

## The Effects of Play Therapy on Reducing Behavioral Problems, Attention Deficit and Hyperactivity in Children

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### Abstract

**Background:** This study aimed to investigate the effectiveness of play therapy on reducing behavioral problems, attention deficit and hyperactivity in children.

**Methods:** The present study followed an applied-experimental design (pre-test-post-test) with a control group. The statistical population consisted of all the hyperactive 7-12-year-old boys of an elementary school in the 2nd district of Shiraz in the academic year 2018-2019. A sample of 24 individuals in the fifth and sixth grades (average age of 11 years) were selected based on the inclusion criteria and were randomly divided into two groups (12 in the control group and 12 in the experimental group). The experimental group underwent play therapy training in eight 90-min sessions with the cooperation of school psychologists. In order to collect data, Rutter's Behavioral Problems Questionnaire (Parent Form) and Conners Rating Questionnaire were used to evaluate the subjects, and the collected data was analyzed in the form of descriptive statistics (mean and standard deviation) and inferential statistics (analysis of covariance, for hypothesis testing). Data analysis was performed using SPSS-24 software.

**Results and Conclusion:** The results of data analysis showed that play therapy was associated with significant effectiveness in reducing behavioral problems and reducing attention deficit and hyperactivity in primary school children, and it reduced behavioral problems and the severity of hyperactivity symptoms.

**Key Words:** Attention Deficit, Behavioral Problems, Hyperactivity, Play Therapy.

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## 1- INTRODUCTION

The most important period of motor development is childhood, and one of the characteristics of motor development is continuous physical, motor, cognitive and emotional growth. Early experiences and learning in this period are very effective for a person in later learning (1). One of the important disorders in this period is hyperactivity disorder. Hyperactivity disorder is one of the most common neurodevelopmental disorders in children, which continues until puberty and adulthood (2). Attention deficit Hyperactivity Disorder (ADHD) is one of the most common childhood disorders. The prevalence of this disorder is 2.7% worldwide and between 2 and 18% in Iran (3). Hyperactivity disorder is one of the most common and damaging disorders of childhood. This disorder, which has a profound effect on the lives of thousands of children and their families, is classified into three forms based on the prevalence of the related defects and problems. It includes the type of hyperactivity-impulsivity without attention deficit, Attention deficit without impulsivity, and the combined type (4). It has been well proven that children with ADHD have cognitive problems in terms of inattention, impulsivity and hyperactivity. In addition, some studies have reported that children with ADHD usually have problems in performing and learning motor skills (2).

Biological, congenital and environmental factors can play influential roles in the occurrence of this disorder. Biological factors include genetics, underdevelopment of the reticular activating system, hypofunction of the frontal cortex, high activity of alpha waves in the central and frontal regions, low activity of beta waves in the cerebral cortex, and lack of balance in neurotransmitters such as dopamine, norepinephrine, and serotonin. Congenital and environmental factors include low

birth weight, neonatal diseases, drug and alcohol use by the mother during pregnancy, and increased lead levels in the blood (5). We see many risks and negative consequences are observed in affected people; e.g., the higher rates of divorce, crime, delinquency, addiction, high-risk driving, early pregnancy, high-risk sexual behaviors and other high-risk behaviors are evident in these people. Paying attention to this disorder is very necessary due to its long duration and unfavorable prognosis. Compared with normal children, those with attention deficit and hyperactivity disorder are more likely to have an accident when crossing the street, or when they ride a bicycle. Crossing the street requires decision and action; both of these cognitive abilities are defective in ADHD children. In this study, ADHD children were subjected to a simulated image space of intersections and were examined by a stationary bicycle. This study showed that ADHD children, like other children, had a correct understanding of the space between cars to pass, but the timing of their entry into the street was not accurate. Also, when the distance between cars was reduced in the study, ADHD children did not wait until the distance was increased to pass, but instead chose the same small spaces, which increases the risk of accidents in them. Lack of proper timing related to lack of attention and lack of waiting to increase the distance between cars was related to their impulsiveness and hyperactivity; therefore, an important strategy to help them is to teach them to wait for a larger distance between cars, thus reducing the risk of an accident even if their timing is still flawed (6).

Children's behavioral disorders that are emphasized in this research are the subscales of anxiety, social problems, attention and concentration, aggression and other problems that are mentioned in children's behavior list. Evidence suggests that movement programs designed for

these children lead to visible improvement in behavioral and movement problems (7). Timely diagnosis of behavioral problems that manifest themselves in the preschool period is of great importance, because almost all mental health professionals emphasize that the first years are very necessary for later adaptation, and the existence of problems in these years is the basis of maladjustment in future years (3). This disease has a bad effect on children's performance in family, community and school and causes negative reactions from those around them. These behaviors cause serious problems for the child and cause a decrease in self-confidence, feelings of inadequacy, communication disorders, anxiety, depression, and delinquency (8). The prognosis of this disorder in childhood depends on the amount of accompanying mental damage, especially conduct disorder and social disability, and family-related factors. The best results may be obtained by improving the child's social functioning, reducing aggression and improving family conditions as quickly as possible (9). One of the most key axes of pathology is the field of executive functions, which has been proposed in the etiology of attention deficit hyperactivity disorder, and deals with the impaired executive functions in working memory (10).

Memory is one of the great abilities of the brain, which allows a person to record and store information and call it when necessary. The relationship between learning and memory is inevitable, so that the ability to learn is largely dependent on memory (11). Working memory is the central core of many cognitive functions, and it is one of the cognitive functions related to executive functions. It enjoys a set of processes that allow a person to keep in mind or decode information when applying it, in such a way that immediate access to it is possible (12). In fact, working memory is a kind of cognitive

system of temporary storage of information. This system is able to process important information for activities such as reasoning, language comprehension, learning and decision-making (13). Many problems of ADHD children can be seen in the field of behavioral disorders. Children's behavioral disorders refer to behaviors that cause the child to disturb the senses of other children and put pressure on the teacher in school. In some cases, the child's behavior is aggressive or withdrawn, which not only negatively affects the child's individual personality, but also creates unfavorable conditions in the environment and others. Behavioral disorders in children depend on factors such as age, environmental conditions of growth, severity of behavioral abnormality and duration of behavior. Considering its negative and destructive consequences for the child and family, this disorder requires attention and intervention, and one of the treatments based on research evidence in this field is play therapy.

ADHD is a neurological disorder mainly caused by problems in the frontal lobe and executive functions of the brain. Performing some exercises can reduce the severity of the disorder and the problems associated with it. Exercise and movement programs are one of the therapeutic programs that have had significant effects on the treatment of these children in different studies and can reduce the behavioral problems of these children by affecting the nervous system; In other words, it can be said that physical activity-based treatments reduce behavioral problems in children with ADHD by improving processing speed, working memory, planning, and problem solving (7). The role of sports and physical activity as a strategy that has the ability to contribute to health, social and economic goals is very important. In fact, during the past decades, people's opportunity to participate in sports activities has

increased, that's why researchers seek to determine the importance of sports participation motivation (14). Movement plays are among the important forms of sports. Play therapy as a child-centered treatment is, thus, potentially helpful for ADHD children, since as Shen (2006) states children project their inner emotional world during play; it is used for children aged 3 to 16 years who have mental problems or other disorders (15) .

In play therapy, all kinds of problems, such as family violence, abuses, and some communication conflicts, can be treated. Depending on the complexity of their problem, children can benefit from play therapy from 2 to 12 months. Katanach (2009) believes that children's world is a world of activity and action, and the therapist can understand the child's world by the use of play. In fact, toys are like words and games are a child's language (16). Most children lack the necessary verbal skills to express anxieties and fears. Play therapy is a method that helps children with problems to solve their problems and at the same time, it shows the fact that games are natural tools for the child, helping him to know himself and also his inner qualities. In this type of treatment, just like the type of treatment through which adults express their problems by speaking, the child is given the opportunity to express his annoying feelings and problems through play and display them (17). Seyed Rezaei et al. (2021) also determined that activities with visual-motor integration can help solving problems related to this field by improving the skill status of people in some activities (18).

Alizadeh (2015) in his study on 10 6-year-old boys investigated the effectiveness of group cognitive behavioral play therapy on reducing the internal and external behavioral problems of homeless children. His results revealed a significant difference in the average of behavioral

disorders in the pre-test and post-test, indicating that cognitive-behavioral group play therapy had reduced the symptoms of internal and external behavioral disorders in subjects (19). Aryapuran and Eskandari (2015), in their study, investigating the effectiveness of group play therapy on the symptoms of oppositional disobedience and behavior disorder in twenty 6-9-year-old ADHD boys in Isfahan, Iran, reported that group play therapy had a significant effect on Reducing ADHD symptoms, oppositional disobedience and behavior disorder in children with ADHD (20). Al-Ngar et al. (2017), studying the effects of play therapy on 28 symptoms of children with ADHD, reported that play therapy was significantly effective in reducing the ADHD symptoms; and it was also associated with a significant increase in children's social skills (21). Green et al. (2013), in their study of 20 children and adolescents in the United States reported that play therapy was significantly effective in reducing the symptoms of ADHD and also improving Children's adaptation with home and school environment (22) .

## **2- MATERIALS AND METHOD**

The current experimental research is based on the pretest-posttest design and is placed in the field of applied studies. The statistical population of the present study included all ADHD boys of an elementary school in the 2nd district of Shiraz in the academic year 2018-2019. The samples were 24 fifth and sixth graders (average age of 11 years) selected based on the inclusion criteria through purposeful sampling. They were randomly divided into experimental and control groups (12 individuals each) and then the experimental group underwent eight 90-min-sessions of play therapy with the cooperation of the school's psychological counseling officials.

The content of the 8-session play therapy training was as follows:

The 1<sup>st</sup> session: People are introduced to each other. In this meeting, in order to create a friendly relationship and a sense of security, the games suggested by the group are played.

The 2<sup>nd</sup> session: in the form of role-playing games (similar to theater), people learn desirable social behaviors; they also play their favorite roles and express their dreams and ideas in the form of assumed roles.

The 3<sup>rd</sup> session: The therapist explains the game process to the child: “we want to play the bell game. I give you some cubes and a clock is set”. The child is engaged in an activity (painting or building a tower) for 2 minutes, without looking up and without paying attention to anything else. If the child completes this game, he gets 10 extra tokens. If he performs an activity other than the intended task, one token will be taken from him. After playing the game three times, if he can collect 25 tokens (having only 5 mistakes), he can take a prize from the treasure box.

The 4<sup>th</sup> session: First, the therapist explains the game to the child. The therapist asks the child to tell him the emotions he can feel and the therapist draws them on a piece of paper (happy, sad, angry, crying and surprised). Then they are arranged on the table and the therapist starts telling the story, and every time one of these feelings is mentioned, the child puts a token on the paper associated with that feeling. After the therapist finishes the story, the child tells a story and tokens are placed on the feelings by the therapist and the child.

The 5<sup>th</sup> session: Bubble making game; the therapist starts making bubbles in the room, most of the children start popping them when they see the bubble. Then a bubble maker is given to the child and the child starts making bubbles. Then the child is asked to make big bubbles by explaining that big bubbles can be made by taking deep breaths into the chest and abdomen

and letting them out slowly. With this action, the therapist explains to the child that when he is angry and anxious, the brain needs more air, but the lungs do not work well at that time. If he breathes deeply, the brain orders the heart to beat more slowly and the lungs to work better; so, deep breaths (like making big bubbles) reduce anger.

The 6<sup>th</sup> session: Sit and walk in a direct and reverse way; Students should execute the sudden orders of the examiner immediately and in a group; and after learning, they are to do it in reverse. Then, they practice the training of the previous sessions.

The 7<sup>th</sup> session: People are taught good social behavior by using puppets.

The 8<sup>th</sup> session: A pantomime game was performed in the group. The students gave different feedback about the performances. Finally, the post-test and a general summary were presented.

## 2-1. Instruments

### a) Rutter's Behavioral Problems Questionnaire (Parent Form):

This test was prepared by Michael Rutter (1967) to distinguish between normal children and children with behavioral problems. The subgroups of the test are aggression, anxiety, depression, antisocial behavior, social incompatibility, and attention deficit hyperactivity disorder. This test has been translated and used in Iran by Mehriar et al. In Mehriar's research (1997), the concurrent reliability of the scale with psychiatric diagnosis regarding the presence of the disorder and its subtypes was significant at the level of 0.001. In Rutter's research (1975) using the split-half method, its reliability was reported to be about 0.89. In Bagheri's research (1993) its retest reliability was found to be 0.87. In Abolghasemi's research (2013), the split-half reliability and Cronbach's alpha coefficients of this

questionnaire were reported as 0.83 and 0.91, respectively. The scale consists of 30 statements. In the scoring, each question is given a minimum of 0 and a maximum of 2 marks.

**b) Connor’s grading scale:**

In order to check the severity of children's symptoms of attention deficit and hyperactivity disorder, the Connors grading scale of parent form was used. The parent form has 48 questions that can be used to evaluate five groups of children's disorders, including learning disabilities, behavioral disorders, psychosomatic problems, hyperactivity, and anxiety. Ten questions are devoted to hyperactivity disorders. This scale is made for the age group of 3 to 17 years old and each question is answered as never, a little, almost a lot, or a lot which are given a score from 0 to 3. Obtaining an average of 1.5 or higher indicates hyperkinetic disorder. Cronbach's alpha reliability of the questionnaire was found to be 0.93. The mean score of the scale was 21.42 with a standard deviation of 16.28.

Finally, the collected data was analyzed by SPSS-24 software by the use of descriptive (mean and standard deviation) and inferential statistics (analysis of covariance for hypothesis testing).

**3- RESULTS**

**3-1. Descriptive statistics:**

As presented in **Table 1**, the post-test mean score of ADHD symptoms was lower than that of the pre-test. This variable of behavioral problems has also obtained a lower average in the post-test test in different components (anxiety and depression, aggression, social incompatibility, antisocial behaviors, attention deficit disorder).

In Kolmogorov-Smirnov test, the significance level of the variables should be more than 0.5 0 to be able to express the normal distribution of the variables, therefore, based on the obtained results (Table 2), the values of the significance level of the variables are more than 0.05, so it is concluded that the variables are in a normal state for the analysis of covariance.

**Table-1:** Pre-test and post-test mean (SD) scores of ADHD symptoms, behavioral problems, and their dimensions in control and experimental groups

Variable name	Name of the component	test	control group (n=12)		experimental group (n=12)	
			Average	standard deviation	Average	standard deviation
Symptoms of attention deficit hyperactivity disorder	Symptoms of ADHD	pre-test	17.08	4.49	18.91	4.94
		post-test	16.41	4.25	12.33	4.24
behavioral problems	Anxiety and depression	pre-test	5.50	1.13	6.25	1.25
		post-test	5.41	0.79	4.50	1.03
	aggression	pre-test	8.03	1.72	7.50	1.44
		post-test	7.50	1.38	3.75	1.35
	Social incompatibility	pre-test	9.25	1.28	8.83	1.02
		post-test	8.49	1.16	4.50	1.08
	Antisocial behaviors	pre-test	9.41	1.44	9.58	1.24
		post-test	9.41	1.37	5.61	0.83
	Attention deficit disorder	pre-test	9.45	1.31	10.75	1.44
		post-test	10.09	1.39	5.84	1.40

**Table-2:** Kolmogorov-Smirnov test results, checking the normal distribution of the variables of ADHD and Behavioral problems in the post-test

Variables	Test	The significance level
Symptoms of attention deficit hyperactivity disorder	post-test	0.298
Stress and depression	post-test	0.416
aggression	post-test	0.187
Social incompatibility	post-test	0.241
Antisocial behaviors	post-test	0.517
attention deficit disorder	post-test	0.410

### 3-2. Inferential statistics

The first hypothesis: play therapy is effective in reducing the symptoms of ADHD in children.

As presented in **Table 3**, the F value for symptoms of ADHD is insignificant; therefore, the assumption of homogeneity of the regression slope is confirmed, and the analysis of covariance test can be performed.

**Table 4** shows that Levin's test values are insignificant. In other words, the null hypothesis for the equality of the variances

of the two groups is confirmed and it can be said that in the entire test, the variances of the two groups are equal in the variable of ADHD symptoms.

As **Table 5** demonstrates, the two groups are significantly different in mean scores of ADHD symptoms in the post-test stage; therefore, it can be concluded that play therapy has been effective in reducing the symptoms of attention deficit and hyperactivity disorder in children.

The second hypothesis: Play therapy is effective in children's behavioral problems.

**Table-3:** Homogeneity of the regression slope of the symptoms of ADHD in the two groups

Variable	Source of interaction changes	Pretest-posttest	
		F (Interaction)	Significance level
ADHD symptoms	pretest	2.117	0.161

**Table-4:** The results of Levin's test regarding the equality of variances of ADHD symptoms in the two groups

Variable	F	First degree of freedom	Second degree of freedom	The significance level
Symptoms of ADHD	0.576	1	22	0.108

**Table-5:** The results of univariate covariance analysis regarding the effect of play therapy on ADHD symptoms

Sources		sum of squares	Degree of freedom	mean square	F	The significance level
post-test	Symptoms of ADHD	383.317	1	383.317	592.317	0.001
group	Symptoms of ADHD	5.244	1	5.244	8.128	0.010

The results of **Table 6** show that the F value of the interaction for behavioral problems (its components) is insignificant; therefore, the assumption of homogeneity

of the regression slope is confirmed, and the analysis of covariance test can be performed.

**Table-6:** Homogeneity of the regression slope of behavioral problems in two research groups

Variable	Source of interaction changes	F (Interaction)	Significance level
anxiety and depression	Group * pre-test	0.008	0.932
aggression	Group * pre-test	0.488	0.511
Social incompatibility	Group * pre-test	0.513	0.482
Antisocial behaviors	Group * pre-test	0.002	0.967
Variable attention deficit disorder	Group * pre-test	0.238	0.631

According to the results in **Table 7** Levene's test values are insignificant. In other words, the null hypothesis for the equality of the variances of the two groups

is confirmed and it can be said that in the entire test, the variances of the two groups in the components of behavioral problems are equal.

**Table-7:** Levene's test of the equality of variances in the post-test

Plan	Variables	F	Degree of freedom 1	Degree of freedom 2	The significance level
Post-test	Stress and depression	0.402	1	22	0.731
	aggression	0.406	1	22	0.530
	Social incompatibility	0.093	1	22	0.763
	Antisocial behaviors	0.315	1	22	0.419
	attention deficit disorder	0.516	1	22	0.231

The results of **Table 8** show that after removing the effect of the pre-test scores of the behavioral problems (as an intervening variable), this variable has become significant in some of its components and non-significant in some others in interaction with the group in the post-test stage; the components of aggression, social incompatibility and

attention deficit disorder are significant at the level of 0.01 ( $p < 0.01$ ) and the components of anxiety-depression and antisocial behaviors are non-significant ( $p < 0.05$ ). Therefore, it can be concluded that play therapy has been effective in reducing some aspects of children's behavioral problems (significant components).



**Table-8:** Multivariate covariance analysis of the effect of play therapy on the components of behavioral problems

Sources		sum of squares	Degrees of freedom	mean square	F	The significance level
Pretest scores (intervening variable) Pretest scores (intervening variable) Pretest scores (intervening variable)	Stress and depression	8.575	1	8.575	18.346	0.001
	aggression	34.321	1	34.321	105.897	0.001
	Social incompatibility	21.483	1	21.483	70.342	0.483
	Antisocial behaviors	16.228	1	16.228	27.192	0.001
	attention deficit disorder	32.967	1	32.967	5.281	0.032
group	Stress and depression	0.466	1	0.466	10.012	0.327
	aggression	3.643	1	3.643	11.339	0.003
	Social incompatibility	2.184	1	2.184	7.033	0.001
	Antisocial behaviors	1.915	1	1.915	3.209	0.088
	attention deficit disorder	2.664	1	2.664	65.667	0.001

#### 4- DISCUSSION

The results of data analysis showed that play therapy has a significant effectiveness in reducing the symptoms of ADHD. Attention deficit hyperactivity disorder causes significant problems for many students on academic, cognitive, social, emotional performance and then on their professional and family performance in adulthood. This disorder makes the normal developmental process of childhood difficult, and if not treated, increases the child's readiness to accept psychological and social injuries in adulthood. It can be mentioned that the improvement of hyperactivity is largely related to the child's experiences, and the child gains his experiences in various ways, especially games, during the growth

period. Therefore, if it is possible to enrich the environment and create a platform for group and movement games, it will probably help the growth and treat hyperactivity and attention deficit in children.

Games provide children with the opportunity to present a picture of their inner world and facilitate the expression of emotions. The main function of play therapy is to resolve any conflicts interfering with effective functioning individuals with the environment. Play therapy provides a safe environment for children to gradually express their emotions, tensions, feelings of insecurity and suppressed fears (23). Moreover, by playing different types of games individually and collectively with various

toys, children gain more awareness about their feelings and thoughts, gain knowledge about their important problems and methods of facing problems, and their conflicts and uncomfortable feelings. They also face the consequences of their behavior and learn to maintain their stable attention during the game and reduce their arousal states.

Investigating the effect of play therapy on behavior disorder in children with ADHD Ghorbani Ashin et al. taught play therapy skills to their experimental group during 12 one-hour sessions. And a significant change was observed in the scores of the experimental group compared to the control group in the parent-Conners scale ( $p < 0.001$ ). This experimental plan is, thus, recommended to therapists and psychological specialists. With a consideration to the effect of play therapy on behavioral problems, it can be noted that ADHD is a behavioral inhibition disorder that is related to the ability to wait, stop responding or not responding to events. In other words, attention deficit hyperactivity disorder is a chronic neurodevelopmental and biochemical disorder referring to problems related to an individual's ability to regulate and inhibit behavior and sustained attention in tasks.

Inhibition also includes motor inhibition, delaying gratifications, and changing attention to environmental stimuli. ADHD has three subgroups: Attention Deficit Predominant Type, Hyperactivity Predominant Type, and Combined Type. This disorder affects 5-10% of children and adolescents and 3% of adults. In general, 30 to 70% of children with attention deficit hyperactivity disorder show symptoms of this disorder in adulthood. Attention Deficit Hyperactivity Disorder is a common chronic disorder characterized by inappropriate developmental activity level, low deprivation tolerance, inability to maintain attention and concentration, impulsivity

and unorganized behaviors and agitation. Usually, children with ADHD have major behavioral problems and face many challenges in social skills. Children's behavioral problems in the early years of life are closely related to the mother's negative behavior and communication and her stress, and in this way, the child's problematic behavior causes a decrease in mother's self-confidence. In fact, children's behavioral problems deeply affect family relationships and actions. Children with ADHD face significant challenges in social functions. They are, for example, easily rejected by their peers.

Therefore, in explaining the findings regarding the effectiveness of play therapy in the reduction of behavioral problems of preschool children with ADHD, it can be said that play therapy causes children to become more aware of their behaviors and problems and find more appropriate ways to solve problems. Due to the fact that ADHD children are facing problems in controlling and predicting their behaviors and emotional reactions such as anxiety and depression, they need a targeted program focusing on cognition and thinking to help them manage their behaviors. Play therapy based on the cognitive behavioral model, also, led to the reduction of aggression and hyperactivity of the subjects. It can be said that the play therapy program based on cognitive behavioral models, which was implemented in eight sessions, emphasized the child's participation and responsibility in the treatment process. This is taught through paying attention to self-control, accepting responsibility for changing behavior, and acquiring social skills. In addition, this type of play therapy uses methods such as self-monitoring and dependency management techniques, including positive reinforcement, shaping, silencing, and role modeling.

Therefore, it can be expected that such a systematic, structured and purposeful

program decreases aggression, hyperactivity, anxiety, and depression in the participating children. In explaining the finding that play therapy reduced the social incompatibility and antisocial behaviors of children with ADHD, it can be said that these children have problems in some aspects of growth and development, especially in the field of social skills and behaviors. They experience many problems in communicating effectively and adapting to the surrounding environment. Play therapy can be helpful in these problems, since it provides children with the opportunity to experience different emotions. More specifically, play therapy is a kind of psychological and social vaccination for the child, which reduces his social incompatibility and helps to reduce his antisocial behaviors. Therefore, it is not unlikely that play therapy can reduce social incompatibility and antisocial behaviors of children with ADHD. Research studies have also confirmed the effects of different approaches of play therapy on behavior disorder in children with ADHD. A study conducted on 20 boys with ADHD symptoms in Isfahan reported that group play therapy had a significant effect on reducing ADHD symptoms, oppositional disobedience and behavior disorder in children with ADHD (20). Torabi et al. (2014) in their study comparing the effectiveness of individual play therapy and play therapy combined with family therapy on reducing the behavioral problems of twenty 7-12-year-old children with ADHD reported that both treatment methods were effective in reducing children's behavioral problems (25). Although no difference was observed in the reduction of social problems, attention and externalization between the two treatment methods, the groups were different in the reduction of externalization and thinking problems. This research shows that although the two treatment methods were both effective in reducing

the behavioral problems of children with ADHD, looking at this disorder from the perspective of systemic family therapy will be more effective.

## 5- CONCLUSION

In general, the results of the current research revealed that educational Play therapy is effective in reducing behavioral problems and attention deficit and hyperactivity in ADHD children; because it provides them with ways of socialization to enter society as a useful and healthy member. They also learn how to make decisions, have creative and critical thinking, Increase their sense of responsibility, and most importantly learn how to behave properly with their peers.

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