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Impact of Support Program on Enhancing the Participation of Children with Autism in Various Activities

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ABSTRACT :

Family-cantered practice emphasizes practitioner-caregiver partnerships and the use of family resources to achieve family-identified goals in authentic contexts. In occupational therapy for children with autism spectrum disorder (ASD), interventions that align with parental goals are crucial for meaningful outcomes. This study aimed to evaluate the effectiveness of contextual intervention in improving activity participation in children with ASD. A quasi-experimental pre-post-test design was adopted, involving 30 children with ASD. The experimental group (n=15) received contextual intervention alongside conventional occupational therapy, while the control group (n=15) received only conventional therapy. The study spanned 12 weeks, with assessments conducted across four timelines (T1-T4) using the Canadian Occupational Performance Measure (COPM), Goal Attainment Scale (GAS), Parent Sense of Competence Scale (PSOC), Short Sensory Profile (SSP), and Home and Community Activities Scale (HCAS). The intervention consisted of ten sessions, each lasting 45-60 minutes. Results indicated significant improvements in the experimental group, with higher COPM performance scores (ηp^2=0.922) and parental satisfaction (ηp^2=0.916). Additionally, significant gains were observed in GAS (ηp^2=0.897), PSOC efficacy (ηp^2=0.960), and PSOC satisfaction (ηp^2=0.969). These findings suggest that contextual intervention enhances children's participation in activities that parents find meaningful and supports parental competence in their caregiving role.

Keywords: Autism spectrum disorder, contextual intervention, family-Centred practice, occupational therapy, caregiver competence, activity participation.

Introduction :

Family-centred practice, as described by Dunst et al. (2006), emphasizes collaborative partnerships between practitioners and caregivers. This approach is grounded in principles such as utilizing family resources to develop solutions that align with family-identified goals and implementing interventions within authentic contexts. In the field of occupational therapy for children with autism spectrum disorder (ASD), family-centred care prioritizes the goals that parents set for their children, fostering an environment of dignity and respect. Within this framework, families and occupational therapy practitioners engage in a reciprocal exchange of information, empowering caregivers to make informed decisions while ensuring that practitioners remain responsive to families' priorities and choices (American Academy of Pediatrics, 2012).

When adopting family-Centred care, practitioners actively listen to parents' concerns, integrating professional expertise with observations of the child's performance to collaboratively establish treatment goals (Cohn et al., 2014). Children with ASD are particularly vulnerable to limited participation in daily activities, and research indicates that they engage in fewer activities with less variety compared to children with other developmental disabilities or typically developing peers (LeVesser & Berg, 2011; Rodger & Umaibalan, 2011). Studies have found that preschool-aged children with ASD participate less frequently in self-care routines, community mobility, vigorous leisure, and sedentary leisure activities than their typically developing counterparts (LeVesser & Berg, 2011). Additionally, caregivers report reduced frequency and diversity in their children's activity participation (Lam et al., 2010), with special events such as birthday parties and family vacations occurring less often among both preschool- and school-age children with ASD (Rodger & Umaibalan, 2011).

The reduced participation of school-age children with ASD is particularly evident in unstructured social activities, hobbies, and recreational or after-school programs (Hochhauser & Engel-Yeger, 2010; Reynolds et al., 2011). Similarly, adolescents with ASD engage less frequently in community-based activities, such as after-school clubs and organizations, compared to typically developing peers and those with other developmental disabilities (Lee, Harrington et al., 2008; Orsmond et al., 2004; Solish et al., 2010).

Occupational therapy is one of the most frequently requested and utilized services for children with ASD (Mandell & Levy, 2005), with sensory integration-based therapy being among the most preferred interventions (Goin-Kochel et al., 2007). Research suggests that 45% to 90% of children with ASD experience sensory-related challenges (Ben-Sasson et al., 2008), which significantly impact their ability to participate in daily activities (Baranek, 2012; Hilton et al., 2007; Schaaf et al., 2011). Consequently, parents frequently seek occupational therapy interventions that address sensory processing difficulties affecting their child's functional performance. Given these concerns, it is essential for practitioners to adopt family-Centred care approaches to collaboratively establish therapeutic goals and effectively communicate how sensory integration challenges influence a child's participation at home, school, and in the community (Parham & Mailloux, 2015).

Rationale of the Study :

Children with autism spectrum disorder (ASD) often experience challenges in social interaction, communication, and sensory processing, which can limit their participation in various activities, including educational, recreational, and community-based engagements. Participation in these activities is essential for their overall development, well-being, and social integration. However, without appropriate support, children with autism may face barriers that hinder their ability to engage meaningfully in these experiences.

Support programs tailored to the needs of children with autism play a crucial role in enhancing their participation in different activities. These programs provide structured interventions, individualized strategies, and assistive tools that help bridge gaps in communication, socialization, and adaptive skills. By equipping children with the necessary support, these initiatives foster confidence, independence, and inclusivity, leading to improved developmental outcomes.

Aim and Objectives :

3.1 Aim:

To study the effectiveness of contextual intervention to improve activity participation in children with ASD.

3.2 Objectives:

- To link sensory factors to participation
- To establish intervention goals for parents for activity in children with ASD
- To find out the effectiveness of contextual intervention in activity participation

3.3 Hypothesis:

3.3.1 Null Hypothesis:
Contextual intervention will not be effective for improving activity participation in children with ASD

3.3.2 Alternative Hypothesis:
Contextual intervention will be effective for improving activity participation in children with ASD

3.4 OPERATIONAL DEFINITIONS

- Activity is the execution of a task or action by an individual.
- Participation is involvement in a life situation.
- 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 include 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 fulfil the requirements of occupational performance roles.

Research Methodology :

Research design:

The aim of the study was to find the impact of contextual intervention in improving activity participation in children with ASD hence used a quasi-experimental pre-posttest design.

Experimental group underwent conventional occupational therapy and contextual intervention, and control group underwent only conventional occupational therapy.

4.2 Sampling:

Convenience sampling

4.3 Sample size:

The study includes 30 samples

Experimental group: 15
Control group: 15

4.4 Place of the study:

This study was conducted in Occupational Therapy Department, Pacific Hospital, (Rajasthan)

4.5 Variables:

- Independent variables – Contextual intervention
- Dependent variables – Activity participation, self-competence and satisfaction
- Extraneous variables – Parental regularity in attending sessions, severity of illness.

Inclusion criteria:

- Children diagnosed with autism by a psychiatrist.
- Children in the age group 2- 15 years
- Both the gender

Exclusion criteria:

- Children with developmental delays or other physical disabilities.
- Mothers who had history of psychological issues or any form of mental illness

4.6 Outcome measures:

- Occupational performance of children
- Activity participation in children
- Attainment of goals by mothers
- Parental competence

4.7 TOOLS USED:

Canadian Occupational Performance Measure

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.

Goal Attainment Scale (GAS)

- GAS is an individualized, criterion-based measure of goal attainment in which goals are determined through interview with clients.

Data Analysis :

The study was conducted in 30 children with ASD within the age group of 2 to 15years. The study group was divided into two groups the experimental group and the control group, with 15 children in each group. The experimental group received contextual intervention and regular occupational therapy, and the control group received only regular occupational therapy.

Table 1.0 Participant characteristics (Children)

Group	N		Gender (N)		Age		Gender	
	male	female	mean	SD	mean		SD	
Experimental	15	12	3	5.73	2.93	1.20		0.41
Control	15	10	5	2.0	0.00	4.06		1.03

The above table shows that the mean age of experimental group is 5.73 ±2.93 and 2 ±0.00 for the control group respectively. The mean of gender in experimental group is 1.20 ± 0.41and 4.06 ±1.03 for the control group.

Table 2a.0 Participant characteristics (mothers)

Experimental		Control
Urban	11	6
Rural	4	9
UG	10	9
PG	1	0
Below 12th	4	6

This table shows that the mean age of experimental group is 32.06 ±4.63 and 30 and 4.63± 2.87 for the control group.

Table 3.0 Intervention characteristics:

Activity settings	Experimental (in %)	Control (in %)
Home	86.6	80
Community	73.3	86.6
Self-care	100	93.3
Leisure	66.6	60

The above table shows the bulk of activity settings chosen by the mothers.

Results and Discussion :

The children in experimental group showed significance in effectiveness on performance scores of COPM (ηp2=0.922), the mothers showed significance in effectiveness on satisfaction scores ((ηp2=0.916), GAS scores (ηp2 =0.897), efficacy scores on PSOC (ηp2=0.960) and satisfaction scores on PSOC (ηp2=0.969). **Sensory Profile patterns**

Children with ASD present with difficulty processing and integrating sensory information (**Baranek et al.,2006 and Mallioux et al., 2010**) which has an impact on their participation in daily activities (**Schaaf et al, 2012**). This reflects the results shown in Short sensory profile scores (table 4)wherein the sensory patterns are tactile sensitivity(93.3%), taste/smell sensitivity (80%),movement sensitivity(80%), seeks sensation(86.6%), auditory filtering(100%), low energy (13.3%) and visual/auditory sensitivity (93.3%) for experimental group and 100%, 86.6%, 40%, 80%,80%, 13.3% and 80% respectively for control group .A study by **Smith Roley et al.'s (2015)** has demonstrated a link between problems in sensory integration and social participation. **Intervention characteristics:** The bulk of activity settings chosen by the mothers were the home, community wherein home (83%), community (73.3%), self-care (100%) and leisure (66.6%) for the Experimental group and 80%, 86.6%, 93.3% and 60% for control group respectively. Mothers discussed about goals for their children and identified strategies along with the therapist to achieve the goals. **Children's participation** There was a significant ($p \leq 0.05$) improvement in children's performance and participation (COPM, GAS and HCAS) shown in table 7a, graph 7a and table 8a, graph 8a, table 9a and 9b. Mothers exhibited positive perceptions of their children's participation through the sustainability period. **The parent sense of competence**: PSOC efficacy scale assesses capability and problem-solving ability (e.g., "If anyone can find the answer to what is troubling my child, I am the one"). The efficacy components of PSOC did not show a statistically significant ($p \geq 0.05$) improvement (table 10b) at all timelines as the mothers wanted more time to experience competence and to evaluate their child's progress in performance.

Conclusion :

This study concludes that by providing a structure for problem solving (intervention characteristics) and reflective guidance (coaching), the mothers found unique ways to achieve their goals. Contextual intervention led to significant improvement in children's participation in ways that parents found useful. Partnering with parents to find strategies to achieve their goals leads to the parents feeling more competent in their parenting role.

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