

## The Effect of Psycho-social Oriented Recreative Activities on the Symptoms Experienced After Trauma (7-13 Age)

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**ABSTRACT** The aim of this study is to determine the effect of psycho-social oriented re-creative activities to decrease the symptoms which maketrauma repeated after the trauma is experienced escape and avoidance reactions from stimulus which remind the trauma and increased arousal after the trauma. A mixed design in which pre-test, post-test and control groups were used was applied. A total of 14 children (7 children for control and 7 children for experiment group) participated to the study. Children were contacted by Social Help and cooperation foundation. Families', the foundation's and the children's' permissions were taken and "psycho-social oriented re-creative activities program" was applied to the group. No activity was applied to the control group. The data was obtained by behavioural observation, interview and The Scale for Browsing Symptoms of Stress Disorder after Trauma (TSSBBTF). The results and conclusion: results showed that psycho-social oriented re-creative activities are effective to decrease the symptoms which make trauma repeated after the trauma, escape and avoidance reactions from stimulus which remind the trauma and increased arousal.

### INTRODUCTION

The meaning of a traumatic experience depends on the individual's capacity and how others perceive the traumatic event. The possibility to face an unwanted event in today's modern life has been increasing. Television and other mass media bring devastating disasters to families' living rooms and it could be difficult to avoid this case (Fletcher 2003). The disorders related to trauma are the second most expensive health problem in America. Post-Traumatic Stress Disorder affects every man out of 20 and every woman out of 10. Half of those people are the ones who experienced Post Traumatic Stress Disorder in their childhood (Ford 2009). Negative life events, whether or not they have a traumatic event, appear in daily life's casual cycle. The destructive effects of negative life events which could appear everyone's life could gradually impair the mental health of individuals who experience the event (Unal et al. 2011).

The person who experiences a trauma should exhibit psychological reactions which last for days or event for months and these reactions impair and immobilize defence mechanisms of the individual. However, these reactions differ from people to people. Trauma could repeat on behavioural, emotional and physiological levels. This repeat of various levels could cause different individual and social difficulties. Anger which is directed to oneself or another person is the main problem of individuals who have experienced traumatic events and this means repeatedly experience of real past events (Van der Kolk 1989).

Traumatic events which are experienced by children differ. The sexual abuse and violence are suggested to be the most experienced traumas of children (Faust 2001; Copeland et al. 2007). The sexual abuse cause long term emotional and behavioural effects, fear, depression, anger, hostility and unsuitable sexual behaviours in children (Ovayolu et al. 2007).

It is understood that childhood traumas (abuse and negligence), harming oneself and suicide are strongly related to each other (Zoroglu et al. 2001). Aksoy and Ogel (2003) showed in their research, which is about reasons of harming oneself, that physical abuse is important. It is stated that people who experience physical

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abuse harm themselves to control discomfort, which they intensely have, and to punish themselves. When trauma is hidden from the children, the questions related to trauma are not answered and children's curiosity increases, maladaptive behaviour of children could be observed. The reason of this is that when they stay alone (when they go to sleep) the children try to find some answers to the questions, the answers of which have not been reached (Koc et al. 2012).

Children living in war zones are at high risk of suffering from PTSD (Post-Traumatic Stress Disorder) (Thabet et al. 2004) and violent or sexual trauma was associated with the highest rates of symptoms particularly in childhood (Copeland et al. 2007). Media viewing of tragic events is sufficient to produce PTSD symptoms in vulnerable populations such as children (Otto et al. 2007). PTSD is characterized by avoidance, numbing, intrusive re-experiencing, sleep disturbances and increased arousal to trauma-related stimuli (Helzer et al. 1987; Friedman et al. 2008; Ford 2009).

A child's response to a traumatic event will be mediated by his/her age and developmental level. Similarly, the impact of an identical stressor may vary considerably from child to child depending on each child's inherent resiliency, learned coping mechanisms, and external sources of physical, emotional and social support. Even stressors that would universally be considered traumatic (for instance, witnessing multiple murders or being the victim of rape) are experienced as being less traumatic by some children than others (Cohen et al. 2006). According to research results, as the age of the children decreases, their levels to be affected by traumatic events also increase. Preschool children appeared to be most vulnerable to symptoms of re-experiencing the trauma and hyper arousal (Levendosky et al. 2002). School-age children (9-12 years) were more likely to meet all PTSD criteria than were older children (4.2% of those between 13 and 15 years, and 3.1% of those between 16 and 19 years) (Fletcher 2003).

In children, the experience of intense fear can be inferred from disorganized or agitated behaviour (Friedman et al. 2008). Koc et al. (2012) stated that children between the ages of 7-12 exhibited introversion, aggression, insomnia, being absent from school, avoidance and dependency behaviours. Treatment packages for PTSD have included combinations of exposure, psycho ed-

ucation, coping skills, and parent-focused behavioural management training (Friedman et al. 2008). The effects of CBT on PTSD were the strongest in clients with severe PTSD. The findings suggested that clients with severe mental illness and PTSD can benefit from CBT, despite severe symptoms, suicidal thinking, psychosis, and vulnerability to hospitalizations (Mueser et al. 2008).

It has been seen that there is an important effect of cognitive-behaviour therapy to decrease the symptoms for children in therapy of Post-Traumatic Stress Disorder (Mueser et al. 2008; Van der Oord et al. 2010). It was seen in a study in which 33 researches were examined that cognitive-behaviour therapy is more effective than the other therapy methods in treatment of Post-Traumatic Stress Disorder (Bisson and Andrew 2009). In this respect, the aim of this research was to test a new approach in treatment of Post-Traumatic Stress Disorder rather than trying to prove an opposite method to other methods or criticizing them. The prime aim of this research was to test the effect of psycho-social oriented re-creative activities on symptoms experienced after trauma, because transition of children's cognitive structure could be both easier and more permanent as a result of the activities which children are interested in and like to do. In this respect, the three questions listed below were tried to be responded in this research.

Are psycho-social oriented re-creative activities effective to decrease the symptoms which make trauma constantly repeated after the trauma?

Are psycho-social oriented re-creative activities effective to decrease escape and avoidance reactions from stimulus which remind the trauma?

Are psycho-social oriented re-creative activities effective to decrease increased arousal after the trauma?

## METHODOLOGY

In this research, "re-creative activities program" which was developed by the researchers was used to determine the effect of psycho-social oriented re-creative activities to decrease the symptoms which make trauma repeated after the trauma, escape and avoidance reactions from stimulus which remind the trauma and increased arousal after the trauma. A mixed pattern which

has pre-test, post-test and control group was used. In mixed patterns, there are at least two variables (factors) effect of which was examined on the dependent variable. One of them indicated experimental operation conditions which are formed by impartial groups (experiment, control), and the other one indicates repeated measurements of participants in different times (pre-test, post-test). Mixed patterns are also known as split-plot factorial designs (Buyukozturk 2009).

In this research, which has mixed measurements, 2x3 split plot was used to show independent experimental operation conditions (experiment, control) and repeated measurements (pre-test, post-test, monitoring). Pre-test, post-test, monitoring-measurements were evaluated according to mean scores of TSSBBTF. Research pattern is shown on Table 1.

According to the research pattern seen on Table 1, The Scale for Browsing Symptoms of Stress Disorder after Trauma was applied to all participants of experiment, control and monitoring groups. After the first application of the scale, it was controlled if there is any significant differences between the groups and then recreational activities were started. While application phase, all participants of experiment group participated to psycho-social oriented re-creative activities for 8 weeks. 1 week after the application of the program for 8 weeks, all groups (experiment, control and monitoring) filled The Scale for Browsing Symptoms of Stress Disorder after Trauma as a post-test. The Scale for Browsing Symptoms of Stress Disorder after Trauma was also applied to all groups as a follow-up measurement 3 months after the post-test in order to see whether the effects of psycho-social oriented re-creative activities are permanent and long-lasting as being dependent from the time effect.

**Process of Creating the Groups and the Procedure**

According to Eckhardt and Ermann, a necessity of a research patterned with pre-test, post-

test and control groups having a subject pool and objectively and randomly choosing the participants for two groups (as cited in Buyukozturk 2001). Thus, a subject pool was created. With this purpose, officials of Hendek Prefecture Social Help and Cooperation Foundation were contacted. In this process, it was tried to determine the children who experienced/are experiencing a traumatic event in their lives, families who have children suitable for the researched were chosen. The families which were suitable for the research were contacted by the officials of Hendek Prefecture Social Help and Cooperation Foundation and first meeting was arranged in the first meeting day Wednesday between 10:00 am-12:00 pm. Children came to the meetings with their families. The parents and the children were interviewed separately. 19 children appeared to be suitable to participate in the research. All of the 19 children were found to have traumatic events which prohibit their developmental experiences in their life. The effect of the trauma appeared to be continuing for the most of the children. Two families reported not to be able to come to the activities. One of them had two children and their father was paralyzed, not able to talk and his eating was only possible from his stomach. Thus, his wife was not able to leave him or bring the children to the activities as the children had to do farming instead of their father. The other family was living in upland of a village of Hendek which was very far away and transportation was only possible on foot (at least from the upland to the village). Walking from the upland to the village was quite dangerous due to the predators and the parent reported that her children might get hurt. The trauma of this family was that their father was burned to death in front of the children and after 40 days the mother left the home, the grandmother was looking after the children. Although, the grandmother thought that it was necessary to enrich the social life of the children, she stated that it was not possible for the children to participate in the re-

**Table 1: Research pattern**

<i>Measurements groups</i>	<i>Pre-test</i>	<i>Process</i>	<i>Post-test</i>	<i>Monitoring</i>
<i>Experiment Group</i>	TSSBBTF	Psycho-social oriented recreative activities program (8 weeks)	TSSBBTF	TSSBBTF
<i>Control Group</i>	TSSBBTF	Any application was not applied	TSSBBTF	TSSBBTF

TSSBBTF: The Scale for Browsing Symptoms of Stress Disorder after Trauma

search. As a result, 5 children out of 19 could not take part in the research due to the reasons which were stated above.

An interview day and time for 1 week later were arranged with the subject pool which was created by approval of the families, children and the institution. The subjects were met separately in a room allocated by the institution after 1 week in the meeting day and TSBTF was applied to the all subjects. It is agreed that the re-creative activities would start in 17.08.2012. It was aimed by the re-creative activities to remove the symptoms of the trauma and get the developmental features which had not been obtained due to the traumatic event. The re-creative activities which were approved by the children and psycho-social support activities based on the re-creative activities lasted 8 weeks.

Activities were planned and applied as three dimensional; re-creative, psychological and social. Every week a re-creative activity was planned and the activities and their date were chosen with the children. The materials which are necessary for the re-creative activities were obtained and given to the children. Chi Gongé therapy exercise was applied in the beginning of the every planned re-creative activity. The re-creative ac-

tivities, which aim to decrease psychological pressure of trauma and bring some skills of social life, were arranged. Activities were applied by the experts in the areas of recreative and psycho-social activities. The process of the 8 weeks can be seen on Table 2.

### Data Collecting Tool

“The Scale for Browsing Symptoms of Stress Disorder after Trauma (TSSBBTF)” was used. The effect of the traumatic event on children and its behavioural expressions were determined with this form. The Scale for Browsing Symptoms of Stress Disorder after Trauma was used in the research of “the efficacy of fluoxetine treatment in children and adolescents with post traumatic stress disorder symptoms” by Yorbik et al. (2001), Department of Gata Child Mental Health and Illnesses. This form was developed by examining Stress Disorder after Trauma literature, based on the symptoms which are not in DSM-IV and which could develop as a result of trauma in children and adolescences and based on DSM-IV diagnostic criteria. The form was arranged as not affected (0), lightly affected (1), middle level af-

**Table 2: Weekly program of psycho-social oriented recreative activities**

<i>Week</i>	<i>Recreative activity</i>	<i>Psychological activities</i>	<i>Social activities</i>
1	<i>Swimming</i>	<ul style="list-style-type: none"> <li>• Trust walk</li> <li>• Who am I</li> </ul>	<ul style="list-style-type: none"> <li>• Developing cooperation behaviour</li> <li>• Helping each other</li> </ul>
2	<i>Swimming</i>	<ul style="list-style-type: none"> <li>• A day from the past</li> <li>• A photo from the past</li> <li>• Pulling rope</li> <li>• People of my district</li> </ul>	<ul style="list-style-type: none"> <li>• Knowing oneself and the others</li> <li>• Forming reachable expectations</li> </ul>
3	<i>Picnic</i>	<ul style="list-style-type: none"> <li>• Emotions around the body</li> <li>• I have a secret</li> <li>• The total of the anger</li> </ul>	<ul style="list-style-type: none"> <li>• Different reaction to a similar event</li> <li>• Externalizing the emotions</li> </ul>
4	<i>Cinema</i>	<ul style="list-style-type: none"> <li>• A work of logic-emotion</li> <li>• Living the future</li> <li>• Letter to the past</li> </ul>	<ul style="list-style-type: none"> <li>• Effective listening</li> <li>• Expressing oneself</li> </ul>
5	<i>Swimming</i>	<ul style="list-style-type: none"> <li>• The circle of relaxation</li> <li>• Black box</li> <li>• Give a present</li> </ul>	<ul style="list-style-type: none"> <li>• Realizing how behaviours affect others</li> <li>• Realizing estimated results of behaviours</li> </ul>
6	<i>Nature Walk</i>	<ul style="list-style-type: none"> <li>• Mothers-fathers are talking</li> <li>• Shake of the role</li> <li>• Say your story with music and poem</li> </ul>	<ul style="list-style-type: none"> <li>• Enrich vocabulary related to emotions</li> <li>• Prohibit the factors that prevent communication</li> </ul>
7	<i>Cinema</i>	<ul style="list-style-type: none"> <li>• Imagination</li> <li>• Undone works</li> <li>• Own doctor</li> </ul>	<ul style="list-style-type: none"> <li>• Obtaining the skill of deciding</li> <li>• Realizing skills and interests</li> </ul>
8	<i>Swimming</i>	<ul style="list-style-type: none"> <li>• My livings in the past</li> <li>• Present thoughts</li> <li>• Construction of the self</li> </ul>	<ul style="list-style-type: none"> <li>• Application of real me and ideal me</li> <li>• Problem solving</li> </ul>
<i>Monitoring</i>		Monitoring tests were applied to experiment and control groups 30 days after the finishing of the applications, the process was also re-evaluated.	

affected (2), heavily affected (3) according to the level on which children get affected from the symptoms (Yorbik et al. 2001). This form has 3 parts which are 1- Living the trauma again, 2- Escape and avoidance from the stimulus that remind the trauma, 3- Increased arousal. The people who are heavily affected by one or more cases of living trauma again and by 3 cases of escaping and avoiding stimulus part are evaluated as having symptoms of Stress Disorder after Trauma.

Fourteen participants consisted of 8 females and 6 males. Face to face interviews were applied to the 14 subjects. In the interview form there were open-ended questions about “when they were informed about the traumatic event”, “how they were informed”, “what they thought after realizing that had happened”, “what they thought”, “how they reacted”. In the interviews these questions were asked to the children, any other questions were not asked. The answers of the children were written down with the permissions of them and the writings were read to them

**Table 3: Average scores and standard deviations of re-experiencing stress symptoms after the trauma**

	Group	Mean	Std. deviation	N
PTSD: Life again (pretest)	Experiment	12.57	1.51	7
	Control	13.14	1.21	7
	Total	13.86	1.35	14
PTSD: Life again (posttest)	Experiment	5.43	1.40	7
	Control	12.71	1.38	7
	Total	9.07	4.01	14
PTSD: Life again (follow-up)	Experiment	4.86	1.21	7
	Control	12.71	1.70	7
	Total	8.79	4.32	14

in the end of the interviews. The data was analysed by SPSS packaged program. Descriptive statistics and split plot methods were used to analyse the data.

**RESULTS**

1. Results related to the effect of psycho-social oriented re-creative activities on re-experiencing stress symptoms after trauma.

When examining Table 3, it is seen that average pre-test score of re-experiencing trauma and symptoms of it for experiment group was 12.57, average of post-test score was 5.43 and average of monitoring score was 4.86. There is a significant decrease for the scores of re-experiencing trauma and symptoms of it after the applications compared to pre-test scores. Further, this decrease was also valid after the post-test in the monitoring measurement. However, the case was different for the control group. The average pre-test score of re-experiencing trauma and symptoms of it for the control group was 13.14, average of post-test score was 12.71, and average monitoring score was 12.71.

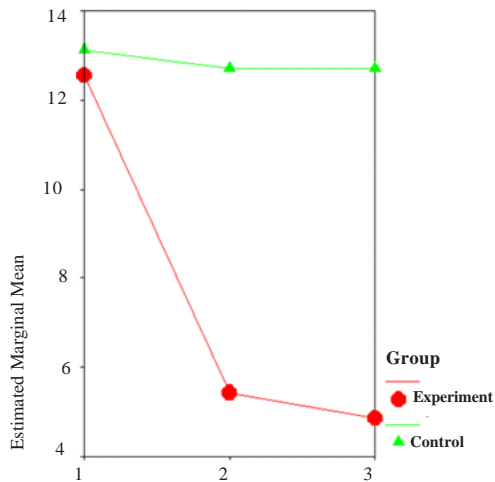
Results of ANOVA analysis to see whether these differences between experiment and control group regarding their pre-test and post-test scores were significant can be seen on Table 4.

According to the result of Table 4, a significant difference was observed between experiment and control groups according to re-experiencing trauma symptoms after trauma ( $F(2-24) = 83.68, P < .001$ ). This result shows that psycho-social oriented re-creative activities are effective to decrease the symptoms related to re-experiencing trauma after trauma. A graph related to pre-test, post-test and monitoring scores’ averages of experiment and control groups can be seen on Figure 1.

**Table 4: Pre-test, post-test and monitoring scores’ ANOVA results for re-experiencing stress symptoms after the trauma**

Source of variance	Sum of squares	df	Mean square	F	P
Intercept	343.61	13			
GRUP (subjects /Grup)	288.09	1		62.26	.001
Error	55.52	12	4.26		
Within-Subjects	275.98	28			
Factor1 (pretest-posttest)	144.61	2	72.31	105.32	.001
Grup* Measurement	114.90	2	57.45	83.68	.001
Error	16.47	24			
Total	619.59	41			





**Fig.1.**Pre-test, post-test and monitoring scores' averages of experiment and control groups for re-experiencing trauma after the trauma

2. Results related to the effect of psychosocial oriented re-creative activities on escape and avoidance reactions from stimulus which reminds the trauma.

**Table 5:** Average scores and standard deviations for escape and avoidance reactions from stimulus which remind the trauma scores

	Group	Mean	Std. Deviation	N
Escape - Avoidance (Pretest)	Experiment	19.14	1.35	7
	Control	19.14	.90	7
	Total	19.14	1.10	14
Escape - Avoidance (Posttest)	Experiment	9.71	.76	7
	Control	19.00	1.00	7
	Total	14.36	4.89	14
Escape - Avoidance (Follow-Up)	Experiment	8.00	.82	7
	Control	18.71	1.38	7
	Total	13.36	5.67	14

**Table 6:** ANOVA results of pre-test, post-test and monitoring scores for escape and avoidance reactions from stimulus which remind the trauma

Source of variance	Sum of squares	df	Mean square	F	P
Intercept	489.91	13			
GRUP (subjects /Grup)	466.67	1		240.98	.001
Error	23.24	12	1.94		
Within-Subjects	521.90	28			
Factor1 (pretest-posttest)	267.76	2	133.88	185.37	.001
Grup* Measurement	236.90	2	118.45	164.01	.001
Error	17.33	24	.72		
Total	1011.9	41			

When examining Table 5 it is seen that average pre-test scores of escape and avoidance reactions from stimulus which remind the trauma scores for experiment group was 19.14, average post-test score was 9.71 and average monitoring score was 8.00. There was a significant decrease in escape and avoidance reactions from stimulus which remind the trauma scores for experiment group in post-test score after the applications compared to the pre-test score. Further, this significant decrease was also observed to be stable in the monitoring score. However, the case was different for the control group. The average pre-test score of escape and avoidance reactions from stimulus which remind the trauma scores for control group was 19.14, average of post-test score was 19.00 and average of monitoring score was determined to be 18.71.

Results of ANOVA analysis regarding subjects' average pre-test and post-test scores of experiment and control groups can be seen on Table 6.

According to the result on Table 6, there was a significant difference between the scores of experiment and control groups for escape and avoidance reactions from stimulus which remind the trauma ( $F(2-24) = 164.01, P < .001$ ). This result shows that psychosocial oriented re-creative activities are effective to decrease the symptoms of escape and avoidance reactions from stimulus which remind the trauma. A graph which shows average pre-test, post-test and monitoring scores of experiment and control groups can be seen on Figure 2.

3. Results related to the effect of psychosocial oriented re-creative activities on increased arousal after trauma.

When examining Table 7, it can be seen that average pre-test scores of symptoms for increased arousal after trauma for experiment group

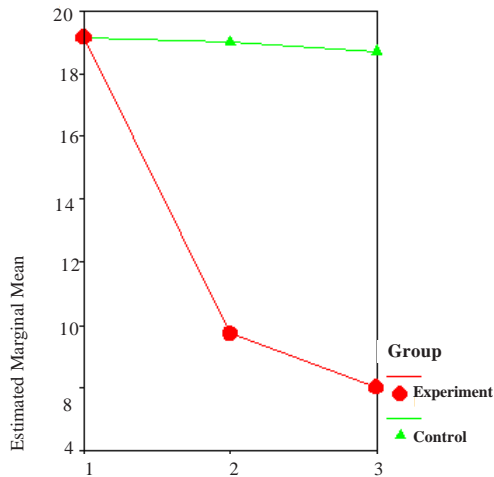


Fig. 2. Pre-test, post-test and monitoring scores of escape and avoidance reactions from stimulus which remind the trauma scores

Table 7: Average scores and standard deviations for increased arousal after the trauma

	Group	Mean	Std. deviation	N
Hyperarousal (pretest)	Experiment	29.86	1.95	7
	Control	29.86	1.95	7
	Total	29.86	1.88	14
Hyperarousal (posttest)	Experiment	10.71	.95	7
	Control	29.43	1.27	7
	Total	20.07	9.77	14
Hyperarousal (follow-up)	Experiment	9.29	.95	7
	Control	29.43	.79	7
	Total	19.36	10.49	14

was 29.86, average post-test score was 10.71 and average monitoring score was 9.26. There was a significant decrease of the score of increased arousal related to trauma in the post-test scores after the applications for the control group. Further, this decrease was also stayed stable in the monitoring measurement. However, the case for

the control group was different. It was observed that average pre-test score of increased arousal for control group was 26.86, average post-test score was 29.43 and average monitoring score was 29.43.

The results of ANOVA analysis regarding subjects' average pre-test and post-test scores of the subjects from the experiment and the control groups can be seen on Table 8.

According to the results on Table 8, it was observed that there is a significant difference between experiment and control groups regarding their scores on experiencing symptoms related to increased arousal after trauma ( $F(2-24)=325.80, P<.001$ ). This result shows that psycho-social oriented re-creative activities are effective to decrease the symptoms of experiencing increased arousal after trauma.

A graph regarding pre-test, post-test and monitoring average scores of experiment and control groups can be seen on Figure 3.

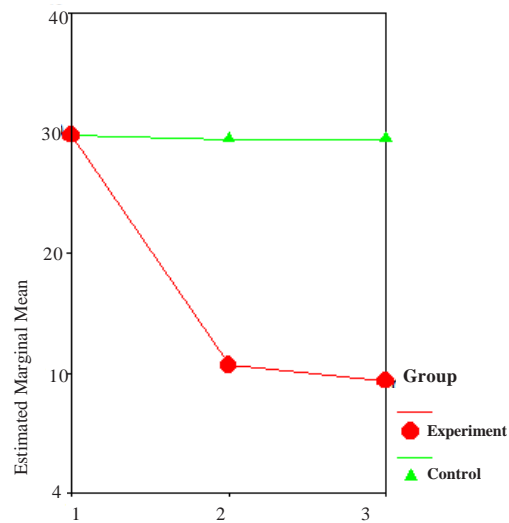


Fig. 3. Pre-test, post-test and monitoring scores for increased arousal after trauma

Table 8: ANOVA results for pre-test, post-test and monitoring scores of increased arousal after trauma

Source of variance	Sum of squares	df	Meansquare	F	P
Intercept	1798.95	13			
GRUP (subjects /Grup)	1761.52	1		564.76	.001
Error	37.43	12	3.1		
Within-Subjects	1880.66	28			
Factor1 (pretest-posttest)	963.76	2	481.88	355.07	.001
Grup* Measurement	884.33	2	442.16	325.80	.001
Error	32.57	24	1.35		
Total	3679.61	41			

## DISCUSSION

Psycho-social oriented re-creative activities are effective after a trauma to decrease the symptoms which make the trauma constantly repeated. The reason of this could be the fact that the children previously had routine lives before the applications of the research. This means, the children previously could somewhat predict how they would spend their days. The effect of the psycho-social oriented re-creative activities could contribute to change this routine. Findings of a recent research which was conducted in veterans also showed that re-creative activities help veterans with PTSD (Bennett et al. 2014). Further, the findings of another study highlights the importance of sport and physical activity to contribute to well-being and rehabilitation of combat veterans diagnosed with Post-Traumatic Stress Disorder (Caddick and Smith 2014). The re-creative activities of this research were possibly a kind of shelter where children could turn to when they thought their previously experienced negative events. The recreational activities could be also a kind of hope for them. In the beginning, there was not a positive experience which they could remember and which consistently lasted long enough to be remembered by them in the participants' lives. If they had some positive experiences, they had been removed from their mind as a result of the traumas which they had experienced. An experienced trauma in children could affect past experiences of them and their hope regarding their future, this is more important when the person who experiences the trauma is a child. Children's balance, their social support and trust they feel decreases after a trauma. Children need to have relationships with people who are predictable, consistent, routine, reliable and supporting relationships in order not to harm integrity and development of their personality as a result of the effects of the trauma's negative effects. The aim of the psycho-social re-creative activities in this research was to make children obtain these emotions. Further, one of the factors that make trauma repeated again is the existence of the symptoms related to the trauma. It could be said that as a result of the re-creative activities, children started to have new thoughts which stemmed from enriched social experiences instead of thinking effects of their past bad experiences.

In addition, psycho-social re-creative activities appeared to be effective to decrease escape and avoidance reactions from stimulus which

remind the trauma. This was observed when children started to bravely talk about the traumas they experienced. They started to talk about the emotions they felt as a result of their traumas. Children realized that all children in the research had similar feelings as a result of their traumas, and this made the children felt that they are not alone. Also, they understood that there is not a necessity to get embarrassed because of these feelings.

It was observed that children chose their professions according to the trauma which was experienced by them. For instance, a child, whose father left the family while the child was with his mother and sister in a tent in a cold winter day when there was nothing to eat after the earthquake, planned to be a policeman and catch his father. He stated that it was the first time when he was bravely able to state this case. Children did not have a past or present experience in order to face their traumas, nor would they have a hope for their future. It is not possible for a child not to have a positive experience, a supporting source or a hope for the future when his/her are facing their trauma or the stimulus that remind it. In this respect, re-creative activities became an important source that supports children, it also provided to children the understanding that it is more functional to face and fight against the trauma and its stimulus instead of avoiding them.

Further, Psycho-social re-creative activities were also found to be effective to decrease increased arousal after trauma. A child who experienced fear could be similar to a car in which the brakes are weak but there is a stronger engine. These children become excessively sensitive and react to everything. Because this is how they ease psychological pressure they experience, this is also what they often use as a result of not knowing another method. When this method is often used to ease the psychological pressure of the trauma at these ages, it also determines the children's root of their adult life styles. As a result of the psycho-social re-creative activities, children learned that there are or could be new ways to cope with psychological pressure caused by traumas.

There are many studies about re-creative activities. These studies tried to discover if re-creative activities are affective for many health problems or to contribute people's well-being, because, re-creative activities help people to develop themselves (Luetkens 2004). Most of the



studies appear to reveal positive effects of recreational and physical activities for various health problems and well-being of different groups of individuals. For example, Yigiter et al. (2011) reported that recreational activities positively affected self-esteem of university students. Besides, it was also suggested by many research that self-esteem of individuals were positively related to recreational activities (Gill 1986; Gurhan 1986; Block 1999; Tiggeman and Williamson 2000; Tiryaki and Morali 2000; Bowker et al. 2003). In addition, physical activities which were a part of our recreational activities were also suggested to decrease anxiety (Strong et al. 2005; Oeland et al. 2010) and increase self-esteem of individuals (Slutzky and Simpkins 2009).

Similarly, Tekin et al. (2009) reported that participation in physical exercise in leisure affects the depression and assertiveness levels of students. In another study, it was proposed that individuals, who engaged in leisure activity, whether it was physical exercise or more sedentary activity such as card games, were less depressed than individuals who did not engage in leisure activity (Fine 2001). Korkmaz (2007) stated that the activities like summer- winter sport schools which can also be categorized as a recreational activity should increase children's self-respect. Further, Bayazit et al. (2007) found that participation to recreational activities could increase children's social development and self-confidence. It was also stated that "Physical exercise was further significantly related to scores for physical and psychological well-being. Adolescents who engaged regularly in physical activity were characterised by lower anxiety-depression scores, and displayed much less social behavioural inhibition than their less active counterparts." (Kirkcaldy et al. 2002). Further, it was also found that physical activities are beneficial for feelings of sadness and suicidal behaviours in Hispanic and non-Hispanic white boys and girls (Brosnahan et al. 2004). It was also indicated in another study that there is an association between exercise and several indicators of mental health Troy et al. (2007).

As it can be seen from the relevant literature, re-creative activities are effective for many problems of individuals. Apart from the individuals' problems, it could also be said that recreational activities could increase the quality of people's life. This research is a different study, as psycho-social oriented recreative activities were used to decrease the symptoms after trauma and it

was thought that the results could contribute to the relevant literature.

## CONCLUSION

In the present study, the aim was to examine the effect of psycho-social oriented re-creative activities to decrease the symptoms which make trauma repeated after the trauma is experienced, escape and avoidance reactions from stimulus which remind the trauma and increased arousal after the trauma. The results of this research showed that psycho-social oriented re-creative activities could be effective to decrease the symptoms which make trauma repeated after the trauma, escape and avoidance reactions from stimulus which remind the trauma and increased arousal.

## RECOMMENDATIONS

Some suggestions based on the results from this research are listed below. Besides enriching children's lives, activities, which allow children to have experiences to gain social life skills, should be regularly and consistently given a place for children who experience symptoms of post-traumatic stress disorder.

The children who experience symptoms of post-traumatic stress disorder should not be handled as a case of one specific field, rather it could be considered as a problem that can be overcome by a multidisciplinary cooperation.

The process of helping children who experience symptoms of post-traumatic stress disorder should be handled as a multi-dimensional process rather than as a one dimension.

This study can also be applied as a solution for developmental crisis of children.

Sportive and re-creative activities could be considered as the parts of the therapies applied for psychological issues.

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