

EFFECTIVENESS OF PLAY-BASED ACTIVITIES ON DEVELOPING DAILY LIVING SKILLS (DLS) AMONG CHILDREN WITH AUTISM SPECTRUM DISORDER (ASD)

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*Autism Spectrum Disorder,
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Abstract

Daily living skills are essential for independent functioning and overall development in children with autism spectrum disorder (ASD). However, children with ASD often experience significant difficulties in acquiring daily living skills due to challenges in daily, taking food, safety awareness and social interaction. The present study aimed to examine the effectiveness of play-based activities in improving daily living skills among children with autism spectrum disorder. The study adopted an experimental research design using a single-group pre-test and post-test method. A total of 30 children with autism spectrum disorder aged at 4 to 10 were selected through purposive sampling. The ASD-Daily Living Skills scale developed by the researcher was used to measure six dimensions of daily living skills are namely daily care and hygiene, snack making and eating, house care, time and money management and interpersonal skills. The activities were implemented using structured play-based activities designed to enhance independence and functional abilities. The collected data were analyzed using mean, standard deviation, and paired sample t-test. The results revealed a significant improvement in post-test scores compared to pre-test scores across all dimensions. The total mean score increased from 171.10 in the pre-test to 227.43 in the post-test, and the obtained t-value (7.254) was statistically significant at the 0.001 level. The findings indicate that play-based activities are effective in enhancing daily living skills among children with autism spectrum disorder. The study highlights the importance of structured play-based activities in improving independence and adaptive functioning in children with ASD.

INTRODUCTION

Autism Spectrum Disorder (ASD) is a neuro-developmental disorder that affects communication, social interaction, behaviour, and learning. It is called a spectrum disorder because symptoms and severity vary from child to child. Children with ASD may experience speech

difficulties, repetitive behaviours, sensory sensitivities, and challenges in daily activities. According to the American Psychiatric Association, ASD is characterized by difficulties in social communication and repetitive patterns of behaviour (APA, 2013). Early

identification and intervention, including play-based activities, help improve communication, behaviour, and daily living skills among children with ASD.

The quote “*Play is the work of childhood*” (Maria Montessori, 1967) means that play is not just recreation, but the primary way children learn and develop essential skills. Through play, children explore, practice, and acquire cognitive, social, and functional abilities. This idea directly supports the present study, which used play-based intervention to improve daily living skills among children with Autism Spectrum Disorder. The structured play-based activities effectively enhanced daily living skills. Thus, the findings of the study align with Montessori’s view that play is a meaningful and powerful medium for learning and development.

Daily living skills are essential abilities that enable individuals to perform routine self-care, personal management, and independent functioning activities in everyday life. These skills include personal hygiene, dressing, eating, communication, and social participation (American Psychiatric Association, 2013). Children with Autism Spectrum Disorder (ASD) often experience significant challenges in acquiring daily living skills due to deficits

in communication, social interaction, and adaptive behavior (Volkmar & Wiesner, 2009).

Developing daily living skills is a critical component of intervention programs for children with ASD, as it enhances independence, improves quality of life, and reduces dependence on caregivers (Smith, 2012). Play-based interventions have been widely recognized as effective approaches to improving functional and adaptive skills because they promote engagement, motivation, and experiential learning (Piaget, 1962).

REVIEWS OF RELATED STUDIES

O’Keeffe and McNally (2021) found that play-based interventions improved communication, participation, and adaptive behavior in children with Autism Spectrum Disorder. Boutot et al. (2005) reported that structured play supports communication, problem-solving, and social skills development in children with autism. Kok et al. (2002) stated that structured play activities improved spontaneous communication and play behavior among preschool children with autism. A study on digital activity-based intervention showed improvement in daily living skills and independence among individuals with autism. López-Nieto et al.

(2022) revealed that symbolic and structured play enhanced developmental and functional skills in children with ASD. Francis et al. (2022) found that play-based learning improved emotional regulation and communication skills in children with developmental disorders. A systematic review on Activities of Daily Living (ADL) interventions showed that activity-oriented learning improved self-care and adaptive functioning. Research on movement-based play reported improvements in sensory regulation, self-control, and behavioral responses in autistic children. Studies on sensory and pretend play indicated improvements in communication, independence, and social participation among children with ASD. A meta-analysis on play skills found that pretend play and role-playing positively influenced adaptive behavior and functional learning outcomes in children with autism.

RESEARCH GAP

Previous studies on Autism Spectrum Disorder (ASD) mainly focused on behaviour, communication, and social interaction through play-based interventions. Although some studies discussed Daily Living Skills (DLS), very few examined the role of play-based activities in improving these skills,

especially in the Indian context. Existing research mostly emphasizes general interventions and behavioural outcomes rather than functional independence. Children with ASD need structured support in areas such as hygiene, eating, house care, time and money management, safety awareness, and interpersonal skills. Therefore, the present study aims to examine the effectiveness of play-based activities in developing Daily Living Skills among children with ASD.

SIGNIFICANCE OF THE STUDY

Children with Autism Spectrum Disorder often face difficulties in performing daily living skills such as personal hygiene, communication, eating, dressing, social interaction, and safety awareness. These challenges may affect their independence and participation in everyday life. Therefore, there is a need to develop effective teaching strategies that can improve these essential skills among children with ASD. Play-based activities provide enjoyable and meaningful learning experiences that help children actively participate in skill development.

The present study is significant because it focuses on enhancing daily living

skills through play-based activities, which may support behavioral improvement, independence, and better social adjustment among children with ASD. The findings of the study may also help parents, teachers, special educators, and therapists in planning suitable intervention strategies for children with autism. Therefore, the present study was conducted to examine the effectiveness of play-based intervention on developing daily living skills among children with Autism Spectrum Disorder.

SCOPE OF THE STUDY

The present study focuses on improving daily living skills among children with Autism Spectrum Disorder through structured play-based activities. The study includes areas such as personal hygiene, eating skills, house care, time and money management, safety awareness, and interpersonal skills. It is limited to children with ASD within the selected educational setting and examines how guided activities enhance independence in daily tasks. The study also provides practical strategies for teachers, parents, and special educators to support skill development and improve intervention practices for children with autism spectrum disorder.

OPERATIONAL DEFINITION OF KEY TERMS

Effectiveness:

It refers to the improvement in daily living skills of children with Autism Spectrum Disorder after participating in play-based activities. It is measured by comparing the pre-test and post-test scores.

Play-based activities

It refers to structured and purposeful activities designed by the researcher to help children with Autism Spectrum Disorder learn and practice daily living skills during intervention sessions.

Daily Living Skills

It refers to basic self care and functional skills needed for independent living, such as Daily care and hygiene, Snack making and eating skills, House care skills, Time and Money skills, Safety and awareness skill, Interpersonal skills Improvement in these skills among children with ASD is measured before and after the intervention.

Children with Autism Spectrum Disorder (ASD)

It refers to the children diagnosed with Autism Spectrum Disorder who are selected for this study in the age group of 4 to 10 years.

OBJECTIVES OF THE STUDY

The study was conducted with the following objectives:

- To assess the level of daily living skills among children with Autism Spectrum Disorder before the intervention.
- To implement play-based intervention strategies to enhance daily living skills.
- To evaluate the effectiveness of the intervention by comparing pre-test and post-test scores.

HYPOTHESIS OF THE STUDY

Null Hypothesis (H_0):

- There is no significant difference between the pre-test and post-test scores of the daily living skills among children with Autism Spectrum Disorder.

METHODOLOGY

Research Design

The study adopted an experimental research design using a single-group pre-test and post-test method. This design helps in measuring the effectiveness of the intervention by comparing performance before and after treatment (Best & Kahn, 2016).

Sample

The sample consisted of 30 children diagnosed with Autism Spectrum Disorder in Tirunelveli, Tamilnadu. The participants were selected using purposive sampling technique based on specific inclusion criteria.

Variables

A variable is any characteristic, trait, or factor that can change or vary and can be measured in a study (Best & Kahn, 2016). In the present study, the independent variable is play-based activities, which include structured and engaging learning experiences designed through play, while the dependent variable is daily living skills, which refer to daily care and hygiene, snack making and eating, house care, time and money management, safety awareness, and interpersonal required for independent functioning among children with Autism Spectrum Disorder.

Research Tool

Play way activities and the “ASD - Daily Living Skills Scale” developed by the researcher were used to assess the daily living skills. The tool consisted of six dimensions:

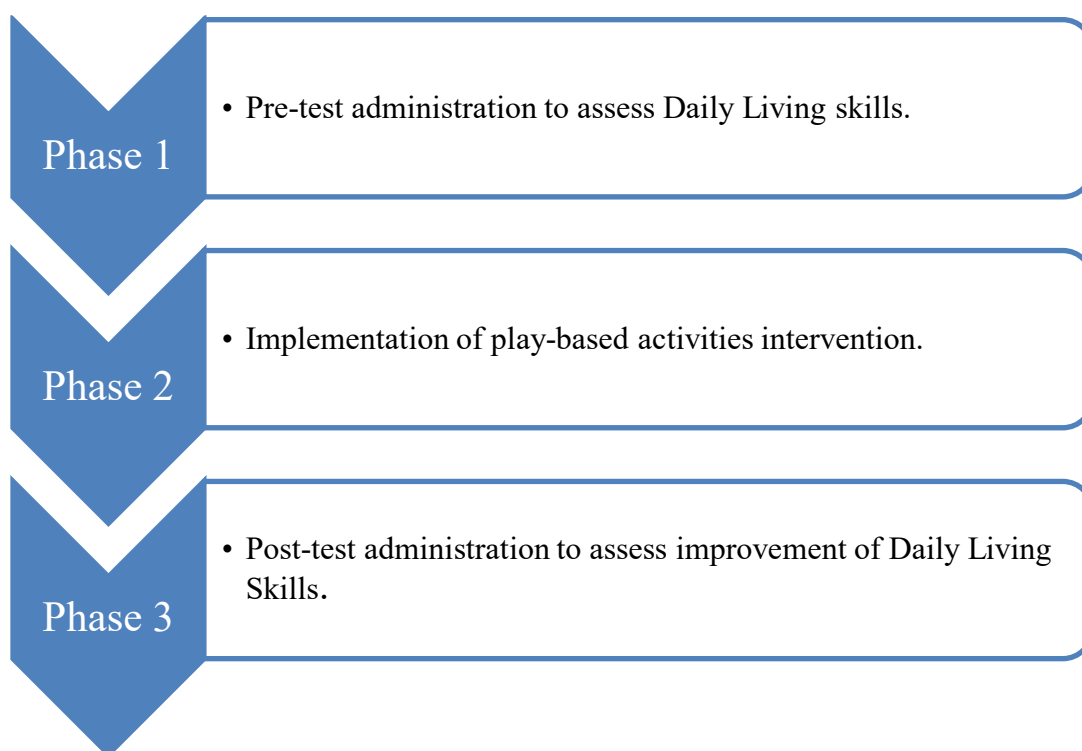
- D1-Daily Care and Hygiene skills
- D2- Snack Making and Eating skills
- D3-House Care skills

- D4-Time and Money management skills
- D5-Safety and awareness skills
- D6-Interpersonal skills

The tool was administered before and after the intervention.

Procedure

The study was conducted in three phases:



Statistical Techniques Used

The collected data were analyzed using:

- Mean
- Standard Deviation
- Paired sample *t*-test

The *t*-test was used to determine whether the difference between pre-test and post-test scores was statistically significant.

PRE-TEST VS POST-TEST OF EXPERIMENTAL GROUP

H_0 : There is no difference between the pre-test and Post test mean score of the daily living skills among the children with ASD.

TABLE 1
The pre-test and post-test scores of experimental group children with ASD in their DLS (n=30)

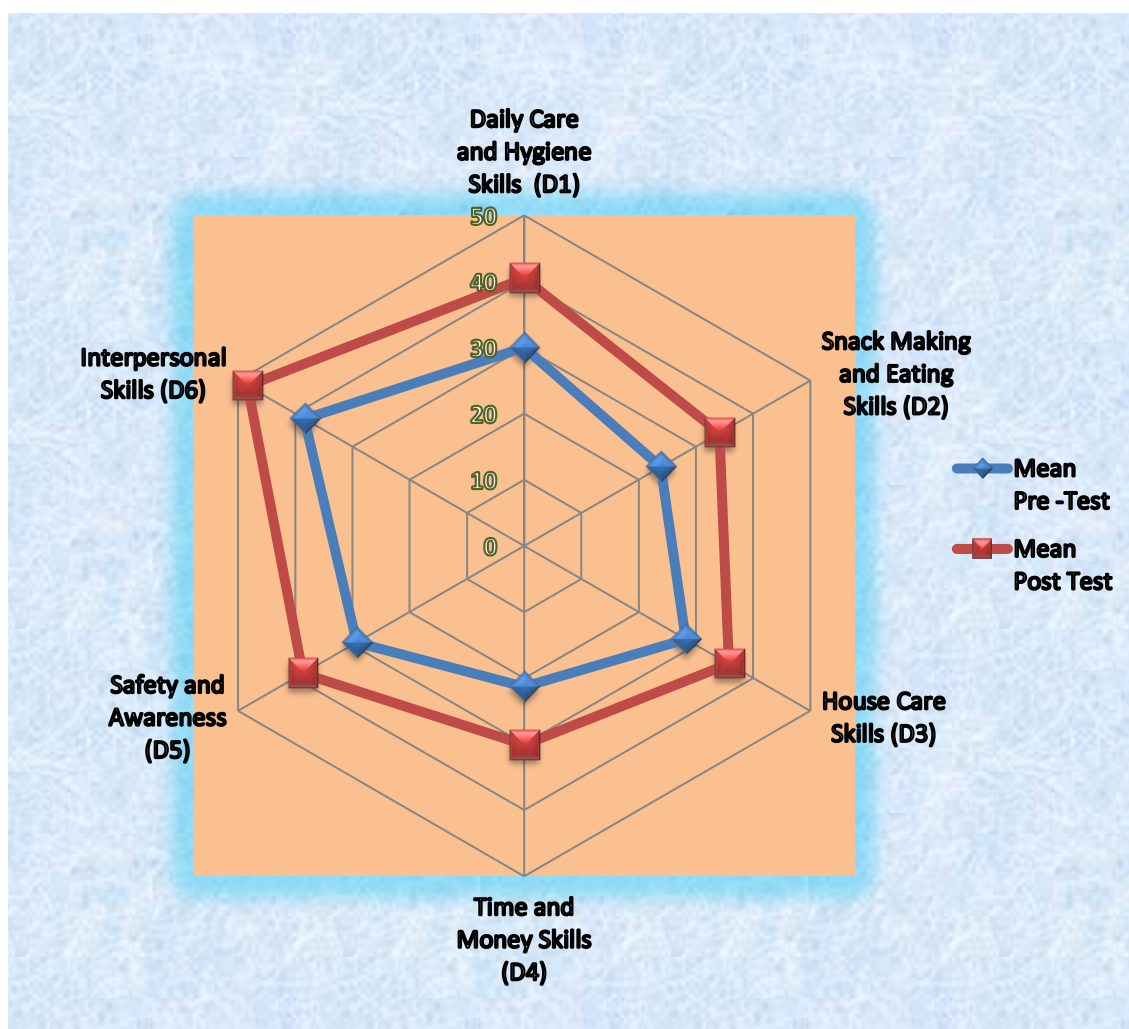
DLS-Dimensions	Experimental Group	Mean	S.D	Calculated t value	p value	Remarks
Daily Care and Hygiene Skills (D1)	Pre -Test	30	10.67	4.597	< 0.001 ***	S
	Post Test	40.47	4.82			
Snack Making and Eating Skills (D2)	Pre -Test	23.9	6.17	8.446	< 0.001 ***	S
	Post Test	34.1	4.23			
House Care Skills (D3)	Pre -Test	28.23	6.5	5.306	< 0.001 ***	S
	Post Test	35.77	3.41			
Time and Money Skills (D4)	Pre -Test	21.33	6.4	4.467	< 0.001 ***	S
	Post Test	30.1	6.82			
Safety and Awareness (D5)	Pre -Test	29.23	7.36	5.116	< 0.001 ***	S
	Post Test	38.67	6.16			
Interpersonal Skills (D6)	Pre -Test	38.4	7.09	5.748	< 0.001 ***	S
	Post Test	48.33	5.08			
Over all DLS	Pre -Test	171.1	37.83	7.254	< 0.001 ***	S
	Post Test	227.43	19.447			

As shown in the above table 1, since the p -values for the Daily Living Skills dimension and its sub-dimensions are less than 0.001, the null hypothesis is rejected at the 0.001 level of significance. Consequently, it is concluded that there is a highly significant difference between the

pre-test and post-test scores of the experimental group children with Autism Spectrum Disorder (ASD), demonstrating that the play-based intervention significantly improved their Daily Living Skills. This has been shown in the radar chart below.

FIGURE 1

Radar chart of the pre-test and post-test scores of experimental group children with ASD in their DLS (n=30)



RESULTS AND ANALYSIS

The table presents the comparison of pre-test and post-test scores of 30 respondents (N = 30) across six dimensions

Daily Care and Hygiene skills, Snack making and eating skills, House care skills, Time and Money management skills,

Safety and awareness skills, Interpersonal skills, and the total score. The results indicate that the post-test mean scores are higher than the pre-test mean scores in all dimensions, showing noticeable improvement after the intervention. In Daily Care and Hygiene skills (D1), the mean score increased from 30.00 in the pre-test to 40.47 in the post-test, with a significant t-value of 4.814 ($p = .000$). Similarly, in Snack making and eating skills (D2), the mean score improved from 23.90 to 34.10, and the obtained t-value was 7.341 ($p = .000$). For House care skills (D3), the pre-test mean of 28.23 increased to 35.77 in the post-test, with a t-value of 5.526 ($p = .000$). In Time and Money management skills (D4), the mean score rose from 21.33 to 30.10, with a significant t-value of 5.045 ($p = .000$). Safety and awareness skills (D5) also showed improvement, where the mean score increased from 29.23 to 38.67, with a t-value of 5.294 ($p = .000$). Likewise, in Interpersonal skills (D6), the mean score improved from 38.40 to 48.33, and the calculated t-value was 6.134 ($p = .000$). The overall Daily Living Skills total score also revealed significant improvement, as the mean score increased from 171.10 in the pre-test to 227.43 in the post-test, with a t-value of 7.254 ($p = .000$). Since all the p-

values are less than 0.05, the differences between pre-test and post-test scores are statistically significant, indicating that the intervention was effective in improving the performance of the respondents across all dimensions. The results of the study revealed significant improvement in daily living skills after the intervention. The pre-test and post-test mean scores across all six dimensions showed noticeable improvement. Since the obtained p-value (.000) is less than 0.05, the null hypothesis is rejected. This indicates that the intervention was effective in improving daily living skills among children with Autism Spectrum Disorder.

DISCUSSION

The findings of the study clearly demonstrate that play-based intervention significantly improved daily living skills among children with Autism Spectrum Disorder. The increase in post-test mean scores across all six dimensions indicates the effectiveness of structured play-based activities.

These findings are consistent with previous research, which reported that structured intervention programs improve adaptive functioning and independence among children with ASD (Smith, 2012).

Play-based learning enhances motivation, engagement, and skill acquisition through experiential learning (Piaget, 1962).

The significant t-values and improved post-test scores indicate that the intervention helped children develop essential life skills such as daily care and hygiene, snack making and eating, house care, time and money management, safety and awareness, and interpersonal interaction, for functional independence. Thus, play-based intervention is an effective approach for enhancing daily living skills in children with Autism Spectrum Disorder.

RECOMMENDATION

Most previous studies have recommended improving communication skills among children with Autism Spectrum Disorder (ASD). While communication is important, the present study emphasizes that Daily Living Skills are equally essential for independent living. Skills such as personal care and hygiene, snack making and eating, house care, safety awareness, Money and time management and interpersonal skills help children with ASD become more independent in their daily life. Therefore, the study recommends giving greater importance to developing Daily Living Skills along with

communication skills for children with ASD.

CONCLUSION

The study concluded that play-based activities are effective in improving the daily living skills of children with Autism Spectrum Disorder. The intervention showed positive improvement in Daily Living Skills. Significant improvement was observed in all dimensions, namely: Daily care and hygiene, Snack making and eating, House care, Time and money management, Safety and awareness, and Interpersonal Skills. The findings indicate that structured and engaging play activities can support the overall development of children with ASD. The results showed a statistically significant difference between pre-test and post-test scores. Therefore, play-based intervention can be considered an effective method for enhancing independence and functional abilities among children with ASD. The intervention helps children with autism spectrum disorder improve daily living skills, and enhances overall quality of life.

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