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Meta-Analysis of the Effectiveness of Various Play Therapy Types on Behavioral Symptoms of Children with Attention Deficit/Hyperactivity Disorder

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A B S T R A C T

Objective: The purpose of the present study was to conduct a meta-analysis on the effectiveness of various types of play therapy on the behavioral symptoms of children with Attention Deficit/Hyperactivity Disorder (ADHD).

Methods and Materials: A meta-analysis method was employed based on the nature of the study. The statistical population consisted of articles and research conducted in this area. ADHD, behavioral symptoms, and play therapy were searched in various databases. The sampling method from this population was theoretical sampling. To search for Iranian research, only Persian sources and studies conducted in Iran were considered. These studies were published in scientific-research journals over the past decade (2011–2021) and examined various forms of play therapy on the behavioral symptoms of children with ADHD. They had an appropriate sample size and met methodological requirements (including hypothesis formulation, research design, statistical population, sample size and sampling method, measurement tools, statistical hypotheses, statistical analysis methods, and the correctness of statistical computations). A subset of the population under review was selected using a predetermined method. The statistical population in the second phase of the study, focusing on internal validation, included all specialists and experts in child play therapy for ADHD. The sample size in this section consisted of 8 specialists, selected through purposive sampling. A content analysis checklist was used in this study.

Findings: Results indicated that in the causal relationship between play therapy and children's behavioral symptoms, all effect sizes extracted were ranked based on Cohen's index, and to confirm significance, the statistical values p-value and t-value were reported. For all components, these indices were less than 0.05 ($P < 0.05$) and greater than 1.96, respectively.

Conclusion: Therefore, this therapeutic program can be utilized to reduce behavioral problems in these children.

Keywords: *play therapy, behavioral symptoms, Attention Deficit/Hyperactivity Disorder.*

1. Introduction

Tension within the family unit, particularly when chronic and occurring early in a child's development, has harmful effects on the health of parents, children, and parent-child relationships. One internal family-related factor that can lead to tension is children's behavioral and emotional problems (Haugan et al., 2022). Research indicates that the severity of children's behavioral disorders is a critical aspect of stressful situations, with Attention Deficit/Hyperactivity Disorder (ADHD) being one of the most common disorders (Glenn, 2024). This disorder leads more children to mental health centers than any other (Veronesi et al., 2024). In a comprehensive definition, ADHD is characterized by a persistent pattern of hyperactivity or inattention that exceeds normal developmental expectations for a child (Wu et al., 2024). According to the DSM-5-TR, the main features of this disorder include inattention and hyperactivity/impulsivity (thoughtlessness/recklessness). These children struggle with focused attention, sustained attention, task or activity engagement, and task completion due to attention deficits (Geurts et al., 2021). Although ADHD is traditionally recognized as a childhood disorder, it increasingly occurs throughout the lifespan. It is estimated that 50 to 90 percent of children with ADHD experience clinically significant symptoms into adulthood (Nursanaa & Ady, 2020). Hyperactivity is predictive of various degrees of impairment in academic, cognitive, social, and developmental functioning, and the disorder negatively affects the social, academic, and emotional growth of affected individuals (Sibley et al., 2023).

Problematic behavioral experiences and the emotional instability and vulnerability of children with ADHD also increase family members' stress and anxiety (Nimmo-Smith et al., 2020). Over the past three decades, various treatment methods have been proposed, including pharmacotherapy, parent training/consultation, functional behavior analysis, behavioral therapy, and cognitive-behavioral therapy. Each treatment has shortcomings in terms of duration and associated costs. Moreover, follow-up in these treatments was not permanent or long-term (Horton et al., 2024). Among the effective methods for reducing ADHD symptoms is play therapy, an essential tool for mental health professionals working with children. Play therapy is a structured, theory-based approach that establishes children's natural and normative processes of learning and communication (Wong et al., 2023). Play therapy techniques are based on the idea that these activities reflect the child's emotional life and imagination, enabling them to express feelings, test, and experience new attitudes and relationships through play. Typically, this form of therapy is indirect and psychodynamic in approach but can also be more direct or analytically oriented depending on the situation (Ashouri & Dalalzadeh Beigi, 2018; Heydarian et al., 2021).

Play is the natural world of the child, where they learn about themselves, others, and their environment. It facilitates the development of skills that foster a sense of competence and adequacy. Through play, children are motivated to meet their needs and explore their surroundings, expressing themselves and nurturing creative thinking (Cartabia et al., 2023). Play therapy involves an interpersonal relationship between the client and therapist, where the therapist uses play to help the client resolve psychological issues and achieve maximum growth. It helps children distinguish reality from fantasy, correct misconceptions, gain control over their world, develop problem-solving and empathy skills, and release tension (Haugan et al., 2022).

Opportunities for play therapy are created in two primary forms: active and non-directive. Active play therapy involves providing a limited number of toys, with the therapist participating in play alongside the child. Non-directive play therapy does not impose specific restrictions on the child's play, allowing the child to engage in various activities while the therapist refrains from intervention or toy limitations (Nursanaa & Ady, 2020). Play therapy includes diverse approaches, such as psychodynamic play therapy, cognitive-behavioral play therapy, and child-centered play therapy.

Numerous studies have explored the impacts of play therapy. Robinson, Simpson, and Hott (2017) examined child-centered play therapy's impact on the behavioral performance of three first-grade students with ADHD, finding improved behavioral performance (Robinson et al., 2017). Fabiano and colleagues (2021) conducted a meta-analysis of psychosocial treatments for ADHD, indicating that parent behavioral training had the highest effect size (0.70) (Fabiano et al., 2021). Pyle and Fabiano (2017) conducted a meta-analysis of ADHD interventions, showing that these significantly reduced inattention symptoms (Pyle & Fabiano, 2017). Jensen, Biesen, and Graham (2017) also performed a meta-analysis of play therapy, using Cohen's effect size, and found that play therapy had a large impact (effect size of 0.44) on reducing children's behavioral problems (Jensen et al., 2017).

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Given the inconsistencies in findings regarding the effectiveness of various play therapy types, a meta-analysis could clarify the actual impact of these therapies on children's behavioral symptoms and determine each type's efficacy. Considering that research on ADHD spans different regions and age groups and that this disorder affects children worldwide, there is a need for a global understanding of effective interventions. Collecting and reviewing these intervention outcomes on a large scale would assess these techniques' effectiveness. Despite the positive impact of play therapy-based interventions on reducing children's behavioral problems, reported effects range from low to high. Thus, a meta-analysis could better quantify play therapy's efficacy in improving ADHD symptoms in children. This study uses meta-analysis to address whether play therapy is effective in alleviating ADHD symptoms.

2. Methods and Materials

Given that this study relies on secondary sources and requires the search, identification, selection, and synthesis of studies, a systematic method like a systematic review can identify, categorize, and summarize the underlying research components. Using statistical methods in meta-analysis enables the estimation of the effects of related studies. Content analysis was also utilized in this study. The statistical population included articles and research conducted in this area. The search terms were ADHD, behavioral symptoms, and play therapy. Sampling from this population was based on theoretical sampling, which implies that the researcher must approach sampling with openness and flexibility. For searching Iranian research, only Persian sources and studies conducted in Iran were reviewed. These studies, published in scientific-research journals over the past decade (2012–2022), focused on various types of play therapy for behavioral symptoms of children with ADHD, had a suitable sample size, and met methodological requirements (hypothesis formulation, research design, statistical population, sample size and sampling method, measurement tools, statistical hypotheses, statistical analysis methods, and accuracy of statistical computations). A subset of the population under review was selected using a predetermined method.

The inclusion criteria were as follows:

a. The research topic must be play therapy and ADHD.

b. The study must have been conducted as a group research project.

c. The research must have used a quasi-experimental design.

d. Valid tools and reliable scales must have been used.

e. All interventions must have included both a control and an experimental group.

f. Due to limited access to and reporting of dissertations, only articles extracted from dissertations published in scientific-research journals were included.

The statistical population in the second phase of the study, focusing on internal validation, consisted of all specialists and subject matter experts in the field of play therapy for children with ADHD. The sample size for this phase included 8 specialists, and the sampling method was census sampling, as qualitative research seeks not to generalize results but to find samples that align closely with the research objective. Three criteria were considered in selecting experts in play therapy for children with ADHD: 1. holding a Ph.D. in psychology, 2. having therapeutic experience using play therapy, 3. having research experience in this field. In the initial phase, 60 studies were collected from reputable databases, including Google Scholar, Science Direct, and others. In the second phase, articles containing statistical values such as p-value, t-value, and other relevant statistics were separated. Out of these, 25 acceptable articles were selected, 20 of which were in Persian and 5 in English.

Content Analysis Checklist (Methodological Evaluation): This checklist was used to select dissertations, research proposals, and research articles that met the inclusion criteria and to extract the necessary information for meta-analysis. The checklist included the following components: titles of studies on various types of play therapy and ADHD, full details of the authors, the year and location of the research, research hypotheses, tools used, validity and reliability of the data collection instruments, statistical population, sample size, and the significance level of the tests used in the research.

Subsequently, to validate the developed program, expert opinions were gathered through a survey to assess internal validity. It should be noted that quantitative content validity was determined using the Content Validity Ratio (CVR). The study involved a systematic review and meta-analysis. In the systematic review, topics such as the types of researcher collaborations, research methods used in the articles, the unit of analysis, the variables used, and the theoretical frameworks and models employed were addressed. After the systematic review, the effect size of each variable was examined. Effect size statistics reflect the

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importance of an experimental effect or the strength of the relationship between two variables (Bronstein et al., 2009). The research data were analyzed using CMA and SPSS software. Effect size analysis was used to assess the effectiveness of various play therapy types on the behavioral symptoms of children with ADHD.

3. Findings and Results

Based on the findings of the study, 25 components were identified. Data entry into the meta-analysis software was conducted in three formats: mean and standard deviation for two groups, p-value significance level with sample size, t-value significance level with sample size, and correlation coefficient with sample size. Subsequently, the frequency of each item was reported. For the variables under investigation, a set of Latin symbols was used. Since the meta-analysis software does not support Persian fonts, Latin symbols were utilized, and the names of researchers were also transcribed in Latin.

The study sample included 215 working adolescents (69 females and 146 males) with a mean age of 14.87 years and a standard deviation of 1.31 years. Table 1 presents the means, standard deviations, and correlation coefficients among mental health, stressful life events, emotional intelligence components, moral intelligence, and addiction proneness

Table 1

Latin Symbolization of Components Extracted from Domestic and International Articles

Identified Components	CMA Symbol	Component Frequency
Learning Disabilities	A	2
Fear and Anxiety	B	10
Lack of Participation	C	2
Difficulty in Self-Expression	D	2
Lack of Self-Control	E	2
Attention Deficit	F	8
Hyperactivity	G	2
Non-Adaptability	H	1
Inattention	I	5
Hyperactivity	J	1
Passive Behavior	K	1
Low Self-Esteem	L	2
Resilience	M	2
Child Aggression	N	6
Impulsivity	O	4
Executive Dysfunction	P	2
Maladaptive and Rule-Breaking Behavior	Q	2
Oppositional Defiance	R	1
Conduct Disorder	S	1
Social Maladjustment	T	4
Antisocial Behavior	U	3
Internalizing Problems	W	2
Externalizing Problems	X	5
Thinking Problems	Y	2
Depression	Z	1

According to Table 1, out of the 25 approved articles, 20 components were extracted for designing various play therapy approaches targeting the behavioral symptoms of children with ADHD through meta-analysis. Among these, the highest frequency was related to fear and anxiety, repeated 10 times, indicating the component's prominence in designing the proposed model. In total, 25 components were extracted for play therapy design on behavioral symptoms, and subsequent analyses will be based on these components. The data entry process in the CMA software is depicted below.

Table 2

Meta-Analysis Findings Combining Effect Size, Confidence Interval, and Homogeneity Test Results

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Row	Identified Components	CMA Symbol	Repetition Count	Random Effects	Calculated Mean Difference	Lower Limit (CI: 95%)	Upper Limit (CI: 95%)	Degrees of Freedom	Homogeneity
1	Learning Disabilities	A	2	0.629	1.609	1.077	2.141	1	89.32
2	Fear and Anxiety	B	10	0.968	2.61	0.985	4.235	9	87.458
3	Lack of Participation	C	2	0.378	0.859	0.813	2.627	1	90.191
4	Difficulty in Self-Expression	D	2	0.389	0.888	-0.873	2.650	1	90.072
5	Lack of Self-Control	E	2	0.298	0.638	-0.701	1.977	1	84.14
6	Attention Deficit	F	8	0.953	2.815	0.944	4.685	7	91.045
7	Hyperactivity	G	2	0.148	0.293	-0.217	0.804	1	89.169
8	Non-Adaptability	H	1	0.995	20.485	8.840	32.130	0	91.356
9	Inattention	I	5	0.988	10.725	2.662	18.789	4	88.559
10	Hyperactivity	J	1	0.981	67.091	29.115	105.067	0	91.349
11	Passive Behavior	K	1	0.403	0.882	-0.355	2.119	0	89.189
12	Low Self-Esteem	L	2	0.945	6.989	-3.344	17.321	1	86.448
13	Resilience	M	2	0.539	1.605	-2.085	5.294	1	97.498
14	Child Aggression	N	6	0.819	4.287	1.221	7.352	5	94.776
15	Impulsivity	O	4	0.951	5.554	3.034	8.075	3	54.008
16	Executive Dysfunction	P	2	-0.209	-0.423	-1.264	0.418	1	62.136
17	Maladaptive and Rule-Breaking Behavior	Q	2	-0.508	-1.366	-4.295	1.561	1	95.459
18	Oppositional Defiance	R	1	0.969	7.810	4.276	11.434	0	81.964
19	Conduct Disorder	S	1	0.906	4.284	2.212	6.356	0	91.346
20	Social Maladjustment	T	4	0.964	4.619	-1.341	10.579	3	84.742
21	Antisocial Behavior	U	3	0.993	12.422	2.649	22.195	2	79.318
22	Internalizing Problems	W	2	-0.250	-0.807	1.187	-2.942	1	86.253
23	Externalizing Problems	X	5	-0.249	-0.526	-1.598	0.546	4	86.828
24	Thinking Problems	Y	2	0.604	1.515	0.119	2.192	1	92.365
25	Depression	Z	1	0.467	1.056	-0.019	2.131	0	82.391

Table 2 calculates the combined effect size based on the correlation index. Each component's statistics are reported, and using the random effects column results, components can be categorized according to Cohen's index.

Table 3

Components with Effect Size Less than 0.3 (Low)

Component	Code	Effect Size
Lack of Self-Control	E	0.298
Hyperactivity	G	0.148
Executive Dysfunction	P	-0.209
Maladaptive and Rule-Breaking Behavior	Q	-0.508
Internalizing Problems	W	-0.25
Externalizing Problems	X	-0.249
Frequency of Low Effect Size		n = 6

Based on the results of Table 3, components such as lack of self-control, hyperactivity, executive dysfunction, maladaptive and rule-breaking behavior, internalizing problems, and externalizing problems have effect sizes of 0.298, 0.148, -0.209, -0.508, -0.25, and -0.249, respectively.

Table 4

Components with Effect Size Between 0.3 and 0.5 (Moderate)

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Component	Code	Effect Size
Lack of Participation	C	0.378
Difficulty in Self-Expression	D	0.389
Passive Behavior	K	0.403
Depression	Z	0.467
Frequency of Moderate Effect Size		n = 4

According Table 4, components like lack of participation, difficulty in self-expression, passive behavior, and depression have effect sizes of 0.378, 0.389, 0.403, and 0.467, respectively.

Table 5

Components with Effect Size Equal to or Greater than 0.5 (High)

Component	Code	Effect Size
Learning Disabilities	A	0.629
Fear and Anxiety	B	0.968
Attention Deficit	F	0.953
Non-Adaptability	H	0.995
Inattention	I	0.988
Hyperactivity	J	0.981
Low Self-Esteem	L	0.945
Resilience	M	0.539
Child Aggression	N	0.819
Impulsivity	O	0.951
Oppositional Defiance	R	0.969
Conduct Disorder	S	0.906
Social Maladjustment	T	0.964
Antisocial Behavior	U	0.993
Thinking Problems	Y	0.604
Frequency of High Effect Size		N = 15

The results indicate that 15 out of 25 components have an effect size equal to or greater than 0.5, suggesting their greater significance and role.

Table 6

Frequency Distribution of Effect Size Categories

Effect Size Range	Frequency	Percentage
Less than 0.3 (Low)	6	16%
Between 0.3 and 0.5 (Moderate)	4	60%
0.5 and Higher (High)	15	24%
Total	25	100%

Table 6 shows the frequency distribution of components in categorized groups. As the results indicate, 6 components (16%) fall in the low effect size category, 4 components (60%) in the moderate category, and 15 components (24%) in the high category.

4. Discussion and Conclusion

The present study aimed to provide a model for examining the effect sizes of various types of play therapy on the behavioral symptoms of children with Attention Deficit/Hyperactivity Disorder (ADHD) through a meta-analysis approach. Following the screening of 60 articles, 25 qualified articles were included in the meta-analysis, resulting in the identification of 25 components. According to Cohen's index, these components were categorized into three groups: effect size less than 0.3 (low), effect size between 0.3 and 0.5 (moderate), and effect size of 0.5 and above (high), with 6, 4, and 15 components, respectively. We will now address the research questions based on the findings of this chapter.

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The results indicated that components such as lack of self-control, hyperactivity, executive dysfunction, maladaptive and rule-breaking behavior, internalizing problems, and externalizing problems were in the low effect size group (<0.3). Components such as lack of participation, difficulty in self-expression, passive behavior, and depression fell into the moderate effect size group (0.3–0.5). Finally, 15 components, including learning disabilities, fear and anxiety, attention deficit, non-adaptability, inattention, hyperactivity, low self-esteem, resilience, child aggression, impulsivity, oppositional defiance, conduct disorder, social maladjustment, antisocial behavior, and thinking problems, were in the high effect size group (≥0.5). The findings are consistent with prior studies (Ashouri & Abedi, 2020; Ashouri & Dalalzadeh Beigi, 2018; Ashouri et al., 2019; Fabiano et al., 2009; Fabiano et al., 2015; Fabiano et al., 2021; Jensen et al., 2017; Pyle & Fabiano, 2017; Robinson et al., 2017).

Children with ADHD experience difficulties in planning and controlling their behavior. They often respond impulsively without adequate information about a given situation, acting on mental impulses without considering the consequences (Asghari Nekah & Abedi, 2014). Play can be seen as a motivational factor, providing individual pleasure and variety in life. Many physical exercises in play encourage children to engage in physical activities (Amouzadeh et al., 2016). Play therapy allows children to express positive and negative emotions, facilitating self-disclosure, expressing needs, and revealing desires (Ashouri & Abedi, 2020). Emotions expressed during play therapy, both positive and negative, are observable behaviors that reveal children's concerns and problems to therapists.

Through play, children symbolically communicate their difficulties and explore multiple ways to solve challenges, fostering problem-solving skills and reducing ADHD-related behavioral issues (Cochran et al., 2022). Play therapy enhances children's self-perception and decreases internalizing and externalizing behavioral problems. The physical activity and pleasure experienced during play engage children fully, increasing their focus and attention (Obiweluozo et al., 2021). Furthermore, play therapy raises children's awareness of their behaviors, helping them find more appropriate ways to handle issues (Feizollahi et al., 2019). Given their struggles with controlling and predicting emotional reactions, ADHD children need structured programs that target both cognitive and behavioral aspects (Wong et al., 2023), and play therapy can assist with this.

The results also showed that play therapy significantly impacted child aggression, with an effect size greater than 0.5, supporting prior studies (Delavar et al., 2015; Ganji et al., 2015; Heydarian et al., 2021). Aggression in children is a complex behavior resulting from frustration and unmet desires. ADHD children, who often face repeated frustrations, struggle to adapt to environmental rules and societal norms, leading to aggressive behavior. Play therapy helps address these frustrations by providing a safe space for emotional release and learning aggression management techniques (Akbari & Rahmati, 2015).

Play therapy offers a secure environment for emotional expression and reduces tension and anxiety. It is an intervention based on the premise that the therapeutic relationship between the child and therapist reduces anxiety. Through interaction in a safe space, children express and manage repressed emotions, which helps them regulate aggression. Emotional regulation is crucial for managing aggression and involves responding appropriately to situations, thus reducing behavioral outbursts (Post et al., 2019).

Children in play therapy learn that behavior is a choice, and understanding the consequences of their actions strengthens self-control. Play is a natural and enjoyable activity, essential for cognitive, emotional, social, and psychomotor development. It fosters curiosity, innovation, and genuine self-experience, providing children with a way to externalize and process emotions. The main function of play therapy is to resolve conflicts that hinder effective functioning in the environment, offering a safe space for children to express negative emotions and gradually develop positive skills (Najafi & Sarpoolaki, 2016).

The study showed that play therapy has a strong and significant impact on reducing aggressive and rule-breaking behaviors. This finding aligns with prior research (Amiri Morchgani & Lahrabi, 2020; Jensen et al., 2017; Sabet et al., 2020). Research emphasizes that rule-breaking behaviors in ADHD children can escalate to future antisocial conduct (Stewart et al., 2002). Children with ADHD often struggle with social interactions, displaying fewer prosocial behaviors, which hinders peer relationships (Dros, 2019). Play therapy helps these children manage emotional pressure and adapt more effectively to social norms, reducing negative behaviors (Lambert et al., 2007).

Play therapy involves using toys to relieve stress, allowing children to resolve negative life experiences. They integrate these experiences into new perspectives, facilitating emotional release and growth. Axline noted that

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play therapy provides children a way to express and manage distressing emotions, fostering emotional peace and self-discovery (Roozeh & Ahmadi, 2015).

5. Limitations & Suggestions

This study faced limitations, such as limited access to specific research databases and the lack of a comprehensive national database for meta-analyses. Future research should report all methodological details, including sample size, psychometric properties of tools, statistical analysis methods, significance levels, and effect sizes, to facilitate meta-analyses. The growing use of meta-analytic approaches highlights the need for complete and precise reporting. Additionally, further research on other special needs groups is recommended. The findings can be used to address ADHD children's behavioral issues and prevent more severe problems. Training in play therapy methods for parents, teachers, and professionals, along with workshops for counselors and psychologists, is suggested.

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Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

Not applicable.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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Authors' Contributions

All authors equally contributed in this article.

References

Akbari, B., & Rahmati, F. (2015). The Effectiveness of Cognitive-Behavioral Play Therapy in Reducing Aggression in Preschool Children with Attention Deficit/Hyperactivity Disorder. *Child Psychological Development Quarterly*, *2*(2), 93-100. https://childmentalhealth.ir/article-1-53-en.html

Amiri Morchgani, F., & Lahrabi, B. (2020). Examining the Effect of Short-Term Structured Play Therapy on Reducing Symptoms of Attention Deficit/Hyperactivity Disorder and Behavioral Disorders in Students with Attention Deficit/Hyperactivity Disorder. *New Approaches in Educational Sciences Quarterly*, *2*(1), 96-108. https://journal.iocv.ir/article_106857.html?lang=en

Amouzadeh, F., Hassanvand, S., Hashemian, K., & Hemayat Talab, R. (2016). Comparison of the Effect of Play Therapy and Medication on the Development of Motor Skills and Attention Span in Children with Attention Deficit/Hyperactivity Disorder. *Motor Behavior*, *8*(23), 97-110. https://mbj.ssrc.ac.ir/article_660.html?lang=en

Asghari Nekah, S. M., & Abedi, Z. (2014). Investigating the Effectiveness of Play Therapy Based on Executive Functions in Improving Response Inhibition, Planning, and Working Memory of Children with Attention Deficit/Hyperactivity Disorder. *Cognitive Psychology Quarterly*, *2*(1), 41-51. https://jcp.khu.ac.ir/article-1-2005-en.html

Ashouri, M., & Abedi, A. (2020). Meta-Analysis of the Impact of Play Therapy-Based Interventions on Adaptive Behavior in Children with Intellectual Disabilities. *Child Mental Health Quarterly*, *7*(1), 91-105. https://doi.org/10.29252/jcmh.7.1.9

Ashouri, M., & Dalalzadeh Beigi, F. (2018). The Effectiveness of Cognitive-Behavioral Model-Based Play Therapy on Behavioral Problems and Social Skills in Preschool Children with Attention Deficit/Hyperactivity Disorder. *Rehabilitation Quarterly*, *19*(2), 103-115. https://doi.org/10.32598/rj.19.2.102

Ashouri, M., Ghasemzadeh, S., & Dalalzadeh, F. (2019). The Impact of Cognitive-Behavioral Model-Based Play Therapy on Social Skills in Preschool Children with Attention Deficit/Hyperactivity Disorder. *Child Mental Health Quarterly*, *6*(2), 28-39. https://doi.org/10.29252/jcmh.6.2.4

Cartabia, M., Finazzi, S., & Bonati, M. (2023). Differences between centers in functional outcome of patients with ADHD after 1 year from the time of diagnosis. *Scientific reports*, *13*(1), 18738. https://doi.org/10.1038/s41598-023-48487-6

Cochran, N. H., Nordling, W. J., & Cochran, J. L. (2022). *Child-Centered Play Therapy: A Practical Guide to Therapeutic Relationships with Children*. Taylor & Francis. https://doi.org/10.4324/9781003260431

Delavar, A., Ganji, K., & Taghavi, S. (2015). Analysis of Studies on the Effectiveness of Non-Medication Therapies in Reducing Symptoms of Attention Deficit/Hyperactivity Disorder. *Educational Measurement*, *19*, 67-98. http://ensani.ir/fa/article/353574/%D9%81%D8%B1%D8%A7%D8%AA%D8%AD%D9%84%DB%8C%D9%84-%D9%85%D8%B7%D8%A7%D9%84%D8%B9%D8%A7%D8%AA-%D8%AA%D8%A7%D8%AB%DB%8C%D8%B1-%D8%AF%D8%B1%D9%85%D8%A7%D9%86-%D9%87%D8%A7%DB%8C-%D8%BA%DB%8C%D8%B1%D8%AF%D8%A7%D8%B1%D9%88%DB%8C%DB%8C-%D8%A8%D8%B1-%DA%A9%D8%A7%D9%87%D8%B4-%D9%86%D8%B4%D8%A7%D9%86%D9%87-%D9%87%D8%A7%DB%8C-%D8%A7%D8%AE%D8%AA%D9%84%D8%A7%D9%84

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Fabiano, G. A., Pelham, W. E., Gangy, E. M., Burrows-MacLean, L., Coles, E. K., & Chaco, A. (2009). The single and combined effects of multiple intensities of behavior modification and methylphenidate for children with attention deficit hyperactivity disorder in a classroom setting. *School Psychology Review*, *36*, 195-216. https://doi.org/10.1080/02796015.2007.12087940

Fabiano, G. A., Schatz, N. K., Aloe, A. M., Chacko, A., & Chronis-Tuscano, A. (2015). A systematic review of meta-analyses of psychosocial treatment for attention deficit/hyperactivity disorder. *Clinical Child and Family Psychology Review*, *18*(1), 77-97. https://doi.org/10.1007/s10567-015-0178-6

Fabiano, G. A., Schatz, N. K., Aloe, A. M., Pelham Jr, W. E., Smyth, A. C., Zhao, X., & Coxe, S. (2021). Comprehensive meta-analysis of attention-deficit/hyperactivity disorder psychosocial treatments investigated within between group studies. *Review of Educational Research*, *91*(5), 718-760. https://doi.org/10.3102/00346543211025092

Feizollahi, J., Rezaei, F., & Sadeghi, M. (2019). A Study on the Effect of Cognitive-Behavioral Play Therapy Combined with Parent Management Training on Symptoms of Attention Deficit/Hyperactivity Disorder in Children Aged 7-11 with ADHD. *Rafsanjan University of Medical Sciences Journal*, *19*(2), 155-172. https://doi.org/10.29252/jrums.19.2.155

Ganji, K., Zabihi, R., & Taghavi, S. (2015). Meta-Analysis of the Effectiveness of Play Therapy on Behavioral Disorders in Children. *Behavioral Sciences*, *9*(2), 111-120. https://www.behavsci.ir/article_67911.html

Geurts, D. E., Schellekens, M. P., Janssen, L., & Speckens, A. E. (2021). Mechanisms of change in mindfulness-based cognitive therapy in adults with ADHD. *Journal of Attention Disorders*, *25*(9), 1331-1342. https://doi.org/10.1177/1087054719896865

Glenn, M. (2024). *Childhood ADHD: Treated vs. Untreated—Treatments, Implications, & Outcomes*. https://digitalcommons.csp.edu/human-services_masters/6/

Haugan, A. L. J., Sund, A. M., Young, S., Thomsen, P. H., Lydersen, S., & Nøvik, T. S. (2022). Cognitive behavioural group therapy as addition to psychoeducation and pharmacological treatment for adolescents with ADHD symptoms and related impairments: a randomised controlled trial. *BMC psychiatry*, *22*(1), 375. https://doi.org/10.1186/s12888-022-04019-6

Heydarian, M., Mirzaei, M., Shah Owisi, S., & Akbari, M. (2021). The Effectiveness of Cognitive-Behavioral Model-Based Play Therapy on Behavioral Problems, Responsibility, and Self-Esteem of Male Students with Attention Deficit/Hyperactivity Disorder. *Early Childhood Health and Education Quarterly*, *2*(3), 124-143. https://jeche.ir/article-1-54-en.html

Horton, E., Romito, M., Frawley, C., & Schoonover, T. J. (2024). A size-inclusive playroom: Play therapy considerations to promote healing for children of diverse body shapes and sizes. *International Journal of Play Therapy*, *33*(3), 154. https://doi.org/10.1037/pla0000218

Jensen, S. A., Biesen, J. N., & Graham, E. R. (2017). A meta-analytic review of play therapy with emphasis on outcome measures. *Professional psychology: Research and practice*, *48*(5), 390. https://doi.org/10.1037/pro0000148

Lambert, S. F., LeBlanc, M., Mullen, J. A., Ray, D., Baggerly, J., White, J., & Kaplan, D. (2007). Learning more about those who play in session: The national play therapy in counseling practices project (Phase I). *Journal of Counseling & Development*, *85*(1), 42-46. https://doi.org/10.1002/j.1556-6678.2007.tb00442.x

Najafi, M., & Sarpoolaki, B. (2016). The Effectiveness of Cognitive-Behavioral Play Therapy on Aggression and Behavioral Disorders in Elementary School Children. *Exceptional Individuals Quarterly*, *6*(21), 103-121. https://jpe.atu.ac.ir/article_5283.html?lang=en

Nimmo-Smith, V., Merwood, A., Hank, D., Brandling, J., Greenwood, R., Skinner, L., & Rai, D. (2020). Non-pharmacological interventions for adult ADHD: a systematic review. *Psychological medicine*, *50*(4), 529-541. https://doi.org/10.1017/S0033291720000069

Nursanaa, W. O., & Ady, I. N. C. (2020). Play therapy for children with anxiety disorders. 5th ASEAN Conference on Psychology, Counselling, and Humanities (ACPCH 2019),

Obiweluozo, P. E., Ede, M. O., Onwurah, C. N., Uzodinma, U. E., Dike, I. C., & Ejiofor, J. N. (2021). Impact of cognitive behavioural play therapy on social anxiety among school children with stuttering deficit: a cluster randomised trial with three months follow-up. *Medicine*, *100*(19). https://doi.org/10.1097/MD.0000000000024350

Post, P. B., Phipps, C. B., Camp, A. C., & Grybush, A. L. (2019). Effectiveness of child-centered play therapy among marginalized children. *International Journal of Play Therapy*, *28*(2), 88. https://doi.org/10.1037/pla0000096

Pyle, K., & Fabiano, G. A. (2017). Daily report card intervention and attention deficit hyperactivity disorder: A meta-analysis of single-case studies. *Exceptional Children*, *83*(4), 378-395. https://doi.org/10.1177/0014402917706370

Robinson, A., Simpson, C., & Hott, B. L. (2017). The effects of child-centered play therapy on the behavioral performance of three first grade students with ADHD. *International Journal of Play Therapy*, *26*(2), 73. https://doi.org/10.1037/pla0000047

Roozeh, F., & Ahmadi, A. (2015). Types of Play and Play Therapy in Psychology.*International Conference on Humanities, Psychology, and Social Sciences*

Sabet, M., Hashemi, N., & Jafari, F. (2020). The Effectiveness of Group Play Therapy in Reducing Behavioral Disorders and Aggression in Preschool Children with Hyperactivity Disorders. *Journal of Advances in Modern Psychology*, *30*(3), 46-62. http://ensani.ir/fa/article/442092/%D8%A7%D8%AB%D8%B1%D8%A8%D8%AE%D8%B4%DB%8C-%D8%A8%D8%A7%D8%B2%DB%8C-%D8%AF%D8%B1%D9%85%D8%A7%D9%86%DB%8C-%DA%AF%D8%B1%D9%88%D9%87%DB%8C-%D8%A8%D8%B1-%DA%A9%D8%A7%D9%87%D8%B4-%D8%A7%D8%AE%D8%AA%D9%84%D8%A7%D9%84%D8%A7%D8%AA-%D8%B1%D9%81%D8%AA%D8%A7%D8%B1%DB%8C-%D9%88-%D9%BE%D8%B1%D8%AE%D8%A7%D8%B4%DA%AF%D8%B1%DB%8C-%DA%A9%D9%88%D8%AF%DA%A9%D8%A7%D9%86-%D9%BE%DB%8C%D8%B4-%D8%AF%D8%A8%D8%B3%D8%AA%D8%A7%D9%86%DB%8C-%D8%AF%D8%A7%D8%B1%D8%A7%DB%8C-%D8%A7%D8%AE%D8%AA%D9%84%D8%A7%D9%84%D8%A7%D8%AA-%D8%A8%DB%8C%D8%B4-%D9%81%D8%B9%D8%A7%D9%84%DB%8C

Sibley, M. H., Graziano, P. A., Coxe, S. J., Bickman, L., Martin, P., & Flores, S. (2023). A Randomized Community-Based

Trial of Behavior Therapy vs. Usual Care for Adolescent ADHD: Secondary Outcomes and Effects on Comorbidity. *Behavior therapy*, *54*(5), 839-851. https://doi.org/10.1016/j.beth.2023.03.001

Veronesi, G. F., Gabellone, A., Tomlinson, A., Solmi, M., Correll, C. U., & Cortese, S. (2024). Treatments in the pipeline for attention-deficit/hyperactivity disorder (ADHD) in adults. *Neuroscience & Biobehavioral Reviews*. https://doi.org/10.1016/j.neubiorev.2024.105774

Wong, T. Y., Chang, Y. T., Wang, M. Y., & Chang, Y. H. (2023). The effectiveness of child-centered play therapy for executive functions in children with attention-deficit/hyperactivity disorder. *Clinical Child Psychology and Psychiatry*, *28*(3), 877-894. https://doi.org/10.1177/13591045221128399

Wu, C., Wu, D., Fang, Y., & Song, H. (2024). Efficacy of Integrated Neurofeedback and Virtual Reality Training in Children with ADHD: A Randomized Controlled Trial. https://www.researchgate.net/publication/379892579_Efficacy_of_Integrated_Neurofeedback_and_Virtual_Reality_Training_in_Children_with_ADHD_A_Randomized_Controlled_Trial

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