

Investigating the Effect of Narrative Exposure Therapy on Improving the Emotion Expression Dimensions in Children with Post-traumatic Stress Disorder

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ABSTRACT

Post-traumatic stress disorder is related to trauma and stressful factors. It occurs after being exposed to a terrible or difficult experience in which a person is threatened physically, mentally, and psychologically. The present study aims to investigate the effect of narrative exposure therapy on improving the emotion expression dimensions in children with post-traumatic stress disorder. The study method was quasi-experimental with a pretest and post-test design with a control group. The statistical population of the study included all children with post-traumatic stress disorder who formed a medical record in the fall of 2019 in the social emergency and Red Crescent of Shahrekord city. Thirty children were selected by convenience random sampling. They were randomly allocated to experimental (15) and control (15) groups. To collect the data, the emotion expression questionnaire (King and Emmons, 1990) was used in the pretest and post-test stages. The experimental group received narrative exposure therapy for eight sessions, lasting 90 to 120 minutes. The control group did not receive any intervention. A covariance analysis test was used to analyze the data. The results revealed that narrative exposure therapy significantly reduced post-traumatic stress symptoms and improved the samples' emotional expression ($p < 0.01$).

Keywords: Narrative exposure therapy, Emotion expression, Post-traumatic stress disorder

Introduction

The post-traumatic stress disorder study center announced this disorder rate at 25-95% in the children. Studies have revealed that evaluating post-traumatic stress disorder in young children based on their developmental age is valid, according to the fifth diagnostic and statistical manual of mental disorders. These symptoms in children are significantly different from adults. Based on the fifth diagnostic and statistical manual of mental disorders, post-traumatic stress disorder has been excluded from the subset of anxiety disorders. It has been included in a new diagnostic category of trauma-related disorders and stressful factors. An independent branch has been created to diagnose and evaluate this disorder in 6-year-old and younger children (Goodarzi, 2003). Exposure to traumatic events such as accidents, earthquakes, diseases that

threaten death, and all traumatic events that expose children to serious harm or sexual violence increases the risk of developing post-traumatic stress disorder in children. Increasing the stress level in childhood can accelerate the development of many mental and physical diseases in a person (Sajjadian, 2013).

Emotion expression is one of the effects of post-traumatic stress disorder on people (Adnaylor, Katani, and Gall, 2017). In his definition of emotion regulation, Thomson (1994, quoted by Rafinia, 2011) has referred to emotion expression as one of the emotion regulation dimensions. He has stated that emotion regulation includes internal and external processes responsible for reviewing, evaluating, and modifying emotional reactions. According to him, internal processes are the awareness of the internal aspect of emotions, and external processes include emotion expression. Emotional control includes creating thoughts

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and behaviors that help people know the kind of their emotion when this emotion appears in them and how they should express it (Haskett, Stelter, Proffit, and Nice, 2012). The development of skills to regulate the emotional experience and its expression play a significant role in psychological and social adaptation in life-threatening situations, including experiences leading to post-traumatic stress disorder (Quinton & Wagner, 2015). A low level or lack of these skills, such as weakness in emotional expression, can cause defects in healthy psychological function. Also, the growth and emotion theories state that the difficulty in expressing emotions and not regulating them during childhood leads to the child's vulnerability in the future (Richards and Gross, 2018). Experimental reasons support this hypothesis that the emotional experience of traumatic events disrupts the process of controlling and expressing emotions. Also, weak regulation and expression of emotions have a positive association with symptoms of depression, anxiety, and physical complaints in children (Arianpour, 2018). Narrative exposure therapy is one of the therapeutic methods developed by a combination of narrative therapy and the cognitive-behavioral approach. Narrative therapy was developed by White and Epston (1990). It was developed within the context of postmodern epistemology-social constructivism. In narrative exposure therapy, the participant builds a detailed history of his or her life in chronological order with the cooperation of a therapist. The therapist records this life history and modifies it in each subsequent reading. This therapy is focused on transforming the fragmented general report of traumatic event experiences into a coherent narrative (Brady, Killeen, Brewerton, and Lucerini, 2010). Discussing the traumatic event ends only if the person accepts the emotional reactions presented and reported by the patient. Adnayer et al. (2017) examined narrative exposure therapy for symptoms related to post-traumatic stress disorder. They showed that it allows patients to re-evaluate the real risk in the current situation, leading to reduced post-traumatic stress disorder symptoms. The study by Ferson (2016) examined the narrative exposure therapy effect on the symptoms of post-traumatic stress disorder in victims of collective violence and torture. The results showed that the therapy significantly reduced the symptoms. Children may be at greater risk of suffering from post-traumatic stress disorder than adults after a traumatic event. This disorder is associated with other traumatic experiences during life, loss of support resources, and parents' reaction to the traumatic experience.

The prevalence of post-traumatic stress disorder in the general population is relatively high. However, the rate of this disorder is higher in some vulnerable groups, including children and adolescents. In other words, young age groups experience post-traumatic stress more often

than adults due to their unique physical and age conditions and lack of development of coping strategies to cope with physical and mental harms caused by a traumatic event (Basharpour, Amani, and Ahmadi, 2018). The studies conducted in this area have shown that 15 to 43 percent of girls and 14 to 43 percent of boys have experienced at least one traumatic event. Also, 3 to 15 percent of girls and 1 to 6 percent of boys meet the diagnostic criteria of post-traumatic stress disorder (Aaron, Zaglul, & Emery, 2019). Thus, given the effect of narrative exposure therapy on the symptoms of post-traumatic stress disorder and a few numbers of studies that examined the effect of this therapeutic approach on children's expression of shame, the present study aims to answer this question: Will the narrative exposure therapy be effective in improving the emotion expression in children with post-traumatic stress disorder?

Methods

The present study was an applied analysis in terms of aim and a quasi-experimental with a pretest and post-test design with experimental and control groups. The statistical population of this study included all children with post-traumatic stress disorder aged 7 to 11 years who were diagnosed by social emergency and Red Crescent in 2019 and did not receive any psychological treatment during the last six months. Thirty people were selected by a convenience random sampling method. They were randomly allocated to experimental (n=15) and control groups (n=15).

Data collection tools

Emotion expression Questionnaire (EEQ)

It was developed by King and Emmons in 1990. It includes three components and 16 items. Its seven items are related to positive emotion expression, five relate to intimacy expression, and four relate to expressing negative emotion. Rafei et al. (2006) in Iran examined the psychometric characteristics of this questionnaire. They examined its validity using the internal consistency method and calculated its Cronbach's alpha coefficient. Its value for the scale and subscales of positive emotion expression, intimacy expression, and expressing negative emotion was obtained at 0.68, 0.65, 0.59, and 0.68. It is scored on a 5-point Likert scale from strongly disagree to agree strongly.

The Posttraumatic Stress Disorder Checklist (PCL-5)

It is a self-report scale used as a diagnostic tool to assess the degree of disorder and to differentiate these patients from normal people and other patients. One advantage of this checklist is that it is short. The time needed to implement it is approximately 10 minutes. One limitation of this checklist is that it has been validated only for military forces. It was prepared by Weather, Litz, Herman, Huska, and Kean (1994) based on the DSM diagnostic criteria for the US National Center for Post-Traumatic Stress Disorder. It includes 17 items. Five items are related to re-experiencing a traumatic event, seven are related to

the signs and symptoms of emotional numbness and avoidance, and five are related to extreme arousal. Weather et al. (1994) conducted two studies on this checklist. In the first study on 123 men participating in the Vietnam War, the internal consistency coefficient was reported at 97% and 96% for the scale and 93%, 92%, and 92%, respectively, for the D, C, and B symptoms. Also, they reported the test-retest coefficient with a two-day or three-day interval at 96%. Goodarzi (2013) calculated its reliability in Iran at Shiraz University using the data obtained from implementing this checklist on 117 subjects. The Cronbach's alpha coefficient of the scale was

calculated. This coefficient was obtained at 0.93, indicating that it is a reliable checklist. Also, the reliability coefficient of this list using the test-retest method (based on whether the items are even or odd) was obtained at 0.87 (n=117), indicating its good reliability. The mentioned correlation coefficient was $P=0.0001$, $n=117$, and $r=0.37$, indicating the concurrent validity of the scale. Narrative exposure therapy was implemented in the experimental group, eight sessions of 90 to 120 minutes per week. The control group did not receive any intervention. After completing the treatment sessions, both groups answered the questionnaires as a post-test.

Table 1: Content of narrative exposure therapy training sessions

Session	Stages	Content of sessions
1	Introducing and justifying the treatment	Introducing group members, justifying, and interpreting the logic of treatment and psychological training (normalizing, legitimizing, and describing trauma-related reactions and explaining the treatment procedure
2	Life string	Children represent the course of their lives along the string symbolically and ritually. The child spreads the string on the ground based on the "flow" of his/her way of life. By doing this, they arrange the course of their life along the string, representing the continuous flow of time. At the end of the session, a photo or drawing is drawn from the string.
3	Start narrating	The child narrates his or her life story from birth until the first traumatic event. In this session, you will collect information about the period before the traumatic event and practice emotional processing.
4, 5, 6, and 7	Narration of "Hot" memory, recounting of the story	Recounting the story obtained in previous sessions. Continuing the narrative of lived events and subsequent traumatic events. The purpose is to connect the hot memory, i.e., senses, feelings, and thoughts, to its corresponding strings in the historical memory. It is done by telling all parts of the memory and adding them to the memory. Habituation (reducing disease symptoms after long-term exposure to a stressful factor), emotional processing, and emotional labeling states. In these sessions, drawing or mindfulness was used to start or end the session
8	The last session	Reading and signing all sheets. The patient's life story is read to him or her. He or she is asked to pick the string of life for the last time and express his or her feelings.

Descriptive statistics (mean, standard deviation, and frequency, percentage, accumulative, and frequency distribution tables) and inferential statistics (univariate and multivariate covariance test) indices were used to analyze the data. All analyses were performed in SPSS-23 software.

Results

The first-child respondents with a frequency of 7 people (46.66%) in the experimental group and 6 (40%) in the control group had the highest frequency. Also, the third and later-child respondents with a frequency of 2 (113.33%) in the experimental group and 4 (26.66%) in the control group had the lowest frequency. The age frequency of 10 years with five people (33.34%) in the experimental group and nine years with four people (26.66%) in the control group were the most frequent. Also, the age frequency of 11 years with one person (6.66%) in the experimental group and 11 and 7 years with two people (13.34%) in the control group were the least frequent ages. The violence and physical abuse with a

frequency of 5 (33.34%) in the experimental group and violence with a frequency of 5 (33.34%) in the control group were more than many other reasons. Also, watching murder with 1 (6.66) frequency in the experimental group and 0 people (0%) in the control group had the lowest frequency. The frequency of two-child respondents, 6 (53.33%) in the experimental group and 5 (33.33%) in the control group, was more than the frequency of other groups. Also, one-child respondents with two people in the experimental group and the four and more-child respondents with three people (20%) in the control group have the lowest frequency. The respondents with self-employed father jobs with a frequency of 9 people (60%) in the experimental group and the respondents with a governmental father job with a frequency of 8 people (33.53%) in the control group had a higher frequency compared to other groups. Also, respondents with an unemployed father job, with one person (6.66%) in the experimental group and 0 people (0%) in the control group, had the lowest frequency.

Table 2: Mean and standard deviation of scores obtained from emotion expression dimensions Table 2: Mean and standard deviation of scores obtained from emotion expression dimensions

Variable	Group	Stage	Mean	SD
Positive emotion expression	Experimental	Pretest	9.93	2.37
		Posttest	26.26	7.68
	Control	Pretest	10	3.16
		Posttest	9.46	3.68
Intimacy expression	Experimental	Pretest	8.13	2.89
		Posttest	16.00	6.63
	Control	Pretest	8	2.76
		Posttest	8.06	2.44
Negative emotion expression	Experimental	Pretest	8.73	2.37
		Posttest	11.53	3.87
	Control	Pretest	8.2	2.51
		Posttest	8.00	2.62

As shown in Table 2, general descriptive information such as mean and standard deviation in the experimental and control groups are presented separately in the pretest and

post-test stages for the emotion expression dimensions (positive emotion expression, intimacy expression, and negative emotion expression).

Table 3: The results of testing the normal distribution of scores in the emotion expression dimensions

Variable	Group	DF	Sig
positive emotion expression	Experimental	15	0.32
	Control	15	0.15
intimacy expression	Experimental	15	0.14
	Control	15	0.15
negative emotion expression	Experimental	15	0.25
	Control	15	0.31

As shown in Table 3, the obtained significance level is higher than the error level of 0.05. Thus, it can be stated with high confidence that the data are normal emotion expression dimensions (positive emotion expressions, intimacy expression, and negative emotion expression).

Table 4: The results of the Box's M test in the emotion expression dimensions

BOX's M	F	Sig.
7.269	6.854	0.32

Table 4 shows that the significance level is 0.32, indicating that the homogeneity of the variance-covariance matrix has been well fulfilled.

Table 6: The results of testing the intragroup effects on the emotion expression dimensions

Effect	Effect	Value	F	Df of hypothesis	Df of error	sig	Eta coefficient	Statistical power
	<i>Pillai's trace</i>	0.90	18.33	3	26	0.001	0.39	1.00

Table 5: The results of Levene's test for the emotion expression dimensions

Research variables	F	Df 1	Df 2	Sig.
positive emotion expression	5.68	1	28	0.22
Intimacy expression	6.45	1	28	0.12
negative emotion expression	4.27	1	28	0.16

Table 5 confirmed the assumption of homogeneity of variances in the emotion expression dimensions (positive emotion expression, intimacy expression, and negative emotion expression). This test was not significant for any of the variables. Thus, using parametric tests is allowed.

Experiment+Group	Wilks' lambda	0.09	18.33	3	26	0.001	0.39	1.00
	Hotelling trace	9.64	18.33	3	26	0.001	0.39	1.00
	Roy's largest root	9.64	18.33	3	26	0.001	0.39	1.00

Table 6 shows that Pillai's trace effect ($F = 18.33$) on the emotion expression dimensions (positive emotion expression, intimacy expression, and negative emotion expression) in the experimental groups is significant at the confidence level of 0.01 (001 $p=0.00$). Thus, it can be

concluded that narrative exposure therapy significantly affected at least one dimension of emotion expression (positive emotion expression, intimacy expression, and negative emotion expression). The effect size of the test was obtained at 0.39.

Table 7: The results of univariate covariance analysis in MANCOVA text on the emotion expression dimensions

	Variable	Sum of squares	DF	Mean of squares	F	Sig.	Squared Eta	Statistical power
Positive emotion expression	Pretest	2.78	1	2.78	1.78	0.18	0.004	0.024
	Group	166.18	1	166.18	41.88	0.001	0.46	1.00
	Error	111.08	28	3.96				
Intimacy expression	Pretest	3.22	1	3.22	0.058	0.188	0.089	0.018
	Group	58.38	1	58.38	9.02	0.006	0.53	0.82
	Error	181.13	28	6.46				
Negative emotion expression	Pretest	2.46	1	2.46	0.098	0.62	0.007	0.036
	Group	52.96	1	52.96	16.97	0.001	0.39	0.97
	Error	87.38	28	3.12				

Based on the results of Table 7, the significant level obtained from the dimensions of positive emotion expression ($F = 41.88$, $p = 0.001$), intimacy expression ($F = 9.02$, $p = 0.006$), negative emotion expression ($F=16.97$, $p=0.001$) is smaller than 0.01. Thus, it can be stated that there is a significant difference between the experimental and control groups regarding this variable. Therefore, the research hypothesis on the effect of the independent variable (narrative exposure therapy) on the emotion expression dimensions (positive emotion expression, intimacy expression, and negative emotion expression) is confirmed. It can be generally stated that narrative exposure therapy had the most significant impact on the change in the intimacy expression scores with 0.53, then positive emotion expression with 0.46, and finally, negative emotion expression with 0.39.

Discussion

The results revealed that the significant level obtained from the positive emotion expression ($F=41.88$, $p=0.001$), intimacy expression ($F=9.02$, $p=0.006$), and negative emotion expression ($F = 16.97$, $p = 0.001$) is smaller than 0.01. Hence, it can be stated that there is a significant difference between the experimental and control groups regarding this variable. Therefore, the research hypothesis on the effectiveness of the independent variable (narrative exposure therapy) on the emotion expression dimensions (positive emotion expression, intimacy expression, and

negative emotion expression) is confirmed. It can be stated that narrative exposure therapy had the most significant impact on the change in the intimacy expression scores with 0.53, then on positive emotion expression with 0.46, and finally on negative emotion expression with 0.39. The result of the present study is consistent with the result of the study conducted by Ferson (2016) since he confirmed the effectiveness of narrative exposure therapy on emotion expression.

In explaining these results, it can be said that disturbing and ruminating memories in people suffering from post-traumatic stress disorder cause mental confusion and emotional disorders in patients and affect their social and interpersonal communication. Amani, Basharpour, and Narimani (2016) concluded that narrative exposure therapy affects interpersonal communication and causes a deep understanding of this indicator. Some people engage in these memories, and some others avoid them. Both of these coping methods can be inappropriate. Narrative exposure therapy can reduce the emotional burden on the involved person and cause positive and negative emotions by providing conditions for expressing the details related to the trauma event.

This result is in line with the study by Shivrani, Azadfalsh, and Moradi Eskandari (2017), who concluded that this therapy improves the historical memory system and increases the positive emotion burden. People who

experience a traumatic event are afraid to express its details. It causes them to avoid facing that event, increasing the negative emotional burden. Narrative exposure therapy can effectively reduce the negative symptoms of the traumatic event by providing an opportunity to retell the traumatic event memories and repeat them in a stress-free atmosphere. Narrative exposure therapy can provide conditions for people to review their traumatic memories in a calm environment, accept the event details without judging them, and change their relationship with their emotional states. This therapy is based on emotional disclosure related to traumatic events. Several studies have revealed that emotional disclosure has many positive emotional, psychological, and social consequences. For example, Adnayer, Katani, and Gall (2017) reported that narrative exposure therapy reduces psychological symptoms and increases emotion regulation in patients with post-traumatic stress disorder. Emotional disclosure occurs in retelling the trauma memory by the patient in narrative exposure therapy. Thus, this intervention makes the person less focused on negative events, pays more attention to pleasant events, and has a realistic evaluation of these events by providing an opportunity to re-evaluate the events. Ferson (2016) also proves the effectiveness of this therapy in increasing emotion regulation and expression in the victims of this disorder. The narrative exposure therapy's effectiveness in increasing intimacy might be because the current therapy was implemented in the group form. Also, the effect of social communication with members and conversations about common symptoms can encourage the subjects to communicate more. Additionally, the level of acceptance of the disease and its realistic limitations, which might have been considered a weakness earlier, can improve interpersonal relationships and increase intimacy during this therapy. Amani, Bashrpour, and Narimani (2017) reported the effect of this therapy on improving interpersonal communication.

Conclusion

In explaining the effectiveness of narrative exposure therapy, it can be stated that a significant number of studies have been conducted on cognitive behavioral therapy; they are limited to narrative exposure therapy on the target group. However, the present results are consistent with previous results in this regard. It can be concluded that this therapy has been effective in reducing post-traumatic symptoms. To confirm the accuracy and generalization of the results of this study, it is necessary to pay attention to its limitations. For example, it was not possible in this study to follow up with the patients due to time limitations.

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