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Research Article

EFFECT OF OCCUPATIONAL THERAPY INTERVENTION ON PERFORMANCE SKILLS AMONG PRESCHOOL AGED CHILDREN AND PARENTS' SATISFACTION TO OCCUPATIONAL THERAPY INTERVENTION

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Abstract

Background: The transition from home to school presents developmental challenges that require robust motor, cognitive, and social-emotional competencies. Occupational therapists utilize activity-based frameworks to enhance performance skills and foster engagement in daily school occupations.

Methods: A randomized controlled trial study was carried out at Santosh College of Occupational Therapy. Experimental group was given a 5-week multi-modal intervention that combined cognitive tasks, conductive education, Goals Activity and Motor Enrichment, and therapeutic listening for 45 minutes, three times per week, in addition to conventional therapy. The control group took part in the usual school-based activities. Assessments before and after the intervention were carried out using the Performance Skills Questionnaire (PSQ) and the Client Satisfaction Questionnaire-8.

Results: While both groups improved, the experimental group demonstrated superior post-intervention gains. Pre- to post-intervention PSQ scores in the experimental group yielded a Cohen's d of 9.230 and Hedges' g of 9.726, reflecting substantial performance enhancements. CSQ-8 scores showed Cohen's d of 3.830 and Hedges' g of 4.035, indicating marked caregiver satisfaction. Between-group post-intervention comparisons showed significant differences for both PSQ ($t = -10.216$, $p < .001$) and CSQ-8 ($t = -10.680$, $p < .001$).

Conclusion: Structured, multi-modal occupational therapy significantly enhances performance skills in preschool-aged children and increases caregiver satisfaction relative to standard school activities.

Keywords: occupational therapy, performance skills, preschool children, parent satisfaction, early intervention, PSQ, CSQ-8.

1. Introduction

The preschool years, spanning ages three to five, represent a vital period during which children develop foundational physical, cognitive, and social-emotional competencies. Transitioning from home to a structured school environment introduces unfamiliar routines and demands that can induce stress, manifest emotional or behavioral restlessness, and disrupt learning continuity [1, 2]. Successful transition planning mitigates anxiety, builds environmental familiarity, and cultivates a sense of safety and belonging essential for academic engagement [3, 4].

Early childhood competence requires the integration of motor, social, and cognitive performance skills [5]. Fine and gross motor abilities—such as postural control, bilateral coordination, and visual-motor integration—underpin independent self-care, classroom tool manipulation, and play [6, 7, 8]. Fundamental movement patterns established during this stage serve as building blocks for complex physical and functional tasks [9]. Furthermore, social interaction skills enable children to express emotions, interpret social cues, and engage in cooperative peer relationships according to shared norms [5, 10].

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Play constitutes a child's primary occupation, offering a natural medium for cognitive exploration, motor refinement, and emotional resilience [11, 12]. Unstructured and goal-directed play activities foster holistic developmental growth and support academic readiness [13, 14]. Guided by the Occupational Therapy Practice Framework, occupational therapy supports active engagement in vital life roles through interventions that are client-centered and based on activity [15, 16].

Pediatric occupational therapists promote self-reliance and functional development in children experiencing developmental delays or environmental transition difficulties (Moll et al., 2018; Novak & Honan, 2019). Despite the recognized value of early intervention, limited empirical research evaluates multi-modal occupational therapy programs targeting both child functional performance skills and caregiver satisfaction during the preschool transition [17, 18]. This study addresses this gap by investigating the impact of an enriched occupational therapy intervention on children's performance skills and parent satisfaction.

2. MATERIALS AND METHODS

2.1 Study Design and Participants

The Institutional Ethical Committee of Santosh College of Occupational Therapy reviewed, discussed, and approved this randomized controlled experiment (Ref No. SCOT/JULY-.25/ECPEADS-07), which included 32 preschoolers ages 4 to 6. The subjects were divided into two groups at random: a control group (n = 16) and an experimental group (n = 16). Children between the ages of 4 and 6 who were enrolled in preschool programs and whose parents had provided written informed consent were required to meet the inclusion criterion. Children with significant neurological abnormalities or severe untreated sensory impairments were excluded.

2.2 Intervention Protocols

Both groups received therapy across 15 sessions (45 minutes per session, 3 times weekly for 5 weeks). (Negi, N., & Kandula, P. et.al) [1].

- **Table: 1 Experimental Intervention Plan**: Combined cognitive, conductive, neuro developmental, motor enrichment, and auditory sensory activities alongside standard classroom exposure.

Category	Description	Session Dosage
Cognitive Interventions	Memory games, puzzles, problem-solving tasks, and structured attention exercises.	5 min
Conductive Education	Daily living skills training, gross motor routines, and fine motor coordination drills.	10 min
Early Intervention (Developmental)	Milestone activities focused on locomotion, grasping, and interactive game communication.	5 min
Neurodevelopmental Therapy (NDT)	Balance routines, postural control tasks, muscle stretching, and targeted strengthening.	5 min
GAME (Goals Activity & Motor Enrichment)	Ball handling, jumping, climbing, and structured role-play activities.	10 min
Therapeutic Listening	Specialized auditory sensory music protocols.	5 min
Visual Motor Interventions	Target ball tosses, shape drawing, and spatial puzzle matching.	5 min

- **Control Group Services**: Engaged in regular school-based activities, standard classroom learning, physical education routines, and standard motor tasks for 45 minutes per session without specialized occupational therapy additions.

2.3 Outcome Measures

Performance Skills Questionnaire (PSQ): a parent-report measure that assesses children's motor, cognitive, and social-interaction abilities in everyday activities (Bart et al., 2010). This scale shows robust internal consistency (Cronbach's alpha = .80\.90) along with high test-retest reliability (Bart et al., 2010).

Client Satisfaction Questionnaire-8 (CSQ-8): 8-item test with a 4-point Likert answer format (scores range from 8 to 32) that assesses parent satisfaction with therapy treatments (Larsen et al., 1979). The CSQ-8 exhibits great concept validity and high internal consistency (Cronbach's alpha =.85,.92) (Larsen et al., 1979).2.4 Statistical Analysis IBM SPSS Statistics (Version 29.0) was used to compile and analyze the data. Demographic characteristics are summed up via descriptive metrics. Independent and paired t-tests were used to evaluate baseline comparability and post-intervention differences. Hedges' g and Cohen's d were used to compute standardized effect sizes. The threshold for statistical significance was fixed at $p < .05$.

3. RESULTS

The total sample comprised 32 children with a mean age of 4.45 -0.46 years. Males represented 68.75% (n = 22) and females represented 31.25% (n = 10) of the cohort.

Table:2. Demographic Profile of Participants (N = 32)

Variable	Category	Value / n (%)
Age (year)	Mean ± SD	4.45 \pm 0.46
Gender	Male	22 (68.75%)
	Female	10 (31.25%)

Independent t-tests confirmed baseline equivalence between groups prior to therapy, showing no significant differences for PSQ (t = -0.738, p = .466) or CSQ-8 (t = -1.706, p = .098).

Table: 3. Baseline Pre-Intervention Comparison

Scale	t	p-value	Interpretation
Pre-OT PSQ (Control vs. Experimental)	-0.738	.466	No significant difference
Pre-OT CSQ (Control vs. Experimental)	-1.706	.098	No significant difference

Following intervention, paired analyses demonstrated significant gains in both groups; however, the experimental group exhibited markedly larger test statistics.

Table:4. Within-Group Pre- to Post-Intervention Analysis

Scale / Group	t	p-value	Interpretation
Post-OT PSQ (Control)	-1.401	.003	Statistically significant
Post-OT CSQ (Control)	-3.359	.004	Statistically significant
Post-OT PSQ (Experimental)	-13.434	< .001	Statistically significant
Post-OT CSQ (Experimental)	-10.967	< .001	Statistically significant

Effect size analyses confirmed the substantial impact of the experimental intervention relative to standard care.

Table:5. Pre- to Post-Intervention Effect Sizes (Cohen's d and Hedges' g)

Group	Scale	Metric	Point Estimate	95% CI (Lower, Upper)
Control	**PSQ**	Cohen's d	3.391	-0.850, 0.161
		Hedges' g	3.573	-0.807, 0.153
	CSQ	Cohen's d	1.861	-1.403, -0.256
		Hedges' g	1.961	-1.331, -0.243
Experimental	**PSQ**	Cohen's d	9.230	-4.636, -2.064
		Hedges' g	9.726	-4.400, -1.959
	CSQ	Cohen's d	3.830	-3.820, -1.645
		Hedges' g	4.035	-3.625, -1.561

Between-group post-intervention comparisons confirmed that the experimental group achieved superior outcomes on both measures.

Table: 6. Between-Group Independent t-Test Analysis

Outcome Measure	F (Levene's)	p-value (Levene's)	t	p-value (Two-Sided)	Mean Difference	Std. Error Difference
PSQ Pre-Int.	0.143	.708	-0.738	0.466	-3.375	4.575
PSQ Post-Int.	0.068	.796	-10.216	< .001	-33.187	3.249
CSQ Pre-Int.	1.944	.173	-1.706	0.098	-1.562	0.916
CSQ Post-Int.	0.227	.637	-10.68	< .001	-10.500	0.983

.4. DISCUSSION

This study investigated the effectiveness of an enriched, multi-modal occupational therapy intervention in improving performance skills and caregiver satisfaction among preschool children. Baseline equivalence confirmed that both groups started from comparable functional levels.

While control participants demonstrated improvements from standard school routines, the experimental group achieved significantly greater functional gains across all metrics. The combination of cognitive training, conductive exercise, motor enrichment (GAME), and auditory listening addressed multiple developmental domains simultaneously. These structured activities enhanced balance, visual-motor integration, and task attention, directly improving overall classroom engagement [6, 11].

The marked increase in parent satisfaction (CSQ-8) in the experimental group highlights the clinical importance of family-centered occupational therapy. When parents observe tangible improvements in their child's daily functioning and school readiness, caregiver confidence and satisfaction increase [17, 18], These results highlight the importance of including

structured occupational therapy routines during school transitions in early childhood. [3, 16].

5. CONCLUSION

Multi-modal occupational therapy intervention significantly enhances performance skills in preschool-aged children and increases parental satisfaction compared to standard school activities alone. Early implementation of structured occupational therapy supports functional development and school readiness during critical early childhood transitions.

8. Conflict of Interest: Nil

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