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The Extent of Awareness and Application of the Structured Play Strategy by Specialists Working with Children with Autism Spectrum Disorder

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Abstract

This study highlights the critical role of structured play in enhancing the development of children with Autism Spectrum Disorder (ASD) and underscores the necessity of equipping specialists with effective strategies for implementation. Understanding and applying structured play not only improve children's social and cognitive skills but also contribute to the advancement of specialized education and intervention programs.This study aimed to assess the level of awareness and application of the Structured Play Strategy among specialists working with children with ASD in daycare centers within the Riyadh region. The study sample consisted of 219 specialists, including 26 males and 193 females, who work with children with ASD in these centers. To achieve the study's objectives, the researchers employed a descriptive research method. The results indicated that the specialists' awareness of the structured play strategy was high, with 86% demonstrating familiarity with the approach, a finding consistent with previous research. Additionally, the professionals' application of the strategy was also high, with an application rate of 84%. However, the study identified several obstacles that may hinder the effective implementation of the structured play strategy, including the lack of a stimulating environment and difficulties in managing large groups of children. Furthermore, no statistically significant differences were found in the application of the strategy based on variables such as gender, years of experience, or educational qualifications. The study concludes with recommendations for future research.

Keywords: *Structured Play Strategy, Evidence-Based Practices, Autism Spectrum Disorder, Social interaction, Childhood.*

Introduction

Play is considered a spontaneous activity through which a child expresses joy, satisfaction, and psychological comfort. It allows children to explore and interact with their environment, facilitating the acquisition of various concepts and social, linguistic, and scientific skills that contribute to their experiences, personality development, and mental health (Al-Anani, 2014). Despite the individual differences among children regarding cognitive characteristics—such as intelligence, physical and health traits, psychological attributes, and social and skill-related features, it is generally agreed that play is a fundamental behavioral manifestation in childhood and a source of learning (Al-Hila, 2004) .

According to the Unified National Platform (2024), the Kingdom of Saudi Arabia has taken significant measures to support individuals with disabilities, ensuring their rights related to disabilities. This has been achieved through the provision of preventive care, rehabilitation, and comprehensive care services tailored to each individual's needs. The ultimate goal is to empower individuals with disabilities to meet their life requirements and enhance their potential to become productive members of society. Believing in the importance of equal opportunities for both typically developing children and those with disabilities, the Kingdom has provided educational services that cater to the abilities of children with disabilities through specialized institutes. Additionally, educational, rehabilitative, and supportive services have been offered to ensure the integration of these students with their peers in general education settings that are conducive to their needs (Unified National Platform, 2024). Community interest in individuals with various disabilities has increased due to the continuous rise in their numbers in recent years; individuals with disabilities in Saudi Arabia represent 5.9% of the population, according to the Saudi Authority for the Care of Persons with Disabilities. Al-Zar' (2014) notes that Autism Spectrum Disorder (ASD) is a developmental disorder characterized by restricted interests, repetitive and stereotypical behaviors, and impaired communication and social interaction. This can lead to difficulties in forming social relationships and friendships, which aligns with the criteria outlined in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders by the American Psychiatric Association (DSM-5, 2013). Consequently, researchers and

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practitioners have focused on addressing the deficiencies in children with ASD and methods to enhance their skills, particularly since these skills are crucial for adaptation and integration with others, especially during early childhood, the most critical stage for care and attention (Al-Jamal et al., 2022).

Children often acquire social skills from their surrounding environment through interactions with parents, peers, or specialists. Therefore, there is an urgent need to be aware of effective practices that can help develop children's various skills. This requires equipping specialists with knowledge, enhancing their expertise, and training them to work with children with ASD using scientifically validated methods (Shepher, 2019). Structured play strategy falls under evidence-based practices. Structured play is a guided learning strategy based on purposeful play that is suitable for children with ASD and includes stimuli that facilitate social interaction (Zaghloul et al., 2022). To ensure that a child acquires the targeted skills through play, it is essential to identify the goals to be developed, followed by implementation through guided play and facilitation according to the children's needs (Sam et al., 2024). Several studies have addressed specialists' knowledge of evidence-based practices, including the studies by Al-Maghrabi and Al-Humaidan (2020), Al-Zar'and Al-Yafi'i (2020), and Azazi (2021) all of which reported positive results, indicating that specialists possess sufficient knowledge of evidence-based practices. However, the study by Knight et al. (2019) revealed that structured play was one of the least utilized practices compared to other evidence-based practices. Undoubtedly, specialists' awareness of evidence-based practices enhances their functional performance and contributes to improving student outcomes and achieving positive results. Numerous studies have demonstrated the effectiveness of structured play in developing skills for individuals with ASD from various aspects. For instance, in the realm of communication and social interaction, studies by Bayoumi (2020) and Hashim (2021) confirmed the effectiveness of symbolic play in enhancing social communication and increasing the experiences and social skills of individuals with ASD. This reflects the positive outcomes of this strategy in developing their diverse social and communicative skills.

Literature Review

Knowledge and Application Regarding Evidence-Based Practices Among Educators of Children with ASD

Evidence-based practices are among the most effective strategies for delivering behavioral and educational interventions for students with disabilities. In fact, Applied Behavior Analysis (ABA) methods are considered a significant example of evidence-based strategies, that involve describing and analyzing behavior procedurally and subsequently developing appropriate intervention plans aimed at increasing, decreasing, or improving behavior, or shaping socially acceptable behavior (Cooper et al., 2020). It is essential for educators to be aware of and proficient in applying evidence-based methods, as the success rate of these effective strategies is high, which can ensure successful interventions and achieve the desired educational objectives. Several studies have demonstrated a lack of utilization of scientific methods, such as ABA, among teachers working with children with autism for various reasons related to training, lack of technical support, and work pressures (Al-Harbi & Abdulaziz, 2023), as well as a low awareness of evidence-based practices among those working with children with autism (Almutlaq, 2021; Azazi, 2021). Conversely, another study by Ashour & Bagadood (2022) found that an increased number of students with autism in the classroom poses a barrier for teachers in organizing the classroom environment and managing students' behaviors. In a study conducted by Hassan et al. (2019) on a sample of specialists, the results indicated a deficiency in knowledge and experience in identifying effective evidence-based interventions for children with ASD and in evaluating the development of intervention and collecting data to build appropriate individual plans. In contrast, a study by Al- Sumadi and Al-Zreeqat (2020) confirmed that there is a high level of knowledge about evidence-based practices among teachers of children with ASD. Another study found that the most commonly used evidence-based practices included direct instruction, video modeling, and environmental structuring, while the least used practices included modeling, structured play, facilitated communication, and communication through picture exchange (Knight et al., 2019).

Structured Play Strategy and the Development of Skills in Children with Various Disabilities

Children acquire various skills through playing and interaction with their surrounding environment and enhance their abilities. Stimulating environments provide children with opportunities to develop social, communicative, cognitive, and motor skills depending on the type and nature of play (Shepher, 2019). Regarding the development of social skills through play, it has been noted that group play has shown

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positive results in a sample of children with Attention Deficit Hyperactivity Disorder (ADHD) in enhancing social skills (Al-Jamal et al., 2022). Meanwhile, a study by Al-Humairi (2021) found the effectiveness of a program applied to a sample of children with learning difficulties that relied on play to reduce social withdrawal, in addition to a positive impact on developing language concepts and social interaction through play among preschool children (Al-Momani, 2017).

Structured Play Strategy and the Development of Skills in Children with ASD

The deficits in communication and social interaction among individuals with ASD are characterized by a clear inability to use various communication methods, such as pictures and facial expressions, which adversely affect social interaction and the establishment of relationships (Bayoumi, 2020). In addition, Bayoumi (2020) in his study demonstrated the effects of playing in children with ASD, found that playing leads to a significant role in developing communication skills as improving social interaction for children with ASD. Structured play is considered one of the most prominent practices for developing skills among individuals with ASD, regardless of the type of play. For instance, imaginative play has been shown to enhance and increase social interaction and communication for several children with ASD (Al- Anouz, 2022; Hashim, 2021). Furthermore, play has contributed to fostering social interaction and communication through an implemented program focusing on play to achieve and develop social interaction among children with ASD (Zaghloul et al., 2022; Mousa & Qatawneh, 2022; Wolfberg et al., 2014). Additionally, play contributes to develop and enhance cognitive skills in children with ASD (Al-Bakar & Al- Zreeqat, 2018). Despite play varied methods, it is obvious that play assist individuals with ASD in developing social (Kelly, 2009).

Play is an inherent nature and instinct in children and a necessity for healthy growth and development. It helps in the development of many cognitive, psychological, educational, and social aspects of the child (Al-Anani, 2014). The deficits in communication and language that children with ASD experience often lead to numerous challenges, potentially resulting in weaknesses in their ability to engage socially. Therefore, they need skills that assist them in building relationships and understanding others, in order to achieve balance in the child's development across various aspects (Moussa & Qatawna, 2022). Al-Zar' (2014) notes that the deficits displayed by children with ASD limit their communication and social interaction, leading to restrictions that hinder the child's social participation and relationship building, often accompanied by stereotypical and repetitive behaviors. Consequently, social interaction requires effective communication, and the weakness in communication and social interaction is one of the most prominent characteristics of individuals with ASD. Teaching social skills to individuals with ASD is vital for their development. Ahmad & Wahab (2012) assert that improvements in a child's condition are directly proportional to the degree of attention given to learning social, communicative, and thinking skills, becoming more noticeable the earlier it occurs. Furthermore, the strategy of structured play has proven effective in developing various aspects for children with ASD, such as communication, social interaction, and skill development, as supported by the results of several experimental studies, including those by Moussa and Qatawna (2022) and Bayoumi (2020), which demonstrated the effectiveness of the play strategy in developing social skills in a sample of children.

Several studies have explored the Structured Play Strategy in working with children with ASD, emphasizing its positive effects on social, emotional, and cognitive development (Ahmad & Wahab, 2012; Al-Bakar & Al-Zreeqat, 2018; Bayoumi, 2020; Moussa and Qatawna , 2022). However, there remains limited exploration into specific barriers that specialists face when applying these strategies in real-world daycare settings, particularly in the Riyadh region. Some studies highlight challenges such as lack of training (Azzazi, 2021) and environmental constraints (Al-Harbi & Abdulaziz, 2023), but further research is needed to understand the impact of these barriers on the long-term success of structured play interventions.

Upon reviewing the previous studies, it is evident that teachers of children with Autism have a high and general knowledge of evidence-based practices, as studies agree on the positive role of these practices in developing and enhancing children's skills (Al-Harbi & Abdulaziz, 2023; Al- Sumadi & Al-Zreeqat, 2020; Ashour & Bagadood, 2022; Azazi, 2021; Hassan et al., 2019; Knight et al., 2019). On the other hands, many studies agree on the existence of several obstacles faced by professionals working with individuals with Autism that hinder the practice and application of evidence-based practices, such as lack of knowledge, difficulty in implementing practices, and ensuring their effectiveness due to insufficient supervisory support

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in schools (Hassan et al., 2019; Azazi, 2021). Moreover, from the teachers' perspective, large number of students in the classroom poses a challenge in organizing the classroom environment and managing student behaviors, thus making it difficult to implement and evaluate evidence-based practices (Ashour & Bagadood, 2022). Several studies have confirmed the effectiveness of the strategy of structured play in developing skills for children with various disabilities (Al-Jamal et al., 2022; Al-Humairi, 2021; Al-Momani, 2017). Studies have consistently shown the positive impact of structured play strategies in contributing to the development of various skills for individuals with Autism (Al-Bakar & Al- Zreeqat, 2018; Al-Anouz, 2022; Bayoumi, 2020; Zaghloul et al., 2022; Moussa & Qatawna, 2022; Hashim, 2021; Kelly, 2009; Wolfberg et al., 2014).

Despite, lack of studies that addressed structured play and its level of implementation by specialists of children with ASD, previous research on structured play and its effectiveness has primarily been experimental in methodology. This current study is distinctive as it is a descriptive study aimed at exploring the level of awareness among specialists working with children with ASD regarding the structured play strategy, the extent of its application, and identifying the barriers that may hinder specialists from implementing this strategy. The study is guided by several questions:

1. What is the level of awareness among specialists about the structured play strategy for children with ASD?
2. To what extent do specialists apply the structured play strategy with children with ASD, from their perspective?

This question branches into the following:

- What are the main challenges that hinder the application of the structured play strategy with children with ASD, from the specialists' point of view?
- Are there statistically significant differences attributed to variables such as gender, years of experience, or academic qualifications among the study sample's responses regarding the level of application of the structured play strategy by specialists working with children with ASD?

Methodology

Design and Sample

The descriptive methodology was adopted in this study as it is the most suitable approach for obtaining accurate answers to the research questions and presenting results that indicate the level of knowledge and awareness among specialists working with children with ASD, as well as the extent of their implementation of the structured play strategy. This methodology also provides a description of the quantitative variables of the study, aligning with the purpose of the current study as noted by Al-Jamni (2023). It facilitates in-depth answers aimed at describing a specific phenomenon, interpreting it, and identifying the underlying causes for its emergence.

Prior to data collection, ethical approval was obtained from Majmaah University to ensure compliance with research ethics and participant rights. An electronic survey was designed and distributed via work email to a targeted group of specialists working with children with ASD in daycare centers within the Riyadh region. The survey aimed to assess specialists' awareness, application, and perceived barriers to implementing the structured play strategy. Participation was voluntary, and respondents were assured of confidentiality and anonymity in the handling of their data.

The data were gathered from the Ministry of Human Resources and Social Development in the Riyadh region. A convenience sampling approach was employed, where the survey was distributed to 478 specialists (394 females and 84 males) who were accessible and available to participate, ensuring ease of data collection. This approach was selected for its practical efficiency in reaching a sufficient number of specialists working with children with ASD in daycare centers.

The final sample consisted of 219 specialists (26 males and 193 females) who completed the survey. Despite the use of convenience sampling, the sample is considered representative of the population of specialists working with children with ASD in daycare centers in Riyadh, as the survey was distributed to all available

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specialists within the targeted region. According to Cohen, Manion, and Morrison (2018), convenience sampling can be appropriate in quantitative studies when the goal is to collect data efficiently from a population that is easily accessible and willing to participate.

To analyze the distribution of sample individuals according to demographic variables, descriptive statistics were employed, including frequency counts and percentages. The sample was analyzed based on characteristics of the study variables (gender, educational qualification, years of experience) as follows:

Table 1. Distribution of Sample Individuals According to Demographic Variables

Variables	Categories	Frequency	Percentage
Gender	Male	26	**11.9%**
	Female	193	**88.1%**
	Total	219	**100%**
Educational Qualification	Diploma	1	**0.5%**
	Bachelor	187	**85.4%**
	Graduate Studies	31	**14.2%**
	Total	219	**100%**
Years of Experience	Less than 5 years	134	**61.2%**
	5 to 10 years	68	**31.1%**
	More than 10 years	17	**7.8%**
	Total	219	**100%**

In Table 1, most of the sample participants were females, representing approximately (88%) of the total, while males accounted for about (12%). Those holding a bachelor's degree comprised the majority at (85%), while graduate students represented (14%), and diploma holders accounted for only (0.5%). Regarding years of experience, around (61%) of the participants had "less than 5 years," and those with "5 to 10 years" represented about (31%). Only (8%) had "more than 10 years of experience."

Pilot Sample

The study was conducted on a pilot sample that recorded (30) responses from specialists working with children with ASD. The purpose was to measure the validity and reliability of the data collection tool used in the study, including the internal consistency validity of all items across various dimensions and the correlation between them. This also included measuring the reliability of the tool and assessing the validity of the study population in case it was applied to the main study sample.

Tool

To achieve the goals of the study, a questionnaire was constructed to assess the level of awareness among specialists regarding the structured play strategy, based on literature and previous studies, such as Azazi (2021), Sam et al. (2024), and Raising Children Network (2024).

Validity

To ascertain the apparent validity of the study tool, which measures what it was intended to measure, it was presented to (7) faculty members, who specialize in special education and ASD for evaluation. Their feedback focused on the clarity of the items, their accuracy, linguistic formulation, and the suitability of each item for the study's objectives, along with any necessary modifications and adjustments based on the reviewers' suggestions. This led to the final version of the tool. The internal consistency validity using Pearson correlation coefficients were calculated, as shown in the following table:

First: Internal Consistency Validity (Awareness Level of the structured Play Strategy)

Table 2. Pearson Correlation Coefficients Between the Item Scores First Section

No	Item	Correlation Coefficient	Significance Level

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1	Structured play refers to goal-directed play that seeks to achieve a predetermined goal.	**0.732	**0.000**
2	The structured play strategy helps modify and develop targeted behaviors in children with ASD.	**0.712	**0.000**
3	The play strategy contributes to the development of academic skills in children with ASD.	**0.653	**0.000**
4	The structured play strategy contributes to the development of imagination and creativity in children with ASD.	**0.718	**0.000**
5	Children's interests must be considered during play to encourage participation.	**0.552	**0.002**
6	The specialist plays a significant role in managing the play.	**0.635	**0.000**
7	Structured play helps develop expressive language skills in children.	**0.830	**0.000**
8	Structured play provides children with more opportunities to interact with their peers.	**0.739	**0.000**
9	Structured play provides children with greater opportunities to express their emotions.	**0.638	**0.000**
10	Activities used during structured play are clearly defined with a beginning and an end.	**0.509	**0.004**
11	Structured play helps develop social skills, such as teamwork and respect for roles.	**0.852	**0.000**
Overall correlation of the first section with the study tool.		**0.746	**0.000**

**(**) Significant at the 0.01 level.

Table (2) shows that all correlation coefficients for the items are positive, ranging from (0.509 to 0.852), with an overall correlation of the first section with the study tool reaching (0.746). All correlations are statistically significant at the 0.01 level, indicating an internal consistency between the items of the first section (awareness level of the structured play strategy) and the total score for the sections.

Second: Internal Consistency Validity (Application Level of the Structured Play Strategy)

Table 3. Pearson Correlation Coefficients Between the Item Scores of the Second Section

No	Item	Correlation Coefficient	Significance Level
12	I observe the child's behavior to identify weak skills for development through structured play.	**0.505	**0.004**
13	I clarify the beginning and end of activities to the children during strategy implementation.	**0.530	**0.003**
14	I determine the number of children in the structured play group during strategy planning.	**0.580	**0.001**
15	I clearly explain the steps of the game to participating children.	**0.769	**0.000**
16	I use a variety of activities and materials appropriate for the children's ages and interests.	**0.741	**0.000**
17	I have a clear pattern for the children regarding the beginning and end of strategy implementation.	**0.723	**0.000**
18	A facilitator is necessary to support children during their learning of new skills.	**0.546	**0.002**
19	I assist participating children during play and gradually decrease assistance.	**0.536	**0.002**

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20	I clarify the objectives of structured play and explain what is expected from children during play.	**0.549	**0.001**
21	I build a targeted behavior plan before starting to implement the strategy.	**0.567	**0.001**
11	I follow a specific sequence to transition the children to start the structured play group.	**0.720	**0.000**
21	I use more evidence-based practices during play—such as reinforcement and visuals—to enhance understanding and experiences for children with ASD.	**0.708	**0.000**
22	I use intermittent reinforcement schedules to ensure independent play.	**0.772	**0.000**
24	I analyze data after collection to determine the level of progress.	**0.613	**0.000**
25	I determine the next steps based on the learner's outcomes after applying the structured play strategy.	**0.872	**0.000**
26	I implement the Structured play strategy with children for a minimum of three months, twice weekly.	**0.635	**0.000**
Overall correlation of the second section with the study tool.		**0.885	**0.000**

(**) Significant at the 0.01 level of significance

Table (3) shows that all correlation coefficients for the statements are positive, ranging from (0.505 to 0.872). The correlation of the second dimension with the study tool reached (0.885), and all are statistically significant at the 0.01 level, indicating internal consistency among the items of the second dimension (level of implementation of the structured play strategy) and the overall score of the dimension.

Third: Internal Consistency Validity of the Items in the Third Section (Barriers to Implementing the Structured play Strategy):

Table (4). Pearson Correlation Coefficients Between the Scores of the Items in the Third Section and the Overall Score of the Sections

No	Item	Correlation Coefficient	Significance Level
27	Weak awareness of the strategy and its implementation steps.	**0.797	**0.000**
28	Absence of a stimulating environment that facilitates the application of the Structured play strategy with peers.	**0.822	**0.000**
29	Lack of available material resources hinders the application of the strategy.	**0.789	**0.000**
30	Difficulty in dealing with a large number of children during the implementation of the strategy.	**0.706	**0.000**
31	I perceive the strategy as ineffective in developing various skills for children with ASD.	**0.746	**0.000**
32	Lack of training courses on implementing the Structured play strategy.	**0.828	**0.000**
33	Weak interest of center management in the importance of the Structured play strategy.	**0.671	**0.000**
Overall correlation of the third section with the study tool.		**0.739	**0.000**

**(**) Significant at the 0.01 level of significance

Table (4) shows that all correlation coefficients for the statements are positive, ranging from (0.671 to 0.828). The correlation of the third section with the study tool reached (0.739), and all are statistically

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significant at the 0.01 level, indicating internal consistency among the items of the third section (barriers to implementing the structured play strategy) and the overall score of the sections.

Reliability

To verify the reliability of the questionnaire dimensions, Cronbach's Alpha coefficient was used, as shown in Table (5) below:

Table (5). Cronbach's Alpha Reliability Coefficients for the Study Sections

Study Dimensions	Number of Items	Cronbach's Alpha Coefficient
First Section: Level of Awareness of the structured play Strategy	11	**0.863**
Second Section: Level of Implementation of the structured play Strategy.	16	**0.887**
Third Section: Barriers to Implementing the structured play Strategy	7	**0.830**
Overall Reliability of the Study Tool	34	**0.867**

Table (5) shows the reliability coefficients for the study sections, which ranged between (0.830 and 0.887). The overall reliability coefficient of the study tool was (0.867), indicating a high level of reliability for the data collection tool, thus allowing confidence in the results obtained from the study.

Analysis

To achieve the study objectives and answer its questions, various appropriate statistical methods were used utilizing the IBM SPSS Statistics software (Version 23). These included:

- Descriptive statistics to calculate weighted means and standard deviations to determine the responses of the sample members to the statements included in the study tool.
- Pearson Correlation Coefficient: to verify the internal consistency validity of the study tool.
- Cronbach's Alpha: to confirm the reliability of the study tool.
- Percentages to describe the demographic characteristics of the study sample and their representation.
- Independent t-test for two independent groups to identify the differences in responses of sample members based on gender.
- One-Way ANOVA to identify the differences in responses of sample members based on academic qualifications and years of experience.

To determine the length of the five-point scale cells used in the study dimensions, the range was calculated as 4 = 1-5, then the length of the category was calculated by dividing the range by the highest value, resulting in 0.8 = 5/4. This value was added to the lowest value in the scale (1). The criteria for judging the mean values were established as follows:

The sample responses were divided on a five-point Likert scale (Very High, High, Moderate, Low, Very Low), and the distribution of categories according to the gradation used in the current study tool was as follows: (Strongly Agree = 4.21 to 5) indicates a very high response on the tool; (Agree = 3.41 to 4.20) indicates a high response; (Neutral = 2.61 to 3.40) indicates a moderate response; (Disagree = 1.81 to 2.60) indicates a low response; (Strongly Disagree = 1 to 1.80) indicates a very low response.

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Results

The level of awareness among specialists working with children with ASD regarding the strategy of structured play

Eleven statements were allocated to assess the level of awareness among specialists working with children with ASD regarding the strategy of structured play. The mean values, standard deviations, and relative weights were calculated to test the differences in responses. The results are summarized in the following table:

Table (8). Descriptive Analysis of the Awareness Level of Specialists Working with Children with ASD Regarding the Strategy of structured play

No	Statement	Mean	Standard Deviation	Relative Weight	Response Level	Rank
1	Structured play refers to purposeful play aimed at achieving a predetermined goal.	4.44	0.506	88.8%	Very High	**4**
2	The Structured play strategy helps modify and develop targeted behaviors in children with ASD.	4.45	0.568	89%	Very High	**2**
3	The play strategy contributes to developing academic skills in children with ASD.	4.39	0.704	87.8%	Very High	**8**
4	The Structured play strategy contributes to the development of imagination and creativity in children with ASD.	4.37	0.626	87.4%	Very High	**10**
5	It is essential to consider the child's interests during play to encourage participation.	4.60	0.509	92%	Very High	**1**
6	The specialist plays a significant role in managing play.	4.44	0.590	88.8%	Very High	**5**
7	Structured play helps develop expressive language in children.	4.42	0.581	88.4%	Very High	**7**
8	Structured play provides greater opportunities for children to interact with their peers.	4.45	0.599	89%	Very High	**3**
9	Structured play allows children to express their emotions more effectively.	4.37	0.617	87.4%	Very High	**9**
10	The activities used during Structured play are clearly defined with a beginning and an end.	4.33	0.672	86.6%	Very High	**11**
11	Structured play helps develop social skills, such as teamwork and respecting turn-taking.	4.44	0.628	88.8%	Very High	**6**
Overall Score		4.31	0.424	86.2%	**Very High**	

Table (8). illustrates the descriptive analysis of the awareness level among specialists working with children with ASD regarding the structured play strategy. The results indicate that the level of awareness is very high, with an overall score of approximately 86% based on the total score for the dimension, with a mean of 4.31 and a standard deviation of 0.424. This suggests that the participants' responses to the statements in this dimension are positively oriented, with all statements receiving very high response levels. The standard deviations ranged from 0.506 to 0.704, indicating the homogeneity of the respondents' answers.

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The statement "It is essential to consider the child's interests during play to encourage participation" ranked first with a very high response level, mean of 4.60, standard deviation of 0.509, and relative weight of 92%. The statement "The structured play strategy helps modify and develop targeted behaviors in children with ASD" ranked second, with a mean of 4.45, standard deviation of 0.568, and relative weight of 89%. The statement "Structured play provides greater opportunities for children to interact with their peers" ranked third, with a mean of 4.45, standard deviation of 0.599, and relative weight of 89%. The statement "Structured play refers to purposeful play aimed at achieving a predetermined goal" ranked fourth, with a mean of 4.44, standard deviation of 0.506, and relative weight of 88.8%. The statement "The specialist plays a significant role in managing play" ranked fifth, with a mean of 4.44, standard deviation of 0.590, and relative weight of 88.8%. The statement "Structured play helps develop social skills, such as teamwork and respecting turn-taking" ranked sixth, with a mean of 4.44, standard deviation of 0.628, and relative weight of 88.8%. The statement "Structured play helps develop expressive language in children" ranked seventh, with a mean of 4.42, standard deviation of 0.581, and relative weight of 88.4%. The statement "The play strategy contributes to developing academic skills in children with ASD" ranked eighth, with a mean of 4.39, standard deviation of 0.704, and relative weight of 87.8%. The statement "Structured play allows children to express their emotions more effectively" ranked ninth, with a mean of 4.37, standard deviation of 0.617, and relative weight of 87.4%. The statement "The structured play strategy contributes to the development of imagination and creativity in children with ASD" ranked tenth, with a mean of 4.37, standard deviation of 0.626, and relative weight of 87.4%. The statement "The activities used during structured play are clearly defined with a beginning and an end" ranked eleventh, with a mean of 4.33, standard deviation of 0.672, and relative weight of 86.6%.

The level of implementation of structured play strategies by specialists working with children with ASD

Sixteen statements were designated to assess the level of implementation of structured play strategies by specialists working with children with ASD. The means, standard deviations, and relative weights were calculated to test for differences in responses. The results are presented in the following table:

Table 9. Descriptive Analysis of the Level of Implementation of structured play Strategies by Specialists Working with Children with ASD

No	Statement	Mean	Standard Deviation	Relative Weight	Response Level	Rank
12	I observe the child's behavior to identify weak skills for development through structured play.	4.37	0.586	87.4%	Very High	**12**
13	I clarify the beginning and end of activities to the children during strategy implementation.	4.33	0.599	86.6%	Very High	**14**
14	I determine the number of children in the structured play group during strategy planning.	4.39	0.575	87.7%	Very High	**10**
15	I clearly explain the steps of the game to participating children.	4.37	0.539	87.4%	Very High	**11**
16	I use a variety of activities and materials appropriate for the children's ages and interests.	4.53	0.527	90.6%	Very High	**1**
17	I have a clear pattern for the children regarding the beginning and end of strategy implementation.	4.33	0.651	86.6%	Very High	**15**
18	A facilitator is necessary to support children during their learning of new skills.	4.40	0.622	88.0%	Very High	**9**
19	I assist participating children during play and gradually decrease assistance.	4.45	0.568	89.0%	Very High	**4**

Journal of Ecohumanism
2025
Volume: 4, No: 1, pp. 4470 – 4486
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
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20	I clarify the objectives of structured play and explain what is expected from children during play.	4.44	0.635	88.8%	Very High	**5**
21	I build a targeted behavior plan before starting to implement the strategy.	4.42	0.587	88.4%	Very High	**7**
11	I follow a specific sequence to transition the children to start the structured play group.	4.42	0.531	88.4%	Very High	**6**
21	I use more evidence-based practices during play—such as reinforcement and visuals—to enhance understanding and experiences for children with ASD.	4.53	0.544	90.6%	Very High	**2**
22	I use intermittent reinforcement schedules to ensure independent play.	4.40	0.585	88.0% |	Very High	**8**
24	I analyze data after collection to determine the level of progress.	4.37	0.598	87.4%	Very High	**13**
25	I determine the next steps based on the learner's outcomes after applying the structured play strategy.	4.47	0.544	89.4%	Very High	**3**
26	I implement the Structured play strategy with children for a minimum of three months, twice weekly.	4.16	0.790	83.2%	High	**16**
Overall Score		4.23	0.422	84.6%	**Very High**	

Table 9. illustrates the descriptive analysis of the level of implementation of Structured play strategies by specialists working with children with ASD. The results indicate that these specialists have implemented the Structured play strategy at a very high level, with an overall percentage of approximately 85%. The overall mean for the section was 4.23, with a standard deviation of 0.422, indicating that the responses of the participants tended towards a positive direction. All statements received very high response levels except for one, which received a high response. The standard deviations ranged between 0.527 and 0.790, reflecting the consistency of responses among participants.

The highest ranked item was "I use a range of activities and materials suitable for the children's ages and interests" with a mean of 4.53 and a relative weight of 90.6%. The next highest ranked item was "I use more evidence-based practices during play, such as reinforcement and visuals, to enhance understanding and experiences of children with ASD" with a mean of 4.53 and a relative weight of 90.6%. The third highest ranked item was "I determine the next steps based on the learner's results after applying the Structured play strategy" with a mean of 4.47 and a relative weight of 89.4%. The fourth highest ranked item was "I assist the participating children during play and gradually reduce assistance" with a mean of 4.45 and a relative weight of 89.0%. The fifth highest ranked item was "I clarify the goals of Structured play and explain to the children what is expected of them during play" with a mean of 4.44 and a relative weight of 88.8%.

Barriers of application of structured play strategies

There were seven statements designated to identify the barriers to implementing structured play strategies from the perspective of these specialists. The means, standard deviations, and relative weights were calculated to test for differences in responses. The results are as follows:

Table 10. Descriptive Analysis of Barriers to Implementing Structured play Strategies from the Perspective of Specialists Working with Children with ASD (ASD)

No	Statement	Mean	Standard Deviation	Relative Weight	Response Level	Rank

Journal of Ecohumanism
2025
Volume: 4, No: 1, pp. 4470 – 4486
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v4i1.6335

27	Lack of awareness of the strategy and its implementation steps	3.89	1.043	77.8%	High	**6**
28	Absence of a stimulating environment conducive to implementing Structured play with peers	4.46	0.637	89.2%	Very High	**1**
29	Insufficient material resources hinder the implementation of the strategy	4.36	0.814	87.2%	Very High	**3**
30	Difficulty in managing a large number of children during the implementation of the strategy	4.44	0.717	88.8%	Very High	**2**
31	Perception of the strategy as ineffective in developing various skills in children with ASD	2.42	1.090	48.4%	Low	**7**
32	Lack of training courses on implementing Structured play strategies	4.25	0.746	85.0%	Very High	**4**
33	Low interest from management in the importance of Structured play strategies	4.05	1.012	81.0%	High	**5**
Overall Score		3.76	0.725	75.2%	**High**	

Table 10 presents a descriptive analysis of barriers to implementing Structured play strategies from the perspective of specialists working with children with ASD. It reveals that specialists perceive several challenges to implementing Structured play strategies, with an overall percentage of approximately 75%. The mean score for this section is 3.76, with a standard deviation of 0.725, indicating a generally positive direction in responses. The response levels ranged from very high to low, with standard deviations between 0.637 and 1.090, indicating a consistency in responses.

The highest ranked item was "Absence of a stimulating environment conducive to implementing Structured play with peers" with Mean: 4.46, SD: 0.637, Relative Weight: 89.2%. The second highest ranked item was "Difficulty in managing a large number of children during the implementation of the strategy" - Mean: 4.44, SD: 0.717, Relative Weight: 88.8%. The third highest ranked item was "Insufficient material resources hinder the implementation of the strategy"- Mean: 4.36, SD: 0.814, Relative Weight: 87.2%. The fourth highest ranked item was "Lack of training courses on implementing Structured play strategies" - Mean: 4.25, SD: 0.746, Relative Weight: 85.0%. The fifth highest ranked item was "Low interest from management in the importance of Structured play strategies" - Mean: 4.05, SD: 1.012, Relative Weight: 81.0%. The sixth highest ranked item was "Lack of awareness of the strategy and its implementation steps" - Mean: 3.89, SD: 1.043, Relative Weight: 77.8%. The last ranked item was "Perception of the strategy as ineffective in developing various skills in children with ASD" - Mean: 2.42, SD: 1.090, Relative Weight: 48.4%.

The statistically significant differences

Gender. An independent t-test was used for two independent groups to assess the differences in the overall score of the sections and all items based on gender.

Table 11. Results of the Independent t-test for Two Independent Groups Based on the and Overall Score by Gender

Study Section	**Male**	**Female**	**t-value**	**Significance Level**

Journal of Ecohumanism
2025
Volume: 4, No: 1, pp. 4470 – 4486
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v4i1.6335

| Level of Implementation of Structured play Strategies by Specialists Working with Children with ASD	4.45	0.357	4.20	0.438	1.610	**0.119 Not Statistically Significant**

Table 11 presents the results of the t-test for the differences in the perspectives of the sample members regarding the level of implementation of Structured play strategies by specialists working with children with ASD based on gender. According to the t-value and significance levels, there are no statistically significant differences between the mean scores regarding the level of implementation based on gender.

Educational qualification variable. A one-way ANOVA was used. The study aimed to identify whether there were statistically significant differences in the responses of the sample participants based on the educational qualification variable. The results were as follows:

Table (12). Results of One-Way ANOVA for Differences in Average Attitudes of Study Sample Members Based on the Educational Qualification Variable

Field of Study	Variance	Sum of Squares	Degrees of Freedom	Mean Square	F-value	Significance
Level of Application of Specialists Working with Children with ASD to the Structured Play Strategy	Between Groups	0.170	2	0.085	0.460	**0.636 Not Statistically Significant**
	Within Groups	4.993	27	0.185		
	Total	5.164	29			

Table (12) illustrates the results of the one-way ANOVA test for the differences in the attitudes of sample members regarding the level of application of specialists working with children with ASD to the structured play strategy, based on the educational qualification variable. According to the F-value and significance levels, we find the following:

There are no statistically significant differences between the average responses regarding the level of application of specialists working with children with ASD to the structured play strategy based on the educational qualification variable.

Years of experience variable. To test the hypothesis, a one-way ANOVA was used. The study aimed to identify whether there were statistically significant differences in the responses of the sample participants based on the years of experience variable. The results were as follows:

Table (13). Results of One-Way ANOVA for Differences in Average Attitudes of Study Sample Members Based on the Years of Experience Variable

Field of Study	Variance	Sum of Squares	Degrees of Freedom	Mean Square	F-value	Significance
Level of Application of Specialists Working with Children with ASD to the Structured Play Strategy	Between Groups	0.318	2	0.159	0.886	**0.424 Not Statistically Significant**
	Within Groups	4.846	27	0.179		
	Total	5.164	29			

Table (13) presents the results of the one-way ANOVA test for differences in the attitudes of sample members regarding the level of application of specialists working with children with ASD to the structured

Journal of Ecohumanism
2025
Volume: 4, No: 1, pp. 4470 – 4486
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https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v4i1.6335

play strategy based on the years of experience variable. According to the F-value and significance levels, we find the following:

There are no statistically significant differences between the average responses regarding the level of application of specialists working with children with ASD to the structured play strategy based on the years of experience variable.

Discussion

The level of awareness among specialists working with children with ASD regarding the strategy of structured play

The results of the first question indicated that the knowledge of specialists working with children with ASD regarding the structured play strategy is high, with a percentage of 86%. This is consistent with several studies that reported positive results concerning specialists' knowledge of evidence-based practices, which includes the structured play strategy, such as the study by Sumadi and Al-Zreeqat (2020). However, the study by Hassan et al. (2019) contradicted this finding, concluding that the level of knowledge of specialists working with children with ASD regarding evidence-based practices is weak, in addition to deficiencies in several other areas, including the development of individual plans and the identification of effective strategies for children with ASD. Researchers attribute this positive knowledge of specialists regarding practices—specifically the structured play strategy—to research and access to the latest strategies. This is due to the ease of obtaining updated information on ASD and the prominent published research and shared experiences among interested individuals and researchers eager to learn and develop, along with the ease of applying these strategies with children with ASD, which enhances the impact on children's training, development, and learning outcomes. This increases the motivation to research and explore the latest practices and studies in the field of ASD.

The level of implementation of structured play strategies by specialists working with children with ASD

The results of the second question indicated that the level of application of specialists regarding the structured play strategy with children with ASD is very high, at 84%. This aligns with several studies that reported positive findings regarding the application of evidence-based practices by specialists, which includes the structured play strategy. This is evident in other experimental studies that relied on the structured play strategy to enhance social interaction and other skills, which reported positive outcomes, such as the studies by Al- Anouz (2022), Zaghoul et al. (2022), and Murcy et al. (2023), among others, which concluded the positive impact of the structured play strategy in developing skills in children with ASD. The results of this question contradict the findings of Knight et al. (2019), where the structured play strategy was among the least used strategies within evidence-based practices. Similarly, the study by Al- Zar' and Al-Yafi (2020) noted the most prominent practices used by specialists with children, omitting structured play from the list. This may indicate a weak application of the strategy by specialists; thus, the results suggest that the awareness of specialists regarding the structured play strategy has significantly increased over a very short period, due to the ease of implementing the structured play strategy and its use as a means to develop various skills in children, as highlighted in the questionnaire's clarity and detailed description of the strategy and its implementation steps. Researchers attribute this to the positive results of applying the strategy with children with ASD, resulting from the questionnaire's clear and detailed items, which helped participants respond honestly and consistently to various questionnaire items, given the clarity of what is meant by "the structured play strategy and its implementation steps." Additionally, technological advancements have facilitated specialists' access to updated knowledge and recent developments through databases that include contemporary research and literature, despite existing obstacles that hinder the application of the strategy, which were mentioned in response to the following sub-question.

Barriers of application of structured play strategies

Several of the most prominent obstacles facing specialists working with children with ASD regarding the structured play strategy were identified after reviewing literature and research that indicated various obstacles impeding specialists in the field from effectively implementing the strategy. The results showed that the most significant hindrance for specialists in applying the strategy is the lack of a stimulating environment for applying the strategy to children. The result here is consistent with the studies of Al-Harbi and Abdulaziz (2023) and Ashour and Bagadood (2022), which found that the lack of support from management for specialists in applying one of the most prominent evidence-based strategies, ABA, along

Journal of Ecohumanism
2025
Volume: 4, No: 1, pp. 4470 – 4486
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
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with the absence of interaction and cooperation among specialists and the team, creates barriers for specialists in implementing evidence-based strategies. Additionally, the low awareness of specialists regarding the strategy—specifically its implementation steps—ranked sixth, which can be attributed to the good knowledge of specialists regarding the structured play strategy. The difficulty specialists face in managing a large number of children ranked second, indicating that specialists encounter challenges in applying strategies to children due to insufficient training. Furthermore, a specialist may require an assistant to enhance control over the children and achieve daily goals. The lack of adequate training courses for applying the structured play strategy ranked fourth, highlighting the reasons for specialists' weak ability to interact with children during its implementation. This is consistent with the study by Azzazi (2021), which stated that the main obstacle preventing specialists from applying evidence-based practices is their lack of knowledge about them, as well as their limited experience during application. This finding also aligns with the study by Hassan et al. (2019).

The statistically significant differences

The results indicated that there are no statistically significant differences between the responses of the study sample members regarding their level of application of the structured play strategy based on the gender, years of experience, and educational qualification variables. This differs from the study by Al- Zar' and Al-Yafi (2020), which showed that the level of master's degree holders in applying evidence-based strategies is higher than others, and previous studies did not address these variables.

Conclusion

This study underscores the significant role of structured play as an effective strategy for engaging children with ASD. The findings highlight that specialists are generally well-informed and consistently apply structured play in their work. However, several logistical and resource-related challenges, such as inadequate training opportunities, lack of stimulating environments, and insufficient resources, were identified as barriers to its broader implementation. To optimize the application of structured play, it is recommended that greater attention be given to enhancing training programs and creating more supportive environments. These efforts would help address the challenges and improve the overall effectiveness of structured play strategies in ASD interventions.

Recommendation

One of the most important recommendations based on the findings of the current study is as follows:

- Attracting the attention of decision-makers emphasize the integration of evidence-based practices into the child's plan. additionally, increase specialized training courses on evidence-based practices for professionals working with children with ASD and implement practical training under the supervision of competent specialists.
- Training professionals equip specialists with skills to manage children during the application of strategies, and provide assistant specialists to ensure the complete implementation of strategies for better outcomes.
- Implementing structured play develop mechanisms to establish structured play as a fundamental strategy in the child's daily plan, as it combines play, learning, and social interaction with peers. Focus on enhancing environments and supporting specialists' performance, which should be reflected in student outcomes through continuous monitoring of their progress.
- Facilitating effective communication create ways for effective communication among specialists in various regions and centers to exchange knowledge, opinions, and suggestions, as well as to raise awareness and leverage their expertise concerning children with ASD.
- Encouraging structured play implementation promote the use of structured play strategies with children diagnosed with ASD.
- Enhancing Environmental Support Prepare the environment and increase incentives for specialists to utilize their professional skills to the fullest.

Journal of Ecohumanism
2025
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DOI: https://doi.org/10.62754/joe.v4i1.6335

- Intensifying research on barriers conduct more studies addressing the obstacles faced by specialists that hinder the application of evidence-based practices, particularly structured play strategies. The study's findings indicate a positive understanding of structured play, despite the existence of barriers to its implementation in the field.
- Qualitative study on environmental factors conduct a qualitative study to identify environmental factors that inhibit the implementation of structured play strategies.
- Designing an intensive program create an intensive program to empower specialists in the proficient application of structured play strategies with children with ASD.
- Qualitative study on field barriers conduct a qualitative study to determine the field-related barriers affecting specialists and the environment's impact on the implementation of structured play strategies with children with ASD in daycare centers.

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Journal of Ecohumanism
2025
Volume: 4, No: 1, pp. 4470 – 4486
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https://ecohumanism.co.uk/joe/ecohumanism
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