

Effectiveness of play therapy on cognitive-behavioral approach in reducing intensity of the violence and aggression in children with Attention Deficit / Hyperactivity Disorder

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Abstract: This study has been conducted in order to effectiveness of play therapy based on cognitive behavioral approach to reduce violence and aggression in children with Attention Deficit / Hyperactivity disorder, study a series of articles in the field from different websites such as: SID, magiran, sciencedirect , ELSEVLER and google and..., have been used for this purpose. Inclusion criteria included articles that have been conducted in English and Farsi in Iran from 2004 to 2016 and from 1993 to 2017 outside Iran. As well as articles that were case reports were excluded from the study. The different kinds of games, sessions of play therapy, effect of behavioral cognitive approach and ... have been studied to reduce the Attention Deficit / Hyperactivity disorder especially reducing violence and aggression rate in people with this condition. Conclusion: The overall outcome of surveyed studies shows that play therapy has had a positive effect on violence and aggression rate of children with this disorder, so therapeutic interventions are extremely necessary by considering the fact that this method of therapy has been worked on rarely in Iran.

Keywords: Attention deficit / hyperactivity disorder, play therapy, cognitive-behavioral approach, violence and aggression in children.

INTRODUCTION

Attention Deficit / Hyperactivity disorder is one of the most common behavioral problems in children and adolescents , the disorder first was identified in 1845 by a German doctor named Henry Hoffman (Greenhill LL, 2000; 39 (7): 908-19).

Its prevalence in boys had been four times more than girls (America Psychiatric Association, 2005). Attention Deficit / Hyperactivity disorder has been determined before 5 years old (World Health Organization) or 7 years (Psychiatric Association of America, 2000) but yet determine the age for this disorder is difficult because research results have shown that sometimes disorder may diagnose after mentioned ages and hence can be concluded that emphasize on the criteria the age of 7 years at diagnosis does not work (Alizadeh, 2005). Attention deficit / hyperactivity disorder is placed in part of externalizing disorders in classification the disorders of childhood times (Barkley R; 2000.) due to the significant prevalence of this disorder in children, and possibility to continue it in periods of adolescence and adulthood (Fisher, 1997). Aggressive and law breaking behaviors such as anti-social behaviors are among the most important behavioral problems related to the classification of externalizing behaviors such as attention deficit / hyperactivity disorder , which are among the most common reasons for referral of children and adolescents to mental health clinics, (Kutcher S, 2004; 14: 11-28).

Several studies have emphasized that aggression and behavioral problems of children with this disorder can lead to anti-social and law breaking behaviors in the future (Stewart A, 2002). In fact, children with attention deficit / hyperactivity disorder, aggressive in terms of peers show less society friendly behaviors and are more aggressive and on the other hand these features impede making relationships with peers and disable child in learning (Cavell T, Elledge L. 2007).

Attention deficit hyperactivity disorder has a genetic component is so powerful so that 60 to 90% of this disease has been considered the result of genetics. Monozygotic twins show more attention deficit and hyperactivity problems than dizygotic twins at the same time. Studies on the families also support the hereditary of ADHD. If one parent has ADHD the risk of having a child with this disorder is 57 percent (Jung and Bramham, 2007). People with ADHD have structural damage in the brain, which this has role in control attention and behavior problems as well.

It seems that there is structural differences between the brains of people with ADHD . In particular, studies that use functional imaging techniques, show important and abnormal differences. Prefrontal cortex is part of the brain that has been studied for this purpose. As it is said, this part is involved in behavioral inhibition and is mediator of response to environmental stimuli. In addition, the dopamine and norepinephrine neurotransmitters in particular areas of the brain are less, that seems to be involved in the semiotics symptoms

of ADHD (DoPaul and Stoner, 2002, translated by Mohammad Khani and Asmayee Majd, 2009). These factors lead to the destruction of individual's executive performance and for this purpose patient with ADHD is in trouble in behaviors that require self-regulation (Ramsey, 2010).

That's why most of the time parents and especially mothers of these children resort to control child and dealing with she/he in ways that worsened the child's condition and create a condition by imposing strict control on child that its outcome is serious conflict of parent with child and become more severe the symptoms of behavioral problems and aggression in child (Fabiano G, Pelham W. 2008; 52: 1-12).

In fact, parenting has considered very important matter and a great responsibility, and this matter seems very difficult in situations that child has signs of irritability, negative mood, neglect, disobedience and serious problems in the field of behavioral problems such as aggression and not to do work assignments at home (Gorji Y. 2004).

It causes poor academic performance and an aversion to school (Wojtalewicz, 2004). In addition to this aggression has negative consequences such as depression, anxiety, loneliness, low self-esteem on the victims of such behaviors (Vander Wal, 2005), the formation of negative attitude towards school, which leads to a move away from school (Crothers & et.al., 2007). Therefore, the necessity of early diagnosis of these behavioral problems and as well as effective interventions and therapy methods suited to each child are felt more than before.

Aggression is usually accompanied by other behavioral disorders in children that among the most important of them can be noted to the hyperactivity and impulsivity (Shechtman & Nasaraladin, 2006). ADHD is the most common childhood disorders that have attracted the attention of psychologists and psychiatrists (Bussing, Mason, Bell, Porter & Garvan, 2010).

Play therapy is a way to help children with a lot of problems so they can solve their problems, and at the same time, reflects this fact that game for child, is such as a natural means, with the intention that he can know him/herself as well know his/her internal properties and to act it. In this type of therapy, the opportunity is given the child to show his/her disturbing emotions and problems inside through the game and playing and demonstrate them, like the therapies that adults express their problems through it by "speaking" (Hajaran, 1996).

Cognitive - behavioral play therapy that is among direct methods of play therapy has mixed the traditional techniques of play therapy with behavioral - cognitive techniques. It has been proved that such approaches are useful and effective in the development of problem solving skills and social skills of children, and other adaptive behavioral -cognitive solutions (Gerald, G. 1999).

People with ADHD have low self-esteem, poor academic performance, are failed persons during the life and in long personal engagements and adults with attention deficit and hyperactivity, participate often in risky activities. So treat this disorder has great importance to reduce the severity of symptoms and patients do not have problem in personal, social and academic areas in the future. Drug therapies, particularly with stimulant drugs, ways of behavior therapy (education directedness and parent education) and play therapy, are including therapy methods that are used to treat patients with attention deficit disorder and hyperactivity (Alizadeh, 2004).

Therapists teach more adaptive behaviors to children with weak social or emotional skills through play, (McCloskey P, Divner B, 2009) Today, executive functions and play therapy and attention, are the focus of recent theories of neuropsychological of children at risk disabilities, especially children with hyperactivity / attention deficit disorder and children with disability in learning (Alizadeh H. 2005; 17: 323-43), Berkeley, believes in behavioral inhibition model. Behavioral inhibition is a neurological process that helps children to respond in delay. He knows self-control impairment as the core of attention deficit / hyperactivity disorder (2011; 4: 15-25 Ganji K, Zabihi R, Krasyn A.).

Play therapy has two types from methodological subject point of view: direct and indirect. In the first type (with leadership) therapist has responsibility to guide and interpret of the data of therapy and in second type (without leadership) therapist can give this subject to child (Hajaran, 1996).

Indirect Play Therapy is an interaction between trained children and adults that are through symbolic relationship in play, in search of ways to reduce the emotional turmoil's of the child; Child experiences, admission, exciting discharge, reduce the painful effects, reorienting impulses and corrected exciting experience during interpersonal interactions with the therapist. Play therapy is an active approach that can be used individually or in groups, so that to allow children reveal their conscious and unconscious emotions through playing (Mohammad Ismail, 2004).

MATERIALS AND METHODS

This research was an overview research that is on the tests available to evaluate the various aspects of impact of therapeutic play sessions as well as the impact of behavioral -cognitive approach in reducing hyperactivity / attention deficit disorder. Articles are obtained by searching various databases that are used in

the field of medical researches, including: google scholar, pubmed, science direct, proquest, medline, advanced google and Pedro.

Keywords kinesio tape, elastic tape, Taping technique, Pain, Grip strength ,, Lateral epicondylitis, tennis elbow were used. Inclusion criteria included articles in English and Farsi that have been conducted from 2004 to 2016 in Iran and from 1993 to 2017 outside Iran. As well as articles that were case reports were excluded from the research. The terms such as attention deficit / hyperactivity disorder, play therapy, cognitive-behavioral approach, violence and aggression in children were used in research.

Research history: (internal)

In research of Maryam Seyl Sapour et al (2015) titled evaluate the effectiveness of neurofeedback therapy in reducing symptoms of hyperactivity and Attention Deficit in elementary students of Varamin in 2014, that 19 persons of these children were selected as a case group based on available sampling method and 20 patients were placed in the control group at the same procedure. According to findings of this research, Neurofeedback is a proper therapy method for reducing the amount of attention deficit and hyperactivity disorder in children. It is suggested this research is conducted on a wider level to achieve reliable results.

In the research of Sanaz Eftekhari et al (2014) titled the effectiveness of sand therapy on children with attention deficit disorder -hyperactivity, shows that ADHD disorder is raised as one of the common disorders in childhood, and affects the numerous lives of children, families and teachers every day. So concluded that play therapy, including sand therapy technique can be effective to reduce the problems of children with ADHD.

Kahrizi Somayeh et al (2014) concluded in a research titled effectiveness of sand play therapy on reducing aggression / hyperactivity of preschoolers, which was conducted with the aim of investigate the effectiveness of sand play therapy on reducing aggression / hyperactivity in preschoolers of Kermanshah that sand play therapy has a significant effect on reducing aggression / hyperactivity of children of experimental group compared with children of control group. Such an achievement was maintained at follow-up of one month. It is concluded according to the research findings that sand play therapy can be effective in reducing behavioral disorder in children and it was emphasized on the need of application of sand play therapy to reduce the aggressiveness / hyperactivity and increase mental health of children with this disorder.

In the research of Maryamm Al sadat Reza Zadeh et al (2007) Impact of educational games focusing thought to reduce the intensity of symptoms of Attention Deficit / Hyperactivity disorder showed use games that forced children to do continuous and slow movements for a relatively long time is one way to detect the focus on children which concludes by using these games can act for relaxation and concentration in children who are too restless, inattentive and noisy. These games come from the book "training during the game" written by Vaseghi (1997), "active learning" by Creti (1994) and "psychology of game" by Mahjoor (1995).

In a research that was conducted by Zare and Ahmadi (2004) on children 7 to 9 years, research results showed that therapy play sessions in cognitive - behavioral method have been caused to reduce behavioral problems. That play therapy sessions, were done in 10 sessions by using, cognitive - behavioral techniques to reduce the severity of this disorder in this research. That these sessions were started from familiarity of therapist of child and goes forward to anger control skill training of child.

In the research the effectiveness of play therapy-based on cognitive - behavioral approach on intensity of symptoms of hyperactivity (Sima Jannatian et al, 2008): The ultimate goal of treatment for ADHD is enabling children to overcome difficulties that are encountered during the life in this research. The effect of therapy with CBT with training: pause, think, act is described, this method is performed by the therapists with play therapy.

In this research the effectiveness of ball and non-ball games, in reducing the symptoms of attention deficit / hyperactivity disorder among boy students between 9 to 11 years of in Arak (Alireza Bahrami, 2012): Results are based on an effective role of these games in reducing the severity of this disorder. Children symptom inventory (CSI-4) was used in this research.

In the research by Aasieh Moradi and Khodamorad Momeni (2015) titled the effectiveness of sand play therapy on reducing behavioral disorders in preschool children, statistical population included 7-5 years old children with behavioral disorder that were in years 2012-2013 in day nursery centers in Kermanshah. Covariance analysis results showed that the intervention of sand play therapy leads to reduce components of aggressiveness / hyperactivity, anxiety / depression, conflict and attention deficit in children with behavioral disorder. But has no significant effect on conduct disorder. Such an achievement was maintained at follow-up of one month. As a result, the intervention of sand play has more effective role in reducing behavioral disorder in children with behavioral disorder.

In this research the effectiveness of early interventions based on attention games on the attention rate of children with hyperactivity (Mzhgan Shoshtari, Fall 90):

Interventions are in such way that teaches children that pay attention first and then act. That timely detection and early interventions for these children helps to identify and treat many other disorders of hyperactivity, such as oppositional defiant, behavioral disorder, learning disabilities and academic problems.

Type of games in this research was as image display and along with the story. conser`s parents questionnaire has also been used in this research that has 48 questions with answers, of not at all, to some extent, high and very high. Experimental group under trading of early interventions based attention games in the last stage; the experimental group was divided into groups of three or four persons and was trained in 12 sessions of forty-five minutes. First four sessions are as following:

First session

Getting familiar to Play Therapy method.

Second Session: The audio attention consists of listening to sounds, recorded sounds, etc.

Third session: vision attention, see and say game, and see images of children and then recognition them, play, find color matching shapes in their size and then change the set of answers.

Second Session: Practice and review the audio and visual attention activities.

Table 1: Theoretical History

Virginia Ekslayn	She knows Play therapy as a means to diagnose the problems of children, create a good relationship between the child and consultant and knows it the most appropriate learning method for child. She was the first person who performed play therapy in modern way in play therapy room.
Russell	He knows kids love to play as the most obvious symptom of children's characteristics, whether for baby of human or animal
Piageh (1980-1896)	He knows an action as a game that has a goal -be optional and enjoyable - not organized and free from any conflict and aggression
Freud	He knows a game as a means to develop physical, emotional and mental power
Froebel (prophet game)	He knows the game that children can learn, discover and satisfy his/her curiosity with it. He proceeded to prepare a variety of play equipment's for children.
Sponsor and shyler	They know game purely for energy depletion
Carl Gross	Theory before practice, means that children's game is training for their future
Lazarus	He knows the game rest and refreshment.
Stanley Han	He knows the game repeating of ancestral activities
Maria Montessori(1953-1870)	Children are active learners
Lyvoiygo teski(1934-1896)	Play is means that the child do activities through it that in reality it is not possible for him/her. Like flying a plane
Jean-Jacques Rousseau(1939-1859)	Emphasis on the importance of the game: respect for the child
Adler(1931-1870)	The child's future life can be predicted to some extent through the game
Gatarsis	Game can help child to reveal what lies in his/her unconscious and ease his/her tension.
Anna Freud	She notices painting and coloring for children during the game because she emphasizes on the unconscious and empathy feel
Prophet Muhammad (PBUH)	He has called first seven years of life as years of playing.

Three hypotheses have been proven at the end of these sessions:

- (1) Play therapy reduces hyperactivity and violence in children with ADHD.
- (2) Play therapy increases social relationships in children with ADHD.
- (3) Play therapy reduces the anxiety in ADHD children.

Play therapy room features:

- it should be soundproof.
- it should have a window and curtains.
- it should not be disturbe
- it should have one-way mirror and video camera for indirect observations of therapist
- it should have sink in wet area for dirty and splurge games
- it should have adequate and sufficient space for vibrant games.

Research history (external)

Research conducted by Kazdyn, Vasil, Astriton, Webster and Hammond (1997, quoted by Kazdyn, (2000) specified that the combination of teaching social skills to children by training parents is more successful than training behavioral -cognitive skills alone. behavioral training based on the interaction parent - children, is the most common and successful treatment approach for children with behavioral disorders and most of parents expressed their satisfaction towards these mentioned programs.

Research of Ray, Schetlkorb, Tasi (2007) in researching play therapy on children with ADHD indicates that the level of discomfort and emotional problems such as anxiety and depression have fallen by intervening play therapy and self-awareness, self-efficacy and social acceptance have been increased in developed children. According to findings kaduson& Finnerty (1995) self-control, strategic and feedback games have had a positive effect on increasing attention and social skills and control the momentum.

Blinn (1999) indicated that play therapy is effective in reducing impulsive behaviors and improve self-esteem. Impact of child-centered play therapy to reduce symptoms of attention deficit / hyperactivity has been reported to be effective in research of shuttle Corb and Ray (2009) .

Research of Schaefer (1993) pointed out that has used 15 play therapy-based approach to CBT techniques in this research that some of these games are: Take the wood, the bell alarm clock, slow motion, party hats on head of monster and ... that was designed to treat and reduce the severity of symptoms of ADHD.

Kessler et al. (2006, quoted by Spencer et al., 2010) have estimated the prevalence of ADHD in the adult population in America about 4.4 percent. However, there is very little information about the prevalence of ADHD among students. Some studies have estimated the prevalence of ADHD among the student population at about 10.3 percent.

Play therapy has been known as the best treatment for children 3-11 years old according to a finding field study that was conducted by Phillips and Landreth (1998, quoted by Gerald, 1999),. Male and female therapists can treat clients of both sexes. Most play therapists believe that their treatments in 80 percent of the time are quite successful In the field success of behavioral - cognitive play therapy, regardless of the approach of therapist,.

Hazoui et al (2007) showed that compared to drug therapy group, children under play therapy treatment had performed better in bilateral coordination of strength, coordination of eyesight - movement and speed of the upper limb.

Table 2: Types of effective games in treating violence and aggression in children with ADHD

Group walking	(Out angrily from the soles of the feet) and pop bubbles (out of anger at the fingertips)
Mud playing	To enable child in the throwing away feelings on the mud
Building	Child's responses to defeat, victory, decision making, problem solving and doing her/his task
Drawing, painting and collage	Help child to tell the story, his/her sleeping, express strong or repressed emotions
Drawing with the finger	It is comforting
Imaginative games	Throws away Ideas, wishes, fears and reveries, expresses hidden thought. Experiences being strong through emotions physical expression. He / she is freedom of the pains of unpleasant feelings. He /she will be dominant about the issues and events of the past Takes risk promoting the new behaviors.

Herbert and Esparham (2017) investigated physical -mind sports , such as meditation, yoga and tai chi to their impact on the treatment of attention-deficit / hyperactivity in their research titled therapy mind and body for children with attention-deficit / hyperactivity disorder, that they concluded in this study that mental sports can significantly improve symptoms (ADHD) among children.

In research of Nahed Saied El-Nagger and colleagues (2017) titled Effect of the use play therapy in children with attention deficit disorder and hyperactivity, that this research was conducted in one of the rehabilitation centers in Jeddah in Saudi Arabia, the present research showed that use of play therapy had a positive effect on attention, reducing hyperactivity and impulsive behavior controlling of children, also, there is a significant difference in children's emotional and behavioral disorders of children before and after play therapy sessions.

In research of Dee C.; Schottelkorb (2007) play therapy with children subjected to symptoms of attention deficit and hyperactivity disorder, children participated in 16 sessions of 30 minutes. The results showed that children who participated in 16 sessions (CCPT and RM) ,a significant improvement was created in show (ADHD) and personality scope of the students.

In research of Vyniauske, R.; Verburgh, L.; Oosterlaan, J.; Molendijk, M.L (2017) titled the effects of exercise on the application of results in the treatment (ADHD): Meta-analysis, which examined the effect of exercise in the treatment of hyperactive children, showed that exercise has a positive moderate effect on functional outcome (ADHD) that like executive functions and motor skills, leads to better results with other interventions.

Chu et al (2017) in a research entitled the effects of a yoga program for 8 weeks on sustained attention and discrimination among children with attention deficit and hyperactivity disorder, showed that the effect of exercise during two tests, considerable and significant progresses in rate of attention and reaction time were observed in the experimental group compared to the control group. The findings of this research show that alternative therapies such as yoga exercises can be complement of behavioral interventions for children with attention deficit-hyperactivity.

Hung and colleagues conducted a research titled as neurological and behavioral disorders of effects of compound exercises to change the task in children with attention-deficit / hyperactivity disorder, the results showed that children with (ADHD) significantly have less accurate, and more cost to change situation for accuracy than healthy people. In the second test, thirty-four children with ADHD performed a model of change the situation after 30 minutes of moderate-intensity aerobic exercise on a treadmill and after control sessions. The results showed that after exercise, children with ADHD have exhibited less costs of changing the situation after control sessions.

In research of Mhtare Priti, Gajre Mona, Karia Sagar, Chheda Nidhi, Saroj Dinesh, De Sousa (2017) Effectiveness of multi-dimensional therapy in children with Attention Deficit Hyperactivity Disorder, that a

Prospective longitudinal study has been conducted from January 2014 to October 2014, with coming the children to the neurodevelopmental center and diagnosis of children with ADHD showed that multi-dimensional interventions are effective in the treatment of these children.

CONCLUSION

The results of the studies of present articles in relation with a variety of games, toys and play equipment's, play therapy room , various sessions of play therapy as well as the impact of behavioral -cognitive approach on reducing hyperactivity disorder / attention deficit that literature review shows that under the effect of behavior play therapy behavioral- cognitive, aggressive children, has improved at least in social relations and these children are able to interact effectively and useful to others and this improvement owes to teach problem solving skills and improve information processing which are done during exercises in therapy sessions and causes to change their interpretation of the social terms and conditions. On the other hand, play therapy, according to some researchers (quoting of Landreth, 2002) as well as play therapy has caused the participants spend some of their energy play sessions. This energy spending was led to lower impulsivity and hyperactivity in subjects in the remaining hours of the day. In addition, children's emotional and behavioral discharge powers and strengthen in sand play through language of sand play.

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