

The Effect of Exploratory play Therapy Method on the Reduction of the Level of Combined Type /ADHD in 9 to 11 Years Old Boys

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Abstract

The aim of this study is to investigate the effect of discovery play therapy on reduction of the level combined type ADHD of 9 to 11 years old boys. To this end, 30 children among those who saw the doctor's consult in two of the consult and psychology centers in Kermanshah were selected randomly (sent by the psychotherapists) and put into two groups of experimental (n=15) and control (n=15). The duration of this experiment was nine sessions (each session took 30-45 mins) and SNAP-IV scale was the standard instruments used to measure the variables. This instrument was checked for variability and reliability in several studies. In this study the validity of the instrument was approved by the experts and the reliability was also checked by test-retest reliability and estimating the correlation coefficient of the responses in two tests ($r=.78$). The analysis of the data using ANCOVA revealed that play therapy will significantly reduce the attention deficiency disorder ($F=16.939$, $Sig=.000$), Impulsivity and hyperactivity disorder ($F=57.756$, $Sig=.000$), and combined type ADHD ($F=114.38$, $Sig=.000$)

Key Words: *discovery play therapy, attention deficiency disorder, Impulsivity and hyperactivity disorder,*

Introduction

Children make a major segment of the world population; so that in developing countries, the share of this segment is approximately 50 percent (Narimani, et al., 2011). Therefore children's and adolescents' health is of special importance in any society, and paying attention to their physical and mental health, helps them to be healthier both physically and mentally and play their social roles better. Attention deficit / hyperactivity is a neurobehavioral disorder which exists in a large number of children.

Hyperactivity disorder is the most common behavioral disorders in need of treatment among children and adolescents, and often persists into adulthood with some outstanding and limited symptoms (Wilens, et al., 2002). Attention deficit / hyperactivity has always been a special problem for psychiatrists, psychologists, parents, and

teachers since children with this disorder have problems such as inhibition of motor behavior, lack of attention, lack of learning, aggression, academic problems and anxiety, which are always problematic for parents, teachers, peers and school administrators (Sherman, et al., 2008).

The spread of this disorder is such that approximately 3 to 7 percent of school-age children have it. In recent years, the results of the parents' report in the National Institutes of Health have shown the prevalence of this disorder was 9.5% for children with 4-7 years old in the year 2007 (as cited in Baxter, 2013).

ADHD is a common, but highly controversial disorder, which can be diagnosed with the inappropriate spread of hyperactivity, impulsivity, and inattention (Elia, et al, 1999). Although lack of focus, high activity, and impulsivity are natural features in

children, and ,therefore, require high levels of monitoring and control, the hyperactive children, may manifest severe amount of weakness in playing games and restlessness in motions well as related problems, such as developmental delay, oppositional behavior, and poor social skills (Harpin, 2005).

Since the negative effects of this disorder is not cross sectional and may affect all aspects of a child's life, it has always attracted the attention of researchers and psychotherapists. In fact, not only do the effects of this disorder create problems for the individuals, but also they create problems for the family, and even sexual performance of the individual in adulthood (Harpin, 2005). Disregarding the control and treatment this disorder influences the personal and social life of the patient in adulthood as well. It is so that in a longitudinal study by comparing two groups of youth with hyperactivity disorder, Wilens, and the colleagues (2003), showed 1.9 percent reduction in the risk of drug addiction among the youth treated for this hyperactivity compared to those young people who were not treated.

In addition to behavior management problems, hyperactivity also creates disorders in the areas of the brain that are critical for the processes related to learning (Tanook, 2007). Therefore, in most cases the learning process in the patients is affected by this disorder. As a result, the control and treatment of ADHD in childhood (during preschool and school) is of extraordinary importance. Despite a number of methods have been used to control the behavior and treat these disorders, medication is always considered as the first choice which has some side effects for users. Consequently, in recent years, much concern has been raised about the use of medication and the growing use of stimulants such as Ritalin to regulate the behavior of these children (Currie, 2004).

In an alternative practices to medication, control techniques - treatment are utilized. A number of these practices can be implemented in schools. So it is noteworthy

that although there are different views on the hyperactivity, a lot of scientific evidence is in support of its harmful effects on the individual. This suggests that, as teachers, we must have different ways of classroom management for children with hyperactivity disorder (Tanook, 2007). Hyperactive students can use an inclusive educational model, where teachers are utilizing the latest teaching strategies. The best learning method for hyperactive children is a method which reduces the problematic behaviors and increases their functional interactions. (Tanook, 2007) one of these methods is pay therapy.

In the writings of Rousseau in late 1700, playing was recognized as an essential element for the healthy development of children. However, by the early 1900s are playing was less likely to be employed as a therapeutic tool in the management of children's behavioral problems (Bratoon, et al., 2005). Play therapy, in its specific use, is utilized to help healthy development of children's based on the idea that in playing, children can communicate with others, while expressing their inner feelings and emotions (Landreth, et al., 1996). Thus, play therapy has been well established in the management and treatment of many disorders for more than 60 years and clinical activities is used as an engaging method for the treatment of children.

Field studies have been done on the effectiveness of play therapy in the control and treatment attention deficit disorder and hyperactivity, promising the positive effects of the application of the games in the control and treatment of this disorder in children.

Among the local studies done in this area, the study by Naderi and his colleagues (2010) on the effectiveness of play therapy in reducing attention deficit disorder and hyperactivity in children aged 8 to 12 years can be mentioned. The results of their study showed that the play therapy treatment can reduce attention deficit hyperactivity disorder students' anxiety. Barzegari and Zamini (2011) assert that the effectiveness of play therapy with the play (ring time) has been positive in reducing the symptoms of

hyperactivity disorder in children. In their study on the Effect of Gestalt Play Therapy and Cognitive - Behavioral Play Therapy on reducing hyperactivity disorder Farahzadi and Masafi (2013) showed that both methods can reduce this problem, and there is no difference between the effects of two. By investigating the effect of cognitive – behavioral play therapy on attention deficit and hyperactivity disorder Abdollahian et al. (2013) found that using this method as a form of play therapy significantly decreases attention deficit / hyperactivity disorder of the 7-9 years old children. Nazer and colleagues (1392) found the positive impact of physical therapy on symptoms of elementary school students' hyperactivity disorder. Jafari et al. (2011) showed that play therapy can significantly reduce the problems of disobedience among hyperactive children. Jannati, et al (1387) evaluated the effectiveness of cognitive - behavioral play therapy in reducing symptoms of hyperactivity, attention deficit, attention deficit, response errors, and significant increase in response time, as positive. Ganji et al (2010) showed that the use of child-centered play therapy after 3 sessions can significantly reduce attention deficit / Impulsiveness in children with a gentle slope. In her study, Saadat (2010) showed that play therapy, and the combination of play therapy and yoga can efficiently reduce the symptoms of attention deficit and hyperactivity. Shushtari and colleagues (2010) demonstrated that early interventions based plays is effective on the focus of preschool children with attention deficit disorder, attention deficit hyperactivity.

Among the studies carried out abroad, the study of Ray and colleagues (2007) can be mentioned. They investigated the effect of child-Centered lay therapy on reducing attention deficiency and hyperactivity, and revealed that play therapy has positive effects on attention deficiency, hyperactivity, anxiety and stress. Alagesan (2011) showed that the use of play therapy with the medication is a more efficient way to reduce the effects of attention deficit disorder than the medication alone.

Hansen's (2000) studies showed that the group plays therapy significantly increase the confidence and ability of hyperactive students to engage in acceptable social behaviors. 29. Panksepp and colleagues (2003) showed that the play therapy treatment was effective in reducing hyperactivity and playfulness among people with attention disorders. Use of irregular games can be more effective in this regard.

Growth of the play therapy and consolidating its positive results in many field studies have provided the conditions so that in recent years a series of innovative techniques play therapy have been developed and implemented in order to stabilize the power play therapy. Play therapy is among the techniques developed and discussed in this context and it was also used in the present study. In discovery play therapy, the teacher tries to make the mind interact in the play and let the students to use discovery during the play. They should draw a map of the way during the play and only act as a guide. Therefore,

The origin and nature of the study to is to evaluate the impact of discovery play therapy in reducing symptoms of ADHD Combined, and 3 hypotheses were proposed in this regard.

- Discovery play therapy reduces the attention deficiency disorder among 9-11 years old boys.
- Discovery play therapy reduces impulsivity and hyperactivity disorder among 9-11 years old boys.
- Discovery play therapy reduces combined type ADHD among 9-11 years old boys.

Methods and instruments

Since this study investigates the effect of discovery play therapy on the reduction of attention deficiency disorder among children as well as their hyperactivity, and also tries to describe the result of controlling and manipulating specific variables (Best, 1384, p. 43), it is an interventionist, semi-experimental study with a control and experimental group and pre-, posttests. The population for this study was all the hyperactive boys in Kermanshah within the

age range of 9 to 11 during the year 1392. The sample size drawn from the population includes 30 boys among those who saw the doctor's consult in two of the consult and psychology centers in Kermanshah were selected randomly (sent by the psychotherapists). These participants were randomly selected and put into two groups of experimental (n=15) and control (n=15). The sample size was selected based on Nader and Seif Naraghi's view (1387) that for causal experimental studies, 15 participants each group is acceptable. The duration of this experiment was nine sessions (each session took 30-45 mins). WISC-IV was used to homogenize the two groups. SNAP-IV scale was the standard instruments used to measure the variables. To determine amount of the hyperactivity disorder in subjects before and after the intervention, the Child Symptom Inventory was used. This scale is a rating scale and its earliest form was developed by Sprafkin and Gadow (1984) based the classification in the fourth edition of Diagnostic and Statistical Manual of Mental Disorders for diagnosing 18 behavioral and emotional disorders of 5-12 years old children. Later, it has undergone several revisions. In the year 1994 it was undergone minor revisions base on the classification in the third edition of Diagnostic and Statistical Manual of Mental Disorders and was published as Children Symptom Inventory, the fourth edition. This form of the inventory, like the previous ones, has two separate check list for the parents and the teachers. In

Table 1: the ANCOVA of post test of the two groups for attention deficiency disorder

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Pre	.154	1	.154	.223	.641	.011
Group	42.804	1	42.804	16.93.641	.000	.747
Error	14.512	21	.691	16.939		

Table 1 shows that the analysis of the data for the first hypothesis shows that the data does not violate the assumption of homogeneity of regression slopes. Also Leven's test shows the homogeneity of the variance in the analysis. After adjusting for the effect of the pretest and conducting an ANCOVA a significant effect of play therapy was obtained $F(1, 21) = 16.94, p =$

the present study, the parents' checklist was used. The parents' checklist has 112 questions of which 41 statements (groups A, B, C) are about vexatious conduct disorders and attention deficit. Each of the items is answered through four scales (Never, rarely, sometimes, and often). For the better understanding of the parents, the scales were also shown with ionic symbols (circles with different sizes). In this study, group A, B, and C of the main questionnaire (41 questions) were used which measure three distinct types of attention deficiency and hyper activity (Predominantly Inattentive Type ADHD, Predominantly Hyperactive-Impulsive Type ADHD Combined Type ADHD). This is a standard instrument and was checked for validity and reliability in various studies. In this study the validity of the instrument was approved by the experts and the reliability was also checked by test-retest reliability and estimating the correlation coefficient of the responses in two tests ($r=.78$). The data was analyzed using inferential statistics and multivariate analysis of covariance and for the moderating effect of pre-test and Eta coefficient was calculated.

Results

In this study, three hypotheses were introduced and, after gathering the data, the hypotheses were analyzed using ANCOVA. Hypothesis 1: Discovery play therapy reduces the attention deficiency disorder among 9-11 years old boys.

.000 and therefore the null hypothesis was rejected. Considering the b , it can be said that after adjusting for the effect of the pretest, play therapy can explain 74 percent of the variance posttest. Therefore, it can be said that Discovery play therapy reduces the attention deficiency disorder in the population under the study.

Hypothesis 2: Discovery play therapy reduces impulsivity and hyperactivity disorder among 9-11 years old boys.

Table 2: the ANCOVA of post test of the two groups for impulsivity and hyperactivity disorder

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Squared	Eta Squared
Pre	.273	1	.273	.391	.538	.018	
Group	40.275	1	40.275	57.756	.000	.733	
Error	14.644	21	.697				

Table 2 shows that the analysis of the data for the second hypothesis shows that the data does not violate the assumption of homogeneity of regression slopes. Also Leven's test shows the homogeneity of the variance in the analysis. After adjusting for the effect of the pretest and conducting an ANCOVA a significant effect of play therapy was obtained $F(1, 21) = 57.75$, $p = .000$ and therefore the null hypothesis was rejected. Considering the b , it can be said that after adjusting for the effect of the pretest, play therapy can explain 73 percent of the variance posttest. Therefore, it can be said that Discovery play therapy reduces the attention deficiency disorder in the population under the study.

Hypothesis 3: Discovery play therapy reduces combined type ADHD among 9-11 years old boys.

Table 3: the ANCOVA of posttest of the two groups for combined type ADHD

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Squared	Eta Squared
Pre	.053	1	.053	.037	.85	.002	
Group	164.482	1	164.482	114.38	.000	.845	
Error	30.197	21	1.438				

Table 3 shows that the analysis of the data for the second hypothesis shows that the data does not violate the assumption of homogeneity of regression slopes. Also Leven's test shows the homogeneity of the variance in the analysis. After adjusting for the effect of the pretest and conducting an ANCOVA a significant effect of play therapy was obtained $F(1, 21) = 114.38$, $p = .000$ and therefore the null hypothesis was rejected. Considering the b , it can be said that after

adjusting for the effect of the pretest, play therapy can explain 84 percent of the variance posttest. Therefore, it can be said that combined type ADHD can be reduced by discovery play therapy.

Conclusion and dissections

Children with combined type ADHD have three fundamental features of hyperactivity, attention deficiency and impulsivity. They

are the most common problems associated with attention deficit hyperactivity disorder, including the inability to control behavior, inability to concentrate and being too active (National Institute of Mental Health, 2012). Inattentiveness can be diagnosed by symptoms such as inability to complete an assignment, problematic focusing or sticking to an activity, Negligence in listening and following what was said to them. In impulsivity children do a task before they are told to, have problems with organizing their time and work, need a lot of supervision and it is difficult for them to observe their turn in a play. Hyperactive children can be detected with signs such as jumping up and down too much, having problem with sitting in one place, and always fidgeting (Barkley, et al., 2006). Many studies have focused on the study of techniques and therapies to reduce ADHD combined type. This study was also conducted with the aim of assessing the effectiveness of discovery play therapy in reducing the combined type ADHD / hyperactivity in boys 9 to 11 years. According to the objectives of the study, 3 main hypotheses were proposed and studied. Analysis of the data the first hypothesis (i.e. Discovery play therapy reduces the attention deficiency disorder among 9-11 years old boys.

) showed that attention deficit disorder was significantly decreased among the participants in the experimental group compared to the control group. This result in the present study is in line with various other studies (e.g. Alagesan 2011; ; Ganji, et al. 1390; Janantian, et al. 1387; Naderi, et al., 2010; Panksepp, et al. 2009, Shooshtari, et al. 1390) Being attentive is among the skills that children will need for their academic and social activities (Meltzer, 2007; McCloskey, et al. 2009). Early forms of attention to behavior and performance occur very early in life, and show a quick change in the pre-school and early years of the primary school. (Davidson, E al. 2006; Zelazo & Muller, 2002). It seems that having the skill to be attentive plays a key role in expanding the academic and social capabilities in hyperactive children (Hughes, 1998); it is

also important for social and academic readiness while entering the school (Semrud – clikeman, 2005). According to the results of recent studies on the effectiveness of behavioral therapy techniques, the use of play therapy as a means of intervention for children can be effective on attention deficiency. Many of the children less 11 years old do not have a completely developed ability for abstract thinking which is a prerequisite for meaningful verbal expression, understanding complex issues, and expressing motivations and emotions (Piaget, 1962). Therefore, unlike adults who communicate with abstract world through words, most children naturally show their communication with abstract world through games and activities. In hyperactive children play, because of its natural charm, attracts during their attention in a subtle process from beginning to end of their activities. These exercises will increase their minimum attention and thus will increase their focus on activities.

Analysis of the data for the second hypothesis (i.e. Discovery play therapy reduces impulsivity and hyperactivity disorder among 9-11 years old boys) revealed that play therapy significantly reduces are impulsivity and hyperactivity disorder. this result are in accordance with some previous studies (e.g. Barzegari & Zamini, 2011; Farokhzadi & ; Jafari , et al. 2011; Mosafa ,2013; Naderi, et al., 2010; Nazer, et al. 1392; Panksepp, et al. 2003; Ray, et al. 2007). In discovery play therapy, since playing and achieving the goal requires cooperation with other players as well as obeying the rules, children will learn to have a plan and respect other's rights.

Analyzing the data regarding the third research question (i.e. Discovery play therapy reduces combined type ADHD among 9-11 years old boys.) revealed that Discovery play therapy significantly reduces combined type ADHD. This result agrees with other studies (e.g. Janatian, et al. ,1387; ; Ganji, et al.,1390, Naderi, et al., 2010; Nazer, et al. 1392; Panksepp, et al. 2003; Ray, et al. 2007).

According to the results of this study, it can be assumed that discovery play therapy can be used as a therapy for children with attention deficiency/ hyperactivity disorder, or at least it could be used as supplementary therapy along with medication therapy or combined with other methods to control or cure ADHD. Discovery play therapy can provide a situation for participants to burn a large portion of their energy during the game. Burning energy will reduce the amount of impulsivity and hyperactivity among participants for the rest of the day. Additionally, since playing process, education, and learning is under the control of the child during the discovery play therapy, it will help them to have a positive attitude toward the context of the game and playing it.

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