

# THE EFFECTIVENESS OF OCCUPATIONAL THERAPY SPATIAL PLAY-BASED MANAGEMENT ON COOPERATIVE BEHAVIOUR IN ELEMENTARY SCHOOL-AGED CHILDREN WITH AN AUTISM SPECTRUM DISORDER

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## Abstract

**Background :** This study resources to explore the effect of Occupational Therapy Spatial Play-based Interventions on Cooperative Behaviour in Elementary School-Aged Children with a Autism spectrum disorder in a Flora occupational therapy centre in Bhavani, Tamil Nadu. Statistical tools like Descriptive statistics mean and standard deviation was utilized to analyze the effect of Occupational Therapy Spatial Play-based Interventions on Cooperative Behaviour in Elementary School-Aged Children with a Autism spectrum disorder. The analysis discovers that Occupational Therapy Spatial Play-based Interventions in Elementary School-Aged Children with a Autism spectrum disorder, and training and advancement strategy and practices of Flora occupational therapy centre. Then again, pediatric occupational therapists are satisfied with the Spatial Play-based Interventions for operational developmental coordination disorder, compensation policy, performance appraisal, and industrial relations. The analysis proposes that the clinics ought to create an appropriate Spatial Play-based strategy and give prominence to appropriate play practices to upgrade the satisfaction of their pediatric occupational therapists and construct them with Cooperative Behaviour in Elementary School-Aged Children with Autism spectrum disorder.

**Key words :** Spatial Play, clinics, Autism spectrum disorder, pediatric occupational therapists, Cooperative Behaviour

## INTRODUCTION

The pediatric occupational therapists sector is growing at a brisk pace due to its founding of kindness services and increasing distribution by the public as well as Spatial Play-based Interventions in private clinics. The pediatric occupational therapist distribution system is characterized by major components- community and private. The Government: private-public health care system comprises limited secondary and territory care associations in key cities and emphasizes providing basic occupational therapists facilities in the form of health care centers in rural areas. The private sector provides the majority of secondary and temporary care institutions with a major concentration on Autism spectrum disorder. Existing pediatric occupational therapist establishments are expanding by opening clinics in new service areas and new societies entering with state of art equipment latest approaches and promotion strategies. Consequently, struggle along pediatric occupational therapists is on the rise increased income and awareness levels are dynamic the patients to seek quality pediatric occupational therapists. The providers in turn need to be more advanced in their approach and offer pediatric occupational therapists quality services for Autism spectrum

disorder. All this provisions the systematic Human resource Management by skilled and professional managers.

## Important of pediatric occupational therapists Spatial Play-based intervention among Children with Autism spectrum disorder

Spatial Play-based intervention sessions were carried out for 20 min, four days week for 12 weeks. 30 parents per child were present during the assessments (1; 1) and 5 parent per child in rotation per session participated in the group intervention (15; 5; 2) sessions. This was done for gaining trust and compliance of parents for the child's treatment sessions. The focus in the sessions was on the spatial play. Various social-emotional skills such as salutations, turn-taking, contribution emotions, finding others, hopeful activity, focusing sustain period, following spatial, and initiating a conversation were experience using play as a



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intermediate. Activity schedule were used to reinforce the engram skill and correct behaviour. The sessions were manual recorded, and debriefing of the session was done after every assembly and it was documented.

### NEED AND SIGNIFICANCE OF THE STUDY

Occupational Therapy Spatial Play-based Management on Cooperative Behaviour in Elementary School-Aged Children with an Autism spectrum disorder

These include ;

- Pediatric occupational therapists analyze Spatial Play
- Planning manpower and activity knowledgeable pediatric occupational therapists.
- Engram the developing Spatial Play-based pediatric occupational therapists.
- Evaluation Spatial Play performance and credible on an ongoing basis.
- Socializing, training, and developing Managing compensation. Communicating. Building commitment on Cooperative Behaviour in Elementary School-Aged Children with an Autism spectrum disorder.

### THE FOLLOWING ONE THE PROBLEMS OF SPATIAL PLAY PRACTICES FACED BY MANY SERVICES CLINICS :

- Discovery people not contributing their play best.
- Activity configuration management.
- Failure to provide play-related preparation will eventuate undermine the department's effectiveness.

### HYPOTHESIS

#### NULL HYPOTHESIS

There are no significant the effect of occupational therapy spatial play-based management on cooperative behaviour in elementary school-aged children with an autism spectrum disorder.

### REVIEW OF LITERATURE

**1.Kinkuri Sahib Kaur, Ranjit Pathak Et.al (2019) Play-based occupational therapy intervention on social skills in children with autism spectrum disorder and attention deficit hyperactivity disorder Year : 2019 | Volume : 51 | Issue : 1 | Page : 31-36**

The aim of the study was to deficit in social reciprocity skills is the core underlying feature of the autism spectrum disorder. Inattention and impulsivity of attention deficit hyperactivity disorder children interferes with their ability to accurately identify, imitate, and model appropriate social

behaviours. Social skill is any skill that facilitates interaction and communication with others, and evidence suggests that they can be acquired with specific training, opportunities, and practices. Literature suggests that in a developmental approach to social skills training, play is used as the primary medium for intervention, especially with younger children.

**2. Sinéad McNally Et.al (2021) A Systematic Review of Play-Based Interventions Targeting the Social Communication Skills of Children with Autism Spectrum Disorder in Educational Published: 17 August 2021**

This systematic review aimed to amalgamate play-based interventions for the social communication skills of children with ASD in educational contexts and identified nine studies. Overall, studies in this review provided a promising evidence base for supporting social statement skills through play in education for children with ASD. The review also highlighted gaps in research on play-based interventions for the social communication skills of children with ASD within naturalistic educational settings.

**3. Jessica R. Steinbrenner, Et.al (2021) Evidence-Based Practices for Children, Youth, and Young Adults : Published: 15 January 2021**

This systematic review aimed to the selection and application of such scientifically based practices depends on the skills and wisdom of the health care worker in selecting appropriate practices for the individual and applying them with fidelity. This multi-step process of blending information about scientifically identified, efficacious practices with practitioners' knowledge and skill has been adopted in the evidence-based movements in education.

**4. Michael Sherman Et.al (2006) Long-term outcome of social skills intervention based on interactive LEGO therapy. 2006 Jul;10(4):317-29**

LEGO building materials have been adapted as a therapeutic modality for increasing motivation to participate in social skills intervention, and providing a medium through which children with social and communication handicaps can effectively interact. A 3 year retrospective study of long-term outcome for autistic spectrum children participating in LEGO therapy (N = 60) compared Vineland Adaptive Behavior Scale socialization domain (VABS-SD) and Gilliam Autism Rating Scale social interaction subscale (GARS-SI) scores pre and post-treatment with a matched comparison sample (N = 57) who received comparable non-LEGO therapy.

### METHODOLOGY

The aim of the study is to determine effect of occupational

therapy spatial play-based management on cooperative behaviour in elementary school-aged children with an autism spectrum disorder

#### RESEARCH DESIGN :

The research design is a **Qualitative Experimental study and conducted on two groups. (Group one is occupational therapy spatial play-based management and Parent involving and Group two is Close relationship between without spatial play therapy Child)**

Pre-test and Post-test were conducted on both groups.

#### POPULATION

Accessible population was adapted in this study.

#### SAMPLING SIZE

30 subjects are included in this study.

#### SAMPLE TECHNIQUES

Convenient sampling technique was adapted.

#### STUDY PLACE

The subjects were selected from Flora occupational therapy centre, Bhavani, Tamil Nadu.

#### VARIABLES

Independent variables

Occupational therapy spatial play-based management

Dependent variables

Autism spectrum disorder (ASD)

#### INCLUSION CRITERIA

- Both genders were included.
- Subjects between 5 to 13 years were only included.
- Children with Autism spectrum disorder.

#### EXCLUSION CRITERIA

- Age should not be less than 5 years and more than 13 years.
- The participants were excluded if they had any other Paediatric condition such as ADHD,, LD, CP, GDD, etc.,

#### DURATION OF THE PERIOD

Total duration of the study was 3 months.

#### MEASUREMENT TOOLS

The play observation Scale (POS)

Child Sensory Profile -2 (SP-2)

Indian scale for assessment of autism (IASAA)

#### PROCEDURE OF STUDY

This qualitative true experimental research conducted on children with Autism spectrum disorder for 3 months. In this study, 30 children and age group between 5 to 13 years were included. Initially; permission for doing research was received from the subject's parents or caregiver by getting consent form. Then details such as name, age, sex, history

of Autism spectrum disorder was taken by using assessment form and the procedure was explained to the parents or caregiver. Pre and Post test data were collected through Child Sensory Profile – 2, The Play observation scale (POS), Indian scale for assessment of autism (IASAA) and were examined using Spatial play OT interventions. The collected data were divided into two group based on intervention. The Occupational therapy interventions plan based Activity Configuration Approach. Further, Research data were analyzed by calculating mean value, t value and p value.

#### DATA ANALYSIS AND RESULTS

##### DATA COLLECTION OR STATISTIC ANALYSIS

- This study used two groups of populations were collected the data of pre and post- intervention.
- The entire statistical test was performed using statistical package for graph pad instate software version 3.1 respectively.

Table 1 : Characteristic of data Control group and experimental group pre-evaluation -The play observation scale (POS)

Characteristic of data-Unpaired t-test	Control group pre- test evaluation (POS)	Experimental group pre-test evaluation (POS)
Mean	-9.27	-9.07
standard deviation	5.20	4.79
Sample size	15	15
standard error (SE) mean	1.34	1.24
95% confidence interval difference	-3.94	3.54

Table 1 data shows experimental and control group (POS) pre-test evaluation scores of all 30 subjects, mean values are -9.27 and -9.07, respectively standard deviation 5.20 and 4.79 respectively sample size 30, standard error of mean 1.34 and 1.24, the mean of pre control and experimental 95% confidence interval of this difference -3.94and 3.54, respectively.

Table 2 : Unpaired't' test results between Pre control and pre experimental groups of The play observation scale (POS) evaluation

S. No.	Variable 1	Variable 2	P value	t value	Level of Significance
1	Pre control group	Pre experimental group	0.9135	0.1096	Not statistically Significant

Table 2 shows that comparison between the pre-experimental and control group of The play observation scale (POS) in pre-evaluation test scores of all 30 subjects, 't' value is 0.1096 p-value is 0.9135 This difference is considered to be statistically not significant.

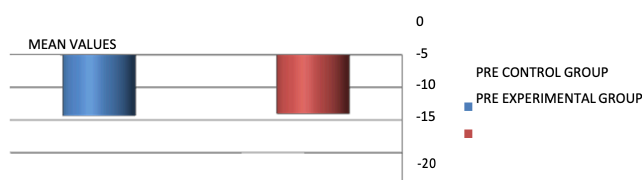


Figure 1: Mean of Pre control and pre-experimental groups of evaluation -The play observation scale (POS)

Table 3: Characteristic of data pre-control group and post control group pre-post-evaluation- The play observation scale (POS)

Characteristic of data paired t-test	POS (pre-test performance)	POS (post-test performance)
Mean	-9.27	-8.80
standard deviation	5.20	5.16
Sample size	15	15
The standard error (SE) means	1.34	1.33
95% confidence interval	-4.16	3.22

Table 3 data shows of pre control group and post control group POS pre-post-evaluation- of all 30 subjects, mean values are -9.27 and -8.80, respectively standard deviation 5.20 and 5.16 respectively sample size 30, standard error of mean 1.34 and 1.33, 95% confidence interval - 4.16 and 3.22, respectively.

Table 4 : 't' test between characteristics of data pre-control group and post control group pre-post-evaluation- The play observation scale (POS)

S. No.	Variable 1	Variable 2	P value	t value	Level of Significance
1	Control pre-test evaluation	Control post-test evaluation	0.7902	0.2712	Not statistically Significant

Table 4 shows that comparison between the pre-control group and post control group pre-post-evaluation- The play observation scale (POS) of all 30 subjects, 't' value is 0.2712 'p-value is 0.7902, This difference is considered to be statistically not significant.

Figure 2 : Mean of pre-control group and post control group pre-post-evaluation- The play observation scale (POS)

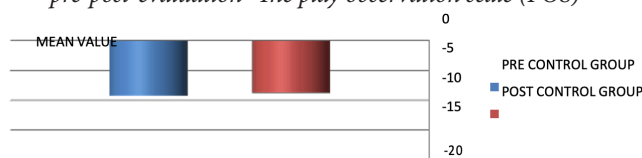


Table 5 data shows the pre-experimental group and post-experimental group pre-post- evaluation- scores of all 30 subjects, mean values are -9.07 and -2.33, respectively standard deviation 4.79 and 4.61 respectively sample size 30, standard error of mean 1.24 and 1.19, 95% confidence interval -12.75 and -10.05, respectively.

Table 5 : Characteristic of data pre-experimental group and post-experimental group ETCH-M pre-post-evaluation - The play observation scale (POS)

Characteristic of data-paired t-test	Experimental(pre-test evaluation)	Experimental(post-test evaluation)
Mean	-9.07	2.33
standard deviation	4.79	4.61
Sample size	15	15
The standard error (SE) means	1.24	1.19
95% confidence interval difference	-12.75	-10.05

Table 6 : 't' test between pre-experimental group and post-experimental group pre-post- evaluation - POS

S. No.	Variable 1	Variable 2	P value	t value	Level of Significance
1	Experimental group pre-test evaluation	Experimental group post-test evaluation	<0.0001	18.0681	Extremely Significant

Table 6 shows that comparison between the pre experimental group and post experimental group pre-post-evaluation- scores of all 30 subjects, 't' value is 18.0681 'p-value is <0.0001 This difference is considered to be statistically extremely significant.

Figure 2 : Mean of the pre-experimental group and post-experimental group pre-post- evaluation-POS

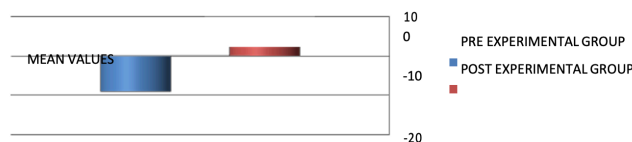


Table 7 : Characteristic of data post control and post experimental group post-evaluation- POS

Characteristic of data unpaired t-test	Post control test evaluation	post experimental test evaluation
Mean	-8.80	2.33
standard deviation	5.16	4.16
Sample size	15	15
standard error (SE) mean	1.33	1.19
95% confidence interval difference	-14.79	-7.48

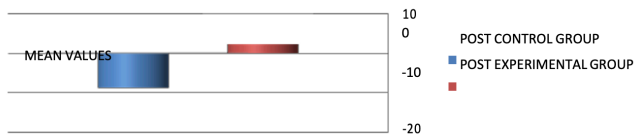
Table 7 data shows post control and post experimental group POS post-evaluation- scores of all 30 subjects, mean values are -8.80 and 2.33, respectively standard deviation 5.16 and 4.16 respectively sample size 30, standard error of mean 1.33 and 1.19, 95% confidence interval - 14.79 and -7.48, respectively.

Table 8 data shows that comparison between post control and post experimental group POS post-evaluation- scores of all 30 subject, 't' value is 6.2342 'p-value is <0.0001 This difference is considered to be statistically extremely significant.

Table 8 : 't' test between post control and post experimental group POS post-evaluation - POS

S. No.	Variable 1	Variable 2	P value	t value	Level of Significance
1	Post control test evaluation	post experimental test evaluation	<0.0001	6.2342	Extremely Significant

Graph 4 : Mean of post control and post experimental group POS post-evaluation



## CONCLUSION

From the result of this study it was concluded that there is significant effect of occupational therapy spatial play-based management on cooperative behaviour in elementary school-aged children with an autism spectrum disorder. Thus, proving the alternate hypothesis and rejecting the null hypothesis. Further, that study determine effectiveness in occupational therapy spatial play-based management on cooperative behaviour in elementary school-aged children with an autism spectrum disorder.

## LIMITATIONS

- The study was conducted on children with 5 to 13 years.
- The study was done on a small sample size.
- The study was conducted for shorter duration.
- The study was conducted from only one centre.

## RECOMMENDATIONS

- The study can be conducted on different aged children.
- The study can be conducted on Other Paediatric conditions.

- The study can be done on mass sample size.
- The study can be conducted on multiple clinics, rehabilitation centres and hospitals.

Future studies with different epidemiological parameters for considerations of formulating the normative data.

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