

## The Effect of Play Therapy on the Reduction of Post Traumatic Stress Disorder in a Sample of the Symptoms of Abused Children

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### Abstract

The current study aimed to examine the effectiveness of play therapy in reducing the symptoms of post-traumatic stress disorder among a sample of sexually abused children. The sample of the current study consisted of (30) sexually abused children in Al Hussein Foundation for Social Services in Jordan and who have the highest scores on Post-Traumatic Stress Disorder Scale which was tested and judged for reliability by experts from Al-Ahliyya Amman University and the University of Jordan.

Anxiety, self-esteem, and depression scales were applied to the study sample as conducted in previous studies in the literature. These factors are known to accompany and exacerbate post-traumatic stress disorder, and thus, influence the improvement level during therapy sessions.

The study sample was divided into a control group, which consisted of (15) children (8 males and 7 females), and an experimental group which consisted of (15) children (8 males and 7 females). The ages of the study sample ranged from (6) to (12) years old for both groups. The individuals of the experimental group were subject to a play-based psychotherapy program, while the control group did not receive any therapeutic intervention.

The program consisted of (30) play-based psychotherapy sessions and (20) individual therapy sessions with a time duration of (35 - 45) minutes each, in addition to (10) group therapy sessions with time duration of (60 - 90) minutes each. The program contained the following therapeutic techniques: expression through art, play with puppets, storytelling, and group therapy. With regard to treatment, children did not have any other psychological or medicinal treatments, as the treatment plan was limited to entertainment through activities designed specifically for them.

Means, standard deviations pre and post standard error i.e. after termination of treatment in the three sub-dimensions of post-traumatic stress disorder scale, anxiety trait scale, depression scale, and a measure of self-esteem as well as S-Anxiety Scale and T-Anxiety Scale. Analysis of variance was calculated after fixing the pre and post differences to extract the statistical significance between the pre and post-means (ANCOVA) of the two groups of the study. The results of the current study showed statistically significant differences between the means and the symptoms (re-experiencing the event, avoidance, hyperarousal, and feeling of numbness) of post-traumatic stress disorder, Anxiety Scale, Depression Scale, and self-esteem in favour of the experimental group.

Therefore, the effectiveness of the therapy program used in reducing the symptoms of PTSD, as well as its efficacy in alleviating symptoms of psychological disorders associated with PTSD, such as anxiety, depression, lack of self-esteem, experiencing the traumatic event, feeling numb, and impeding social, professional, and educational performance, is clear.

**Keywords:** Post-Traumatic Stress Disorder; Play Therapy; Sexually Abused Children; Psychological Disorders; Anxiety; Depression

### Abbreviations

PTSD: Posttraumatic Stress Disorder; APT: Association for Play Therapy; STAIC: State – Trait Anxiety Inventory for Children; CDI: Children Depression Inventory; NCPTSD: National Center of PTSD; ANCOVA: Analysis of Covariance

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## Introduction

One of the most shocking incidents of individuals, especially children and adolescents, is the incidence of sexual abuse in its many forms and manifestations. A report by the US National Center for Post-Traumatic Stress Disorder reported that the number of cases recorded in children was 5.5 million per year, and that sexual abuse accounted for more than 500,000 cases. In addition, studies conducted by the Center showed that the average exposure to sexual assault in children is 1 per 6 children, male and 1 female [1].

The report also shows the diversity of the aggressor's children. The majority, about 6 in 10 cases, have a prior relationship with the child but are not family members like friends of the family, neighbors, nanny or driver. While the offender is a family member such as a father, uncle or uncle in 3 out of 10 cases [1].

Saywitz [2] states that sexual assault can lead to disturbances and obstructions during childhood, which may include depression, anxiety, and behavioral disorders that may be sexual. It can also extend to the addiction of banned substances, social phobia, and depression that may lead to suicide attempts [3,4].

The research framework used for this study is the post-traumatic stress disorder of children who sexually abused them by Al Banna (2013) according to literature reviews. In order to identify the effectiveness of some scientific and psychological therapeutic techniques related to psychological treatment of such cases, using the method of playing in children.

In the light of the introduction, the problem of the study in identifying the effectiveness of a play therapy program for children who suffered from PTSD (in the Jordanian society) because of sexual abuse. in order to help these cases to get rid of the symptoms they suffer and work to re-adapt and maintain their proper growth.

The specific research question addressed as follows: How effective is psychotherapy by reducing the symptoms of PTSD in a sample of sexually abused children?

## Objectives of the Study

1. Identify the results of the game-based psychotherapy program in reducing the symptoms of PTSD in sexually abused children.
2. Reduce the prevalence of such cases and increase in children.
3. Preserving children's abilities and providing healthy growth.
4. Submit scientific proposals in light of the results of the study.

## Study Hypotheses

- **The main hypothesis:** There were statistically significant differences between the two groups (control and experimental) of children after treatment with PTSD.
- **First Hypothesis:** There were statistically significant differences between the two groups (control and experimental), after psychotherapy based on play on the measure of depression for children.
- **Second Hypothesis:** There are statistically significant differences between the two groups (control and experimental), after the psychotherapy based on the play on the anxiety scale (status and feature) for children.
- **Third Hypothesis:** There were statistically significant differences between the two groups (control and experimental), after psychotherapy based on play on the scale of self-esteem for children.

## Research Design

The design method were used of the two groups (control and experimental), with two tests before and after, and the following table 1, explains how the research design of the sample of the study. A pre scale was conducted of the application of psychological measures

on both groups (control and experimental), and then applied the program to the experimental group only, within a period (about three months), after which a post-scale was done for both groups (control and experimental), and the researcher conducted a follow-up for all groups (control and experimental).

Sample	Pre scale	Treatment (program)	Post scale
Control group		-	
Experimental group			

Table 1: Research design of the study sample.

**Procedures**

The current study included the Independent Variable, the play-based psychotherapy program, and the Dependent Variable, the symptoms of post-traumatic stress disorder.

The children who received the highest scores on the PTSD were selected and one of four alternatives (always, rarely, never) was chosen. These alternatives are given weights (3, 2, 1, 0) Broker's account to classify the child's status according to the following:

- Zero There is no disturbance.
- 0 - 1 is a minor disturbance.
- 1 - 2 Moderate Disorder.
- 2 - 3 severe disorder.

Before applying the treatment plan, the Child Depression Scale, the Children's Concern Scale, the Children's Self-Assessment Scale, and the Men's Mental Measurement Test were applied to conduct a case study for each child.

**The play Psychotherapy program**

The overall objectives of the program are to reduce symptoms of PTSD, reduce anxiety and depression, and improve self-esteem for sexually abused children. The program was structured by reference to direct and indirect theoretical and school literature on how to deal with child sexual abuse and abuse. As well as the use of special therapeutic techniques for post-traumatic stress disorder for children who have been sexually abused [5]. The therapeutic program was presented to a number of university professors interested in playing therapy at Amman National University and the University of Jordan. The program included (30) treatment sessions, which were applied individually and collectively by two individual sessions per child per week and one weekly session.

**Methods**

Quasi Experimental Design and the clinical approach were used to the study to test the effectiveness of the psychotherapy program by reducing the symptoms of PTSD in sexually abused children.

The study relied on a number of clinical methods, including the history of the case, case study, interview, observation, medical reports, etc.

**When the program was implemented:**

1. The program was implemented within 75 days, with two sessions per week, and one session on a collective basis.
2. The session time ranges from (35 - 45) minutes for the individual session due to the rapid boredom of children, and from (60 - 90) minutes for the collective session.
3. The use of colored pens, special papers for drawing, pencils, pencil sharpener, games, dolls.

The sample of the study, which was subjected to psychological therapy, was composed of children aged 6 - 12 years who had previously been sexually abused according to the medical records of the Hussein Foundation for Social Services. This was the cause of post-traumatic stress disorder as determined by the highest scores On the scale of post-traumatic stress disorder. All children who were sexually abused were also excluded but received low scores according to this measure.

The sample was systematically stratified by age (6 - 12 years), sexual abuse, highest PTSD scores, no psychiatric treatment, no previous treatment, and exclusion (98 children), and children who were subjected to sexual abuse were selected. Table 1 shows the distribution of the sample of the study group to the control group and the experimental group according to gender variable.

Table 2 shows the distribution of the sample of the study according to the gender variable of the control group. The program does not apply to the number of (15) children divided by sex to (8) males and (7) females. The program of psychological therapy in the game number (15) children, divided into (8) males, and (7) females.

Sample	Female	Male	Total
Control group	7	8	15
Experimental group	7	8	15
Total	14	16	30

**Table 2:** Distribution of sample members by gender.

### Instruments

The following tools were used to diagnose post-traumatic stress disorder and to identify the symptoms associated with it.

#### An interview questionnaire for children in the experimental group of the case study

In the light of the objectives of the study, an interview questionnaire was designed for children, which is filled in two ways, the first through the child's file inside the organization, and the second through the interview of the child and social worker or supervisor responsible for the child. This questionnaire aims to identify some of the child's psychological, physical, social and health characteristics, in addition to the age of the child and the current school year, and the type of abuse with emphasis on sexual abuse.

#### Questionnaire Validation

The form has been presented to a number of arbitrators from the faculty members of Amman National University to verify the veracity of their paragraphs. Their opinions have been taken and some paragraphs have been reworded to accurately balance the contents of the questionnaire in their paragraphs and help to measure the objectives of the study

#### Post-Traumatic Stress Disorder Scale

The Post Traumatic Stress Disorder (PTSD) in Yemen has developed based on the Diagnostic and Statistical Manual of Mental Disorders [6] paragraph. It has been presented to a number of faculty members from the Department of Psychology, the Guidance Department, the Educational Psychology Department at the University of Jordan, as well as members of the faculty of Amman Arab University. (80%) between the arbitrators and based on the observations of the arbitrators. Some modifications were made in the formulation of some paragraphs in the light of PTSD criteria. This measure includes the following dimensions:

- A. After Reliving the event or Re-experiencing the event:** This can be achieved through the repetitive and painful repetition of the traumatic event, or seeing the disturbing nightmares surrounding the traumatic event, or a sudden feeling as if the traumatic event will happen again, the so-called “flash back”, and the feeling of discomfort and pain when remembering the event The Shock. As well as physiological reactions when remembering the event. Such as rapid heartbeat, fast breathing hardening of some muscles, causing sweat, dizziness, and nausea, these symptoms may appear at any time as they can appear when remembering anything related to the original event such as a word, image, article, or seeing an estimate of accidents may back to the incident that happened.
- B. After Avoidance:** Here, the person who was exposed to the traumatic incident resorted to avoiding anything that was mentioned in the event because the event caused psychological pain. Avoiding the thoughts or feelings of the traumatic event, avoiding activities and places reminiscent of the traumatic event, losing interest in daily activities, feeling detached from others, not being able to remember important aspects of trauma, and pessimistic view of the future.
- C. After hyperarousal:** Exposure to trauma may make a person feel at all times at risk, thus reducing the chances of relaxation and enjoyment of life. This is manifested in a sudden feeling of anger and tension, difficulty sleeping and being overwhelmed, difficulty concentrating, a lack of security and a constant sense of danger or danger.
- D. Feeling of numbness:** This is a way to avoid the disturbing thoughts of trauma, in which the person finds it difficult to express his feelings. This is by not showing positive feelings towards other people, moving away from social relationships, and not paying attention to work like a person who is shocked and loves. In addition to forgetting to talk about important parts of the shock or inability to talk about. Because the scale is based on the DSM-IV-TR simulation, the scale will provide the validity of the content. Also, the scale is based on the criteria contained in the same book and thus may provide the measure of truthfulness.

The study used the anxiety scale, depression scale, and self-esteem scale for children, as used in previous studies, and were defined as symptoms associated with post-traumatic stress disorder. They affect the severity of PTSD symptoms and thus affect the level of improvement during Period of treatment sessions.

### Anxiety Scale for Children

Charles D Spielberger, Richard Gorsch and Robert J authorized this measure of state-trait anxiety inventory for children (STAIC) as a research tool to study anxiety in school children who have reading ability. And may also be used with adolescents with intermediate abilities. This measure consists of 20 paragraphs measuring the state anxiety. It is corrected by giving a very low degree (1), sometimes given (2), and almost always (3). There are (20) items that measure Trait anxiety, and these are anxiety symptoms and are corrected by giving negative paragraph (3), intermediate paragraph (2), and positive paragraph (1) (20 - 60) score on both the attribute scale and the anxiety state, and the low score indicates a decrease in anxiety [7].

Spielberger extracted truth signals by comparing the scores of children on the anxiety scale in the test position and their scores in a normal position, and found intermediate links of 0.41. The correlation between the apparent anxiety scale for children and the coefficient of correlation (0.75) was obtained [8]. According to researcher Kazem [9] referred to the Shaboun [10], it is the first Arabization and standardization of the scale on the Egyptian environment, and then the Bayiri also referred to in the Shaboun [10] codification and Arabization again on the Egyptian environment. Gishan [8], referred to in Bakhour [11], Arabization and standardization of the scale on the Jordanian environment, and the results of sincerity were obtained by comparing the responses of students described by their teachers that they are more concerned and students are less anxious, and the results indicated a significant difference at the level of ( $\alpha = 0.05$ ) between the two groups. The stability coefficient was extracted by the return and ranged from 0.47 to 0.97. The coefficient of correlation of each paragraph was obtained with the total score as an indicator of truth. 20.0 - 64.0) on the list of anxiety and between (26.0 - 60.0) on the list of anxiety state, and also calculated the stability of the midterm.

### List of depression for children

Kovacs [12] prepared the Children Depression Inventory (CDI) in Philadelphia. The list consists of (27) paragraphs that measure depression from its different cognitive, behavioral and neurological aspects. Gharib, referred to in Al-Sanbani [7], translated the standard into standard Arabic (and to the general Egyptian dialect). Hence, the researcher Ghishan [8] referred to in the Sunbani (2005) Arabization and standardization of the standard of the Jordanian environment. (2), 1 (1), 1 (0), and (0). The total score of the scale ranges from 0 to 54, and the person (12) degrees [7].

The distinguishing ability of the paragraphs ranged from 0.23 to 0.35. This is an indication of the validity of the construction. It also calculated the coefficient of stability as it reached the return method (0.92) and the half-way distribution (0.67) [7].

The judges referred to in Al-Sanbani [7] extracted the discriminating ability of the paragraphs. The correlation coefficients ranged from 0.23 to 53.0 (9).

### Self-assessment scale

This scale was prepared and codified on the Jordanian environment by Kilani and Abbas, who are referred to in Bakhour [11]. This measure is suitable for the age group (7 - 16 years). It can be used by younger children. The researcher helped the children to read, understand and apply the scales.

This measure was chosen for several reasons, including that the aspects measured by this measure are aspects related to PTSD, i.e. aspects that we want to measure and are included in the dependent variable, including: Emotional balance, self-confidence, aggression, group orientation, activity, avoidance, social isolation, excessive sensitivity, numbness and inability to express positive feelings to others.

This measure is characterized by a good level of honesty and the extraction of the truth signals through the correlation of the sub-measures, ranging from 16.0 to 45.0, where it is possible to add yes at the positive or negative and zero at zero by comparing two groups of children One highly adaptable and the other uncoordinated. Abbas found the discriminatory truth of the scale and the differences were significant. Stability was 0.79 for males and 0.83 for females.

The scale is corrected by giving (+1) to each positive expression that is answered (yes), one negative score is given to each answer (no) and zero is given when the answer is not answered [11].

### Man drawing test

The man drawing test was used to exclude mental retardation and to determine general mental abilities in children due to individual differences and to know the effect of intelligence on play therapy.

Florence Goodenough was one of the first to create a standardized child intelligence test to measure the child's mental ability without the need to use written language, as well as to measure the personality traits of the child. The first study was based on solid foundations Theory and experimental work, it has concluded from research and research from previous that there is a close relationship between the development of concepts (Concept Development) derived from the drawings of young children and their general intelligence. It is one of the tests that have been freed from the factors of culture and language in the measurement of intelligence, and classifies this test as a non-verbal test, which is not expensive material and does not need researcher or who wants to apply to a lot of tools and equipment, and is very useful in the measurement of intelligence and especially the intelligence of children, School achievement. It is suitable for children, adolescents and adults [13].

Dr. Harries (1963) reviewed the test, now known as the Goodenough - Harris Drawing Test [14].

**Statistical analysis**

The statistical analysis was carried out by means of the Statistical Package for Social Science (SPSS) program, in order to determine the significance of the differences between the variables and to ensure that the differences between the sample and control groups were explained. The researcher used the analysis of Covariance (ANCOVA) for two independent samples to determine the significance of the differences between the two groups (control and experimentation), before and after the experimental group of the psycho-game-based therapy program, on both the post- Trauma, anxiety scale (for example, status and trait) for children, children’s depression measure, children’s self-esteem scale, and man’s IQ test.

**Results**

The aim of this study was to identify the effectiveness of play therapy in reducing the symptoms of PTSD for a sample of sexually abused children. To achieve this goal, the hypothesis of the study will be verified in this chapter.

**The main hypothesis**

There were statistically significant differences between the two groups (control and experimental) after psychotherapy by playing on the PTSD scale.

To examine this hypothesis, the arithmetical averages, standard deviations, and the analysis of the common variance were calculated. Table 3 illustrates the values of the arithmetical averages and standard deviations of the scale on the PTSD for the experimental and control groups in the tribal and remote scales.

Sample	Pre Scale			Post Scale		
	Number	Average	Standard Deviations	Number	Average	Standard Deviations
Experimental group	15	46.07	8.66	15	16.07	6.67
Control group	15	51.87	9.36	15	51.60	9.34

**Table 3:** Arithmetic averages and standard deviations of the scores of the experimental and control groups on the post-traumatic stress disorder in the two measurements pre and post scale.

Table 3 shows that the mean of the experimental group scores on the PTSD scale was 46.07 and by a standard deviation of 8.66 to be on the post measurement (16.07) and by a standard deviation (6.67) The tribal control group was 51.87 and by standard deviation (9.36) to be on the post measurement (51.60) and by standard deviation (9.34).

In order to verify that the differences between the averages are statistically significant, the analysis of the common variance, whose results are shown in table 4.

Source of variation	Total squares	Average squares	Degrees of freedom	F	Level of significance
Pre scale	900.96	900.96	1	18.01	0.00
The group	4477.31	4477.31	1	89.48	0.00
Error	1351.04	50.04	27		
Total	6729.31		29		

**Table 4:** The results of the ANCOVA analysis of the differences in post-traumatic stress disorder between the experimental and control groups.

\* Statistically significant at the level (0.05).

Table 4 shows that the value of (P) was (89.48), in statistical terms (0.00), which is a function at the level of (0.05), indicating that the symptoms of PTSD have decreased in view of the arithmetic averages of the pre-test And the post-experimental group, and this shows how the impact of the game-based program in reducing the symptoms of PTSD in the sample of the study. The researcher will test the sub-hypotheses and as indicators of the child's improvement of PTSD symptoms as follows.

**First Hypothesis**

There were statistically significant differences between the two groups (control and experimental), after psychotherapy based on play on the measure of depression for children. To examine this hypothesis, the computational averages, standard deviations, and the analysis of the common variance were calculated. Table 5 shows the values of the arithmetical averages and the standard deviations of the scale on the depression scale of the experimental and control groups in the pre and post scale.

Sample	Pre Scale			Post Scale		
	Number	Average	Standard Deviations	Number	Average	Standard Deviations
Experimental group	15	27.47	8.21	15	13.47	3.87
Control group	15	41.57	11.88	15	42.53	11.17

**Table 5:** Statistical averages and standard deviations of the scores of individuals in the experimental and control groups on the depression scale in the tribal and post.

\* Statistically significant at the level (0.05).

It is clear from table 5 that the mean of the experimental group members on the measure of tribal depression is 27.47 and by a standard deviation 8.21 to be on the post measurement (13.47) and by standard deviation (3.87). The arithmetic average of the control group The tribal measurement was 42.53 and by standard deviation (11.17) to be on the telemetry (42.53) and by standard deviation (11.17).

To verify that the differences between the averages are statistically significant, a joint variance analysis was performed, the results of which are shown in table 6.

Source of variation	Total squares	Degrees of freedom	Average squares	F	Level of significance
Pre scale	1483.52	1	1483.52	84.87	0.00
The group	1467.70	1	1467.70	83.97	0.00
Error	471.95	27	17.48		
Total	3423.17	29			

**Table 6:** Results of the analysis of the common variance of the differences in the level of depression between the experimental and control groups on the telemetry.

Table 6 shows that the value of the statistics (P) was (83.97), with a statistical significance level of (0.00) which is a function at the level of (0.05). This indicates that the symptoms of depression have decreased due to the arithmetic averages of the pre- Experimental, and this indicates that there is an impact of the game-based program in reducing the level of depressive symptoms in the study sample members.



**Second Hypothesis**

There are statistically significant differences between the two groups (control and experimental), after the psychotherapy based on the play on the anxiety scale (status and feature) for children. To examine this hypothesis, the arithmetical averages, standard deviations and the analysis of the common variance were calculated. Table 7 shows the values of the arithmetical averages and the standard deviations of the scale on the anxiety scale of the experimental and control groups in the tribal and remote indices.

	The Group	Pre Scale			Post Scale		
		Standard Deviations	Average	Number	Standard Deviations	Average	Number
Characteristic anxiety	Experimental	8.39	41.20	15	6.43	26.80	15
	Control	9.98	45.88	15	9.15	44.07	15
State anxiety	Experimental	7.68	44.73	15	11.16	20.33	15
	Control	8.06	49.40	15	8.06	49.40	15

**Table 7:** Statistical averages and standard deviations of the scores of the experimental and control groups on the anxiety scale in the tribal and remote scales.

\* Statistically significant at the level (0.05).

Table 7 shows that the mean of the scores of the experimental group members on the measure of characteristic anxiety is 41.20 and the standard deviation is 8.39. It is on the post measurement (26.80) and the standard deviation (6.43). The arithmetic average of the control group The tribal measurement was (45.88) and the standard deviation (9.98) to be on the post measurement (44.07) and by standard deviation (9.15).

The mathematical mean of the experimental group scores on the state anxiety scale was 44.73 and the standard deviation was 7.68. It became the post measurement (20.33) and the standard deviation (11.16). The arithmetical mean of the members of the control group on the tribal measurement was (49.40) With a standard deviation (8.06) to become a post-measurement (49.40) and a standard deviation (8.06).

To verify that the differences between the averages are statistically significant, a joint variance analysis was performed, the results of which are shown in table 8.

	Source of variation	Total squares	Average squares	Degrees of freedom	F	Level of significance
Characteristic anxiety	Pre scale	1107.23	1107.23	1	46.41	0.00
	The group	1687.54	1687.54	1	70.74	0.00
	Error	644.10	23.86	27		
	Total	3438.88		29		
State anxiety	Pre scale	424.35	424.35	1	5.14	0.03
	The group	4907.95	4907.95	1	59.46	0.00
	Error	2228.58	82.54	27		
	Total	7560.88		29		

**Table 8:** Results of the analysis of the common variance of the differences in the level of anxiety between the experimental groups and the control over the telemetry.

Of the table 8 regarding the characteristic anxiety, it is clear that the value of the statistics (P) was (70.74) in statistical terms reached (0.00), a function at the level of (0.05) and less, indicating that the symptoms of anxiety characteristic has decreased in view of the averages For the experimental and pre-trial testing of the experimental group, indicating the extent to which the game-based program has reduced the level of anxiety among the study sample.

As for the case anxiety, it is clear that the statistical value of (P) was 59.46 in statistical terms (0.00), a function at (0.05) This indicates the extent to which the game-based program has reduced the level of anxiety among the study sample.

**Third Hypothesis**

There are statistically significant differences between the two groups (control and experimental), after psychological therapy based on playing on the scale of self-esteem of children. To examine this hypothesis, the arithmetical averages, standard deviations, and the analysis of the common variance were calculated. Table 9 shows the values of the arithmetical averages and the standard deviations of the scale on the self-assessment scale of the experimental and control groups in the tribal and remote indices.

Sample	Pre Scale			Post Scale		
	Number	Average	Standard Deviations	Number	Average	Standard Deviations
Experimental group	15	49.47	9.63	15	67.47	5.83
Control group	15	49.73	9.38	15	49.73	9.38

*Table 9: Statistical averages and standard deviations of the scores of individuals in the experimental and control groups on the self-assessment scale in the pre and post.*

Table 9 shows that the mean of the scores of the experimental group on the self-assessment scale was (49.47) and by a standard deviation (9.63), to the post measurement (67.47) and by standard deviation (5.83). The arithmetic mean of the control group Tribal measurement was (49.73) and by standard deviation (9.38) to be on the post-measurement (49.73) and by standard deviation (9.38).

To verify that the differences between the averages are statistically significant, a joint variance analysis was performed, the results of which are shown in table 10.

Source of variation	Total squares	Degrees of freedom	Average squares	F	Level of significance
Pre scale	622.04	1	622.04	15.46	0.00
The group	2393.33	1	2393.33	59.47	0.00
Error	1086.62	27	40.25		
Total	4101.99	29			

*Table 10: Results of the analysis of the common variance of the differences in the level of self-assessment between the experimental and control groups on the post-measurement.*

\* Statistical function at (0.05).

Table 10 shows that the value of the statistics (P) was 59.47, in statistical terms (0.00), which is a function at the level of (0.05). This indicates that the symptoms of self-esteem in children have increased in view of the calculation averages of the test Tribal and post-experimental group. This indicates a statistically significant effect of the play-based program in raising self-esteem among the study sample.

**Man drawing test results**

To determine the IQ scores of children whose case was studied by the male drawing test, these grades were classified according to table 11.

Child Number	The chronological age	IQ
1	9 years	%80
2	6 years	%92
3	6 years	%81
4	8 years	%80
5	9 years	%85
6	8 years	%83
7	9 years	%90
8	8 years	%91
9	8 years	%92
10	6 years	%80
11	10 years	%90
12	11 years	%91
13	12 years	%82
14	12 years	%92
15	11 years	%82
Average IQ scores		86%

**Table 11:** IQ scores for children through a man drawing test.

Table 11 shows that the IQ of children in the experimental group whose cases were studied through the male drawing test ranged from 80% to 92%. This figure explains that the study sample in the experimental group falls within the category of natural intelligence score What is stated in the Jordanian Intelligence Standards for testing the man's drawing in the study tools [13].

**Discussion of Results**

The results of PTSD showed the effectiveness of the psychotherapy program by playing to relieve post-traumatic stress disorder in sexually abused children.

Psychotherapy was characterized by various techniques and activities aimed at reducing the symptoms of post-traumatic stress disorder. Re-experiencing sexual abuse may take several forms. Nightmares, which are an essential part of re-experiencing sexual abuse, have seen the impact of art expression technology on a reduction in their incidence, as suggested by the built-in results of children's responses to PTSD. The relationship between expression and painting is characterized by a reduction in the incidence of nightmares in the fact that creative art is only a reflection of the thoughts and memories of sexual abuse. This conclusion is consistent with a previous study of creative art in reducing symptoms of psychological trauma [15].

This finding is consistent with the findings of Reyes and James [16], which conducted a longitudinal study to test the effectiveness of play therapy in the treatment of PTSD symptoms. The results showed a reduction in the symptoms of PTSD.

These findings are consistent with Morrison's 2009 [17] study of the case of a boy named Steven who was treated with a play program after being shocked. Through treatment therapy and the therapeutic relationship, the boy gained an understanding of himself and his experience, as well as reduced symptoms of PTSD. The effectiveness of the therapeutic program used in this study is due to the variety of techniques used to develop each symptom of post-traumatic stress disorder. The child has been trained to express his emotions, and how to acquire social skills to increase the ability to reduce mental images and how to deal with them. As well as the ability to tell a story to relieve symptoms of excessive arousal in children with post-traumatic stress disorder.

### Discuss findings related to anxiety and depression

The results of the study indicate that psychotherapy in play has a good ability to reduce the level of anxiety and depression as symptoms of post-traumatic stress disorder in children who have sexual intercourse, as was evident by the low level of anxiety by testing the trait anxiety and anxiety, as well as improved mood in children, The results of the depression test. Undoubtedly, anxiety and depression are closely linked to high stress levels beyond the child's adaptive skills. As is well known, storytelling has an effective role in reducing the level of anxiety and depression in children, especially when the choice of story is based on the historical background of children (in this study, sexual assault). Therefore, all the stories that were narrated were imitated by the reality of children to attract their interest and interaction with the events of the story, and then to develop their adaptive skills by finding typical characters that are easy for the child to imitate, imitate and model as role models [18].

From this perspective, it was clear from the analysis of the results that the story has in particular a significant role in reducing the level of anxiety and improve the mood in children. They were noted the great attachment to the character of the stories of irrigated as it was clear through their repeated questions about these characters, which shows their admiration and a role model for them. This finding is in line with the study by Shen and Sink [19], which aims to reduce anxiety and depression in children exposed to PTSD. The drawing and stuffed toys were used as a safe way to highlight their thoughts and feelings. By playing down both the level of anxiety and depression. We also find in the study conducted by the researcher [20] that they agree with the current study in the marked decrease in the scale of anxiety, and improvement on the scale of self-efficacy, when using the program of therapy.

### Discussion of self-esteem results

The results showed that the method of psychotherapy by play has led to a marked improvement in self-esteem and children's perception of themselves. It is common practice in psychology theories that the principle of self-esteem is only an individual's own view of either positive or negative, and is an indicator of mental health according to FTS referred to in Henriques [21]. One of the most common techniques used in the treatment of psychotherapy is playing technique. Because the individual in childhood derives his own view through the opinions of others around him (Frey 1989), the choice of this technique has been taken into account in particular to improve the positive view of the self. Playing together can increase the child's direct contact with others who may not have a prior relationship. This ensures that the child is subject to a position that develops the child's social skills, thus increasing the positive perception of the child. Repeated praise by children for each other and their collective cooperation have a great impact on the self-esteem of the child. This is what the self-esteem test for children has indicated after their completion of the therapeutic program. The results of the study are also consistent with the results of Misurell's 2010 [22] study, which aimed to reveal the therapeutic efficacy of behavior based on behavioral theory with children who were sexually abused in reducing some of the problems associated with abuse. Psychometric Scale, Self-Assessment Scale, and Social Skills Scale. The results showed that the game therapy program has alleviated the problems experienced by these children, as well as improvement in self-perception. This is consistent with the far-reaching results of the present study.

### Limitations that emerged during the application of the study

- 1- Some centers did not agree with the current study, despite the approval of the Ministry of Social Development.
- 2- Lack of follow-up psychological treatment of children periodically by the Hussein Center for Social Services.
- 3- The large number of external activities, which lead to the failure to control the number of children during the sessions of psychological therapy play.

### Recommendations and Proposals

1. The application of the therapeutic program used in this study in centers and institutions on children suffering from post-traumatic stress disorder because of sexual abuse.
2. Conduct a study to test the effectiveness of the therapeutic program used in this study on children suffering from PTSD caused by accidents other than sexual abuse.
3. Conduct a comparative study to test the effectiveness of treatment therapy with other methods of treatment, in the treatment of PTSD in children.
4. Building supportive programs that include methods and social skills applied to children after PTSD, in a structured manner to acquire skills and work after post-traumatic stress disorder.
5. Educate and guide families and parents to understand post-traumatic stress disorder and the symptoms of this disorder and how to treat it in their children.
6. Building preventive programs to educate children about sexual abuse.
7. To raise awareness among members of society and parents in order to protect children from sexual abuse.
8. The need for qualified and trained psychologists and therapists to treat these children.
9. Provide counselors and child care providers with institutions on how to deal with children who are exposed to PTSD.
10. Cooperation between the institutions involved in the protection and treatment of children with symptoms of P.T.S.D.

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