

**EFFECTIVENESS OF OCCUPATIONAL  
PERFORMANCE COACHING ON MOTHERS OF  
CHILDREN WITH DISABILITIES**

**DISSERTATION SUBMITTED  
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THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY  
CHENNAI**

## **CERTIFICATE**

This is to certify that the research work entitled **EFFECTIVENESS OF OCCUPATIONAL PERFORMANCE COACHING ON MOTHERS OF CHILDREN WITH DISABILITIES** was carried out by Reg. No.411413004, KMCH College of Occupational Therapy, towards partial fulfillment of the requirements of Master of Occupational Therapy (Advanced OT in Pediatrics) of the Tamil Nadu Dr. M.G.R. Medical University, Chennai.

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## **ABSTRACT**

### **AIM**

To assess out the effectiveness of Occupational Performance coaching on Mothers' Occupational Performance and satisfaction

### **METHODS**

36 Mothers of Children with Disabilities were included in the control group(N=18) and experimental group(N=18). Canadian Occupational Performance scale, Parenting sense of Competence scale, Goal attainment scale was used before and after the Occupational Performance Coaching. Post test right after the intervention and one mpre post test 4 weeks after the completion of the intervention was done to assess the Occupational Performance, sense of Competence and Goal achievement of Mothers. Interviews using semi structured questions were conducted for Qualitative analysis of the Intervention.

### **RESULTS**

In the experimental group, COPM (both goals addressed and goals not addressed), there was a significant difference in the pretest and post test of the performance ( $p=0.000$ ) and satisfaction ( $p=0.000$ ) component of COPM. There was no significant difference in the control group. When goals addressed in the control and experiment groups were compared between groups, it showed significant difference in the post tests of both the groups in performance ( $u=0.001$ ) and satisfaction( $u=0.003$ ) component of COPM. When Mother's improvement was compared with Children's improvement, it showed a positive moderate significant correlation. The maintenance phase showed statistically significant improvement when the post tests done after 10 weeks (with intervention) and then after 4 weeks (without intervention). The pre test and post test scores of the satisfaction component of Parenting Sense of Competence showed significant difference in the experiment group before and after OPC intervention. There was no significant difference in the control group. The Efficacy component of PSCS did not show significant difference in both control and experiment groups. The comparison of Parenting sense of Competence between the control and experiment group did not show significant difference in both the components. The Goal attainment scale within group comparison

between the pre test and post test in the experiment group showed statistically significant improvement ( $p=0.000$ ).

## **CONCLUSION**

The Occupational performance coaching improved Mothers' and Children's Occupational performance and Mother's sense of Competence. The more the improvement in Mother's performance, more is the improvement seen in Children's performance. Occupational Performance Coaching has a long term effect on both Mothers and Children performance. The Goal setting skills of Mothers improve through this Coaching.

# *INTRODUCTION*

# 1. INTRODUCTION

Mothers form the integral part in each aspect of the development of their children. Parenting a child being very challenging for every Mother, it becomes even more challenging for Mothers of Children with Disabilities. Caring for a child with a disability introduces even more demands on a mother than caring for a typically developing child. As a result of constraints imposed by the demands of long-term care giving, Mothers of children with disabilities are often prevented from participating in discretionary occupations

Mothers of children with disabilities often take on additional roles including those of developmental interventionist, liaison between the family, health care, and school systems, and advocate for the child. Due to the various roles they take, they are unable to take time for them to relax. Hence the need for a family centered practice arises where the needs of the family and the child are being met (Allen & Hudd, 1987; Lawlor & Mattingly, 1998; Odom & Chandler, 1990)

Therapists have been urged to use interventions that recognize parents' knowledge and skills, address parents' learning needs in supporting their children's development. An alternative approach to intervention that is congruent with both occupation- and family-centered practice is needed. Occupation – centered practise – that is, the enablement of occupation in everyday contexts – is heralded as core to Occupational Therapy and is highly relevant to practise with children and families. To focus on both occupation and family centered practice, Occupational Performance coaching was developed (Graham, Roger and Ziviana, 2009)

Occupational performance coaching is an enablement – focused, parent-directed intervention designed for use by occupational therapists working with parents of children with performance difficulties (i.e., difficulty managing everyday tasks, routines, and activities)

This approach to working with parents is consistent with the principles of adult learning (Knowles, Holton, & Swanson, 2005) such as to relate learning to life

occupation experience and to allow demonstration of prior knowledge. The development of OPC is one attempt to meet the expectations of parents while still attending to the therapists' needs for interventions to guide practice.

There are no studies done on the use of Occupational Performance Coaching in India. However there are studies done to identify barriers and facilitators to family centered practice in India. The barriers were educational status, frustrated family members, protective family members, cultural beliefs and external influences. Active participation of family members was perceived as a facilitator to family-centered practice (Saipriya Vajravelu, Patricia Solomon, 2013). The problems experienced by the mothers were associated with common themes such as disturbed social relationships, health problems, financial problems, moments of happiness, worries about future of the child, need for more support services, and lack of adequate number of trained physiotherapists. (Somashekhar Nimbalkar, Shyamsundar Raithatha, 2014)

Though family centered services along with centered practice are highly recommended for therapists working with children with disabilities, its need is barely noticed. Both the therapist and the families have not yet understood the importance of such services and its benefits in the long term treatment of their children. There is still a lack of proven experimental studies that shows that this service delivery model is better than the traditional ones.

Thus, this study was particularly done on an Indian population to find out the attitude of Mothers in taking over control of their own and their child's performance, and to find if such a coaching for Mothers would make any difference in their children's lives.

## **RESEARCH QUESTION**

Does Occupational Performance coaching of mothers have an effect on the occupational performance and satisfaction of the mothers and their children with disabilities?

*OPERATIONAL*  
*DEFINITION*

## **2. OPERATIONAL DEFINITION**

### **Occupational performance**

It is a meaningful sequence of actions in which the person enacts and completes a specified task that is relevant to his or her culture and daily life roles.

### **Occupational performance roles**

They are patterns of occupational behaviour composed of configurations of self-maintenance, productivity, leisure and rest occupations. Roles are determined by individual person-environment-performance relationships. The Roles of Children includes Play, School and sleep. They are established through need and/or choice and are modified with age, ability, experience, circumstance and time

### **Occupational performance areas**

They are categories of routines, tasks and sub-tasks performed by people to fulfill the requirements of occupational performance roles. These categories for adults include self-maintenance occupations, productivity, leisure and rest occupations.

The Categories for Children include self-maintenance occupations, school occupations, play occupations and rest occupations.

### **Adult Occupations:**

#### **Rest Occupations**

It refers to the purposeful pursuit of non-activity. This can include time devoted to sleep as well as routines, tasks, sub-tasks and rituals undertaken in order to relax

#### **Productivity**

They are routines, tasks and sub-tasks which are done to enable a person to provide support for self, family or community through the production of goods or provision of services

## **Self-Maintenance Occupations**

They are routines, tasks and sub-tasks done to preserve a person's health and well being in the environment .These routines, tasks and sub-tasks can be in the form of habitual routines (dressing, eating) or occasional non-habitual tasks (taking medication) that are demanded by circumstance.

## **Leisure**

They are those routines, tasks and sub-tasks for purposes of entertainment, creativity and celebration, for example gardening, sewing, games

## **Children's Occupations:**

### **Rest Occupation**

It refers to the purposeful pursuit of non-activity. **Sleep**—A series of activities resulting in going to sleep, staying asleep, and ensuring health and safety through participation in sleep involving engagement with the physical and social environments.

### **Education/School**

Includes activities needed for learning and participating in the environment. Including the categories of academic (e.g., math, reading, working on a degree),nonacademic (e.g., recess, lunchroom, hall-way), extracurricular (e.g., sports, band, cheerleading, dances), and vocational (pre-vocational and vocational) participation.

### **Play Occupation**

Any spontaneous or organized activity that provides enjoyment, entertainment, amusement, or diversion” (Parham & Fazio). Participating in play; maintaining a balance of play with other areas of occupation; and obtaining, using, and maintaining toys, equipment, and sup-plies appropriately

## **Conventional Occupational Therapy**

**Children:** Goals are set by the therapist and achieved through Occupational therapy approaches including Sensory Integration, Behavior Modification techniques, Floortime therapy, fine motor training including handwriting skills and ADL training

**Mothers:** Everyday interaction with the therapist where Therapist instructs the Mothers and set goals for their Children. Home program is given to the Mothers which are designed by the therapist.

## **Occupational Performance Coaching**

**Children:** Goals are set by the Mothers themselves and action plan created using strategies that are developed by Mothers through the group discussions.

**Mothers:** Weekly once group sessions wherein each mother addresses self identified goals for themselves and their children. Home program is developed by the mothers themselves with just minimum guidance from the therapist.

# *AIMS AND OBJECTIVES*

### **3. AIMS AND OBJECTIVES**

#### **Aim of the study**

To assess out the effectiveness of Occupational Performance coaching on Mothers' Occupational Performance

#### **Objectives**

To assess the effectiveness of Occupational Performance coaching in improving

- Mothers' satisfaction
- Children's performance
- Mothers' self competence

# *HYPOTHESIS*

## **4. HYPOTHESIS**

### **Alternate Hypothesis:**

The Occupational Performance Coaching is significantly effective in improving Mothers' Occupational Performance

The Occupational Performance Coaching is significantly effective in improving children's Occupational Performance

### **Null Hypothesis:**

The Occupational Performance Coaching is not significantly effective in improving Mothers' Occupational Performance

The Occupational Performance Coaching is not significantly effective in improving children's Occupational Performance

*RELATED LITERATURE*

## **5. RELATED LITERATURE**

### **1) Need for inclusion of Mothers in the intervention:**

Parents, in particular, greatly influence participation at school, at home and in the community. They undertake many actions to improve their children's participation in daily life. Pediatric rehabilitation considers Family-centered service (FCS) as a way to increase participation of children with disability in daily life.

Parents apply a broad range of strategies to support participation of their children. They experience many challenges, especially as a result of constraints in the social and physical environments. (Piškuret et al, 2012)

Studies have shown that Services are more beneficial when they are delivered in a family centered manner and address parent identified issues such as the availability of social support, family functioning, and child behavior problems (Gillian King et al, 1999)

Children learn and develop by participating in everyday activities (Dunst, Bruder, 2006; King et al., 2003). For families of children with autism spectrum disorders (ASD), participating in the variety of activities that comprise a family's life routines can be challenging and stressful (Schieve, 2007). Occupational therapists have a vital role in helping families choose meaningful activities that are a good match between the family's needs and resources.

### **2) Occupational Performance Coaching:**

Occupational performance coaching (OPC), or simply "coaching," has been described in the occupational therapy literature as, "a process whereby parents are guided in solving problems related to achieving self-identified goals" (Graham, Rodger, & Ziviani, 2009). In this approach, therapists do not "tell" parents what to do. Instead, therapists guide parents in developing strategies and supports to meet their family's needs.

Emerging evidence in occupational therapy literature supports coaching interventions as a way to increase participation of children with special needs (Dunn, Cox, Foster, Mische-Lawson, & Tanquarary, 2012; Graham, Rodger, & Ziviani, 2010)

Occupational performance coaching (OPC) is an enablement-focused, parent directed intervention designed for use by occupational therapists working with parents of children with performance difficulties (i.e., difficulty managing everyday tasks, routines, and activities) (Graham, Rodger, & Ziviani, 2009). Coaching, in which a goal-focused conversational format is used to guide clients to examine their goals in detail and identify changes to the performance context that improve goal achievement, is a key element of OPC (Fiona Graham, 2013). The therapist employs specific language, questioning and reflection cues to guide parents' self-discovery of solutions, and their implementation and evaluation within a problem-solving framework.

OPC is grounded in an enablement perspective of disability, specifically, the International Classification of Functioning, Disability and Health (World Health Organization, 2001) and employs a top-down approach to clinical reasoning that begins with an exploration of occupational roles and competence rather than beginning with an examination of performance

The primary intention when using OPC is improvement in the performance and satisfaction families experience as they go about their everyday lives, as indicated by parents.

A secondary intention is enhancement of parents' skills to resolve children's performance difficulties with greater autonomy in the future.

It incorporated three domains

- a) Emotional support
- b) Information exchange
- c) A structured process

Findings provide preliminary evidence supporting the effectiveness of occupational performance coaching in improving children's and mothers' occupational performance and mothers' parenting self-competence. Improvements were sustained and appeared to generalize to other areas of performance (Graham,2013)

There is preliminary support for the use of OPC when working with mothers toward goals for their children and themselves. OPC may lead to generalized improvements in children's performance to other occupations beyond the specific activities or goals addressed during intervention. The effect of setting goals, as it was used in OPC, should not be underestimated, because the process itself may lead to significant improvements in children's and parents' perceived performance

### **3) Assessment tools incorporating coaching outcomes:**

Goal Attainment Scaling - GAS is a goal-setting process used to determine intervention outcomes expressly relevant to individuals and their families. GAS is able to depict functional and meaningful outcomes that are often challenging to assess using standardized measures (Mailloux et al., 2007). In various studies, GAS has been determined to be an effective outcome measure (Mailloux et al., 2007; Miller et al., 2007). Many studies in recent years has used GAS as the main outcome measure.

In one of the studies, the goals were developed in conjunction with the primary caregiver by the researchers/ evaluators and individualized for the child. The goals were shared with the interventionists to guide treatment planning and was used to find out Effectiveness of Sensory Integration Interventions in Children With Autism Spectrum Disorders(Beth A. Pfeiffer et al,2011)

Canadian Occupational Performance Measure (COPM) -It has been 73 years since the Canadian Occupational Performance Measure (COPM) was published. In that time there has been a remarkable growth in its acceptance as an outcome measure within the occupational therapy practice and research. It is evidenced by its extensive use as the

gold standard against which other measures of client valued performance are evaluated (Carswell et al., 2004). It has been found that the COPM is used with a wide variety of clients, enables client-centred practice, facilitates evidence-based practice and supports outcomes research.

The literature shows that the COPM has been successfully used with a variety of clients, including Palliative care clients, clients with mental health needs, clients in Neuro rehab unit, Children with a disability and their family members(Lyons & Raghavendra,2003)

The COPM has been used successfully with a wide variety of patients, from children and their families to adult patients coping with various illnesses, disabilities, and life circumstances (Atwal et al,2003; Chesworth et al,2002; Lyons & Raghavendra, 2003; Reid, Hebert, & Rudman, 2006)

Parenting sense of competence scale - Parenting self-efficacy has been strongly associated with parenting competence and child developmental outcomes (Coleman & Karraker 1998; Shumow & Lomax 2002; Jones & Prinz 2005). Jones and Prinz (2005) identified the Parenting Sense of Competence (PSOC) scale as the most commonly used tool for measuring parental self-efficacy

REVIEW OF LITERATURE

## **REVIEW OF LITERATURE**

**J. Mark Donovan et al** in his study done in 2005, performed an analysis on Occupational Goals of Mothers of Children With Disabilities: Influence of Temporal, Social, and Emotional Contexts. The concerns and goals of the mothers were classified into six themes which suggests need for intervention in these areas for Mothers of children with Disabilities. Data was collected from 38 mothers of children with disabilities using the Canadian Occupational Performance Measure (COPM) and were analyzed qualitatively. Six themes emerged: (I) doing and being alone: taking care of my own health and well-being; (II) doing and being with others: expanding my social life; (III) improving my child's quality of life; (IV) household management: organizing time and resources; (V) balancing work, home, and community responsibilities; and (VI) sharing the workload. The patterns in the data suggested that the occupational performance of mothers of children with disabilities is constrained by time, overlaid by difficult emotions, and involves a desire for increased social contact.

**Amy D. Herschell et al** described a therapy similar to Occupational performance coaching called PARENT-CHILD INTERACTION THERAPY (PCIT) in 2002, also emphasizes the link between parents and children in pediatric Occupational Therapy. It was designed for families with children between the ages of 2 and 6 who are experiencing a broad range of behavioral, emotional, and family problems. Throughout treatment, emphasis is placed on the interaction between the parents and their child. Family factors are thought to influence child behavior through their effect on parenting behaviors. The strong and consistent relations between certain parenting styles and problematic child outcomes suggests the need to focus on parenting style and parent child interactions in families whose young children demonstrate behavioral and emotional problems. For each phase of treatment parents attend one didactic session during which the therapist describes the skills of the interaction and provides the rationales for their use. Modeling and role-playing are incorporated into these sessions to facilitate learning of the skills. Looking at the phases of treatment, the need for focus on parent – child interaction is emphasized in this study.

**Dathan D. Rush et al (2003)** focused on coaching families and colleagues and explained the use of coaching in therapy. This article provides guidelines for coaching early childhood professionals serving young children with disabilities and their families. The five phases of the coaching process described in his article are: initiation, observation or action, reflection, evaluation, and continuation or resolution. Coaching is a reciprocal process between a coach and learner, comprised of a series of conversations focused on mutually agreed upon outcomes. Coaching for educational personnel over the past 20 years emphasizes the three key characteristics for coaching in early intervention programs: (1) nonjudgmental interaction, (2) observation paired with reflective feedback, and (3) acquisition of new knowledge and skills for the adult learner directed towards improving a child's performance. He strongly suggested that Coaching is a mechanism that is effective in early intervention services and supports family-centered, evidence based, and learner-focused models in natural settings.

**Susanne King et al (2009)** emphasized the importance of Family-Centered Service for Children with Cerebral Palsy and Their Families through an intense Review of literature. The research evidence shows strong support for family-centered service in promoting the psychosocial well-being of children and their parents and in leading to increased satisfaction with services. She explained that the Outcomes should go beyond those of the child's physical, emotional, social, and cognitive functioning. Much of the research on quality care has focused on the key outcomes of parental satisfaction, reduced stress and worry, and adherence to therapy programs, and these parental outcomes certainly should be considered. The scope of information on the benefits of family-centered service for children is limited. Studies have generally focused on two major kinds of outcomes for children, developmental gains/ skill development and psychosocial adjustment. Several RCTs have demonstrated that parents, mostly mothers, have experienced better psychological health, as demonstrated by reduced anxiety, less depression, and higher levels of well-being, when programs or services are provided in a family- centered way. The evidence presented here from RCTs and other methodologies demonstrates considerable support for family-centered service which is effective in outcomes for children, parents, families, and the service delivery system.

**Robert J. Palisano et al (2003)** in his review proposed that optimal participation involves the dynamic interaction of determinants (attributes of the child, family, and environment) and dimensions (physical, social, and self engagement) of participation through Participation-based therapy for children with physical disabilities. The method he used was review of literature that identified research and theory on participation of children with physical disabilities. A case report was completed to illustrate application to practice. Interventions that were included in the literature search were goal-oriented, family-centered, collaborative, strengths-based, ecological, and self-determined. The five step process in this therapy are (1) Develop a collaborative relationship with the family and child, (2) Determine mutual goals, (3) Assess child, family, and environment strengths, abilities and what needs to occur for the child to achieve the goal, (4) Develop and implement the intervention plan and (5) Evaluate processes and outcomes with the child and family. The therapist's primary role is to support the child and family to identify challenges to participation and solutions to challenges. This study shows the success of intervention when the therapist is a consultant, collaborating with the child, family, and community providers to share information, educate, and instruct in ways that build child, family, and community capacity.

**Molly Shields Bagby et al (2012)** explored how Sensory Experiences of Children With and Without Autism Affect Family Occupations. She found that Children's sensory experiences affect family occupations in three ways: (1) what a family chooses to do or not do; (2) how the family prepares; and (3) the extent to which experiences, meaning, and feelings are shared. Grounded theory approach was used in which parents of six children who were typically developing and six children who had autism were interviewed. Data was analysed using using open, axial, and selective coding techniques. In the first theme, all families described powerful family routines. Families of typically developing children described positive social effects and opportunities, whereas families of children with autism described occupations they avoided and social limitations created by their children's sensory experiences. In the second theme, families in both groups highlighted increased preparation for sensory activities, however, the breadth and depth of preparation and alternate plans in families of children with autism were intense. The

third theme explains that experiences, meaning, and feelings during occupations were shared less often by families with children with autism than by families of typically developing children. These findings also support the fact that family occupations are affected in families of children with disabilities.

**Maly Danino et al (2012)** aimed to determine the Superiority of group counseling to individual coaching for parents of children with learning disabilities. Two interventions for parents of children with learning disabilities (LD) individual coaching and group counseling were compared. Participants were 169 parents, non-randomly assigned to three experimental conditions: coaching (45), group counseling (93) and control (31). Variables included outcomes (parental stress and parental coping), personal (perceived social support) and process (bonding with therapist/group). Therapeutic bonding was found to increase with time only for parents who attended group counseling, whereas perceived social support increased in both treatment conditions. The results clearly indicate better outcomes on parental stress reduction in group counseling. This is surprising, since each parent/couple in individual coaching had a full hour for themselves with experienced therapists, whereas in groups they shared their therapy time with several other participants. In group counseling, they could identify with others, imitate others' behavior, and learn from the interpersonal interaction. Based on these results, and considering cost effectiveness, groups are highly recommended to help parents of children with LD. Thus this study tells us that group counseling is an effective treatment process for parents of Children with Disabilities.

**Winnie Dunn et al (2012)** also explored the components involved in Occupational performance coaching for Mothers of Children with Autism in a Qualitative method for Occupational Therapy Practice. The purpose of this study was to understand the perceptions of mothers of children with autism spectrum disorder (ASD) who participated in 10 one-hour coaching sessions. Coaching occurred between an occupational therapist and mother and consisted of information sharing, action, and reflection. Researchers asked 10 mothers six open-ended questions with follow-up probes

related to their experiences with coaching. Themes emerged related to relationships, analysis, reflection, mindfulness, and self-efficacy. The findings suggest how an intervention provided can lead to positive outcomes, including increased mindfulness and self-efficacy. This study builds upon the research of Graham et al. (2010) and Dunn et al. (2012) by investigating the thought and behavioral processes parents experience during the coaching process. The occupational therapists who provided coaching for the Dunn et al. (2012) study observed that mothers shared similar insights related to coaching. The aim of this study was to systematically explore how mothers used their insights from the coaching process in their daily lives. Knowledge of the process that parents go through is important to further develop and refine practices related to the coaching. Ten mothers of children diagnosed with ASD aged 4–10 years participated in this qualitative study. In this study, they found that the process goes beyond learning new skills. They used the term “mindfulness” to describe how mothers’ experiences change related to mothers’ descriptions of paying attention to a situation, analyzing it, and accepting the outcomes. *Reflection* - Mothers reported the importance of having the opportunity to reflect on what they tried, *Analysis*- Consistent analysis of the child’s engagement in the specific occupation was also important. *Relationship*- The relationship between coach and parent, along with specific coaching discourse, *self-Efficacy*- By being mindful and solving problems proactively, mothers reported an increased sense of self-efficacy. These explorations are useful for further intervention studies on Occupational performance coaching.

**Fiona Graham et al (2012)** explored the use of occupational performance coaching (OPC) with three parent–child dyads using descriptive case study methodology. In this study, parent and child performance was examined using a pre–post intervention design with the key outcome measures being the Canadian Occupational Performance Measure (COPM) and goal attainment scaling (GAS). Themes relating to learning, changes at home, and the challenges and rewards of OPC emerged from interviews with parents. Results indicate that OPC may be a useful intervention for therapists seeking to achieve occupational performance outcomes with children and parents. A key aspect of this collaborative analysis process is the therapist’s attention to parents’ performance in

implementing change. Both performance measures demonstrated positive change in goals relating to children's and parents' activities, tasks and routines. All parents reported that goal attainment reached or exceeded expected levels for both parent and child performance established using GAS. While goal setting and coaching discussions were child-, task-, and context- specific, performance improvement was reported by parents beyond the child, tasks, or contexts of goals. They suggested future research on OPC that includes a follow-up stage that will provide additional information on parents' continued application of skills. They also suggested further research to address its use with a range of therapists in different clinical contexts.

**Fiona Graham et al 2012** – assessed the effectiveness of occupational performance coaching in improving children's and mothers' occupational performance and mothers' parenting self-competence. A one-group time-series design was used to evaluate changes in children's (n = 29) and mothers' (n = 8) occupational performance at four time points: (1) pre-wait list, (2) pre intervention, (3) post intervention, and (4) follow-up. Findings provide preliminary evidence supporting the effectiveness of occupational performance coaching in improving children's and mothers' occupational performance and mothers' parenting self-competence. Improvements were sustained and appeared to generalize to other areas of performance. Children's performance differed significantly before and after OPC sessions, as did mothers' satisfaction with their child's performance. Post hoc analysis of COPM scores at each phase of the study revealed that significant improvement in children's performance occurred over the intervention phase ( $p < .001$ ), with a large effect size ( $d = 2.53$ ), but not over the wait or maintenance phases. Improvements in children's performance were maintained at follow-up. Mothers' satisfaction with their child's performance on the goals addressed during OPC sessions improved significantly over the wait phase as well as during the intervention phase. GAS scores at pre-wait list, pre intervention, and post intervention also showed significant differences in children's performance. Children's performance on goal activities that were not addressed during OPC sessions also differed significantly after OPC sessions. Mothers' overall self-competence in the parenting role improved significantly after OPC. Improvements in all goals (both related to mothers' or children's performance and

addressed or not addressed during intervention) were clinically significant after OPC intervention and were maintained at 6-wk follow-up. Findings from this study of the use of OPC with mothers of children with occupational performance issues offer preliminary support for its effectiveness with this population and suggests for further researches on different populations.

CONCEPTUAL  
FRAMEWORK

## 6. CONCEPTUAL FRAMEWORK

### 1) Family-centered practices

Therapeutic interventions have traditionally targeted changing characteristics of the child. However, over the past three decades, this perspective has shifted from trying to “fix” a child’s deficits, to FCP that promote child participation in the family’s routines. Characteristics of FCP include recognizing each family’s individual strengths, acknowledging caregivers as the experts regarding their child, supporting the child’s learning and development by working with the family, and providing support to family members by building upon strengths, resources, and past successes.

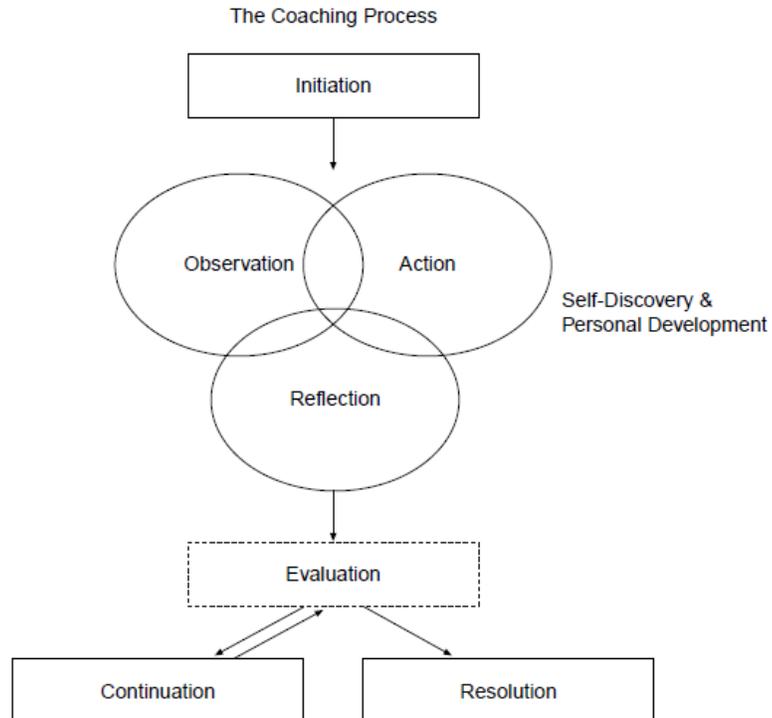
### 2) Coaching

Coaching is an evidence-based practice used in FCP. The purpose of coaching is to increase knowledge, skills, and competence of a client to enable participation in the context of the family’s daily life. A coach is a person who supports another person’s learning through the development of collaborative partnerships, by supporting the person to achieve self-created goals, by using adult learning strategies, and by building the person’s existing competencies. A primary difference between coaching and traditional therapy services is that therapists do not *tell* the parent what to do. Instead, the therapist helps the parent problem solve challenging activities related to their child. The core elements include:

- a) Joint Planning: Coach and parent jointly identify what each will do between coaching sessions.
- b) Observation: Coach observes the parent trying a current or new strategy. During observation, the coach may help the parent analyze the task by asking reflective questions or the coach may model a certain strategy.
- c) Action: This is the family’s “real-life” opportunity to practice/participate in occupation. Action often occurs between coaching sessions, when

families engage in activities during their typical routine. In between coaching sessions, parents have the opportunity to analyze activities and try strategies within the context of their family's life. At the next coaching meeting, the parent and coach come together to discuss progress towards the goal.

- d) Reflection: During reflection, the coach asks questions that help the parent think about what is occurring, what the parent has already tried, and what resources the parent has. After reflection, the coach can provide information related to the family's needs. The purpose of reflection is to support the parent to gain insight into current strengths and strategies
- e) Feedback: This is the opportunity for the coach to provide information to the parent related to interventions, development, resources, and strategies. Feedback relates to what the coach has seen and what the parent has shared. Coaches do not typically provide intervention ideas based on the coach's experience. This goes against principles of coaching. Instead, the coach invites the parent to reflect on recent experiences and develop strategies that meet the family's needs, and progressively build on the parent's insights.
- f) Coaching is based on conversations of *personal discovery* re: what is known by an individual (or team) and what new learning is desirable.
- g) Coaching focuses on improving individual/team *performance* within a specific *context*.
- h) Coaching provides a *process* for improving instruction, experimenting with new approaches, solving problems, and building collegial relationships.

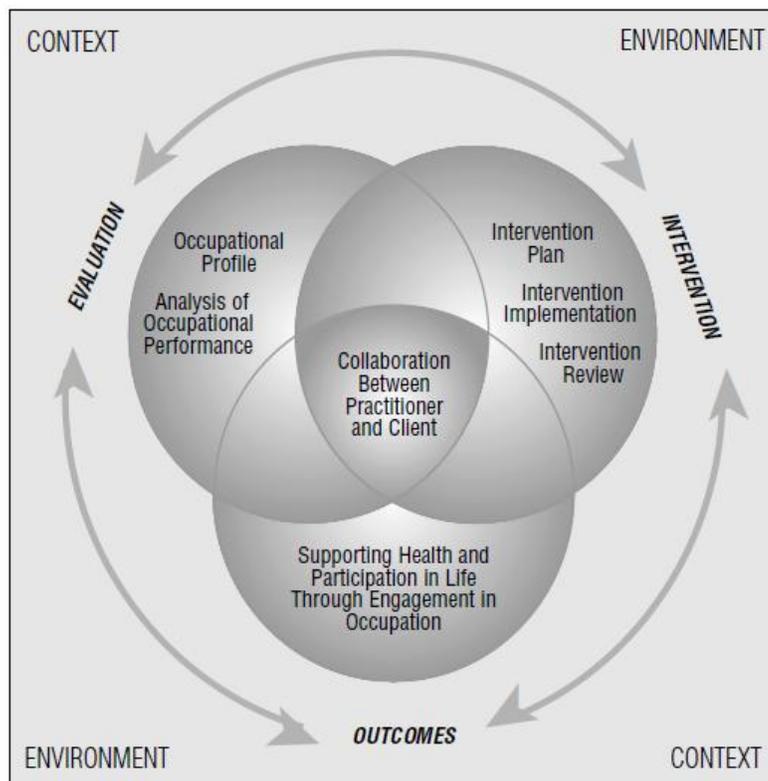


### 3) Occupation-centered practice

Occupational therapy practice framework (OTPF – 3<sup>rd</sup> edition)

The Occupational Therapy Practice Framework: Domain and Process, 2nd Edition (Framework–II) is an official document of the American Occupational Therapy Association (AOTA). Intended for internal and external audiences, it presents a summary of interrelated constructs that define and guide **occupational therapy** practice. It was developed to articulate occupational therapy’s contribution to promoting the **health** and **participation** of people, organizations, and populations through **engagement in occupation. Collaboration between clients and therapists is part of the process.**

Occupational therapy domain in this framework include



Occupation-centered approaches, also called ‘top down’ approaches to occupational therapy practice refer to interventions that employ engagement in occupation as the primary means of assessment, intervention and measurement of outcomes. OPC conforms to these requirements. A top-down approach makes the association between intervention and occupational goals clear to the client.

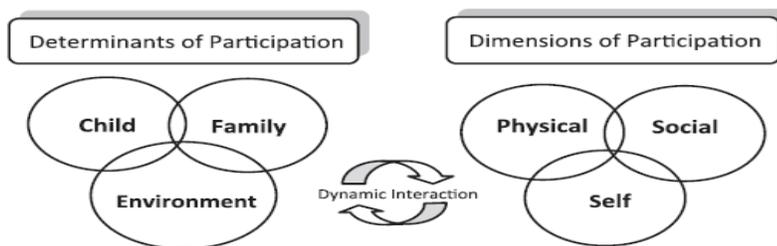
Occupation-centered assessment begins with a discussion regarding parents’ and children’s occupational roles and the task requirements of those roles. Therapists may use tools such as the Canadian Occupational Performance Measure (COPM) or Goal Attainment Scaling (GAS) to gain baseline and outcome measurements that reflect tasks of relevance to occupational roles. During goal-setting, therapists encourage parents to develop a detailed picture of their preferred situation, in other words what the setting of the desired performance would be like. In doing so, very clear goals are obtained and the therapist begins the process of guiding parents’ attention to the

small, tangible differences that may exist between the current performance context and a context that enables more successful performance.

Occupation-centered practice includes an analysis of the environment because occupational performance occurs through the dynamic and unique interaction between a person, her/his occupation and the environment.

#### 4) ICF – participation

In the ICF, participation is specifically defined as “involvement in a life situation.” It has defined a view of participation unique to children—the concept of social participation: “active engagement in the typical activities available to and/or expected of peers in the same context.” Thus, participation as a social construct includes interactive relationships among the physical, social, and attitudinal aspects of environment and the individual and his or her family, habits, and lifestyles. Congruent with concerns related to performance in natural contexts, several authors recommend evaluating children’s physical performance with regard to shifting physical environmental factors as well as social and attitudinal aspects of environment, which include family attitudes, habits, and expectations



Principles of participation-based physical and occupational therapy include

- a) Child and family identify goals for home and community participation
- b) Family-centered - family is recognized as the expert on their child.

- c) Collaborative - therapist collaborates with the child, family and community providers (e.g. teachers, instructors, and coaches), agencies, and organizations.
- d) Strength-based: Interventions are designed to build on the strengths and resources of the child, family, and community.
- e) Ecological: Interventions are provided in natural environments and emphasize real-world experiences.
- f) Self-determined: child is engaged in activities that are fulfilling and promote a sense of belonging and self-accomplishment.
- g) Therapist shares information, educates, and instructs in ways that enable the child and family to solve problems and discover solutions to participation.

## **5) Enablement**

Participation, as defined by the ICF, recognizes disability as a multidimensional construct (i.e. disability has many rather than one causal factor) and highlights the contribution of the environment on disability (World Health Organization, 2001)

This reflects the perspectives of social models of disability that consider disability to be the result of a gap between individuals' needs and the socially imposed limitations of the lived environment. A multidimensional representation of disability is consistent with Law's conceptualization of the enablement of occupational performance (Law *et al.*, 1996) as multifactorial and is inherent to occupation-centered practice.

OPC is an enablement-focused intervention that addresses occupational performance issues by coaching parents to create enabling performance environments for both parents and children.

## **6) Solution-focused therapy**

A key aspect of solution-focused therapy is the goal-setting phase when specific techniques are used to heighten clients' awareness of a future in which the goal is

realized. Language is used strategically to convey an expectation that problems are surmountable and that there is evidence in clients' stories that positive change has already occurred

## **7) Problem-solving interventions**

Consist of the following steps: goal setting; generating a list of options; selecting an option and planning actions; implementing actions and; monitoring and evaluating progress. In comparison to coaching and solution-focused therapy, problem-solving interventions emphasize the development of problem-solving skills rather than the transactional elements of the client-professional relationship. Within OPC, the problem-solving process gives structure to discussions with parents and links discussion with action.

# METHODOLOGY

## 7. METHODOLOGY

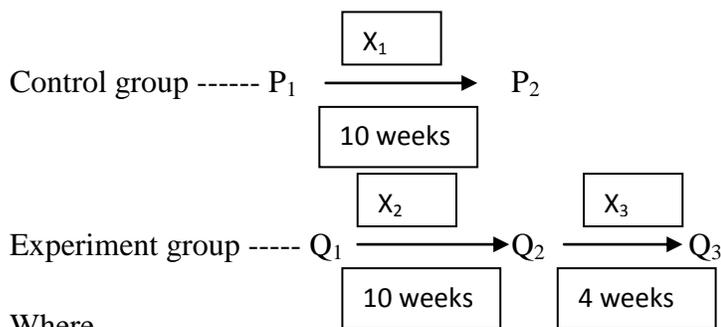
### PLACE OF STUDY

This study was conducted in Occupational Therapy Department, Kovai Medical Centre and Hospital, Coimbatore.

### RESEARCH DESIGN

Two group pre and post Quasi experimental design and Qualitative analysis

### SCHEMATIC REPRESENTATION OF THE STUDY DESIGN



Where,

P<sub>1</sub> = Pre test of control group

P<sub>2</sub> = Post test of control group

X<sub>1</sub> = Conventional Occupational Therapy

Q<sub>1</sub> = Pre test of Experimental group

Q<sub>2</sub> = Post test of Experimental group

X<sub>2</sub> = Conventional OT with Occupational Performance Coaching of mother

X<sub>3</sub> = No active coaching by Therapist, but mothers continue what they learnt

t test after 10 weeks; P3 – Second post test after 4 weeks

## **VARIABLES**

Independent variables – Occupational performance coaching

Dependent variables – Occupational performance of Mothers and Children, Self competence of Mothers, Goal achievement for Mothers and Children

Extraneous variables – Parental regularity in attending groups, severity of illness, co-morbidities, and concurrent treatments received

## **SAMPLING**

Non - probability Convenient sampling.

Grouping was done according to the pre test scores of COPM for Uniformity

## **SAMPLE SIZE**

The study includes 36 samples

18 in control group

18 in experiment group

## **INCLUSION CRITERIA**

- 1) Mothers of children diagnosed with disabilities (Autism, ADHD and SPD)
- 2) Age – parents of children between ages 3–12 yr
- 3) Mothers who have completed basic education – 10<sup>th</sup> standard and higher

## **EXCLUSION CRITERIA**

- 1) Mothers of Children who are not regular to therapy sessions

- 2) Mothers who had history of psychological issues or any form of mental illness
- 3) Children who are under fathers' guidance for therapy and other areas of performance

## **OUTCOME MEASURES**

- 1) Occupational performance of mothers
- 2) Occupational performance of children
- 3) Attainment of goals by Children
- 4) Parental competence

## **TOOLS USED**

### **1) Canadian Occupational Performance Measure**

The COPM is a criterion-based measure of occupational performance in which clients rate the level of importance of, performance of, and satisfaction with goals in self-care, productivity, and leisure on a 10-point scale. A change of 2 or more points in the mean score on the COPM has been reported to indicate clinically significant change. Goals are identified as being of concern during a semi structured interview.

In this study, the Mothers rate their level of performance for themselves and their children on the three areas namely self care, productivity and leisure

### **2) Goal Attainment Scale(GAS)**

GAS is an individualized, criterion-based measure of goal attainment in which goals are determined through interview with clients. Goals are mapped against a 5-point scale in which each step of the scale indicates improvement ranging from current performance to beyond expected performance

### 3) Parental Sense of Competence (PSCS)

The PSOC is used to identify changes in parenting competence after OPC. It is a 16 item Likert-scale questionnaire (on a 6 point scale ranging from strongly agree [1] to strongly disagree [6]), with nine questions under Satisfaction and seven under Efficacy. Satisfaction section examines the parents' anxiety, motivation and frustration, while the Efficacy section looks at the parents' competence, capability levels, and problem-solving abilities in their parental role

#### **PROCEDURE**

- To obtain approval from the ethical committee and informed consent from the parents
- Categorize the Mothers into control and experiment group
- Assess the performance and satisfaction of Mothers and children using COPM and parental self competence scale in both control and experiment group at 3 levels – before intervention, after intervention and 1 month after intervention
- Conduct groups for Mothers in the experiment group
- Frequency of groups – twice a week – one group session once a week and one individual session once a week
- Post test just after intervention in both control and experiment group
- Second post test after 4 weeks of maintenance without intervention in the experiment group

Qualitative analysis:

3 Semi-structured questions through interview of Mothers to find out the experience during OPC

- 1) How was your experience through the course of the OPC intervention?

- 2) How did you find that useful for yourself?
- 3) Does handling children have changed after OPC intervention? If yes, how?

## **PROTOCOL**

Components used in the groups: Performance analysis, questioning, listening, observing, modeling, explaining, and in vivo coaching to assist mothers in identifying strategies that supported their child's performance

Group sessions:

Group framework

Warm up games – 10 minutes

Goal setting using Goal Attainment Scale – 15 minutes

Sub grouping Mothers for discussion of strategies to achieve the set goals – 15 minutes

Revision and wind down – 10 minutes

Suggestion for next session – 5 minutes

Therapists' role: (i) interact as friends, guides, or informants; (ii) convey a belief in parents' abilities; and (iii) provide timely, practical information

Step 1: Setting collaborative Goals between the Therapist and the Mothers

The Mothers will be guided in setting SMART (Specific, Measurable, Achievable, Realistic, Time bound) goals using the Goal Attainment scale choosing major areas from COPM scale

Step 2: Brainstorming and problem solving approach

After specific goals are set, the Mothers will be sub grouped to discuss various strategies they can use to achieve the goals they have set.

#### Step 3: Discussion of Various solutions to the top most problems

After solutions are found, an action plan for the upcoming week is created and a schedule is made that the Mothers need to follow throughout the week by themselves

#### Step 4: Review of the Goals achieved

Goals are revised every week and if the goals have been achieved, Mothers make new goals from the other areas of COPM

#### Step 5: Revision of the various strategies

If the goals have not been achieved, the Mothers are again sub grouped to check if any other strategies can be used for the same goals

#### Step 6: Sharing between Therapist and Mothers

The therapist shares technical knowledge if the Mothers need it. Sessions on various topics like behavior modification, toilet training, sensory integration, stress management, assertiveness training, and relaxation techniques are conducted according to the group's expectations

#### Step 7: Revising old goals and setting up new goals

Every week the goals are revised and new goals are set if necessary

#### Step 8: Measurement using the three scales

After the intervention, again the three scales are used for measurement

Topics related to the Mothers:

- Stress Management techniques
- Adaptive coping strategies

- Assertiveness training
- Ventilation and Emotional Support

Topics related to children:

- Behavior modification techniques
- ADL training
- Sensory Integration Therapy
- Other information according to each Child's needs

## **QUALITATIVE ANALYSIS:**

### **Measures:**

To explore parents' experiences of OPC, a semi structured face to face interview was conducted at the completion of intervention. Interviewing allowed detailed exploration (Silverman, 2005) of parents' perceptions of OPC and its perceived effects. Interviews were audio taped and transcribed verbatim. Content analysis (Silverman, 2005) was used to identify patterns and compare the experiences parents reported.

### **Analysis:**

Parents' experiences of OPC are described based on themes identified through content analysis of interview transcripts (Patton, 2002). Coding was approached with an intention to understand how parents experienced OPC but with an expectation those sessions were likely to have been beneficial to parents. The following steps were used: Another therapist separately considered the research question: How was your experience through the course of the OPC intervention? How did you find that useful for yourself? Does handling children have changed after OPC intervention? If yes, how? Transcripts were analyzed separately again with a view to look for alternative themes. The final list of themes was established through consensus.

*DATA ANALYSIS AND*  
*RESULTS*

## 8. DATA ANALYSIS AND RESULTS

The data obtained in this study was subjected to statistical analysis using IBM® SPSS software Version 20

List of Tables and Graphs:

Table 1: Descriptive distribution of disabilities among children.

Table 2: Descriptive distribution of education qualification of mothers.

Table 3: Comparison of Canadian Occupational Performance Measure (COPM) – Performance component - Goals of both mothers and children Pre test Vs Post test scores (Within group comparison)

Assess the effectiveness of occupational performance coaching on mothers of children with disabilities using COPM Performance component. Data were subjected to Wilcoxon signed rank test.

Table 4: Comparison of Canadian Occupational Performance Measure (COPM) – Satisfaction component - Goals of both mothers and children Pre test Vs Post test scores (Within group comparison)

Assess the effectiveness of occupational performance coaching on mothers of children with disabilities using COPM Performance component. The data were subjected to Wilcoxon signed rank test.

Table 5: Within group analysis of control and experimental group for Parents Sense of Competence scale (PSCS) scores– Efficacy component. The data were subjected to Wilcoxon signed rank test.

Table 6: Within group analysis of control and experimental group for Parents Sense of Competence scale (PSCS) scores– Satisfaction component. The data were subjected to Wilcoxon signed rank test.

Table 7: Within group analysis of COPM (Performance and Satisfaction) scores between timelines T1 and T2 of the experimental group. The data were subjected to Wilcoxon signed rank test.

Table 8: Within group analysis of Parents Sense of Competence scale (PSCS) – Efficacy and Satisfaction component between timelines T1 and T2 of the Experimental groups (within group analysis). The data were subjected to Wilcoxon signed rank test.

Table 9: The analysis of COPM - Performance and Satisfaction measures of mothers in experimental group (Goals of mothers only). The data were subjected to Wilcoxon signed rank test.

Table 10: The analysis of COPM - Performance and Satisfaction measures of children in experimental group (Goals of children only). The data were subjected to Wilcoxon signed rank test.

Table 11: Within group analysis of pre and Post scores in Goal attainment scale in the experimental group (within group analysis). The data were subjected to Wilcoxon signed rank test.

Table 12: Analysis of pre vs post scores of control and experimental in COPM measures – Performance and Satisfaction. The data were subjected to Mann Whitney test.

Table 13: Analysis of pre vs post scores of control and experimental in PSCS Satisfaction and Efficacy. The data were subjected to Mann Whitney test. The data were subjected to Mann Whitney test.

Graph 1: Graphical representation of distribution of disabilities among children.

Graph 2: Graphical representation of distribution of education qualification of mothers.

Graph 3: Graphical representation of Canadian Occupational Performance Measure (COPM) – Performance component - Goals of both mothers and children.

Graph 4: Graphical representation of Canadian Occupational Performance Measure (COPM) – Satisfaction component - Goals of both mothers and children.

Graph 5: Graphical representation of Parents Sense of Competence scale (PSCS) scores– Efficacy component.

Graph 6: Graphical representation of Parents Sense of Competence scale (PSCS) scores– Satisfaction component.

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Graph 9: Graphical representation of COPM - Performance and Satisfaction measures of mothers in experimental group (Goals of mothers only).

Graph 10: Graphical representation of COPM - Performance and Satisfaction measures of children in experimental group (Goals of children only).

Graph 10B: Graphical representation of Correlation of COPM measures of mothers and children.

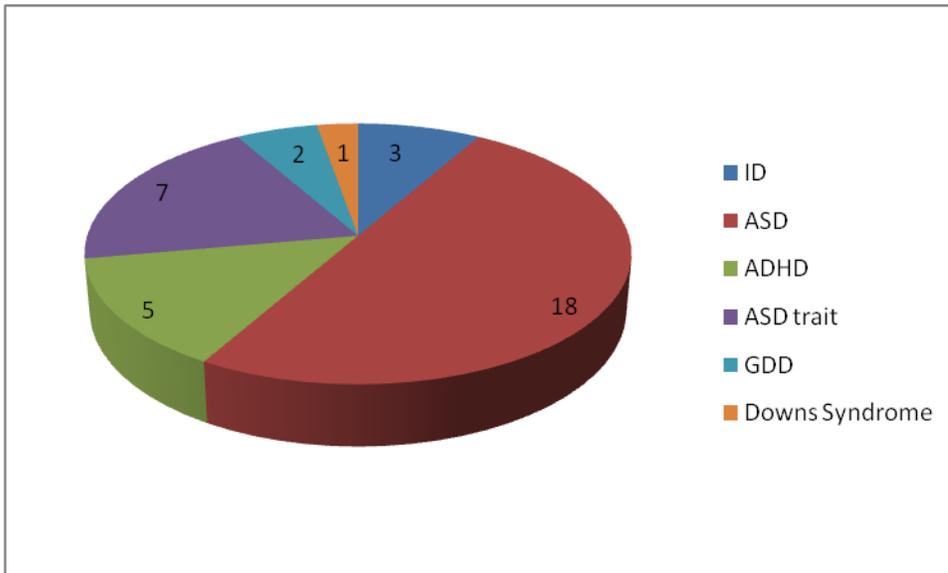
Graph 11: Graphical representation of pre and Post scores in Goal attainment scale in the experimental group.

## DESCRIPTIVE STATISTICS

**Table 1:** Distribution of disabilities among children

Disability	Nos
Intellectual Disability	3
Autism Spectrum Disorder	18
Attention Deficit Hyperactive Disorder	5
Autism Spectrum Disorder trait	7
Global Development Delay	2
Downs Syndrome	1

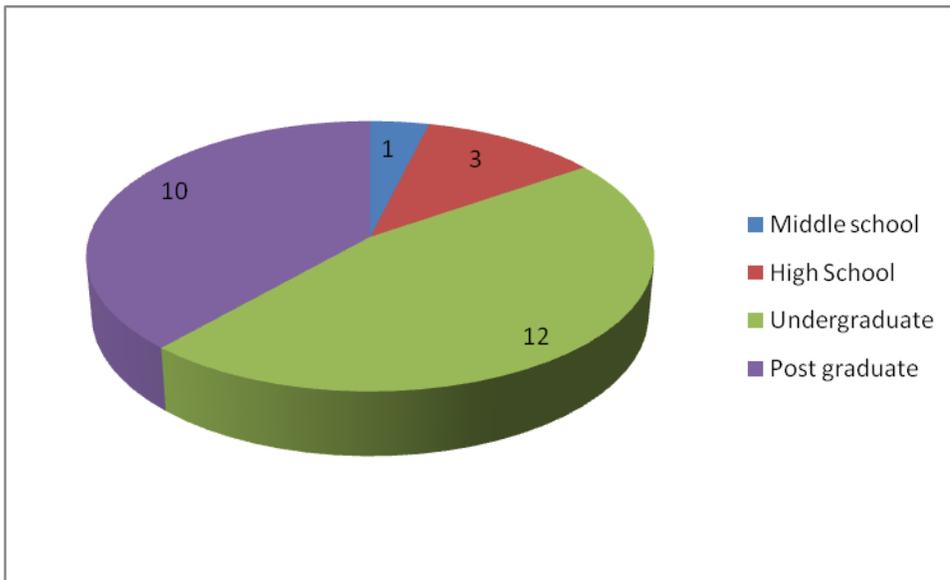
**Graph 1:** Graphical representation of distribution of disabilities among children



**Table 2:** Education Qualification of Mothers of Children with Disability

Education qualification	Nos
Middle school	1
High School	3
Undergraduate	12
Post graduate	10

**Graph 2:** Graphical representation of education qualification of mothers of children with disability



**CANADIAN OCCUPATIONAL PERFORMANCE MEASURE (COPM) –  
PERFORMANCE COMPONENT**

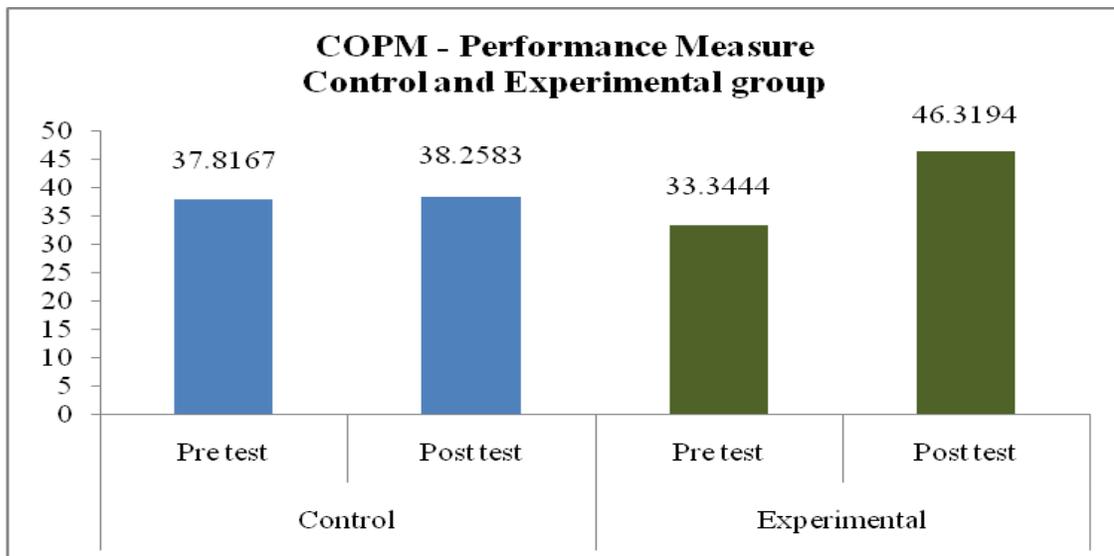
**Table 3:** Canadian Occupational Performance Measure (COPM) – Performance component (Goals of both mothers and children)

Pre test and Post test scores – within group

Group	Test	N	Mean	Std. Deviation	Z Score	Sig. (2-tailed)
Control	Pre test	18	37.8167	10.25642	1.013	0.311
	Post test	18	38.2583	12.38047		
Experimental	Pre test	18	33.3444	13.66482	3.516	0.000*
	Post test	18	46.3194	13.93923		

There is a significant difference between pre and post test scores in the Performance component of COPM in the experimental group ‘P’ value is 0.000 (<0.05).

**Graph 3:** Canadian Occupational Performance Measure (COPM) – Performance component - Pre test and Post test mean scores (within group analysis)



**CANADIAN OCCUPATIONAL PERFORMANCE MEASURE (COPM)**

**Table 4:** Canadian Occupational Performance Measure (COPM) – Satisfaction component (Goals of both mothers and children)

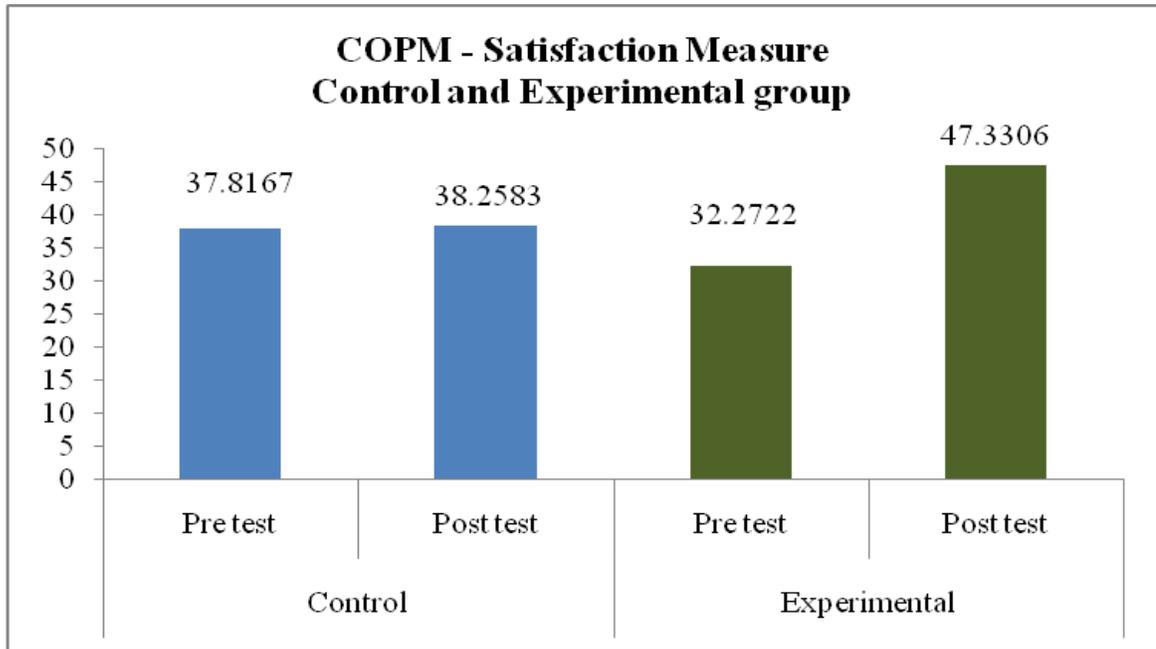
Pre test and Post test scores - (within group analysis)

Group	Test	N	Mean	Std. Deviation	Z Score	Sig. (2-tailed)
Control	Pre test	18	37.8167	10.25642	1.013	0.311
	Post test	18	38.2583	12.38047		
Experimental	Pre test	18	32.2722	12.50194	3.464	0.001*
	Post test	18	47.3306	17.98494		

There is a significant difference between pre and post test scores in the Satisfaction component of COPM in the experimental group ‘P’ value is 0.000 (<0.05).

**Graph 4:** Canadian Occupational Performance Measure (COPM) – Satisfaction component

Pre test and Post test scores (within group analysis)



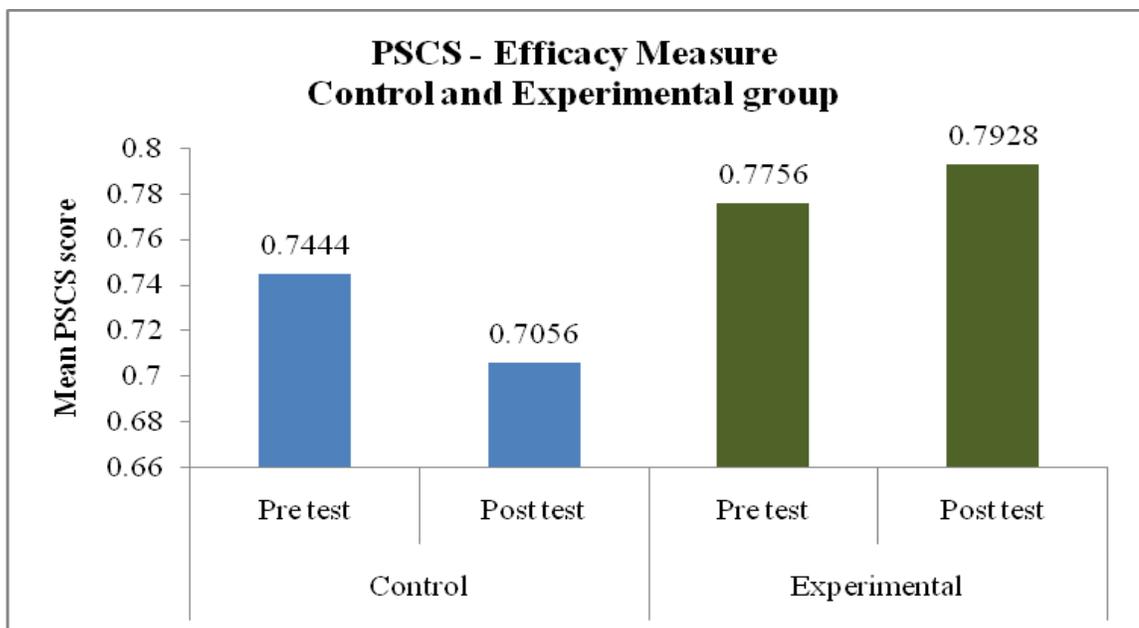
**PARENTS SENSE OF COMPETENCY SCALE (PSCS)**

**Table 5:** Parents Sense of Competence scale (PSCS) – Efficacy component  
Pre test and Post test scores (within group analysis)

Group	Test	N	Mean	Std. Deviation	Z Score	Sig. (2-tailed)
Control	Pre test	18	0.7444	0.14427	0.790	0.430
	Post test	18	0.7056	0.17751		
Experimental	Pre test	18	0.7756	0.11495	0.362	0.717
	Post test	18	0.7928	0.10156		

‘P’ value is 0.430 and 0.717 (>0.05) for control and experimental groups respectively. Hence, no significant difference between pre and post test scores in the Efficacy component of PSCS in both control and experimental group

**Graph 5:** Parents Sense of Competence scale (PSCS) – Efficacy component  
Pre test and Post test scores (within group analysis)



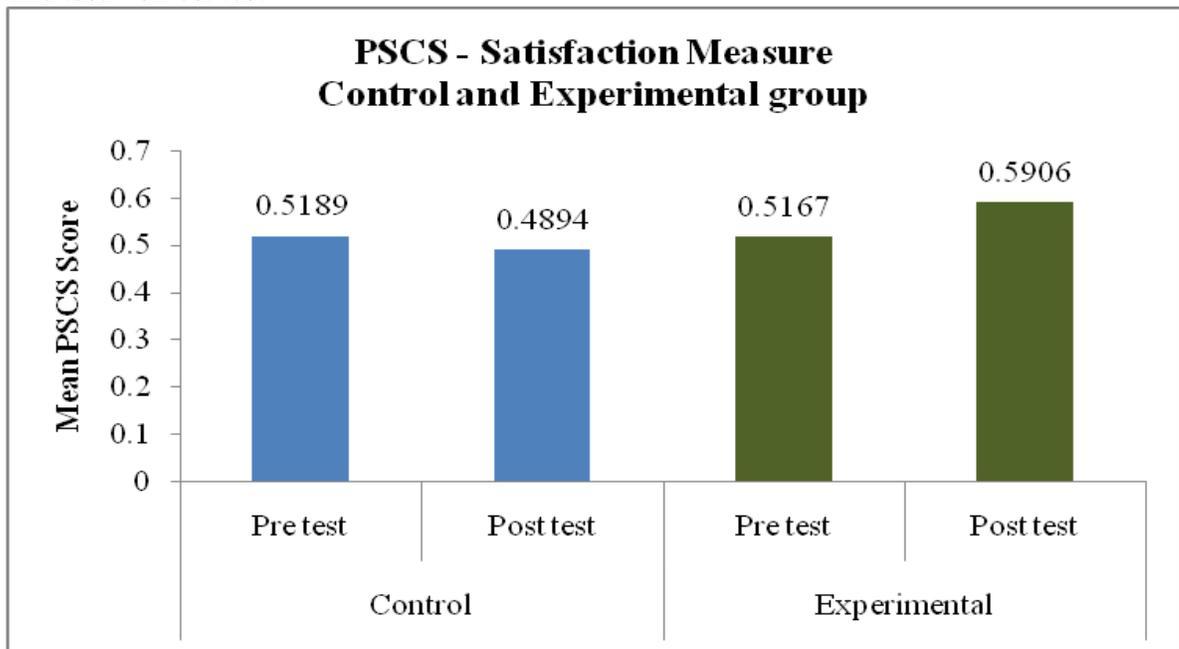
**Table 6:** Parents Sense of Competence scale (PSCS) – Satisfaction component  
Pre test Vs Post test (within group analysis)

Group	Test	N	Mean	Std. Deviation	Z Score	Sig. (2-tailed)
Control	Pre test	18	0.5189	0.13538	1.330	0.184
	Post test	18	0.4894	0.14127		
Experimental	Pre test	18	0.5167	0.08758	2.985	0.003*
	Post test	18	0.5906	0.14779		

‘P’ value is 0.003 (<0.05). Hence, there is significant difference between pre and post test scores in the Satisfaction component of PSCS in the experimental group

**Graph 6:** Parents Sense of Competence scale (PSCS) – Satisfaction component

Pre test Vs Post test



**MAINTENANCE PHASE ANALYSIS IN EXPERIMENTAL GROUP  
CANADIAN OCCUPATIONAL PERFORMANCE MEASURE (COPM)**

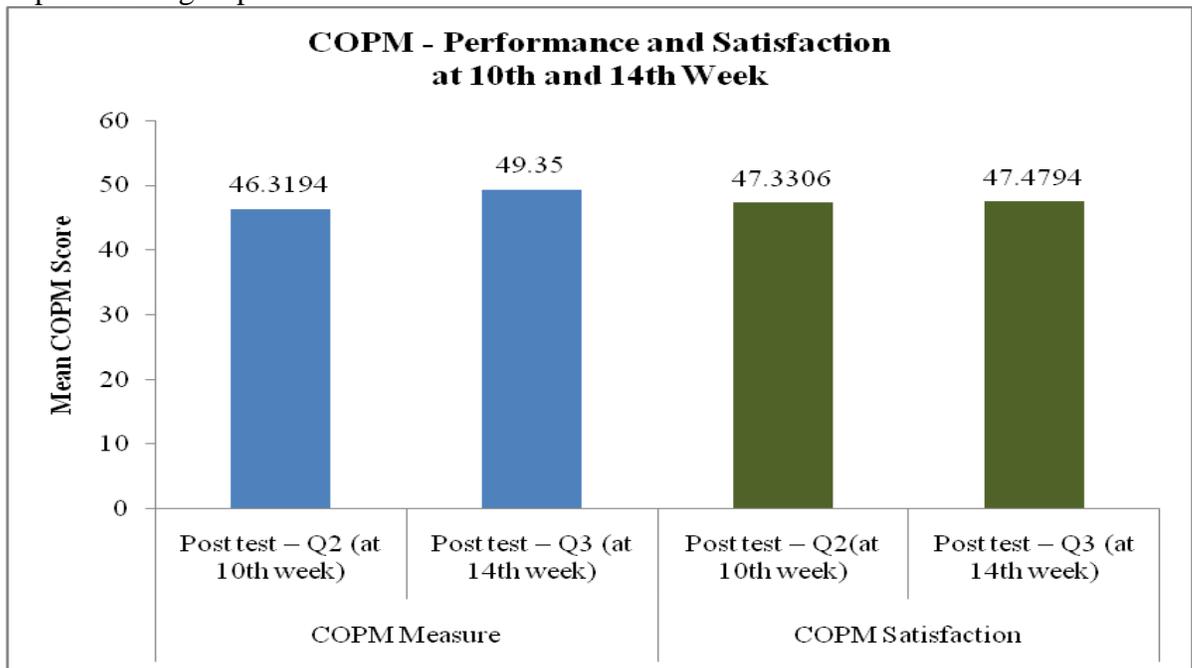
This is the comparison of scores in COPM and PSCS between post (Q<sub>2</sub>) and post (Q<sub>3</sub>) of the experimental group only. Q<sub>2</sub>, Q<sub>3</sub> are two points of post test scores. The time duration between T1 and T2 is the maintenance phase.

**Table 7:** COPM (Performance and Satisfaction) analysis between Q<sub>2</sub> and Q<sub>3</sub> of the experimental group. (within group analysis)

		N	Mean	Std. Deviation	Z score	Sig – (2 sided)
COPM Performance	Post test – Q <sub>2</sub> (at 10 <sup>th</sup> week)	18	46.3194	13.93923	2.535	0.011*
	Post test – Q <sub>3</sub> (at 14 <sup>th</sup> week)	17	49.3500	16.00631		
COPM Satisfaction	Post test – Q <sub>2</sub> (at 10 <sup>th</sup> week)	18	47.3306	17.98494	0.235	0.814
	Post test – Q <sub>3</sub> (at 14 <sup>th</sup> week)	17	47.4794	18.17919		

There is significant difference between post test (Q<sub>2</sub>) and post test (Q<sub>3</sub>) scores in the Performance component of COPM in experimental group ‘P’ value is 0.011(<0.05).

**Graph 7:** COPM (Performance and Satisfaction) analysis between T1 and T2 of the experimental group.



**MAINTENANCE PHASE ANALYSIS IN EXPERIMENTAL GROUP  
PARENTS SENSE OF COMPETENCY SCALE (PSCS)**

**Table 8:** Parents Sense of Competence scale (PSCS) – Efficacy and Satisfaction component

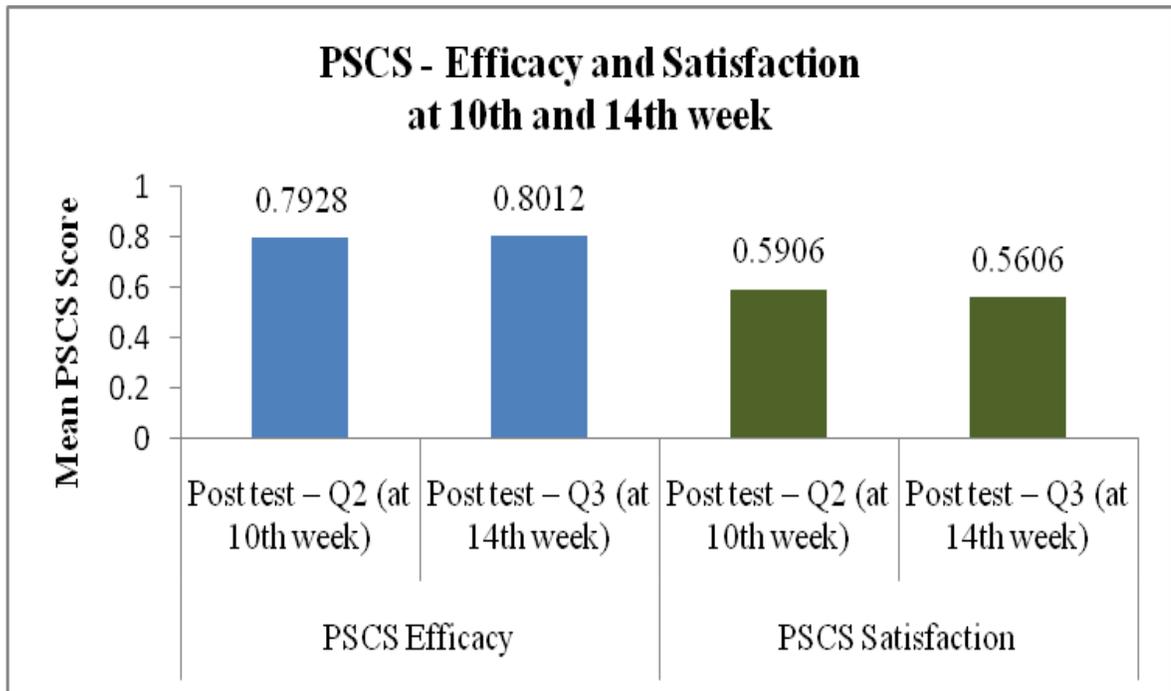
Analysis between Q<sub>2</sub> and Q<sub>3</sub> of the Experimental groups (within group analysis)

		N	Mean	Std. Deviation	Z score	Sig – (2 sided)
PSCS Efficacy	Post test – Q <sub>2</sub> (at 10 <sup>th</sup> week)	18	0.7928	0.10156	-.494	0.621
	Post test – Q <sub>3</sub> (at 14 <sup>th</sup> week)	17	0.8012	0.10994		
PSCS Satisfaction	Post test – Q <sub>2</sub> (at 10 <sup>th</sup> week)	18	0.5906	0.14779	-2.554	0.011*
	Post test – Q <sub>3</sub> (at 14 <sup>th</sup> week)	17	0.5606	0.13474		

‘P’ value is 0.011 (<0.05). Hence, there is significant difference between post tests scores (Q<sub>2</sub> Vs Q<sub>3</sub>) in the Satisfaction component of PSCS in the experimental group.

**Graph 8:** Parents Sense of Competence scale (PSCS) – Efficacy and Satisfaction component

Analysis between Q<sub>2</sub> and Q<sub>3</sub> of the Experimental groups



**COPM – PERFORMANCE & SATISFACTION MEASURE OF MOTHERS IN  
EXPERIMENTAL GROUP**

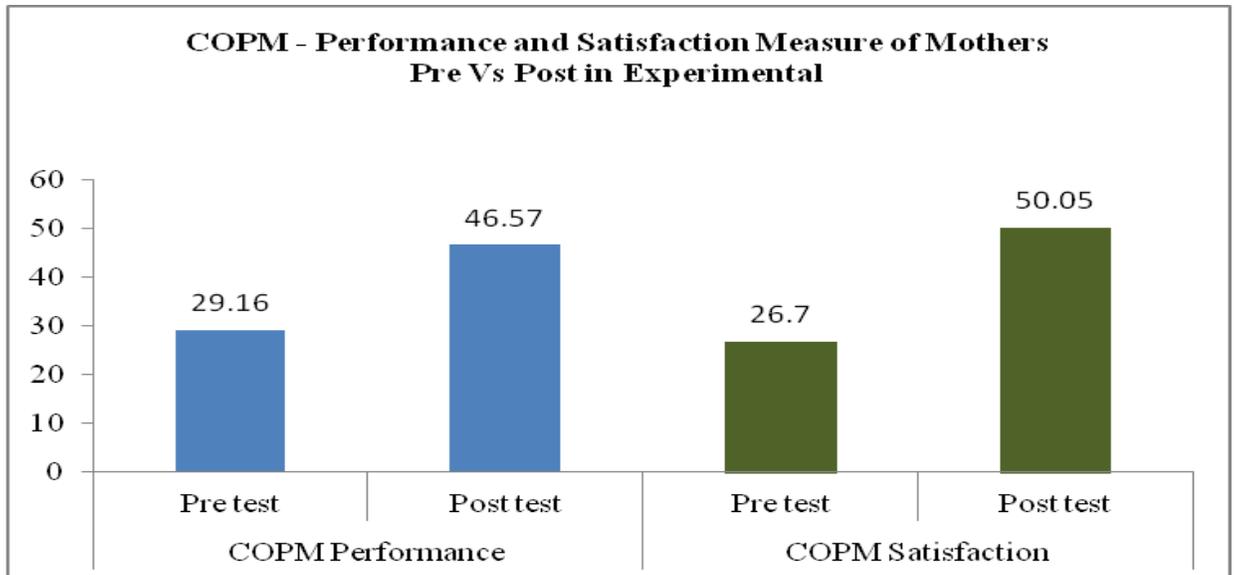
**Pre Vs Post scores (within group analysis)**

**Table 9:** COPM Performance and Satisfaction Measure of mothers in the experimental group (Goals of mothers only)

Group	Test	N	Mean	Std. Deviation	Z Score	Sig. (2-tailed)
COPM Performance	Pre test	18	29.16	12.4	3.72	0.000*
	Post test	18	46.57	14.98		
COPM Satisfaction	Pre test	18	26.7	13.25	3.638	0.000*
	Post test	18	50.05	18.76		

The COPM – Performance and Satisfaction measures, both showed significant difference between pre and post test among mothers in the experimental group.

**Graph 9:** COPM Performance and Satisfaction Measure of mothers in the experimental group (Goals of mothers only)



**COPM – PERFORMANCE & SATISFACTION MEASURE OF CHILDREN IN  
EXPERIMENTAL GROUP**

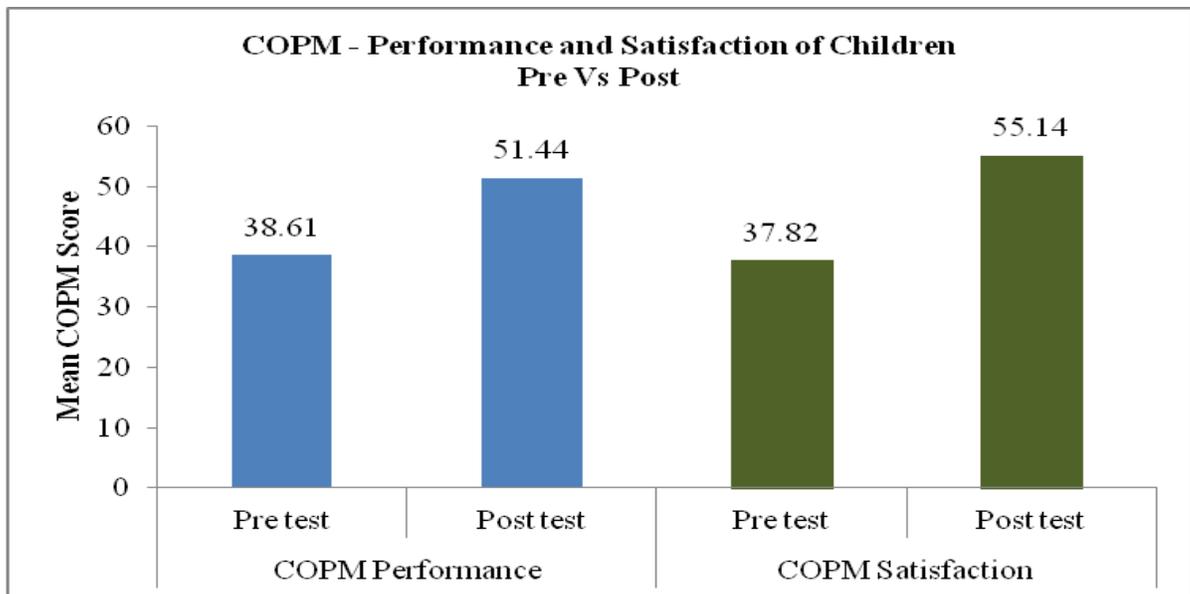
**Pre Vs Post scores (within group analysis)**

**Table 10:** COPM Performance and Satisfaction Measure of children in the experimental group (Goals of Children only)

Group	Test	N	Mean	Std. Deviation	Z Score	Sig. (2-tailed)
COPM Performance	Pre test	18	38.61	15.09	3.623	0.000*
	Post test	18	51.44	16.17		
COPM Satisfaction	Pre test	18	37.82	16.56	3.519	0.000*
	Post test	18	55.14	18.39		

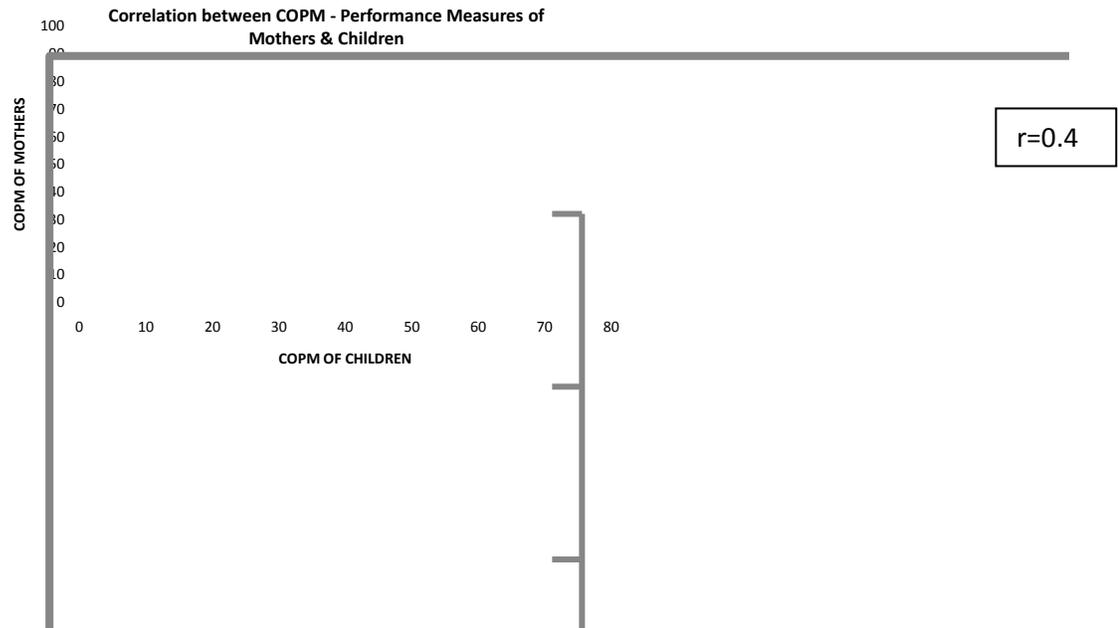
The COPM Performance and Satisfaction measures show significant difference ( $p=0.000$ ) in children in the experimental groups.

**Graph 10:** COPM Performance and Satisfaction Measure of children in the experimental group (Goals of Children only)



## CORRELATION BETWEEN COPM - PERFORMANCE MEASURES OF MOTHERS & CHILDREN

**Graph 10B:** Correlation between COPM - Performance Measures of Mothers & Children



The above graph demonstrates moderate correlation ( $r=0.41$ ) between post intervention COPM - Performance Measures of Mothers & Children

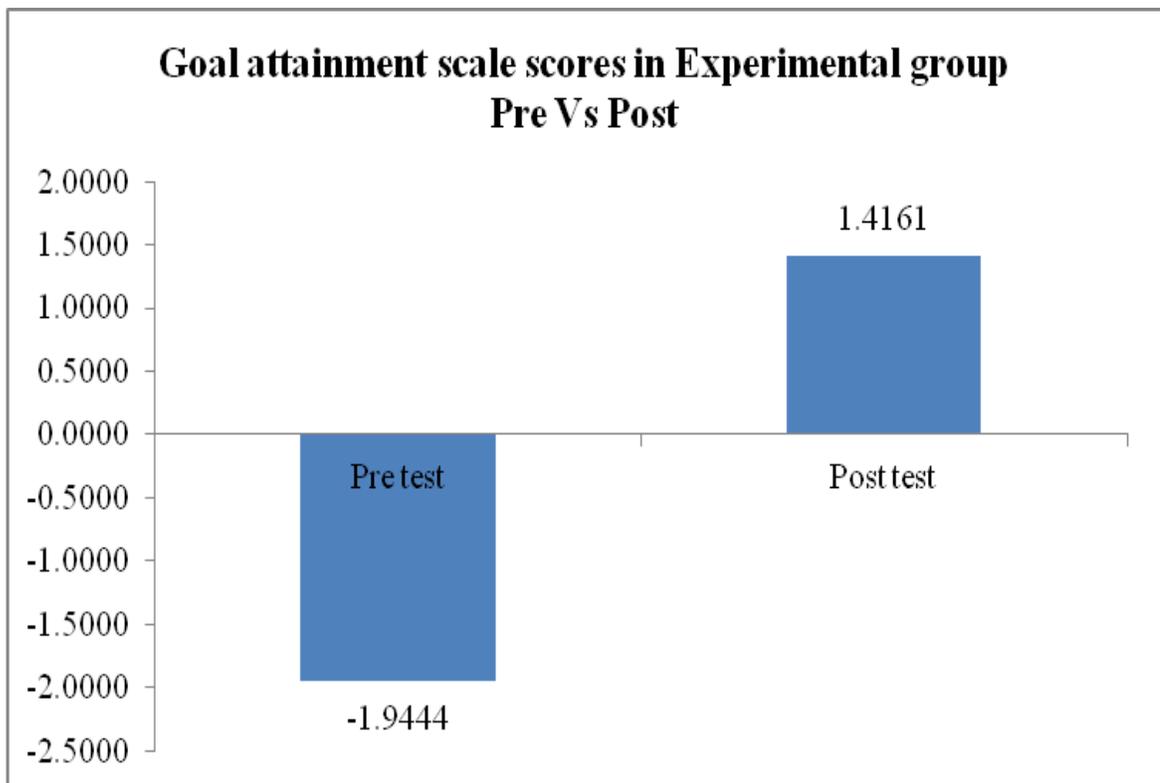
## GOAL ATTAINMENT SCALE

**Table 11:** Pre Vs Post scores in Goal attainment scale in the experimental group (within group analysis)

Test	N	Mean	Std. Deviation	Z Score	Sig. (2-tailed)
Pre test	18	-1.94	0.23	3.782	0.000*
Post test	18	1.41	0.82		

The above table shows significant difference ( $p=0.000$ ) between Pre and Post test in the Goal Attainment Scale (GAS) in the experiment group

**Graph 11:** Pre Vs Post scores in Goal attainment scale in the experimental group



## BETWEEN CONTROL AND EXPERIMENTAL GROUPS

**Table 12:** Comparison of Pre test score in COPM Performance and Satisfaction between control and experimental groups.

Test	Outcome measure	Group	N	U Score	Sig. (2-tailed)
Pre test	COPM Performance	Control	18	0.839	0.402
		Experimental	18		
	COPM Satisfaction	Control	18	1.314	0.189
		Experimental	18		
Post test	COPM Performance	Control	18	3.259	0.001*
		Experimental	18		
	COPM Satisfaction	Control	18	2.974	0.003*
		Experimental	18		

The Pre test scores between control and experimental groups in COPM Performance  $p=0.402$  ( $>0.05$ ) and COPM Satisfaction is  $p=0.189$  ( $>0.05$ ). They do not show any difference in the pre test scores between control and experimental groups. Hence, both the groups are similar at baseline level.

The post test scores between control and experimental groups in COPM Performance and Satisfaction is  $p=0.001$  ( $<0.05$ ) and  $0.003$  ( $<0.05$ ) respectively. Hence, there is a significant difference between control and experimental groups in both COPM Performance and Satisfaction.

**Table 13:** Comparison of Pre test score in PSCS Satisfaction and Efficacy between control and experimental groups.

Test	Outcome measure	Group	N	U Score	Sig. (2-tailed)
Pre test	PSCS Satisfaction	Control	18	0.143	0.886
		Experimental	18		
	PSCS Efficacy	Control	18	0.634	0.526
		Experimental	18		
Post test	PSCS Satisfaction	Control	18	1.806	0.071
		Experimental	18		
	PSCS Efficacy	Control	18	1.763	0.078
		Experimental	18		

The Pre test scores between control and experimental groups in PSCS Satisfaction  $p=0.143$  ( $>0.05$ ) and PSCS Efficacy is  $p=0.526$  ( $>0.05$ ). They do not show any difference in the pre test scores between control and experimental groups. Hence, both the groups are similar at baseline level.

The post test scores between control and experimental groups in PSCS Satisfaction and Efficacy is  $p=0.071$  ( $>0.05$ ) and  $0.078$  ( $>0.05$ ) respectively. Hence, there is no significant difference between control and experimental groups in both PSCS Satisfaction and Efficacy. However, the  $p$  value demonstrates positive trends indicating differences between control and experimental groups.

## *DISCUSSION*

## **9. DISCUSSION**

This study was conducted in Coimbatore from July to October 2015. Samples were selected from Occupational therapy department in Kovai Medical Centre and Hospital according to the determined selection criteria. They were divided into Control Group and Experimental Group. The Control group consisted of Mothers of Children with disabilities including Autism, ADHD and SPD, Children receiving regular Occupational therapy sessions and Mothers having daily interaction with the therapist. The Experiment group also consists of Mothers of children with similar disabilities. They were given Occupational Performance Coaching in groups weekly once in an one hour session and mid week follow up individually.

All the parents willingly provided their written consent. Group therapy and mid week follow up was followed through out the 10 weeks after which maintenance of improvements were tested after 4 weeks.

The pre test and post test measures of the sub components of Canadian Occupational Performance Measure, Parent sense of competence scale were subjected to Wilcoxon signed rank test. The Mann Whitney test was used to compare between the control and experiment group measures.

### **Canadian Occupational Performance Measure:**

#### **COPM:**

There was a significant difference in the pretest and post test of the performance and satisfaction component of COPM in the experiment group where as there was no significant difference in the control group.(Table 1 and 2) On comparing the pre test and post test measures, the experimental group showed significant difference in the performance component ( $p=0.000$ ), satisfaction component ( $p=0.000$ ) in the COPM measure. This study addresses the limitations of the previous study done by Fiona Graham et al, 2013 by including a control group and mothers of lower level education. We have obtained similar results as done by Fiona Graham et al, 2013 in which the COPM measures have shown significant

difference during the intervention phase. Improvements in all goals (both related to mothers' or children's performance and goals addressed during intervention) were clinically significant after OPC intervention and were maintained at 4-wk follow-up.

**COPM (Goals addressed):**

When the COPM measures were compared between the control and experiment group using the Mann-Whitney test, there was no significant difference in the pretests of control and experiment group that shows the homogeneity of the two groups. When goals addressed in the control and experiment groups were compared, it showed significant difference in the post tests. We can infer that the Children's performance, Mother's performance and the Mother's satisfaction has improved significantly in the experiment group after OPC intervention and not in the control group for Goals addressed. To our knowledge, no other studies have addressed this intervention design and proved the above.

**COPM (Mothers and children comparison):**

In this study, the correlation between the Mothers' performance and Childrens' performance was done using Pearson's correlation(Graph 8b). The results showed moderate correlation. This finding strongly supports the fact that working in a family centered practice results in better improvement in the child. Susanne king et al, 2004 and few other studies had mentioned that the outcomes for children are not addressed directly when the intervention focuses on Mothers. This study addresses this issue and has analyzed Mothers and children performance independently.

The Wilcoxon tests comparing pre test and post tests of Mothers(Table 7) and Children performance(Table 8) also shows strong significant difference by which we can infer that interventions that focuses on Mothers or families will have an impact on the children's performance.

**COPM – maintenance phase:**

This was done to show the long term effect an intervention can have on both Mothers and their Children. The intervention is considered stronger if there is statistically significant improvement or maintenance seen even after the intervention is removed (Table 5).

The results show that there was good maintenance during the follow up after 4 weeks when OPC intervention was no longer given. This again supports the previous study done by Fiona Graham, 2013 wherein there is maintenance of improvements after 6 week period. This proves that OPC intervention has a long term impact on both Mothers and Children Occupational Performance.

### **Self Competence in the Parental role**

The pre test and post test scores of the satisfaction component (Table 4) of PSCS showed significant difference in the experiment group before and after OPC intervention. There was no significant difference in the control group. This supports the findings of Fiona Graham et al, Lauren Foster et al in which they have shown better satisfaction of Mothers in handling their children. However efficacy component (Table 3) of PSCS did not show significant difference in both control and experiment groups which is contradicting the findings of previous studies. The probable reasons for efficacy component in COPM not being significant in this study could be attributed to Mother's hesitation in Collaborative goal setting, cultural background of India where Medical model is still followed, and varying educational and work backgrounds of the Mothers.

The comparison between the control and experiment group did not show significant difference in both the components. Though there is a mean difference that increased after OPC intervention, statistically it did not give a difference. The mothers learnt to make goals by themselves and showed improvement in their performance; however their sense of competence in dealing with their child needs to be addressed more in detail in the intervention sessions. This finding also

shows us that empowering Mothers in India might need a longer intervention duration in India.

### **Goal Attainment scale**

The pre test and post test of experiment group was compared using Wilcoxon test and showed significant difference (Table 9). By this we can infer that the goal setting by Mothers was successful and they were able to bring in a change in themselves and their children. This finding supports Fiona Graham, 2010 in her case report found that GAS is the best measure for OPC intervention and GAS is a good supportive scale for COPM.

## **QUALITATIVE ANALYSIS**

### ***PARENTS' EXPERIENCES***

The results of a thematic analysis of parent interviews post-OPC intervention have been condensed and are presented here. Three major themes in parents' experiences were revealed:

- (a) Solitude to Sociableness
- (b) Dependency to self learning and
- (c) Handling skills – Bitter to better.

Although interview questions began by asking about parents' individual experience of OPC sessions, their responses largely emphasized their perceptions of the impact of the intervention.

#### ***(a) Solitude to Sociableness:***

Most Mothers reported that they no more felt lonely after the OPC sessions as they realized that there are similar people with similar problems. They found these sessions as a platform to share their most personal feelings as they felt accepted and welcomed in the groups. Mothers also described this one hour as

moments of fun and relaxation where they enjoyed being in the group. For example, Viji – Mother of 5 year old stated that “The only place I laughed out from my heart is this group time, or else I am filled with worries and anxieties of the future and no one in my family even understands how I feel”. Change of Mindset was explained by Gayathri, Mother of one child with Autism in this manner “I somehow get the mindset that I can manage any kind of problems when I walk out of the room after the group session. It is just that I made lot of friends and when I help and support them, I feel confident about myself”. In addition Mothers described about their social skills and how it has improved after this groups. It is widely understood that in Indian context, most Women do not actively socialize, hence interaction in the group in itself is a big challenge under these circumstances. For example, kalpana, mother of 7 year old quoted “I knew I interact better on one to one basis but I feel shy to open up in a group. However, now I know how to approach a new mother in need and help her, not only that I even feel more confident in sharing my views with other mothers in the group”

***(b) Dependency to self learning:***

A second recurrent theme reflected the change from complete dependency on therapists to being able to set goals and try strategies by themselves that Mothers attributed to OPC intervention. Mothers reported that they were now able to understand the concept of SMART goal setting and they said that it not only helped in making changes in their children but for their own personal lives as well. They felt empowered, self confident, efficient in dealing with their child’s and their own issues of daily life situations. For example, Nandhini, Mother of a girl child commented that “Even though I had been trying for so many years to achieve many things, now I got the tactics of goal setting, analysis and evaluation of the goals. Now I can apply these on myself, on Sakthi (child’s sister) as well, it has reduced my anxiety like anything” . One more Mother happily described the way her child learnt to indicate for toileting saying “I had been trying hard for past 6 months to make him indicate, I just didn’t know the small steps in the goal

setting process that can miraculously achieve this in a simple way. Now I don't set vague goals, I know to specify the goals with a time line and scoring". When the Mothers had learnt the skill of setting goals, they started setting realistic expectations from their children with a timeline that reduced their anxiety and stress levels to bear minimum and they could work on their children much better now as they felt refreshed about themselves.

***c) Handling skills – Bitter to better:***

Mothers were pleased to describe about how the handling of their children had a drastic difference after the OPC intervention. They attributed this to learning from other mothers new strategies on each and every issue. For example, Yadeeswari, commented that "I get so puzzled when her child cries for no reason, but now during these groups I realized the reasons for which these kids cry as they cannot communicate their needs properly. I can now understand her feelings much better and I stay calm when she has a meltdown. I am able to analyze the situation much better now". Manjula said "I thought punishment and hitting is the only way to make my child do her things. I used to get so angry and frustrated when she does not listen to what I say. Recently, I am able to work with her side by side and use rewarding techniques. My anger and frustration has vanished and her child has started showing better improvements in her writing and communication skills". Mothers attributed these changes to both the direct resolution of goal situations and to a realization that staying optimistic supported their children's performance, which lead them to consciously self talk positive things. Greater optimism at home was evidenced by Mothers' report of children's increased confidence to learn new things or address other previously avoided situations post intervention. They also felt more optimistic of their own success.

*CONCLUSION*

## **10. CONCLUSION**

The Occupational performance coaching showed significant effect on the Occupational Performance of Mothers and their children. The improvement of performance and satisfaction in Mothers leads to improvement in Children. The Coaching also has an effect on the competence of Mothers. Thus to provide a holistic intervention for Children with disabilities it is necessary to incorporate occupational Performance coaching for better improvement of Children's' performance by improving the Mother's performance, for long term follow up of children' s performance through Mothers.

*LIMITATIONS AND*  
*RECOMMENDATIONS*

## **11. LIMITATIONS AND RECOMMENDATIONS**

1. The major differences between symptoms of various children resulted in different goal setting by Mothers. This lead to differences in time and complexity of goals for Children. This affected the uniformity in the progression of the intervention.
2. The regular therapy for children given by different therapists may also have had an effect on both the experiment and control group.
3. As the researcher was primarily involved in the intervention program, the study was not blinded to the researcher as well.
4. The study results cannot be generalized due to small sample size of the groups. Further randomized control studies with more subjects can be done to analyze the intervention with uniformity.
5. Further studies using objective type of scales are recommended to get a better analysis of the coaching
6. Long term retention of the improvements can be tested in further studies to even more prove the effectiveness of the coaching in a long term view.

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## 12. REFERENCES

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# APPENDIX

### 13. APPENDIX – I

#### GOAL ATTAINMENT RATING SCALE

SCORE	PREDICTED ATTAINMENT
-2	Much less than expected outcome
-1	Less than expected outcome
0	Expected outcome after intervention
+1	Greater than expected outcome
+2	Much greater than expected outcome

## APPENDIX II

### PARENTING SENSE OF COMPETENCE SCALE

(Gibaud-Wallston&Wandersman, 1978)

Please rate the extent to which you agree or disagree with each of the following statements.

	Strongly Strongly Disagree	Somewhat Disagree	Disagree	Agree	Somewhat Agree	Agree
	1	2	3	4	5	6
1. The problems of taking care of a child are easy to solve once you know how your actions affect your child, an understanding I have acquired.	1	2	3	4	5	6
2. Even though being a parent could be rewarding, I am frustrated now while my child is at his / her present age.	1	2	3	4	5	6
3. I go to bed the same way I wake up in the morning, feeling I have not accomplished a whole lot.	1	2	3	4	5	6
4. I do not know why it is, but sometimes when I'm supposed to be in control, I feel more like the one being manipulated.	1	2	3	4	5	6
5. My mother was better prepared to be a good mother than I am.	1	2	3	4	5	6
6. I would make a fine model for a new mother to follow in order to learn what she would need to know in order to be a good parent.	1	2	3	4	5	6
7. Being a parent is manageable, and any problems are easily solved.	1	2	3	4	5	6
8. A difficult problem in being a parent is not knowing whether you're Doing a good job or a bad one.	1	2	3	4	5	6
9. Sometimes I feel like I'm not getting anything done.	1	2	3	4	5	6
10. I meet by own personal expectations for expertise in caring For my child.	1	2	3	4	5	6

11. If anyone can find the answer to what is troubling my child, I am the one. 1 2 3 4 5 6
12. My talents and interests are in other areas, not being a parent. 1 2 3 4 5 6
13. Considering how long I've been a mother, I feel thoroughly familiar with this role. 1 2 3 4 5 6
14. If being a mother of a child were only more interesting, I would be motivated to do a better job as a parent. 1 2 3 4 5 6
15. I honestly believe I have all the skills necessary to be a good mother to my child. 1 2 3 4 5 6
16. Being a parent makes me tense and anxious. 1 2 3 4 5 6
17. Being a good mother is a reward in itself. 1 2 3 4 5 6

Appendix III  
CANADIAN OCCUPATIONAL PERFORMANCE MEASURE

Authorss  
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Mary Ann McColl, Helene Polatajko, Nancy Pollock

The Canadian Occupational Performance Measure (COPM) is an individualized measure designed for use by occupational therapists to detect self-perceived change in occupational performance problem over time.

Client Name:

Age:

Gender:

ID#:

Respondent (if not client):

Date of Assessment:

Planned Date of  
Reassessment:

Date of Reassessment:

Therapist:

Facility/Agency:

Program:

<p><b>STEP 1:</b></p> <p><b>IDENTIFICATION OF OCCUPATIONAL PERFORMANCE ISSUES</b></p> <p>To identify occupational performance problems, concerns and issues, interview the client, asking about daily activities in self-care, productivity and leisure. Ask clients to identify daily activities which they want to do, need to do or are expected to do by encouraging them to think about a typical day. Then ask the client to identify which of these activities are difficult for them to do now to their satisfaction. Record these activity problems in Steps 1A, 1B, or 1C.</p>	<p><b>STEP 2</b></p> <p><b>RATING IMPORTANCE</b></p> <p>Using the scoring card provided, ask the client to rate, on a scale of 1 to 10, the importance of each activity. Place the ratings in the corresponding boxes in Steps 1A, 1B, or 1C.</p>
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**STEP 1A: Self-care**

IMPORTANCE

**Personal Care**

(e.g., dressing, bathing, feeding, hygiene) \_\_\_\_\_

**Functional Mobility**

(e.g., transfers, indoor, outdoor) \_\_\_\_\_

**Community Management**

(e.g., transportation, shopping, finances) \_\_\_\_\_

**STEP 1B: Productivity**

**Paid/Unpaid Work**

(e.g., finding/keeping a job, volunteering) \_\_\_\_\_

**Household Management**

(e.g., cleaning, laundry, cooking) \_\_\_\_\_

**Play/School**

(e.g., play skills, homework) \_\_\_\_\_

**STEP 1C: leisure**

Quiet Recreation (e.g., hobbies, crafts, reading) \_\_\_\_\_

Active Recreation (e.g., sports, outings, travel) \_\_\_\_\_

Socialization (e.g., visiting, \_\_\_\_\_)

Phone calls, parties, correspondence) \_\_\_\_\_

### STEPS 3 & 4: SCORING - INITIAL ASSESSMENT and REASSESSMENT

Confirm with the client the 5 most important problems and record them below. Using the scoring cards, ask the client to rate each problem on performance and satisfaction, then calculate the total scores. Total scores are calculated by adding together the performance or satisfaction scores for all problems and dividing by the number of problems. At reassessment, the client scores each problem again for performance and satisfaction. Calculate the new scores and the change score.

Initial Assessment:

OCCUPATIONAL  
PERFORMANCE  
PROBLEMS:

PERFORMA  
NCE 1

Reassessment

SATISFACTION 1  
PERFORMANCE 2

SATISFACTION 2

- 1.
- 2.
- 3.
- 4.
- 5.

### ADDITIONAL NOTES AND BACKGROUND INFORMATION

Initial Assessment:

## APPENDIX 4

	<b>Parenting sense of Competence – control group</b>			
<b>Sub. No</b>	PSCSE pre	PSCSE post	PSCSS pre	PSCSS post
1	0.6	0.7	0.33	0.33
2	0.6	0.6	0.55	0.57
3	0.81	0.77	0.37	0.37
4	0.83	0.85	0.31	0.33
5	0.68	0.64	0.34	0.42
6	0.87	0.89	0.61	0.64
7	0.75	0.7	0.61	0.48
8	0.83	0.54	0.57	0.4
9	0.93	0.66	0.62	0.55
10	0.64	0.66	0.48	0.51
11	0.72	0.7	0.5	0.4
12	0.83	0.83	0.66	0.66
13	0.87	0.87	0.33	0.25
14	0.45	0.18	0.5	0.33
15	0.58	0.64	0.5	0.61
16	1	1	0.64	0.64
17	0.81	0.83	0.74	0.74
18	0.6	0.64	0.68	0.58

	<b>Parenting sense of Competence – Experimental group</b>					
<b>Sub. No</b>	PSCSE pre	PSCSE post	PSCSE post 2	PSCSS pre	PSCSS post	PSCSS post 2
1	0.62	0.7	0.68	0.55	0.59	0.55
2	0.91	0.81	0.81	0.59	0.81	0.66
3	0.79	0.85	0.85	0.5	0.51	0.48
4	0.95	0.95	0.95	0.57	0.83	0.83
5	0.85	0.83	0.85	0.42	0.48	0.48
6	0.64	0.68		0.53	0.59	
7	0.81	0.83	0.85	0.4	0.44	0.46
8	0.62	0.89	0.62	0.5	0.5	0.5
9	0.77	0.83	0.85	0.51	0.61	0.62
10	0.87	0.7	0.89	0.5	0.62	0.53
11	0.75	0.95	0.87	0.7	0.77	0.72
12	0.72	0.64	0.72	0.48	0.59	0.51
13	1	0.91	1	0.68	0.83	0.77
14	0.87	0.75	0.71	0.4	0.33	0.32
15	0.75	0.72	0.72	0.38	0.38	0.37
16	0.64	0.64	0.64	0.57	0.57	0.57
17	0.7	0.72	0.72	0.5	0.51	0.51
18	0.7	0.87	0.89	0.52	0.67	0.65

	<b>COPM – Control group</b>			
<b>Sub. No</b>	COPMP pre	COPMP post	COPMS pre	COPMS post
1	35.2	36.3	33.7	33.85
2	36	37	33.6	35.6
3	24	28	46	46
4	33	38.5	27.5	33
5	45.2	35	53	38.2
6	51.5	65	56	65
7	48.4	31.4	35.4	33.8
8	38.6	38.4	34	27.8
9	37.25	37.5	39.75	42.7
10	43.25	47.75	43.25	43.25
11	59.3	66	59.3	62.6
12	24.2	24.2	19.2	19.2
13	28.4	25.2	35.6	29.2
14	31.6	31.6	32.8	32.8
15	46.6	48.6	44.8	45.8
16	21.6	21.6	23.3	23.3
17	44	44	45.4	45.4
18	32.6	32.6	33	33

	<b>COPM – Experimental group</b>					
<b>Sub. No</b>	COPMP pre	COPMP post	COPMP post 2	COPMS pre	COPMS post	COPMS post 2
1	30	50	58	32	64	58.8
2	26.4	47	46.6	29.8	54	52.2
3	21.6	23.4	26	22.4	24.2	24.2
4	27.8	68.2	72.2	23.8	84.2	68.2
5	21.8	26.4	27	15	14	14
6	23	38.8		27	42.8	
7	48	58	60	56	58	60
8	20	34	34	18	34	34
9	54.2	56.8	56.8	36.4	42.8	41.4
10	43.8	55.2	53.2	36	48.8	49.8
11	17.8	64.4	74.4	17.8	68.4	80
12	52	56	68	50	70	74
13	23.2	36.8	40.2	27.2	40.8	40
14	35.6	48	51.8	37.2	49.6	53.4
15	22.5	27.25	27.25	24.5	27.25	27.25
16	33.8	33.8	33.8	39.8	39.8	39.6
17	64.2	64.2	64.2	58	58	58
18	34.5	45.5	45.5	30	31.3	32.3

	<b>GAS – experimental group</b>	
<b>Sub. No</b>	GAS pre	GAS post
1	-2	2
2	-2	2
3	-2	0.33
4	-2	2
5	-2	2
6	-2	2
7	-2	2
8	-2	2
9	-2	1.5
10	-1	1.33
11	-2	1.5
12	-2	-1
13	-2	1.5
14	-2	2
15	-2	1
16	-2	1
17	-2	0.33
18	-2	2

**ETHICS COMMITTEE CLEARANCE LETTER**



**KMCH ETHICS COMMITTEE  
KOVAI MEDICAL CENTER AND HOSPITAL LIMITED**

Post Box No. 3209, Avanashi Road, Coimbatore - 641 014, INDIA

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EC Reg. No : ECR / 112 / Inst / TN / 2013

Ref: EC/AP/411/09/2015  
21.09.2015

**APPROVED**

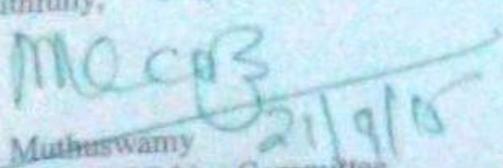
To:  
Mrs.S.Sugi  
Professor,  
KMCH College of Occupational Therapy  
Coimbatore-641048  
Tamilnadu, India.

Dear Mrs.S.Sugi,

The proposal entitled "Effectiveness of Occupational performance coaching on mothers of children with disabilities." Submitted by Mrs.Suja Angelin under your guidance was reviewed by the Ethics Committee in its meeting held on 19.09.2015 and permission is granted to carry on the study at Kovai Medical Center and Hospital Ltd, Coimbatore, India.

Thanking you,

Yours faithfully,

  
Dr. P. R. Muthuswamy  
Chairman, KMCH Ethics Committee

**DR. P. R. MUTHUSWAMY,**  
MA, MEA, FDPM(IIM-A)Ph.D.,  
Chairman  
Ethics Committee  
Kovai Medical Center and Hospital  
Avanashi Road,  
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