

The Effectiveness of a Behavioral Cognitive Therapy Program in Reducing the Symptoms of PTSD in a Sample of Syrian Children Refugees in Jordan

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Abstract

This study aimed at investigating the effectiveness of CBT program in reducing PTSD experiences in a sample of Syrian children refugees in Jordan. The study sample consisted of (100) children who were purposely selected, and who are suffering from PTSD. To achieve the objectives of the study, a pre and post PTSD scales and the program were used within (10) sessions, each of which lasted for (60) minutes; one session per week. The data were statistically analyzed to measure the effectiveness of CBT program in reducing PTSD experiences. The study results indicated that therapy program was of effectiveness in reducing PTSD experiences among Syrian children.

Key words: Cognitive behavioral therapy program, Post trauma Disorder, Syrian children

Introduction and theoretical background:

Post-traumatic stress disorder (PTSD) is considered one of the psychological disorders that afflicts a person after being exposed to severe traumatic experiences or difficult and painful events. Scientists have recognized this type of disorder after the Vietnam War . It is necessary to distinguish between PTSD and acute psychiatric disorder which usually disappears after the first month of trauma. PTSD usually occurs after a person is exposed to a severe traumatic experience or a terrifying event, its symptoms usually appear after several months.

Symptoms of PTSD are often grouped into two types psychological symptoms such as: insomnia, anger, deep sadness and memory disorder or they come in form of physical symptoms such as: Stomach pain, a headache and abdominal pain (Putts, 2014).The most common symptoms of PTSD in the children are the permanent recurrent of memories of the traumatic event in various ways, including the sudden intrusion of certain images of the event to the child's imagination and sounds related to that event, experiencing nightmares or flashbacks related to events. Other features can be noticed clearly through their play, their indifference in the surrounding environment, their Lack of interest in activities they once found enjoyment in, experiencing emotional numbness towards family members and friends and having weak endurance.

PTSD symptoms may develop at the level of motor, including the sudden increase in attention and vigilance, avoidance behaviors and anxiety of all stimuli which may lead to recalling the traumatic event. In addition to the disturbances in sleep, difficulty in concentration and angry outburst.

Generally, PTSD symptoms may include several health problems such as urinary and stool incontinence at night and day periods, thumb sucking, fear of darkness, loss of appetite, persistent headaches, problems of hearing, speech disorders, stuttering, introversion and difficulty maintaining relationships with others, constant quarrels with brothers and friends, loss of desire for daily activities, Lack of focus and ease of distraction, low level of school achievement, disturbing and frequent nightmares related to the traumatic event. Recurrent memories and thoughts of the event result in a state of extreme tension, the feeling that the event will occur again, intense emotional disturbance of any external or internal stimulant that symbolizes or resembles some aspects of the event, sleep difficulties, emotional fatigue and suicidal thoughts. These symptoms or most of them should be observed for at least a month or continuously (Putts, 2014).

PTSD for children at the school age (6 to 12 years) was classified into two levels, cognitive and behavioral levels. At the cognitive level, children at this stage suffer from difficulties in concentration which greatly affect their school achievement, and this due to the memories of the traumatic experience and the depressed mood of the child which affect his mental processes and therefore the learning disorders may appear clearly at this stage.

At the behavioral level, the children of this stage are often negative and non-communicative and may become more violent than before. This may have a clear impact on their relationships with their peers and friends, which may eventually lead to social isolation. Children of this age group are also vulnerable to develop the same physical symptoms as headaches, stomach pains, etc. (Mack.et.al, 1993)

DSM 5 Child Psychiatric Disorder Diagnostic Criteria :

Hammadi (2013) identified the DSM 5 diagnostic criteria for child trauma as follows:

A: Exposure to actual death, threat of death, serious injury, or sexual violence through one or more of the following methods:

1. Direct exposure to the traumatic event.
2. Personal witnessing of the events, when it occurs directly to others.
3. Knowledge of the occurrence of the traumatic event to their parents' friends or relatives.

Notice: Watching events cannot be seen via electronic media, television, movies, pictures.

B: The occurrence of one (or more) of the following symptoms related to the traumatic event, which began after the traumatic event:

1. The painful, recurrent, and involuntary memories of the traumatic event. Note: spontaneous and impulsive memories may not look painful and may be expressed by reacting when playing.
2. Frequent painful dreams where the content of a dream or conscience is linked to the traumatic event. Note: We may not be able to confirm that the scary content is related to the traumatic event.
3. Reactions (flashbacks), where the child feels or acts as if the traumatic event is repeated (These reactions may occur continuously, where the most extreme expression is a complete loss of peripheral awareness.) Shock during play.

4. Extreme psychological frustration when exposed to internal or external stimuli that symbolize or resemble a side of the traumatic event.

5. Physiological reactions when exposed to internal or external stimuli that symbolize or resemble part of the traumatic event.

C: One or more of the following symptoms, which are either to avoid the stimulators related to the traumatic event, which started after the event, or worsened after it, must exist: * Constant avoidance of the stimulators:

1. Avoiding or making efforts to avoid activities, places or physical reminders that are related to the traumatic event.
2. Avoiding or making efforts to avoid external reminders (people, situations) that are related to the traumatic event and negative adjustments in perceptions:
 - The increased tension of the negative emotional state (fear, terror, anger, guilt, shame, mental confusion).
 - Significantly decrease in participation in important activities, including playing restriction.
 - Behavior of social withdrawal.
 - Continuous decrease in expression of positive emotions.

D: Noticeable changes in reaction related to the traumatic event, which begin or worsen after the traumatic event, as evidenced by two (or more):

1. Tensed behavior and tantrums (without the slightest provocation), usually known as verbal or physical abuse of people or objects.
2. Excessive vigilance.
3. Hypervigilance, an exaggerated response when vigilance.
4. Concentration difficulties.
5. Sleep disorder (For example: difficulty in getting into sleep or staying asleep).

E. The duration of the disorder is more than one month.

F. The disorder causes significant clinical frustration or weakness in relationships with parents, siblings, peers, other caregivers or school behavior.

G. The disorder is not attributable to the physiological effects of a substance (SUD) (, drugs, alcohol) or other medical condition

Theoretical Trends in the Interpretation of Post-Traumatic Stress Disorder:

There are various interpretations of PTSD, the most important of which are the following:

1. Biological approach:

This approach assumes that genetic factors lead to post-traumatic stress disorder. This assumption has been verified by multiple studies on twins.

Skre, Onstad, Torgresen, Lygrens and Kringlen (1993) found a greater agreement in PTSD between identical twins in comparison with fraternal twins. "The results support the hypothesis of heredity contribution to post-traumatic stress disorder."

Foa, Ehlers, Clark, Tolin and Orsillo (1989) presented an evidence that may have been related to the genetic hypothesis through the reviews of individuals who have been subjected to battle for treatment, they found that nearly two-thirds of individuals with post-traumatic stress disorder, that due to combat, belong to families with members who have mental disorders. Concluding that, a person living in a family with members suffering from mental illness, is having a high ability to experience PTSD.

2. Biochemical approach

This approach takes place under the organic (biological) perspective, but it focuses on the "biochemical factors".

Krystal et al. (1989) assumed that exposure to a traumatic event leads to damage to the adrenal gland secretion system, specifically to the increased levels of noradrenaline and dopamine, and an increase in physiological excitability, leading to extreme fear of the individual that appears on a large extent. Studies have indicated that there are some evidences to support this biological life theory. They found that level of norepinephrine, and adrenaline was high in patients with post-traumatic stress disorder.

3. Psychodynamic approach

What is confusing in the post-traumatic stress disorder is that its onset can occur months or years after a person has been traumatized. Freud has considered the trauma of childbirth and the accompanying sense of the newborn suffocation as the first anxiety experience in human life. While the psychoanalytic approach considered the unconscious conflicts rooted in childhood are the cause of mental disorders in general. Dynamic psychologists adopted this idea in their interpretation of post-traumatic stress disorder.

Horowitz (1986) has interpreted this disorder by the dynamic psychological theory, concluding that the traumatic event can make the patient feel completely confused, which makes him feel panic and exhausted. Because these reactions are painful, the patient resorts to deliberately suppressing the traumatic thoughts. However, this state of denial does not solve the problem, because the patient is not able to make the information of the traumatic event integrated with his other information and to constitute a part of the sense of himself. The strong side of Horowitz's psycho-spiritual orientation seems to have provided us with a way to understand some of the major symptoms of this disorder. However, the theory did not provide an explanation for the existence of real individual differences in the vulnerability of individuals to post-traumatic stress disorder in response to traumatic events.

4. Behavioural approach.

Behavioral scientists neglect genetic factors, preconceived notions and unconscious experiences when talking about personality and mental disorders. They emphasize environmental factors and the importance of learning (classical conditioning and procedural conditioning) in determining the behavior and its types: normal and abnormal, which are subject to same law, that is learning. Based on this assumption, several studies have been conducted, including the Keane, et, el. (1985). According to the conditional approach in post-traumatic stress disorder, classical conditioning at the time of a traumatic event causes the individual to receive a conditional fear response to unconditional natural alertness.

5. Cognitive approach.

The cognitive perspective assumes that mental disorders are caused by irrational thinking about self, life events, and the world at large.

Foa, Ehlers, Clark, Tolin and Orsillo (1989) concluded that traumatic events threatened our normal assumptions about our concept of safety and what is safe.

For instance, a woman who has been subjected to rape may feel insecure in the presence of any man whom she later encounters, resulting in "the boundary between safety and danger becomes unclear" leading to a large structure of fear in the long-term memory.

People with this fear structure will experience unpredictability and poor control of their lives, which are the cause of high levels of anxiety.

Stages of PTSD:

Gilliland and James (1997) mentioned a model of recovery depending on successive stages of processing information in terms of reaction to the traumatic event and the aftermath of traumatic life events. These are as follows:

- The emergency stage, outcry or anger.

During this stage responses of the victim towards life-threatening events increase, everything around him will be intense, anxiety levels will be extremely high, heart beat will increase, blood pressure, breathing, and muscle activity, feelings of fear, helplessness and confusion prevail and a lot of questions about why and what are the consequences. These thoughts dominate the person's thinking.

- The numbing and denial stages.

In which the survivor protects himself from trauma by burying what he experiences in the memory, thereby avoiding the experience he is subjected to, trying to reduce and eliminate the high levels of stress and anxiety that he is feeling, and this keeps many victims and forever at this stage, unless he receives guidance intervention.

- The intrusive, repetitive stage

The intrusion and the repetition of the ideas related to trauma constitute a difficult problem for individuals, because these ideas take a role in controlling their existence. These thoughts take the form of visual images that occur in their mind as a result of scenes, sounds, smells or the tangents that are associated with the traumatic events and bring them back to the current world, which brings the repressed images to the center of consciousness.

- **The transition stages.**

In this stage the victim begins to move into a new level of acceptance and understanding of what happened and how it has been affecting his life. It witnesses transition in the development of thinking, feelings, making relations with others and communicating with them. This stage is also characterized by self-regulation and making some necessary decisions.

On the other hand, anxiety, depression, psychological and physical changes and change in the individual's character are dominant at this stage.

- **The integration stages.**

This phase is characterized by the completion of information processing that is related to the traumatic event, where the individual is restored his psychological balance resuming his roles and responsibilities. He learns coping mechanisms to address and overcome the PTSD symptoms, he also begins to integrate these new skills into his daily life and move forward in them. Where failure to make this progress means a change in the personality of the individual and his inability to work, interact or communicate with others.

During the past years, most Syrian children have been subjected to harsh events as a result of the violence in most of the Syrian territories. Children and their families witnessed killings and torture with naked eyes or through the media. They have also experienced

moving to safe places, some of them have taken refuge with neighboring countries, these severe experiences led to post-traumatic stress disorder (Neria, 2010).

Many of them have suffered from severe shortages of medical and psychological services, such as malnutrition, skin diseases and respiratory diseases. They were exposed to risky conditions, and they have experienced difficult situations outside their country as a result of poor comprehensive care and the inability of host countries to provide services to ordinary individuals (Elkhatib, Neria, 2010).

Previous studies

The researchers reviewed the most significant studies that dealt with post-traumatic stress disorder and the programs used to mitigate their effects. As summarized below:

Fiqi (1993) examined the negative cognitive, behavioral and emotional effects that Kuwaiti children are suffering from as a result of the Iraqi occupation on a sample of (45) children aged between (5 and 14) years. It was found that (63%) of the sample suffered from traumatic experiences appeared in the form of disturbing dreams, fears, sleep disorders, pessimism about the future and the constant threat of danger.

Goldstein, Wampler, Wise (1997) study aimed at identifying the impact of shocking incidents on children in Bosnia on a sample of (304) Bosnian refugee children between the ages of (6 and 12 years). It was found that children suffer from the effects of traumatic events, which are anxiety, sadness and learning difficulties.

Quota (2000) conducted a study on the psychological trauma, violence and mental health of children in Gaza. The study sample consisted of (108) children between ages of (10-12 years). The results indicated that children were suffering from problems of concentration and memory, and an increase in the level of neurosis. The results also showed that males are more controlled than females.

Hughes and Jones (2000) have shown how strongly violence is associated with traumatic stress disorder and the impact of a self-assertion strategy on reducing symptoms of PTSD in battered women in California. The study suggests that self-assertiveness helped reduce violence and consequently reduced the symptoms of PTSD.

Ateeq (2001) conducted a study on the psychological trauma associated with the exposure of children and their injury to road accidents in the Arab Republic of Egypt. The study identified the symptoms of chronic and severe trauma in the sample of the study. The study identified the levels of psychological compatibility and coping methods in children injured in road accidents. The results revealed that there were differences between the two samples of children affected by road accidents in terms of the various symptoms of PTSD. The results also indicated that children who were injured in road accidents with PTSD had low scores on the psychometric scale and did not have methods to cope with stressful situations.

Jane et al. (2002) studied post-traumatic stress disorder in children who were exposed to car accidents. The sample of the study consisted of 50 children with their parents aged (7-16 years). The study showed that children who were exposed to physical harm appeared to be more disruptive, and children who had previously experienced accidents had clear stress disorders by percentage of 26%. The results also indicated that the results of the social support showed effective results.

Kubany and Hill (2003) study the impact of a cognitive behavioral program in PTSD treatment of battered women on a sample of 25 women. The result showed that women who completed cognitive behavioral therapy sessions showed a decrease in self-esteem, depression and a significant increase in self-esteem. Over (3 - 6) months of follow-up.

Thabit (2008) study aimed at identifying the nature of the trauma and its impact on Palestinian children living in conflict territories and political disputed areas, as well as identifying the prevalence of PTSD and the relationship between them and the psychological and mental health of children and their mothers. The study sample consisted of 286 children aged 9-18 years and their mothers. The researchers used the list of traumas, shock impact assessment, and maternal health questionnaire. The results found that one child out of four children who had been tested had traumatic experience. The results were in favor of females. The study concluded that mothers' general health is linked to the violence that affecting their children.

Al-Ibrahim (2014) conducted a study aimed at identifying the impact of a cognitive-behavioral counseling program in reducing the stress relief of a sample of Syrians refugees in Jordan. The study population consists of all (4500) Syrians living in Jordan, until February 2013. The study sample consisted of (24) Syrian refugees who live in Ramtha camp, who scored the highest scores on Davidson's post-traumatic stress disorder scale. They were randomly distributed into two groups: an experimental group of (12) individuals; control group of (12) individuals. The members of the experimental group received a program of cognitive instruction. The results of the analysis indicated that there were statistically significant differences at the ($\alpha \geq 0.05$) level between the experimental group and the control group on the scale of the post-traumatic stress disorder scale in favor of the experimental group after the program was completed directly. Indicating that the behavioral cognitive guidance program had a positive effect in reducing symptoms of post-traumatic stress disorder.

Nkhaleh (2017) conducted a study aimed at revealing the nature of the relationship between post-traumatic stress disorder and the deductive reasoning and moral judgment of a child in the Gaza Strip. The study sample consisted of 205 children of PTSD, (8-12) years distributed among 117 males and 88 females. The results indicated that there was no statistically significant correlation between the symptoms of PTSD and the deductive reasoning skills of children in the disorder.

Hazeem and Batikh (2017) study aimed at revealing the relationship between PTSD and irrational ideas in a sample of Ba'ath University students. The study sample consisted of (509) students of the first year of the Faculty of Education, Al-Baath University. The list of traumatic experiences and PTSD measure were used. The results indicated a correlation between post-traumatic stress disorder and irrational thoughts. The results also showed statistically significant differences for students who witnessed traumatic experience.

These studies presented a demographic diversity. They emphasized the great impact of PTSD in the future of children and the feasibility of cognitive behavioral counseling programs in children recovery.

Study Problem:

During the past years, Syrian children have been subjected to a high degree of psychological stress as a result of the political conflict there. They have experienced several frightening events, including leaving their homes, watching killings, torture and resorting to outside their country. Consequently, these severe conditions had a negative impact on the Syrian children refugees. Parents have noticed the psychological and physical symptoms on their children which they have not experienced before. Fearing the impact of these painful experiences on the subsequent stages of development of their children, the Syrian refugees' parents sought support from those providing psychological support services to Syrian.

The researchers noted the symptoms of avoidance and excessive stimulation when they dealt with children, which led them to try to help them through the construction of an orientation program based on the theory of cognitive behavior, which has proven effective in many areas.

Objectives of the study:

The study aimed at reducing the symptoms of PTSD in Syrian children who were registered in the American-Syrian Association.

Study Hypotheses:

"Are there statistically significant differences at the level of significance ($\alpha = 0.05$) due to the counseling program, gender and age group in reducing the symptoms of PTSD in a sample of Syrian children in Amman."

The significance of the study:

The theoretical importance of the current study lies in the nature of the problem that is addressed by reducing the symptoms of PTSD for Syrian children in Jordan. The practical importance is to enrich the research of the target group, realizing the effectiveness of the counseling program for Syrian children.

Study terms and definitions:

Post-traumatic stress disorder (PTSD) is a disorder that occurs after an individual has been subjected to extreme fear or actual threat of death, serious injury, or threat to physical safety to himself or to others around him. The symptoms persist for at least a month and cause him to have a malfunction in a clinical or social function or Other (Sheikh, 2006)

Procedural definition: The total score obtained by the study sample on the PTSD scale used in this study.

Therapeutic program: a program was designed to reduce the symptoms of PTSD in a sample of children, which was based on the cognitive behavioral theory, where the sessions included the following strategies: cognitive reconstruction, self-directed talk, modeling, exposure, muscle relaxation, and adopted the educational and the discussion methods.

A child: any individual who is under the age of 18 years.

Method and procedures

Study population

Including (100) children between the ages of (8 and 12), the full number registered in the Assembly.

Study Sample:

The study population consisted of (100) children aged 8-12 years of Syrian children suffering from PTSD from residents of Marka district near the Jordanian capital Amman during 2018. They were randomly selected and distributed into two groups, the experimental group of (50) children, and this group underwent the training program. The control group consisted of (50) children, which were not treated. Table (1) shows the distribution of the study sample by group, gender and age group.

Table (1): Distribution of the Study sample by group, gender and age group

Variables	Levels	control group	experimental group	Total
Gender	Male	23	22	45
	Female	27	28	55
Age group	8-less than 10 years	24	20	44
	10 12 years	26	30	56
Total		50	50	100

Study tools:

1. The PTSD scale that is implemented by the American Syrian Society for Child Welfare was reviewed and presented to several arbitrators, then a new tool was developed, which was applied before and after the program.

2. A collective counseling program was developed, based on the behavioral and cognitive theory, which was presented to the arbitrators and was adopted and applied.

The program included the use of different techniques such as: emotional emptying technique through writing, composition and drawing. The art of relaxation of muscle techniques, deep breathing, imagination and lecture through presenting information in a simple and easy way. Expressing anger and controlling it. Drawing by which a child can express his experiences and feelings that cannot be shared with others, cognitive reconstruction, play, and modeling.

Instrument validity

The validity of the instrument has been verified by using face validity through presenting it in its primary form. Ten arbitrators specialized in psychology and psychological counselors reviewed the instrument paragraphs, their modifications, opinions and suggestions were adopted. The paragraphs agreed upon by more than (80%) of the arbitrators were retained they agreed that the measure is suitable for its application without making any modifications either in coherence of paragraphs or in their numbers.

Instrument reliability:

The researchers calculated the reliability of PTSD by using the Cronbach alpha equation on a sample of (30) children, where the value of alpha was (0.69), which is an acceptable and statistically significant factor.

The reliability coefficient of the counseling program was calculated in the same manner and the value of alpha was (0.63), which is also an acceptable and statistically significant coefficient.

Standard of instrument Correction:

A four-step scale such as the Likert quadrilateral scale was used as follows: (never, rarely, sometimes, and high). The following numerical estimates were given (1, 2, 3, 4), respectively. The following statistical measurement scale was implemented for the distribution of means:

- 1-: (1.00 - 1.75) a low degree of disturbance.
- 2-: (1.76 - 2.50) a moderate degree of disturbance.
- 3-: (2.51 - 3.25) a high degree of disturbance.
- 4-: (3.26 - 4.00) a very high degree of disturbance.

Study Limitation

The study was carried out during the period between 9/9/2018 and 26/12/2018. For children living only in Amman and who are officially registered in the organization.

Study variables:

- Independent Variables: counseling Program.
- Dependent variables: symptoms of trauma in Syrian children.

Discussion of the results:

The equivalence of the study groups: To verify the equivalence of the two groups of study, the PTSD was applied on the study sample before the application of their procedures. The mean, standard deviations and the analysis of the variance were calculated between the sample estimates on the fields of the measures (physical symptoms, psychological symptoms,) by group, gender and age group, as follows:

1-Gender variable.

Table (2): Means and SD of the sample estimates of the PTSD fields by group and gender in the pre application.

Field of measurement	Group	Males		Females	
		Means*	SD	Means*	SD
Physical symptoms	Control	3.62	.56	3.60	.60
	experimental	3.65	.75	3.63	.62
Psychological symptoms	control	3.53	.67	3.57	.76
	experimental	3.51	.65	3.55	.61
Social symptoms	control	3.46	.69	3.41	.71
	experimental	3.42	.78	3.44	.69
Total	control	3.54	.42	3.53	.44
	experimental	3.53	.47	3.52	.45

* The highest degree of (4).

2-Age group variable

Table (3): Means and SD of the Sample Estimates of PTSD Fields by Group and Age Group in pre-Application.

Field	Group	8 – less than 10 years		10 - 12 years	
		Means*	SD	Means*	SD
Physical symptoms	control	3.59	.78	3.63	.75
	experimental	3.58	.66	3.65	.64
Psychological symptoms	control	3.49	.77	3.52	.63
	experimental	3.53	.79	3.57	.69
Social symptoms	control	3.47	.65	3.42	.62
	experimental	3.42	.61	3.45	.66
Total	control	3.52	.40	3.53	.43
	experimental	3.53	.46	3.56	.45

* The highest degree of (4).

Table (2.3) indicates that there are apparent differences between the means of the estimates of the sample members on the fields (physical symptoms, psychological symptoms and social symptoms) by group, gender and age group variables. To realize the statistical significance of these differences, Table (4) illustrates that.

Table (4): Results of the analysis of the variance of the differences between the Means of the estimates of the sample members on the fields by group, gender and age group variables

Source of variance	Fields	SS	DF	MS	F	p value
Group	Physical symptoms	1.055	1	1.055	0.4	0.592
	Psychological symptoms	0.921	1	0.921	0.4	0.564
	Social symptoms	1.157	1	1.157	0.5	0.571
	Total	1.623	1	1.623	0.6	0.483
Gender	Physical symptoms	1.587	1	1.587	0.6	0.481
	Psychological symptoms	1.135	1	1.135	0.5	0.558
	Social symptoms	0.997	1	0.997	0.4	0.564
	Total	1.124	1	1.124	0.4	0.561
Age group	Physical symptoms	1.395	1	1.395	0.7	0.454
	Psychological symptoms	1.216	1	1.216	0.5	0.554
	Social	1.042	1	1.042	0.4	.0623

	symptoms				
Error	Physical symptoms	220.224	96	2.294	
	Psychological symptoms	182.304	96	1.899	
	Social symptoms	197.472	96	2.057	
Total		222.816	06	2.321	

Table (4) indicates that there are no statistically significant differences at the level of statistical significance ($\alpha \leq 0.05$) between the means of the estimates of the sample on the fields (physical symptoms, psychological symptoms, social symptoms) due to the variables of group, gender and age group. This indicates there is equivalence between the two study groups before starting the application of the study procedures.

Statistical Processes:

To verify the hypotheses of the study, the researchers used the following statistical processes: Mean and SD, multiple variance test, independent sample T test, and co-variation analysis.

Results

After the researchers collected the data using the tools "PTSD and Cognitive Behavioral Therapy Program" and presented them according to the hypothesis of the study.

The hypothesis of the study:

There is no significant statistical effect at the level of significance ($\alpha = 0.05$) of the program cognitive behavioral therapy, gender and age group in reducing the symptoms of PTSD in a sample of Syrian children in Amman." To verify the hypothesis of the study, Mean and SD of the sample estimates were calculated on the PTSD fields by group, gender and age group variables in the post-application, as follows:

1. Gender variable:

Table (5): Mean and SD of the sample estimates of PTSD fields by Group and gender in Post-Application

Field of measurement	Group	Males		Females	
		Means*	SD	Means*	SD
Physical symptoms	controlled	3.63	.57	3.57	.48
	experimental	2.24	.72	2.67	.47
Psychological symptoms	controlled	3.55	.61	3.54	.49
	experimental	2.31	.66	2.63	.42
Social symptoms	controlled	3.42	.66	3.40	.51
	experimental	2.34	.45	2.15	.51
Total	controlled	3.53	.40	3.50	.41
	experimental	2.30	.37	2.48	.34

* The highest degree of (4).

2. Age group variable.

Table (6): Mean and S D of Sample Estimates of PTSD fields: group and age group in pre-Application

Field of measurement	Group	8 – less than 10 years		10 - 12 years	
		Means*	SD	Means*	SD
Physical symptoms	controlled	3.61	.68	3.58	.65
	experimental	2.48	.54	2.16	.49
Psychological symptoms	controlled	3.52	.44	3.46	.46
	experimental	2.35	.38	2.03	.34
Social symptoms	controlled	3.49	.43	3.40	.49
	experimental	2.29	.36	2.01	.39
Total	controlled	3.54	.53	3.48	.49
	experimental	2.37	.37	2.07	.33

* The highest degree of (4).

Table (5.6) indicates that there are apparent differences between the Mean of the estimates of the sample members on the fields (physical symptoms, psychological symptoms, and social symptoms) by group, gender and age groups in the two pre-post applications. Multiple common variation was used as showed in Table (7).

Table (7): Results of the analysis of the multiple common variance of the differences between the Means of the estimates of the sample members on the fields: group, gender and age group variables.

Source of variance	Fields	SS	DF	MS	F	p value
Application	Physical symptoms	14.521	1	14.521	6.988	0.008*
	Psychological symptoms	18.624	1	18.624	9.349	0.004*
	Social symptoms	20.958	1	20.958	10.644	0.002*
Total		25.648	1	25.648	13.296	0.001*
Group	Physical symptoms	32.659	1	32.659	15.717	0.001*
	Psychological symptoms	35.244	1	35.244	17.693	0.000*
	Social symptoms	39.054	1	39.054	19.834	0.000*
Total		40.292	1	40.292	20.888	0.000*
Gender	Physical symptoms	16.844	1	16.844	8.106	0.005*
	Psychological symptoms	18.289	1	18.289	9.181	0.004*
	Social symptoms	18.242	1	18.242	9.265	0.003*

Total		19.547	1	19.547	10.133	0.002*
Age group	Physical symptoms	22.132	1	22.132	10.651	0.002*
	Psychological symptoms	21.056	1	21.056	10.570	0.002*
	Social symptoms	19.897	1	19.897	10.105	0.002*
Total		23.516	1	23.516	12.191	0.001*
Error	Physical symptoms	199.488	96	2.078		
	Psychological symptoms	191.232	96	1.992		
	Social symptoms	189.024	96	1.969		
Total		199.488	96	1.929		

Statistically significant at ($\alpha = 0.05$)

Table (7) indicates:

- There were statistically significant differences between the Mean of the individuals of the study sample on the fields of PTSD by group variable, in favor of the experimental group's estimates.
- There were statistically significant differences between the Mean of the individuals of the study sample on the field of the PTSD by sex variable, in favor of the male estimates.
- There were statistically significant differences between the Mean of the individuals of the study sample on the fields of the PTSD by the age group variable, in favor of the age group (10-12 years).

The mean and standard deviations of the sample estimates were also calculated on the PTSD fields by group variable in the post-application, as they were shown in Table (8).

No.	Fields	Control- G		Experimental. G	
		Mean*	SD	Mean*	SD
1	Physical symptoms	3.61	.62	2.19	.45
3	Social symptoms	3.53	.63	2.01	.46
2	Psychological symptoms	3.52	.59	2.08	.48
	PTSD Measure	3.54	.44	2.09	.26

* The highest degree of (4).

Table (8) shows that for the control group, the field of "physical symptoms" ranked first with a mean of (3.61) and a SD of (0.62). The field of "social symptoms" came second with a mean of (3.53) and a SD of (0.63). While the field of "psychological symptoms" came last with a mean of (3.52) and SD (0.59). The mean of "the control group" as estimated by the members of the sample for PTSD was ($P = 3.54$) with SD of (0.44), that corresponding to a high degree of disturbance.

On the other hand, for the experimental group, the field of "physical symptoms" ranked first with a mean of (2.19) and a SD of (0.45). Where the field of "psychological symptoms" ranked second with a mean of (2.08) and a SD of (0.48). "Social symptoms"

as indicated in Table (8) came at the last rank with a mean of (2.01) and SD (.48).PTSD measure for the experimental group as indicated in table (8) has a mean of (2.09) and SD (.26),corresponding to a low degree of disturbance. The mean and standard deviations of T-test of the differences between the estimates of the sample on the PTSD fields by group were calculated as follows:

Field 1. Physical symptoms:

Table(9)

The mean, SD, and T - test for the differences between the estimates of the sample members on the field of physical symptoms by group in the post-application

No.	Paragraphs	Control group		Experimental group		T-test	p value
		Mean	SD	Mean	SD		
1	urinary and stool incontinence at night and day periods	3.73	0.56	2.01	0.59	14.872	0.001*
2	Thumb sucking	3.56	0.75	2.5	0.53	8.134	0.001*
3	Anorexia	3.49	0.67	2.13	0.58	10.805	0.001*
4	permanent headaches	3.84	0.65	2.13	0.49	14.800	0.001*
5	complaint of seeing and hearing problems	3.45	0.69	2.31	0.55	9.100	0.001*
6	Sleep difficulties	3.54	0.78	2.08	0.61	10.386	0.001*
7	Decreased ability to focus on school	3.68	0.83	2.14	0.63	10.412	0.001*
Total		3.61	.62	2.19	.45	13.126	0.001*

Statistically significant at ($\alpha = 0.05$).

Table (9) shows statistically significant differences between the mean of the sample of the study on the paragraphs of the field of “physical symptoms” according to the group variable. It came in favor of the experimental group's estimates.

Field 2: psychological symptoms.

Table(10)

The mean and SD and T-test of the differences between the estimates of the sample members on the psychological symptoms by group in the post-application

No	Paragraphs	Control group		Experimental group		T-test	p value
		Mean	SD	Mean	SD		
1	Fear of darkness	3.67	0.9	2.11	0.58		10.272
2	Speech disorders and stuttering	3.54	0.87	2.16	0.61		9.153
3	Introversion and non-contact with other children	3.56	0.92	2.13	0.45	9.854	0.001*
4	Loss of desire for daily business	3.48	0.83	2.04	0.60	9.908	0.001*
5	Lack of concentration and ease of distraction	3.45	0.87	1.89	0.45	11.238	0.001*
6	Frequent and upsetting nightmares related to the traumatic event	3.37	0.78	2.17	0.58	8.698	0.001*
7	Memories and compulsive and repetitive intrusions of the event result in intense tension	3.47	0.93	2.22	0.47	8.465	0.001*
8	Feeling that the event will happen again	3.55	0.96	2.14	0.53	9.070	0.001*
9	An intense emotional disturbance to any external or internal stimulant that symbolizes or resembles some aspects of the event	3.62	0.98	1.92	0.70	9.947	0.001*
10	I have suicidal thoughts	3.51	0.88	2.03	0.60	9.794	0.001*
Total		3.52	.59	2.08	.48	13.343	0.001*

Statistically significant at ($\alpha = 0.05$).

Table (10) shows statistically significant differences between the mean of the study sample and the “psychological group” according to the group variable.

Field 3: Social symptoms.

Table (11)

the mean, SD, and (T-test) of the differences between the estimates of the sample members on the social effects field by group in the post-application

No	Paragraphs	Control group		Experimental group		T-test	p value
		Mean	SD	Mean	SD		
1	Practicing an attachment behavior with their parents	3.64	0.82	2.05	0.49	11.738	0.001*
2	Constant quarreling with his brothers and with his friends	3.59	0.6	1.96	0.54	14.214	0.001*
3	Emotional chill towards the parents and brothers	3.43	0.78	1.91	0.61	10.813	0.001*
4	The appearance of unusual feelings of sensory stimuli surrounding it and get in shape	3.47	0.55	2.13	0.47	13.041	0.001*
Total		3.53	.63	2.01	.46	13.730	0.001*

Statistically significant at ($\alpha = 0.05$).

Table (11) shows statistically significant differences between the mean of the sample of the study and the social group according to the group variable.

Conclusion

The research dealt with a group of Syrian children who may have been suffering from PTSD caused by the events in Syria. The crisis was generally discussed as a contemporary issue. The PTSD measure was designed, and a therapeutic program was developed for this category and it was applied during the mentioned period. A significant improvement was observed in the experimental group, due to the methods and strategies used in the therapeutic program

The discussion of the result.

The results of the study showed that PTSD had an impact on Syrian children both male and female. This corresponds with Goldstein, Wampler, Wise (1997) study. The researchers relate this to the strength and extent of the traumatic events that have been experienced by Syrian children. The results of the study indicated that females were more affected by traumatic events than boys. This result is consistent with Thabit (2008) study.

According to the researchers this fact due to the emotional nature of females and their excessive sensitivity and the subordination of females in Syrian society to men.

The study also revealed the effectiveness of the cognitive behavioral counseling program and the methods used to reduce post-traumatic symptoms.

This is consistent with the results of both Kubany and Hill (2003) study and Hughes and Jones (2000). According to the researchers, children accepted to interact with the researchers as a result of the counseling relationship they have established with them, and

because they implement a guidance program, which is one of the programs tested globally and proven its effectiveness.

Recommendations:

1. Establish a specialized trauma counseling center with professional staff, that has a good preparedness for immediate and rapid intervention as well as a trauma center.
2. Training school social workers to use guidance methods in dealing with traumatized children.
3. Increase the number of counseling and therapeutic services that deal with psychological trauma in terms of quality and quantity and training the workers in children's institutions on how to use them.
4. Mobilize the press work, whether written, visual or audiovisual, to present programs that shed light on the guidance and therapeutic mechanisms that should be provided to victims of traumatic experiences and to provide a systematic public awareness about the role of programs in preventing the effects of trauma.
5. Distribute brochures and leaflets containing information about psychological trauma and its symptoms, the means of defense and adaptation and the methods of use.

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