

The Effect of CBT Based Play Therapy on PTSD Symptoms of Survived Children from Earthquake

Mahdi Matin Fard M.A

Department of Clinical Psychology, Zanjan Science and Research Branch,
Islamic Azad University, Zanjan, Iran

Mojtaba Amiri Majd PhD (Corresponding author)

Department of Psychology, College of Humanities, Abhar Branch, Islamic Azad
University, Abhar, Iran

Email: amirimajd@abhar.ia.ac.ir

ABSTRACT

Present study is aimed at investigating the effect of group play therapy based on the cognitive-behavioral approach on the PTSD of habitant children of earthquake stricken areas of East Azerbaijan. The population of this research included 6-12 years old girls and boys of earthquake stricken areas of Azerbaijan who manifested Post Traumatic Stress Disorder (PTSD) symptoms. The sample consisted of 30 children of Bajabaj village in Harris, a city of east azerbaijan province, the PTSD of whom were confirmed by an experienced psychologist, and they were categorized randomly into experimental and control groups. First, PTSD diagnostic questionnaire (YOLL) was used for both groups and then experimental group was treated by eight sessions of cognitive-behavioral play therapy and then a post test was performed. A covariance analysis used to analyze the data. Findings indicated that cognitive-behavioral play therapy would decrease PTSD scores ($p \leq 0.05$). Because of the damaging chain which follows PTSD, it is necessary for suffering individuals and their families to attend adequate consulting sessions in order to prevent its psychological and social impositions as much as possible.

Key words: play therapy based on the cognitive-behavioral approach, PTSD, children.

Introduction:

Children's encounter with calamities such as lesions or death of beloved individuals, war, or social violence would annoy them (Kaplan & sadock, 2007). One of the incident impositions of such catastrophes is Post Traumatic Stress Disorder (PTSD). PTSD –which was previously categorized as a subdivision of anxiety disorder, but in new definitions of DSM-V (2013) its

anxiety aspect is not emphasized- is caused by an intense stress during an individual's life. This disorder is both experienced while dreaming or awake and it manifests intolerable pathologic-psychological symptoms. In DSM-IV-TR little attention is paid to young children's PTSD and some shared descriptions with adults are given. However, in DSM-5 version, an especial guidance is provided for diagnosis of this disorder in children, especially children under 6 years old. PTSD is a prevalent disorder among children exposed to mortal incidents such as earthquake and it usually causes high rates of psychological impositions and damages. In specific occasions up to 90% of children would suffer from this disorder, however its incidence is sometimes underestimated (Kaplan & Sadock, 2007). Most of the information about children's PTSD is gained from researches performed on adults (APA, 2008). There are various psychological interventions for treatment of children's anxiety and horror. One approach is cognitive-behavioral treatment (CBT) which is used in different domains of children's treatment (Scheeringa et.al, 2010; Rezaiee et.al, 2012; Aslani et.al, 1386; Bakhtiari et.al, 2013). Most of the clinical studies show that cognitive-behavioral programs are effective in symptom control of those with PTSD. Cognitive-behavioral program is focused on changing discordant thoughts and behaviors. Although some literature clearly confirm effectiveness of these treatments in decreasing symptoms of PTSD (Scheeringa et.al, 2010; Jensen et.al, 2014; Holt et.al, 2014), Children may not be able to learn prevalent techniques of CBT which are mainly based on perception and cognition. So, the researchers have proposed a play therapy based on the cognitive-behavioral approach (Knell, 1999). Play therapy is defined as a process of dynamic interpersonal communication between child and therapist which facilitates a safe communication for the child and allows him to self-express. Through this process, children can acquire and learn self-control skills in a better way (Ghiasi,2012).

Cognitive-behavioral play therapy is based on cognitive-behavioral theories of emotional growth and psychological pathology. Cognitive-behavioral play therapy integrates behavioral and cognitive interventions into a pattern of play therapy. Play activities are used verbally and non-verbally. Cognitive-behavioral play therapy represents a theoretical framework based on the cognitive and behavioral principles and this framework integrates these principles regarding growth (Mohammad Esmaeel, 2004). General purposes of child-oriented play therapy include facilitating partnership learning, self-control, responsibility of expressing the feelings, respect, acceptance of himself and the others and improvement of behaviors such as social skills, self-esteem, and depression relief(Lendreth,2002).

In recent years, increasing attention is paid to psychological disorders of children and their importance, and valuable results have gained; however, there are several shortcomings regarding this issue and according to above mentioned matters, studying different methods of PTSD treatment is considered to be very important. As language for children, just as the adults, is a mean to express feeling, communication, explaining the experiences, manifestation of dreams, and self-flourishing, play therapy can be an effective treatment method for various psychological disorders. Since little is down on children's PTSD and no related research is based on cognitive-

behavioral play therapy in Iran, following research question was assigned to be answered in present study: is a cognitive-behavioral play therapy effective in children's PTSD treatment on an Iranian population?

Methodology

Participants:

This research is a pretest-posttest semi-experimental study with control group. The population included 6-12 years old girls and boys of earthquake stricken areas of East Azerbaijan who were showing symptoms of PTSD. The sample consisted of 30 children of Bajabaj village of Harris of Azerbaijan province. Twenty eight inhabitants of this thin village had lost their lives in 1391 earthquake and 100% of the village was destroyed. First, all of the 6-12 years old children of these areas were selected as the sample and their disorder was confirmed by a psychologist. They were categorized in two groups of 15 individuals as control and experimental groups. Experimental group received eight sessions of cognitive-behavioral group play therapy, while the control group received no therapeutic services.

Research tool:

Children's diagnostic questionnaire of PTSD (YOLL): YOLL is a valid and reliable international questionnaire for diagnosis of children's PTSD with 25 four-choice questions with Likert scale (from a few to very much) which evaluates the existence of PTSD symptoms and their intensity. The value of 24 indicates the existing of PTSD symptoms in children. The severity of children's PTSD is divided into four groups of *sever* (75-100), *medium* (50-70), *light* (25-50), and *asymptomatic* (less than 25) (Moezzi et.al, 1386). This questionnaire can be used for DTD diagnosis as well.

Psychologists diagnosis: both of the experimental and control groups were confirmed by a psychologist regarding their disorder.

Procedure:

After categorization, diagnostic questionnaire of PTSD (YOLL) was filled by parents. In second stage, experimental group received cognitive-behavioral play therapy while control group did not receive any kind of treatment. After treatment, diagnostic questionnaire of PTSD (YOLL) was filled by parents again.

Results

Descriptive analysis of data is represented in table I.

Table I. descriptive findings of pre-test-post-test scores of dependent variable of both groups.

Standard deviation	Mean	Number	Independent variable	Dependent variable
22.69	57.40	15	Pretest	PTSD
20.48	48.66	15	Posttest	
19.69	58.80	15	Pretest	PTSD
18.98	58.60	15	Posttest	

Covariance analysis was conducted to determine the effect of independent variable on PTSD of two groups. Since for covariance analysis, data should be normal and the variances should be equal, Levene test was conducted to verify the precondition. The results show that data is normal ($p \leq 0.05$) and the variances are equal ($p = 0.11$) and the precondition of covariance analysis is observed (table II and III).

Table 2. Results of kromogorov-smirnov test to verify data normality of dependent variable.

P	K-S	Dependent variable
0.204	0.922	Pretest PTSD
0.240	0.926	Posttest PTSD
0.214	0.942	Pretest PTSD
0.712	0.961	Posttest PTSD

Table 3. Levene test to verify preconditioned variance equality.

Significance level	Df2	Df1	F	Dependent variable
0.11	28	1	2.682	PTSD

Since normality and variance equality of the experimental and control groups were observed, covariance analysis was performed.

Table 4. Covariance analysis of PTSD scores for experimental and control groups after modifying pretest scores.

Eta coefficient	Significance level	F	Mean of squares	df	Sum of squares	Dependent variable
0.940	0.000	421.343	10263.25	1	10263.25	PTSD
0.461	0.000	23.127	563.346	1	563.346	

The results of covariance analysis (table IV) show that there is a significant difference between mean values of experimental and control groups.

According to the findings represented in the table, after omission of the effect of pre test scores, there is a significant difference between modified mean of PTSD groups in each stage ($p < 0.000$, $F = 23.127$) with an effectiveness of %46. The results show that cognitive-behavioral play therapy caused PTSD scores to decrease.

Discussion

Results showed that cognitive-behavioral play therapy causes PTSD scores to decrease. Thus, it can be concluded that this therapeutic method can be effective in decreasing children's PTSD symptoms. This conclusion is compatible with findings of Rezaiee Ardani et.al (2012), Aslani et.al (2007), Bakhtiari et.al (2013), Landreth (2009). Some studies show that cognitive-behavioral therapy is effective in decreasing PTSD symptoms. In a study, Simone (2010) concluded that meta-cognitive therapy (MCT) and cognitive-behavioral therapy (CBT) are effective in treatment of PTSD. Foa (2004) has found that cognitive-behavioral approaches are effective in multi-causal PTSD and decrease symptoms of tolerating severe mental disturbance and intervening thought of sudden return. Other studies indicate that cognitive-behavioral therapy can be a complementary and auxiliary treatment of PTSD.

The effectiveness of the intervening approaches in treating symptoms of PTSD can be attributed to the nature of treatment which consists of two main factors. The first factor is cognitive-behavioral therapy factor which is based on this belief that individual's perception and interpretation of a situation determines his/her emotional and behavioral reaction to that situation. The second factor is making use of playing which not only facilitates the purposes of cognitive-behavioral therapy, but also it is a kind of treatment in its nature (Landreth, 2009). In fact, the play therapy design is in such a way that it can justify and explain the decrease in PTSD symptoms. This method allows the child to express his persecutor feelings and internal problems and manifest them while playing and this allows the therapist to help the child to learn how to solve his conflicts. Playing connects internal thoughts of a child with his external world and helps him to control external objects. Playing helps children to express their experiences,

feelings, thoughts, motivations, and threatening problems (Wethinton, H.R et.al, 2008). This can facilitate the way for the therapist to understand discordant and inefficient thoughts of the child.

Another important point is that the children suffering from PTSD avoid from relationship with others and do not participate in group plays and when they are exposed to horrid situations which they have experienced (earthquake and resulting calamities), they become anxious. In group play therapy children are enforced to contact with other children and play with them and since they receive no threatening stimulation while they are playing, their anxiety reduces gradually.

To summarize, findings of this study show that play therapy causes children to actively participate in treatment process and try to control their change of behavior and accept its responsibility. Most of the children suffering from PTSD avoid related issues of the trauma; they may try to avoid anxiety and negative feelings of reminding the experienced situation, such as death of beloved individuals. Relationship therapy which is caused by play therapy as well as the effects of playing on the interaction with the environment and the society and decrease of horror, are other findings of present research. Because of the resulting damaging chain of PTSD, it is necessary for suffering individuals and their families to have adequate treating sessions to prevent its psychological and social impositions as much as possible.

It is better to teach treatment framework to the suffering individual's families to make use of the approach in order to decrease damages of the disorder.

Acknowledgement:

We are grateful of valuable cooperation of Crisis Committee members of Iranian Psychology Association. Also we are thankful of the children and their Families for their participation.

References:

American Psychological Association. (2008). Children and trauma; update for mental health professionals .

Azarniushan, B. Behpazhooh, A. Ghobari Bonab, B.(2012), *the effects of play therapy based on the cognitive-behavioral approach on the behavioral problems of mentally retarded students of primary school*, Iranian seasonal journal of retarded children, 12,no.2: 5-11.

Aslani, M. Hashemian, K. Lotfi Kashani, F. Mirzaiee, J. (2007), *effectiveness of cognitive-behavioral therapy in chronic patients suffering from PTSD*, Thought and behavior journal, 1,no.3: 6-17.

Bakhtiari, M. Ghamkhar Fard, Z. Tahmasbian, K. (2013), *effectiveness of group cognitive-behavioral therapy in children suffering from pervasive anxiety disorder*, Thought and behavior Journal, 7,no. 27: 67-80.

chatto padhyay. S.K. (2008). The effectiveness of interventions to reduce psychology harm from troumative medicine. 35(3).287-373.

Diagnostic and Statistical Manual of Mental Disorders, 5th Edition: DSM-5 (5th. ed.)(2013) Washington D.C.: American Psychiatric Association.

Diagnostic and statistical manual of mental disorders: DSM-IV-TR. (2000) Washington, DC: American Psychiatric Association

Foa, E. B., Riggs, D. S., Dancu, C. V., & Rothbaum, B. (1995). Reliability and validity of a brief instrument for assessing of posttraumatic stress disorder. Journal of Traumatic Stress, 6, 45-76.

Ghiasizadeh, M. (2013), *effectiveness of Meichenbaum cognitive-behavioral play therapy in decreasing timidity and seclusion of primary school students*, Scientific Journal of medical sciences university of Ilam, 21, no. 6: 96-105.

Holt T, Jensen TK, Wentzel-Larsen T. (2014) The change and the mediating role of parental emotional reactions and depression in the treatment of traumatized youth: results from a randomized controlled study. Journal of Clinical Child and Adolescent Psychology.;43(3):356-69.

Jensen TK, Holt T, Ormhaug SM, Egeland K, Granly L, Hoaas LC, Hukkelberg SS, Indregard T, Stormyren SD, Wentzel-Larsen T. (2014) A randomized effectiveness study comparing trauma-focused cognitive behavioral therapy with therapy as usual for youth. Child Adolesc Psychiatry Ment Health. 8;8(1)

Knell SM.(1999) Cognitive-behavioral play therapy. In: Hand book of psychotherapies with children and families. New York: Kluwer Academic/plenum publishers;Pp. 385-404.

Landreth, GL, Ray, DC, batton, S.(2009). Play therapy in elementary school. Psychology in the school, 46(3):1-9.

Lendreth.G (2002) Play therapy, the Art of relationship, New York,. Brunner – Routledge press.

Landreth, G.(1999), *play therapy and dynamism of children's consultation*, translation of Kh. Arian, Tehran: Etela'at publication.

Mohammad Esmaieel, E.(2004), *play therapy*, Tehran: Danzheh publication.

Mahmoodi Gharaiee, J. Bina, M. Yasemi, M. Emami, A. Naderi, F. (2006), *the effect of group play therapy on the symptoms related to the sorrow and damages caused by earthquake in children*, Journal of children diseases, 2, no. 16: 137-142.

Moezzi, M. Shakeri, M. Khadivi, R. Poorheidar, B. (2007), *Extent and severity of PTSD and the effect of mental health intervenes on children of Sefilan Village of Chaharmahal bakhtiari province*, Medical Science University of Sahrkord, 9, 1: 63-69.

Mirzaiee, J. et.al (2004), *comparing of clinical diagnosis of PTSD inpatients and outpatients by psychological tests*, Military Medicine Journal, 6, no. 3: 45-54.

Rezaiee Ardani, A. Soltanifar, A. Jafarzadeh Fadaki, M. Modares Gharavi, M. mokhber, N.(2010), *Investigating the effectiveness of interest-based Transformational Play therapy in symptoms of 3-9 children's DTD*, Journal of Mental Health, 14,no. 55: 260-268.

Saduk; B. James and Saduk; V. Alcott (2008), *summery of psychology*, translation of F. Rezaiee, Tehran: Arjmand publication.

Scheeringa, Michael S. ;Weems, Carl F. ; Cohen, Judith A. ; Amaya-Jackson, Lisa; Guthrie; Donald (2010) Trauma-focused cognitive-behavioral therapy for posttraumatic stress disorder in three-through six year-old children: a randomized clinical trial. Journal of Child Psychology and Psychiatry. 52(8):853-60.

Wethinton, H.R., Hahn, R.A., Fugua-Whitely. D.s., Sipe. T.A., crossly. A.E., Johnson, R.L., liberman. A.M.,mosci chi. E., Price. L.N., Tuma. F.K., halra. G.,

Zoghi Paidar, M. Sohrabi Esmrood, F. Borjali, A. Delavar , A.(2011), *effectiveness of teaching confronting skills based on cognitive-behavioral approach in PTSD of depressed war devotees*, Military Psychology, 2,no.5: 1-16.