The Effects of a Post-traumatic Stress Follow-up Test Through the Education Group Program for Children at Childcare Facilities

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Abstract

The purpose of this study was to investigate the effects of post-traumatic stress through the education program for children at childcare facilities. And for hypothesis verification, Mann-Whitney U analysis and Wilcoxon signed rank test were conducted. The major findings were as; The group program had the effect of the reducing the post-traumatic stress of children in child care facilities. It was also found to be effective for changes in re-experience, evasion, hyperarousal which are sub-factors of children's post-traumatic stress. This study has significance in terms that it proved the importance on the improvement of children's post-traumatic stress at childcare facilities.

Keywords: *Traumatic experience, Post-traumatic stress, Group program, Childcare facilities, Children*

INTRODUCTION

The parental separation experience and unstable parenting environment experienced by children in child care facilities have a negative impact on individual attachment and psychological development [1].

Waite and Shewokis describe the experience of separation between parents and children due to childhood trauma, that is, parental divorce, along with abuse and neglect [2]. These childhood traumatic experiences require more attention because they can strengthen developmental vulnerabilities as children grow. In addition, considering the large number of children who have recently entered child care facilities, there is a great need to pay attention to the experiences of separation from their parents during their childhood.

Recently, an individual's subjective interpretation of the event has been emphasized rather than the event itself as an important criterion for determining whether an event is traumatic[3,4], and war, disaster, terrorism, It is believed that traumatic events can include not only powerful events such as accidents, but also events that go beyond the normal range of stress that can be experienced during the natural developmental stage, such as the death of a significant person, serious illness such as cancer, heartbreak or breakup[5]. Even events that are not generally considered traumatic events can be traumatic experiences that cause psychological pain enough to shake one's life, depending on the individual [6]. In other words, the degree of psychological trauma in traumatic experiences varies depending on the individual's personality and environment, and appropriate management and therapeutic intervention are needed according to post-traumatic events and stress.

The experience of a traumatic event can have a negative impact on an individual's mental health, and the impact may last a lifetime[7]. On the other hand, the impact of traumatic experiences is not only negative but also includes positive aspects that promote an individual's potential[8]. There are also aspects of life's challenges, such as trauma, that provide an opportunity to grow as a person[9]. Regarding this, Tedeschi and Calhoun introduced the term Post-Traumatic Growth (PTG), which refers to the positive psychological changes that occur as a result of struggling with the challenging and difficult adversities that people experience in life [10-16]. Learn to appreciate life more, discover new possibilities and previously unrecognized strengths, and become interested in growing more positively and adaptively in interpersonal relationships.

Therefore, the experience of post-traumatic growth can lead to a more adaptive state when faced with another trauma or strong stress and can promote positive and active change from the traumatic experience through interventions that promote growth in those who have experienced trauma. I would say intervention is necessary. The purpose of this study is to reduce post-traumatic stress through a counseling program for children in childcare facilities and verify its effectiveness.

RESEARCH METHOD

2.1. *Subjects*

This study targeted a total of 26 children, 13 in the experimental group and 13 in the control group, who were

currently residing in child care facilities in two child care facilities located in area C. There were 16 13-year-olds, and the proportion of children in the upper grades was higher than in the lower grades of elementary school.

.The reasons for the selection of study subjects are: First, using the post-traumatic stress diagnostic scale, a total score of 10 or less is clinically evaluated as mild, 11 to 20 points as moderate, and 21 points or more as severe. It is possible. Therefore, 26 children with a scale score of 10 or higher were selected, and 13 children in the experimental group and 13 children in the control group were selected. The average score for each group was 21 points or more.

2.2. *Scale*

To measure PTSD symptoms, the Posttraumatic Diagnostic Scale (PDS) developed by Foa et al. was adapted and used[11]. The PDS consists of several chapters that comprehensively ask about trauma events, time and frequency of experiences, PTSD symptom levels, and disability levels, but only 17 items asking about PTSD symptom levels were extracted and used. The sub-factors of the PTSD symptom scale are re-experiencing, avoidance, and hyperarousal based on the diagnostic criteria of the DSM-V. The PTSD symptom scale measures the severity of the symptoms experienced during the past month on a 4-point Likert scale. The reliability of the post-traumatic stress scale (Cronbach's α) is .915.

2.3. *Program process*

The progress structure for each session of this program is as follows. There are five steps: greeting the child, meditating and relaxation training, connecting session information and activity content, emotional exposure training regarding traumatic experiences or stress, psychological adaptation and emotional therapy, working with cognitive-behavioral play therapy, and encouraging and sharing feedback. It was composed. For each session, an effort was made to structure the manual to guide children so that they could predict the progress of the program, and to proceed according to the steps in the manual to minimize differences between individuals in each session.

Table 1. Counseling for children in child care facilities Group program session-by-session structure

Stage	Structure	1~2	3~4	5~6	7~8	9~10	11~12
1단계	Greetings, meditation, and relaxation training	O	O	O	O	O	O
2단계	Connect session information and activity details	O	O		O		O
3단계	Emotional exposure training regarding traumatic experiences or stress			O	O	O	
4단계	Working with psychological adaptation, emotional therapy, and cognitive-behavioral play therapy		O	O		O	O
5단계	Encourage and share feedback	O	O	O	O	O	O

2.4 *Data processing and analysis*

Mann-Whitney U analysis were performed to verify the homogeneity between groups, and descriptive statistical analysis was performed to show the average value of each group. And for hypothesis verification, Mann-Whitney U analysis and Wilcoxon signed rank test were conducted.

RESULTS

3.1. *Verification of homogeneity of experimental group and control group*

3.1.1. *Verification of homogeneity according to demographic and social characteristics*

Table 2 shows the results of a cross-analysis conducted to confirm the homogeneity of the experimental and control groups according to demographic and social characteristics such as gender and motivation for admission to the facility.

Table 2. Verification of homogeneity between groups regarding gender and motivation for admission

Division		Experimental group(N=13) %(N)	Control group(N=13) %(N)	x^2
Gender	Boy Girl	56.3(9) 43.8(7)	64.3(9) 35.7(5)	.201
Admission motivation	indigence divorce abandonment abuse	18.8(3) 12.5(2) 12.5(2) 56.3(9)	21.4(3) 7.1(1) 14.3(2) 57.1(8)	.260

As a result of the analysis in Table 2, first, it was found that there was no significant difference in gender between the experimental group and the control group. Also, there appeared to be no significant difference in motivation for admission between the experimental group and the control group. Accordingly, it can be seen that gender and motivation for admission were homogeneous between the experimental and control groups.

Table 3 shows the results of the Mann-Whitney U test to confirm the homogeneity of the experimental group and control group according to age, age at admission, and period of admission among sociodemographic characteristics.

Table 3. Verification of homogeneity between groups according to age, admission age, and admission period

	Group	M	SD	Mean Order	U	Z
Age	Experiment(13) Control(13)	10.54 11.34	1.09 1.91	13.16 18.18	74.50	-1.59
Admission age	Experiment(13) Control(13)	5.11 4.70	3.40 3.10	15.91 15.04	105.50	-.27
Admission period	Experiment(13) Control(13)	6.35 7.55	2.96 3.37	14.00 17.21	88.00	-1.01

As a result of the analysis in Table 3, first, in terms of age, the average ranking of the experimental group was 13.16, which was not statistically different from the control group's 18.18. In the case of admission age, the average ranking of the experimental group was 15.91, which showed no statistical difference from the control group's 15.04. Also, during the admission period, the average ranking of the experimental group was 14.00, which showed no statistical difference from the control group's 17.21. In other words, it can be seen that homogeneity in age, admission age, and admission period was secured between the experimental group and the control group.

3.2. *Post-traumatic stress post-pre changes*

Table 4. Comparison of changes in post-traumatic stress between the experimental group and the control group.

	Group	M	SD	Mean Order	U	Z
PTSD	Experiment(13) Control(13)	-0.63 -0.01	0.39 0.12	9.65 22.10	18.50	-3.89***
Re-experience	Experiment(13) Control(13)	-0.79 -0.05	0.70 0.20	10.17 21.55	26.89	-3.64***
Evasion	Experiment(13) Control(13)	-0.47 0.03	0.45 0.16	9.49 22.35	15.99	-4.02***
hyperarousal	Experiment(13) Control(13)	-0.69 -0.03	0.47 0.14	9.91 21.83	22.00	-3.75***
*** p<.001						

As a result of the analysis, the average rank of post-traumatic stress of the experimental group was 9.66, which

was lower than the control group's 22.18, and there was a significant difference at the p<.001 level. This average ranking means that the experimental group's post-pretest change in post-traumatic stress decreased by a greater extent than the control group's post-pretest change. This shows that this program is effective in reducing post-traumatic stress.

In addition, in the verification of the subfactors of post-traumatic stress, the subfactors of re-experiencing, avoidance, and hyperarousal were all found to have decreased by a greater extent than the amount of change in the experimental group at the p<.001 level than the amount of change in the control group.

Post-traumatic stress post-post-mortem changes

Table 5. Verification of differences between post-traumatic stress post-test and follow-up test

Experiment (N=13)	Test	M (SD)	negative rank		positive rank		Tie N[c]	Z
			M order	N[a]	M order	N[b]		
PTSD	Post-test	0.60(0.28)	9.00	13	1.50	2	1	-3.21**
	Follow-up test	0.28(0.14)						
Re-experience	Post-test	0.50(0.26)	8.15	11	4.90	3	2	-2.42*
	Follow-up test	0.30(0.33)						
Evasion	Post-test	0.60(0.41)	7.41	13	8.30	1	2	-2.72**
	Follow-up test	0.18(0.21)						
hyperarousal	Post-test	0.70(0.32)	7.22	12	10.89	1	2	-2.63**
	Follow-up test	0.38(0.28)						
* p<.05, ** p<.001, a. Post-test > Follow-up test, b. Post-test <Post-test, c. Post-test = follow-up test								

As a result of the analysis, there was a significant difference in post-traumatic stress in the experimental group, with 13 people having a lower post-traumatic stress score, 2 people having a higher post-traumatic stress score, and 1 person having the same score. To prove that the effectiveness of the program is maintained in follow-up tests, there should be no difference between the post-score and the follow-up score. However, looking closely at the analysis in Table 5, it was found that there were 13 people whose post-scores were lower than their post-scores, which was much more than the 2 people who had post-scores higher than their post-scores, and these results showed a statistically significant difference. will be. In this way, the fact that there were statistically more people with lower post-traumatic stress scores than post-traumatic stress scores three months after the implementation of the group program means that the effectiveness of the program has not only been maintained but has also increased.

In addition, in the verification of the sub-factors of post-traumatic stress, the sub-factors of re-experiencing, avoidance, and hyperarousal were statistically found to have lower post-scores than the post-traumatic scores, showing that the program's effectiveness in all sub-factors also increased.

The group program was found to be effective in selecting risk groups for post-traumatic stress symptoms among children in child care facilities and reducing post-traumatic stress symptoms through the activities of the group program. Post-traumatic stress means that the experimental group's post-pretest change amount decreased to a greater extent than the control group's post-pretest change amount. Therefore, it was verified that this group program was effective in reducing post-traumatic stress.

In addition, the group program was found to be effective in verifying the subfactors of post-traumatic stress caused by traumatic experiences of children in child care facilities. Re-experiencing, avoidance, and hyperarousal symptoms of post-traumatic stress are not clearly distinct factors, but occur simultaneously or in combination, so they need to be dealt with comprehensively. In particular, the importance of emotional regulation and stabilization is emphasized in children's traumatic experiences. Exposing traumatic memories in unsafe conditions not only reduces the child's traumatic experience and the therapeutic effect, but may actually

risk worsening it[12]. However, in this group program, emotional safety was secured, and the sub-factors of re-experiencing post-traumatic stress, avoidance, and hyperarousal were found to be significantly lower in the experimental group than in the control group [17-21].

DISCUSSION AND CONCLUSION

First, post-traumatic stress means that the experimental group's post-pretest change amount decreased to a greater extent than the control group's post-pretest change amount. Therefore, it was verified that this group program was effective in reducing post-traumatic stress.

In addition, the group program was found to be effective in verifying the subfactors of post-traumatic stress caused by traumatic experiences of children in child care facilities. Re-experiencing, avoidance, and hyperarousal symptoms of post-traumatic stress are not clearly distinct factors, but occur simultaneously or in combination, so they need to be dealt with comprehensively.

Second, the reduction in post-traumatic stress symptoms among children in child care facilities was maintained during follow-up tests. In addition, beyond maintaining the effect of the group program, the reduction in post-traumatic stress symptoms actually decreased, showing that this program reduces post-traumatic stress over time.

Therefore, we experienced the need for systematic support for early intervention and follow-up management regarding post-traumatic stress and traumatic experiences of children in child care facilities. In particular, differentiated management based on the child's motivation for admission and individual follow-up care are needed. This acts as another variable in the child's future adaptation to daily life and school life in child care facilities, so manual management and management service systems following initial management and admission are considered important.

During the group program, children were able to lead to positive results by presenting activities through intentional rumination and indirect exposure training, including cognitive pathways. However, the task of combining these theories in a variety of ways and flexibly developing practical activities still remains. In future research, there is a need to conduct clinical research using a post-traumatic growth group program that children can easily understand and be immersed in through the activity content and program structure. In addition, programs with various access models that can be used not only for children in child care facilities but also for children in various areas, such as temporary shelters who have experienced trauma and facilities for children with disabilities, should be activated.

Second, the practical implications include that, despite the need for programs on post-traumatic stress management and post-traumatic growth for children in child care facilities, no active support services have been provided in practice sites. In that sense, this study aims to understand the characteristics of children in child care facilities, provide therapeutic approaches, and help with children's emotional and cognitive development, providing a program that can be an important resource for maintaining healthy daily lives and forming interpersonal relationships in child care facilities. It can be said to be meaningful in that the results were derived. In addition, the results of this study are meaningful in that they provide a basis for actively implementing such programs in future practice sites.

As another practical implication, there is a need to supplement quality support services such as community service systems that take into account the characteristics of children in child care facilities and parent-child exchange programs for them. Children in child care facilities are separated from their parents for long periods of time and need an exchange system to improve parent-child relationships in addition to visiting facilities and going out. In child care facilities, step-by-step intervention and action plans that apply the parent-child exchange program should be prepared in the annual plan, and parent exchange support services should be provided so that parents and children can build trust and maintain relationships.

Therefore, a post-traumatic growth program with a more in-depth and specialized psychotherapeutic approach, such as the one in this study, should be actively implemented in order to overcome the psychological and emotional difficulties related to the trauma suffered by children in child care facilities.

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