhancing motor development.

Background- Globally, research has found that the prevalence of cerebral palsy ranges from 1.5 to 4 per 1000 live births or children. Cerebral palsy (CP) is caused by non-progressive damage to the developing brain. Cerebral palsy is a developmental disability that manifests itself in childhood. Cerebral palsy patients have global, physical, and mental impairments, as well as behavioral issues. Occupational Performance Coaching (OPC) is an ideal coaching model to use in India because it focuses specifically on enabling children's and parents' participation in occupations in the home and community through therapist-guided but parent-identified solutions to occupational performance barriers.

Methods- 48 CP children was included in this study by convenient sampling method but two of them were not matching the inclusion criteria. It was a randomized control trial. Data was taken from pediatric centre Neuropod Therapy. COPM and MAS was used as outcome measure in this study.

Results and Conclusion- This study concluded that there is statistically significant difference in the intervention group, were received occupational performance coaching (OPC) with conventional occupational therapy program i.e., there was marked improvement in satisfaction and performance in posttest intervention group in comparison of control group and the goals were made which based on motor development of the child, so there was significant improvement in the motor goals which leads to the improvement in satisfaction and performance that enhances the motor development of the child.

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Key words: cerebral palsy, occupational performance coaching, mothers handling, family education, performance level, motor development

INTRODUCTION

Children with disabilities such as cerebral palsy (CP) require support to carry out their activities, and mothers of these children are frequently the main caretaker^[1]. Cerebral palsy (CP) is caused by non-progressive damage to the developing brain. Cerebral palsy is a developmental disability that manifests itself in childhood. Cerebral palsy patients have global, physical, and mental impairments, as well as behavioral issues^[2]. Cerebral palsy can cause deficits in motor coordination, flexibility, and strength which seriously disturb movement and cause problems in any activities that require a combination of mobility and stability^[3]. The care of children with cerebral palsy necessitates an interdisciplinary strategy that draws on the knowledge of numerous specialists from various fields^{[4], [5], [6]}.

CP is initially distinguished by delayed acquisition of a child's motor milestones and motor functioning abnormalities that continue throughout the lifespan. With a reported frequency of 2 per 1000 live births in higher-resource nations, where early intervention is often suggested when the diagnosis is made or suspected, it is the most common motor disability beginning in early childhood.^[7] Globally, research has found that the prevalence of cerebral palsy ranges from 1.5 to 4 per 1000 live births or children.^[8] the prevalence of CP children in India 2.95 per 1000 live births.^[9] Early intervention's major purpose is to assist the child's growth, functioning, and involvement within the context of the family and community, in accordance with the framework of the International Classification of Functioning, Disability, and Health.^[10] The goal of occupational therapy intervention for disabled children is to improve the child's functional performance and capacity to interact with his or her physical and social environments.^[11]

Occupational Performance Coaching(OPC) is a treatment for the person which they want to improve the score of their occupational performance and have certain goals and the improvement in social participation which valued in client's life. It is helpful for the client and their caregiver also to improve functional level and activity participation by involving actively^[12].

Occupational Performance Coaching (OPC) may be an ideal coaching model to use in India because it focuses specifically on enabling children's and parents' participation in occupations in the home and community through therapist-guided but parent-identified solutions to occupational performance barriers^[13]. CP is a prevalent neurological condition affecting children's motor development. Mother of children plays a crucial role in children's care and therapy yet they may encounter challenges that lead to experience of stress and dissatisfaction. In the previous study it was found that OPC offers promising approach to empower mother with tailored strategies and support. This study aims to compare the efficacy of OPC to conventional occupational therapy in enhancing motor development in children with CP. By evaluating these intervention, we seek to identify most effective approach for optimizing motor development in CP children.

OBJECTIVES:

To investigate the efficacy of OPC in mother with CP children to enhance motor development of children according to pre-determined goals.

To find the significant difference between occupational performance coaching of mothers with cerebral palsy children over conventional occupational therapy programme for enhancing motor development

Methodology

Design-Experimental research design.

Participants-children with cerebral palsy (CP) and their mothers were participated in the study. The samples were collected from Neuropod Therapy Center, situated in Delhi, India. We have taken children with age range 2-6 years without any comorbid conditions. The samples were chosen by convenient sampling. The age range above 6 years and below 2 years were not included in this study. The mother who have more than one CP child, children other than CP had excluded in this study. Sample size was 48, two lost the follow-up in between 40 had been analyzed for study. The study included Mothers with children having cerebral palsy, children diagnosed with cerebral palsy with age between 2-6 years and children with other developmental disability except CP, comorbid psychiatric diagnosis or mothers with any other comorbid condition diagnosis was excluded in this study. The outcome measures were used for the collection pre and post data with Canadian occupational performance measure (COPM) and Modified Ashworth Scale (MAS) with measure the performance, satisfaction and muscle tone.

PROCEDURE

There are two groups divided Group A and Group B intervention and control group respectively. Participants in the intervention group received OPC as well as usual occupational therapy services related to their child's needs. Mothers in the control group only received usual occupational therapy services which include therapy treatment related to the need of the child under neuro developmental frame of reference. OPC sessions are provided on thrice in a week with mother up to 1 hour for 12 weeks, in which therapist teach handling skills to the mothers, how to hold limbs of the child, how to move etc. and asked them to perform same protocol at home.

The baseline assessment was done using COPM and MAS. The children were received an intervention protocol for a period of 12 weeks and post intervention data was conducted using Canadian occupational performance measure (COPM) and Modified Ashworth scale (MAS). Pre-intervention, each mother of the CP child was asked to select 3 goals by using COPM, each mother of CP child was asked to select one goal related to her own need (mother related goals) and two goals related to the need of the child which made by therapist and mother (child related goals by therapist).

The goal was broken down into tiny, manageable steps as needed. The blind assessor assess participant in both groups to complete the outcome measures (COPM and MAS) again after 12 weeks. Regardless of whether or not goals were met earlier, all individuals completed the post-test after 12 weeks.

Result:

The result showed that there is significant difference between the pre and posttest scoring regarding Cope and Cosa in the intervention group. T-value Cope=16.722, Cosa=17.778, indicate that the means of the post test scores are significantly higher than the means of the pre test scores for both variables. The p – values (Cope = 0.001, Cosa = 0.001) suggest that these differences are highly statistically significant.

Discussion:

The purpose of this study was to determine whether OPC enhances the mother's ability to support their child's motor development, compared to mother's who receive only conventional occupational therapy. Improvement in child's performance and mother's satisfaction reported by parents. That supports the OPC helps to improve performance level of the child and satisfaction in mother. Mother's was taking interest during the therapy session, they were actively involved and want to learn more, that also enhances their knowledge regarding child's capabilities and performance.

This study results supported by previous study of Mina Ahmadi Kahjoogh a study of occupational performance coaching for mothers of children with cerebral palsy. A randomized control trial, author concluded that Occupational performance coaching significantly improved participants' occupational performance, self-efficacy in child-related goals. The study found that occupational performance coaching can boost mothers' self-efficacy and improve occupational performance of children and mothers with cerebral palsy.

This study was held on 48 subjects with cerebral palsy. In which 6 were not meeting the inclusion criteria and 2 were lost the follow-up, so 40 CP children were analyzed, in this study participants who received OPC in the intervention group had marked improvement in the score of performance and satisfaction level in comparison of control group, only received conventional occupational therapy program, there were improvement in muscle tone which enhances motor development.

Conclusion:

This study concluded that there is statistically significant difference in the intervention group, were received occupational performance coaching (OPC) with conventional occupational therapy program i.e., there was marked improvement in satisfaction and performance in posttest intervention group in comparison of control group and the goals were made which based on motor development of the child.

Limitation of the study: Socioeconomic status of the participants was not considered in the study. Small sample size was taken in the study.

Future recommendation of the study:

- If it can include both the parents in the study or if it will more specify about the muscle tone and along with primary movements take rotational movement as well with the specify level of Gross Motor Functional Classification System (GMFCS). If the study will continue with the other specific disabilities to encourage family centered education.
- The therapist in this study was familiar with OPC and received feedback on her implementation of OPC, she was not formally educated in coaching, coaching principles, and OPC.
- Future research should include a measure of treatment fidelity.

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