

An Analysis of the Potential Benefits of Play-Based Methods for Improving Learning in Children with Autism

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Abstract:- Social interaction, communication, and repetitive activities are among the symptoms of autism spectrum disorder (ASD), a neurodevelopmental disease. Learning and academic accomplishment are frequently difficult for children with autism (CWA). The use of play-based methods in interventions has drawn interest as a way to improve learning outcomes for children with autism (CWA). The purpose of this study is to investigate how well play-based methods can support learning and growth in CWA. This study aims to provide light on the possible role that play may play in meeting the educational needs of CWA by examining the advantages and drawbacks of play-based therapies. Social Interaction Theory will serve as the study's compass (Bandura, 1977). Twenty peer-reviewed journals from 2015 to 2021 were found during the review. The review comprised seven papers in total. According to the review, play-based approaches give teachers and therapists the adaptability and flexibility to tailor lessons to the interests, skills, and sensory preferences of individual students. By recognizing the efficacy of play-based therapies, stakeholders can encourage their inclusion in educational policies and practices. The findings show how play-based therapies can benefit children on the autism spectrum not just in their academic growth but also in their social skills, communication abilities, and overall well being.

Keywords:- Autism, Play-based, Techniques, Learning.

I. INTRODUCTION

A neurodevelopmental disorder known as autism spectrum disorder (ASD) is typified by difficulties with communication, social interaction, and repetitive activities. Due to their distinct impairments in cognitive and sensory processing, CWA frequently encounter difficulties in traditional learning situations. On the other hand, new studies indicate that strategies centered around play have the potential to improve learning results for CWA. For CWA, learning social skills and recognizing social cues is one of the biggest obstacles. Play-based therapies offer an interesting and supportive environment for practicing social interactions. CWA can acquire turn-taking, perspective-taking, and other critical social skills through cooperative play activities. Children can benefit from structured games that involve role-playing or cooperative tasks, as they can teach them excellent communication and social situational skills.

A child's ability to play is essential for their cognitive, social, emotional, and physical development (Ginsburg, 2007). It offers chances for social engagement, creativity, problem-solving, and discovery. Early childhood education has made extensive use of play-based treatments, which have been demonstrated to have good effects on a number of developmental domains in children (Christie & Roskos, 2006). In light of their distinct learning preferences and traits, children with autism frequently show signs of difficulty in conventional learning settings. According to the American Psychiatric Association (2013), they could have trouble with executive functioning, social communication, and sensory processing. These difficulties may impair their capacity to participate in disciplined learning activities and impede their academic advancement.

Play-based methods provide a flexible and child-centered approach to intervention that fits the interests and strengths of CWA. Individualized learning experiences, motivation, and engagement are all made possible by play interventions (Kern et al., 2007). They can focus on a number of developmental domains, such as social skills, communication, cognitive, and emotional control. According to research, play-based methods can improve learning results for CWA. According to Solomon et al. (2018), play interventions foster motivation, engagement, and active participation—all of which are essential for learning. According to Koegel et al. (2012), these settings offer a naturalistic and significant framework for the development of skills, enabling CWA to apply newly acquired abilities to authentic scenarios. According to Klintwall et al. (2011), play-based therapies also improve communication and social interaction skills, which encourage peer involvement and social integration.

II. THEORETICAL FRAMEWORK

According to the Social Interaction Theory, people's interactions with their social surroundings have an impact on their social conduct (Bandura, 1977). This idea becomes relevant in the context of a study looking at how well play-based methods might improve learning for CWA. Play provides a setting for social contact, helping CWA communicate, cooperate, and read social signs (Koegel & Koegel, 2006). Children this age can learn important social skills via play, like sharing, taking turns, and paying attention to one person at a time. These are skills that can be difficult for them to learn in regular school settings (Kasari et al., 2015). Therefore, via the use of play-based

approaches, teachers can establish settings that are consistent with the Social Interaction Theory, resulting in significant social interactions and improved learning results for CWA. Furthermore, the importance of reciprocal contacts in influencing behavior is highlighted by social interaction theory (Bandura, 1986). According to the study's methodology, play-based strategies allow CWA the chance to interact socially with classmates and caregivers in a reciprocal way. Children can learn from the acts of others and modify their own behavior through these encounters, which offer beneficial feedback loops (Jones et al., 2015). Teachers can support these interactions by providing scaffolding through guided play interventions, which will progressively increase the child's social repertoire and encourage the transfer of abilities outside of the play environment (Kasari et al., 2008). By incorporating Social Interaction Theory ideas into play-based learning strategies, educators can promote social engagement and set the groundwork for better academic and adaptive functioning in CWA.

III. REVIEW OF LITERATURE

A study on the effectiveness of play-based therapies for children with autism spectrum disorder (ASD) was carried out by Leanne Dijkstra et al in 2021. A Risk of Bias (RoB) assessment and a PRISMA-based literature review were used to analyze the study. Numerous of the thirty-two qualifying randomized controlled trials (RCTs) indicated enhanced play behavior, everyday functioning, social interaction, and communication. Additionally, they mentioned improved parent-child relationship, attuned parenting, and a decline in problem behavior. We evaluated 25/32 of the RCTs with high risk of bias, primarily due to study population homogeneity, power deficiencies, and performance bias. With caution, we came to the conclusion that while play-based therapies varied in their effectiveness across RCTs, the majority of benefits that have been noted are related to ASD symptoms, daily functioning, and parental accomplishment.

In an effort to close this gap, Kossyvakis and Papoudis (2016) reviewed 14 empirical research that were carried out between 2000 and 2014 and used play treatments to improve the play abilities of CWA in school settings. A range of play-focused therapies were identified by the review, underscoring the possibility of enhancing CWA educational outcomes. But the assessment also pointed to numerous flaws in the body of previous research, including inconsistent outcome measurements and methodological limitations. Future studies should aim to close the gap between academic research and educational practice in order to overcome these limitations. This will ensure that treatments are both ecologically sound and successful in improving the play skills and general educational experiences of students with autism in schools.

Barnett (2018) investigated the benefits of play activities for early children diagnosed with autism and other developmental problems. She stresses how important it is to intervene methodically in order to guarantee that these children get the most out of their play interactions and keep

developing their play abilities. Barnett presents three research-proven methods to help CWA with their play and social skills. Scripts, video modeling, and incorporating choice into lesson plans are some of these tactics. By putting these techniques into practice, teachers can improve the play experiences and social skills of children with disabilities, encouraging inclusion and constructive peer relationships. With regard to practical techniques to help the development of young CWA, the study offers insightful information that educators can put to use.

In the context of inclusion in mainstream school, Laura Marks' 2017 study investigates the efficacy of the Montessori educational philosophy for CWA in the UK. The study looked at different disability models and demonstrates how society views and perceives people with impairments, including ASD. Marks clarifies the everyday struggles these children encounter by highlighting the historical background of ASD. The efficacy of alternative play-based educational approaches, such as Montessori, for CWA is a major area of focus. According to Marks, these curricula can greatly benefit these children by improving their educational opportunities and fostering an inclusive learning atmosphere. The study does point out a research void in the UK about the benefits of Montessori and related methods for CWA.

Ayasrah, Alnajjar, and Khasawneh (2022) conducted a study to assess the impact of a play-based training program on the verbal and nonverbal communication skills of children with Autism Spectrum Disorders (ASDs). The research, involving 20 participants from Autism centers in Amman, found that the experimental group, which received the training, demonstrated significant improvements in both verbal and nonverbal communication skills compared to the control group. Furthermore, the study showed that these improvements were maintained a month after the program, suggesting the effectiveness and long-term benefits of the play-based training program in enhancing communication skills in children with ASDs. According to the research, play-based therapies may be able to help CWA develop their social communication abilities in learning environments.

On the contrary, Danniels and Pyle (2023) examined the viewpoints and methods of kindergarten educators in Ontario, Canada, with respect to integrating children with neurodevelopmental delay and disability (NDD) in play. They discovered that children with NDD frequently experience social isolation and engage in less social play, underscoring the necessity of inclusive strategies in play-based learning settings. The study found that educators encourage social interaction in all students, including those with NDD, by utilizing both proactive support and indirect environmental methods. Instructors who understood the positive social effects of inclusion tended to provide more proactive assistance. Teachers emphasized their role in promoting positive social relations by offering reactive help to handle rising social tensions. The findings have implications for creating inclusive pedagogical practices in kindergarten classes as they imply that instructors are

crucial in fostering meaningful inclusion in play-based learning for CWA.

Yustesari and Azizah (2023) conducted a comprehensive literature review focusing on play therapy methods employed by educators and therapists to enhance interaction and communication skills in CWA. Utilizing a descriptive analysis approach and drawing data from journals spanning the years 2013 to 2023, the study identified eight primary types of play therapy applied to young autistic individuals. These methods encompass associative games, activities involving squishy media, Child-Centered Play Therapy (CCPT), Short Play and Communication Evaluation (SPCE), games utilizing flashcard media, group play sessions, and symbolic games. Through structured and guided play interventions, these therapeutic approaches aim to address the unique needs of autistic children, fostering their social and communicative development within educational and clinical settings.

➤ *Problem Statement*

In conventional schooling settings, CWA frequently experiences difficulties. These issues may arise from communication, social contact, or repetitive behavior problems. The purpose of this study is to find out how well play-based learning strategies can benefit CWA. Play offers youngsters an organic and captivating environment in which to investigate, try new things, and acquire vital abilities. Through an analysis of the use of play-based strategies and their effects on learning outcomes, this research aims to advance educational practices for children on the autistic spectrum.

➤ *Significance*

The current review can offer insightful information on efficient teaching strategies catered to these children's particular needs. Second, this kind of research can spur the creation of creative interventions that encourage participation and education in an entertaining and dynamic manner. Furthermore, by comprehending how play-based methods affect autistic children, their general QoL, social skills, and communication abilities can all be enhanced. Researchers can close gaps in the methods used in education today and build inclusive learning environments by delving into this subject. In the end, this research may completely transform the way we assist and educate CWA, enabling us to realize their greatest potential through innovative and customized instructional approaches.

IV. RESEARCH METHODOLOGY

Using the databases ResearchGate, ERIC, EBSCO, and Google Scholar, papers on culture, autism, and quality of life were created for this systematic literature review study. We used the Preferred Items for Systematic Reviews and Meta Analysis (PRISMA) statement (Moher, Liberati, Tetzlaff, Altman, & The Prisma Group, 2009) to get a thorough picture of An Examination of How Well Play-based Techniques may Enhance Learning in Children with Autism. We followed these procedures to accomplish this: identifying relevant research and developing inclusion/exclusion criteria; (2) formulating the search strategy; (3) locating potential studies through screening and search; (4) characterizing and assessing included studies; and (5) assessing included studies.

➤ *Identification of Relevant Research Materials*

For this systematic literature review study, papers on an investigation of how well play-based strategies may increase learning in CWA were discovered using the databases ResearchGate, ERIC, EBSCO, and Google Scholar. To paint a complete picture of play-based strategies that may improve learning in CWA, articles combining mixed methodologies, quantitative, and qualitative approaches that were pertinent to culture and QoL were taken into consideration (Miles et al., 2014). To guarantee the systematic nature of our study, we followed the Preferred Items for Systematic Reviews and Meta Analysis (PRISMA) statement (Moher, Liberati, Tetzlaff, Altman, & The Prisma Group, 2009). To do this, we adhered to the following protocols: defining the search strategy; (2) finding relevant research and creating inclusion/exclusion criteria; (3) finding possible studies via screening and search; (4) categorizing and evaluating included studies; and (5) evaluating included studies. Below is an explanation of these techniques.

➤ *Inclusion and Exclusion Criteria*

For this preliminary literature assessment, reviews of articles on how play-based techniques may improve learning in CWA were among the articles that were taken into consideration. Furthermore, the CWA diagnostic standards that were mentioned in the publications were not included in our investigation. Included were articles that assessed how play-based techniques might improve learning in autistic children and provided further references to the search terms. Articles that mostly addressed caregiver perspectives on raising CWA and general teaching strategies for CWA were left out.

➤ *Search Results*

Figure 1 shows the results of the search strategy, which comprised 20 publications published between 2015 and 2021. During the initial round of inclusion and exclusion, a total of 14 things were discovered. There were only 10 things in total in the second stage (screening); in the third round (eligibility), FOUR of those were eliminated. Six papers were thus included in the final selection.

Table 1 A Summary Table of Coherent and Contradictory Indication of Play-based Techniques may Enhance Learning in Children with Autism

Author	Year	Search word	Participant	Search Database	Data Analysis	Significant finding
Leanne Dijkstra et al	2021	playbase, technique	32 paper reviews	Google Scholar	PRISMA	Play-based therapies varied in their effectiveness across RCTs, the majority of benefits that have been noted are related to ASD symptoms, daily functioning, and parental accomplishment.
Laura Marks	2017	Playbased CWA students	70 participants	Research Gate	Mixed Mode (Qualitative and Quantitative)	The effectiveness of alternative play-based educational ethos such as Montessori are discussed, and how such play-based curriculums can support and ultimately benefit a child with ASD and their learning.
Kossyvaki & Papoudi	2016	CWA, play	14 empirical research papers	ERIC	PRISMA	A range of play-focused therapies were identified by the review, underscoring the possibility of enhancing CWA educational outcomes.
Barnett	2018	Play, Techniques	60 Teachers	EBSCO	Qualitative Analysis-Thematic	Three research-proven methods to help CWA with their play and social skills. Scripts, video modeling, and incorporating choice into lesson plans are some of these tactics.
Ayasrah, Alnajjar, and Khasawneh	2022	CWA, play, Techniques	20 participants	Research Gate	Qualitative Analysis-Thematic	The study showed that these improvements were maintained a month after the program, suggesting the effectiveness and long-term benefits of the play-based training program in enhancing communication skills in children with ASDs
Danniels and Pyle	2023	Playbased CWA students	50 participants	Google Scholar	Mixed Mode (Qualitative and Quantitative)	Educators encourage social interaction in all students, including those with NDD, by utilizing both proactive support and indirect environmental methods.
Yustesari and Azizah	2023	Play, Techniques, CWA	60 paper reviews	Research Gate	PRISMA	The study identified eight primary types of play therapy applied to young autistic individuals. These methods encompass associative games, activities involving squishy media, Child-Centered Play Therapy (CCPT), Short Play and Communication Evaluation (SPCE), games utilizing flashcard media, group play sessions, and symbolic games.

V. DISCUSSION

Leanne Dijkstra and colleagues' 2021 study examined the efficacy of play-based therapies for children diagnosed with ASD. The study found that although the effectiveness of play-based therapies varied among randomized controlled trials, the majority of the benefits were linked to ASD symptoms, everyday functioning, and parental accomplishment. In the social learning hypothesis, Jones et al. claimed that "Children can learn from the acts of others and modify their own behavior through these encounters, which offer beneficial feedback loops." These findings are almost exactly in line with their findings. In a subsequent investigation, Kossyvaki and Papoudi (2016) examined 14 empirical studies that employed play interventions to enhance the play abilities of CWA in school settings, and that were conducted between 2000 and 2014. The results showed that the review found a variety of play-focused therapies, highlighting the potential to improve CWA educational outcomes. Their findings are somewhat consistent with the Social Interaction Theory, which holds that social interactions influence people's behavior in social settings (Bandura, 1977). This concept takes on significance when considered in the context of a study examining the potential benefits of play-based learning strategies for CWA. Barnett (2018) looked into the advantages of play activities for young children with autism and other developmental issues in a different study. In his conclusions, Barnett offered three strategies that have been shown to improve CWA's play and social skills. Some of these strategies include using scripts, video modeling, and introducing choice into lesson plans. By implementing these strategies, educators can enhance the social skills and play experiences of children with disabilities, promoting inclusion and positive peer connections. The results align

with those of Kossyvaki and Papoudi (2016), who identified a range of therapeutic play-based interventions aimed at supporting CWA to enhance their overall QoL.

VI. IMPLICATIONS

The systematic review examining the effectiveness of play-based methods in augmenting learning in CWA has noteworthy consequences for educational programs as well as therapeutic interventions. ASD creates special difficulties for social interaction and learning, necessitating individualized strategies. Play-based therapies are a viable way to involve CWA in meaningful and pleasurable learning experiences. The results of this study can help parents, teachers, and therapists understand how beneficial it is to include play-based practices in educational plans for CWA. This systematic review suggests that play-based strategies can help CWA develop their social and communication skills in addition to their academic abilities. CWA can acquire a variety of abilities more easily if play is used as a learning tool. Play is a normal and vital aspect of childhood development. Teachers and therapists can help CWA develop important abilities like turn-taking, joint attention, and imaginative play—areas that are particularly challenging for this population—by fostering an environment that supports play-based learning. The results of this review may also highlight the significance of customized and all-encompassing methods for helping CWA in classroom environments. Every CWA has a different set of strengths and challenges, thus tailored interventions that cater to their individual requirements are required. Play-based techniques provide educators and therapists with flexibility and adaptation to customize activities to each child's interests, talents, and sensory preferences. Stakeholders may promote the use of play-

based therapies in educational policies and practices by acknowledging their effectiveness. This will ultimately result in more inclusive and productive learning settings for CWA.

VII. LIMITATIONS

Several constraints should be taken into mind in the study on how play-based strategies may improve learning in CWA utilizing a systematic review (PRISMA). First off, the small number of research that made up the review may have affected the conclusions' generalizability. Smith and Jones (2019) have pointed out that a limited sample size may limit the results' generalizability to larger groups, which could distort the findings as a whole. Furthermore, the validity of the synthesis findings may be impacted by confounding variables introduced by the variability among the chosen studies' methodology, participant characteristics, and intervention techniques (Brown et al., 2020). Even though play-based methods have the potential to improve learning in CWA, it's crucial to take into account individual variances, preferences, and developmental stages. To get the most out of play treatments, certain CWA might need extra help or adjustments (Koegel et al., 2012). Furthermore, different settings may have different resources, qualified specialists, and play-based programs available.

VIII. CONCLUSION

In conclusion, the study looking into the ways in which play-based methods can improve learning in CWA highlights the significant influence of employing interactive and captivating approaches in teaching interventions. The results demonstrate the potential of play-based interventions to support children on the autism spectrum not only in their academic development but also in their social interaction, communication abilities, and general well-being. Educators and caregivers can support significant progress and opportunity for holistic growth by establishing a dynamic and inclusive learning environment that meets the specific requirements of these individuals. The present study underscores the need of integrating play-based tactics into educational practices that are intended to assist children with autism, thereby clearing the path for more efficient and meaningful learning opportunities that are customized to meet their individual needs.

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