



# Evaluating the Effectiveness of Cognitive-Behavioral Play Therapy on Reducing Separation Anxiety in Boys in the First Grade of Primary School

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## Abstract

**Background:** Separation anxiety disorder (SAD) is one of the most common disorders among children's behavioral problems, which leads to disruption in academic performance, social adjustment, family life, and peer relationships. Cognitive-behavioral play therapy (CBPT) is one of the appropriate treatment methods for correcting children's behavioral problems. It is designed for children aged three to eight.

**Objectives:** Considering the importance of controlling separation anxiety in primary school children, the main aim of this research was to assess the effectiveness of CBPT in reducing SAD in boys in the first grade of primary education.

**Methods:** A total of 30 primary school students with SAD were selected and then divided into the experimental group (15 students) and the control group (15 students) to conduct the present study. For the control group, no intervention was performed, but CBPT was done in ten sessions for the experimental group. The level of SAD was evaluated in both groups and then compared with each other before and after the intervention. In addition, the level of SAD in both groups was compared between the pre- and post-study stages to assess the effect of CBPT. The statistical analysis of the results was performed using SPSS software version 24 and using relevant tests at the significance level ( $\alpha = 0.05$ ).

**Results:** The results showed that the average SAD score before the intervention was equal to  $78.84 \pm 1.26$  for the control group and  $78.66 \pm 1.28$  for the CBPT group. The statistical analysis revealed no significant distinction across these average levels ( $P = 0.975$ ). After the intervention, the average SAD for the control and experimental groups was  $77.50 \pm 1.65$  and  $47.75 \pm 0.76$ , respectively, showing a significant difference between the two values ( $P < 0.001$ ).

**Conclusions:** Based on the findings, CBPT can reduce SAD in primary school children. Therefore, psychologists and educational counselors of elementary school students can recommend using CBPT to treat some behavioral problems of elementary students.

**Keywords:** Separation Anxiety, Cognitive-Behavioral Play Therapy, Elementary School Students, Behavioral Problems

## 1. Background

Children make up the majority of the global population and makeup around 11% of the total population in developing nations (1). The welfare of kids and teenagers holds a significant role in all cultures, and addressing their psychological wellness contributes to their overall physical and psychological health, enabling them to fulfill their societal responsibilities more effectively. Scientists have consistently stressed the importance of monitoring youngsters' physical,

psychological, cognitive, and social development. As a result, the field of psychology and psychiatry has increasingly focused on addressing children's psychological, community, and mental disorders during the past two decades (2-5).

With the process of growth, particular kids may exhibit some problems with behavior, which can be broadly classified into two primary categories: (a) internalizing behavioral problems refers to the manifestation of psychological issues that are primarily directed inward, such as anxiety or depression; and (b)

externalizing behavioral problems refers to the manifestation of psychological issues mainly directed outward, such as aggression or defiance. Internal issues encompass feelings of loneliness, melancholy, and anxiety primarily affecting the kid, whereas outward issues involve displays of anger, hyperactivity, and noncompliance (5). For whatever cause, the mentioned issues affect kids' lives, particularly their academic achievement (6, 7). Educational achievement among kids is correlated with their social and psychological challenges, and those who experience mental health issues tend to have worse academic abilities (8-10).

Separation anxiety disorder is a prevalent mental health issue among adolescents that significantly affects their educational achievement, integration into society, life at home, and interactions with classmates and others. Separation stress is a distressed and confused, anxious state that an individual experiences, characterized by feelings of confusion, despair, and physical discomfort. The indications associated with anxiety in young people and adults are mainly similar, although they may manifest differently depending on the age group (11).

Children experiencing anxiety require ongoing support from their parents to alleviate feelings of dread and fear. The daily routines and accompanying schools of these children are seriously impacted due to their belief that undisclosed occurrences might diminish their interest in others. The fear of being criticized by others may result in avoiding social situations and significantly reducing friendly interactions, depending on their age (12-14).

Cognitive-behavioral play therapy (CBPT) is one of the direct methods of play therapy, which is a suitable treatment method regarding age and developmental considerations, designed for children aged three to eight years old (15). Cognitive-behavioral play therapy is based on cognitive-behavioral theories as well as psychopathology and interventions derived from these theories (16). During the CBPT process, children are helped to actively participate in applying treatment changes and overcome their problems (17). In this method, a wide range of toys, art supplies, performance dolls, and other game accessories are used to change and correct ineffective beliefs and behaviors (18). No similar study has been conducted in Iran on the topic stated in the study's primary objective. Therefore, conducting this study is necessary for Iranian society.

## 2. Objectives

Considering the importance of controlling separation anxiety in primary school children, the main objective of the current work was to assess the efficacy of CBPT in reducing SAD in boys in the first grade of primary school education.

## 3. Methods

### 3.1. Study Design and Sampling

The present research was an applied, quantitative, and quasi-experimental study in terms of purpose, methodology, and type of research. This study was conducted in two groups (experimental group and control group) in a pre-test and post-test manner. According to psychologists, this research was conducted on elementary school boys who had SAD. The study participants' SAD condition was first evaluated in the present study, and then the intervention was carried out. After the completion of the intervention, the SAD status of the selected students was assessed again, and finally, the SAD status after the intervention and before the intervention was compared. The research data group comprised all male primary school learners in Mashhad, Iran, 2023, who visited the clinic for clinical examinations and interviews (before entering the school). The sampling method was purposeful, and the sample size was based on the study of AlaeiFard et al. (19) and Cochran's formula; finally, 30 primary school students were selected convenience sampling for the present study. The selected samples were divided into two groups of fifteen people; the first group was considered the experimental group (CBPT group), and the other group was regarded as the control group. The inclusion and exclusion criteria for selecting study participants are presented in Table 1.

**Table 1.** Inclusion and Exclusion Criteria for Sampling

Inclusion Criteria	Exclusion Criteria
Having SAD and two-way dependence between child and parent	Suffering from mental illness
Lack of personality disorder and mental retardation	Occurrence of a stressful event during the treatment period
If receiving medication, drug therapy regarding drug effect and dosage should have been stabilized one month before starting the baseline	Non-cooperation to participate in meetings
Family satisfaction	Drug use
-	Receiving psychotherapy in the last six months
-	Experiencing an acutely stressful event in the last six months

Abbreviation: SAD, separation anxiety disorder.

### 3.2. Zung's Self-Rating Anxiety Scale (SRAS)

The SRAS has 20 four-choice questions and is based on the physical-emotional symptoms of anxiety, which William Zank developed in 1971 (20). The most frequent symptoms of anxiety disorders were utilized as diagnostic criteria to create this scale. In the beginning, the clinical interviews of the anxious clients were recorded in detail, and later, they used every item mentioned in the construction of the test. The diagnostic criteria of SRAS are five emotional symptoms and 15 physical symptoms. Compared to other questionnaires, the advantage of the Zung anxiety questionnaire is that the respondents cannot follow a particular method in their answers. Several questions (sixteen questions) emphasize positive symptoms because of the 20 questions used in SRAS, and the rest (four questions) emphasize negative symptoms (20). Regarding the validity of the SRAS questionnaire, there have been various studies that show that this scale consistently differentiates anxiety disorders from other categories at a statistically significant level. One of these studies on the correlation between Hamilton's anxiety scale (1959) and SRAS showed that based on the information obtained from the implementation of the two scales on more than 500 cases and using the Pearson correlation method, the correlation between the two mentioned tests was equal to 71% (21). The coefficient of coherence method, which examines the degree of internal correlation, was used to calculate the reliability of the SRAS scale. In addition, the statistical analysis of SRAS results using the coefficient of coherence method showed a coefficient equal to 84, indicating this scale's very high reliability (22).

### 3.3. Implementation Method and Treatment Sessions

The participants were given explanations about the research conditions and the study's objectives. The implementation method was as follows: First, to evaluate SAD, the participants completed the pre-test phase; then, CBPT was applied to the experimental group, and no intervention was performed in the control group. Ten meetings were held to implement CBPT, and the content of each meeting is presented in Table 2. Finally, in the last treatment session, the post-test phase was implemented, and the results of both phases were extracted and recorded.

### 3.4. Statistical Analysis

The collected data were statistically analyzed using SPSS software version 24. The results were reported as

"mean  $\pm$  standard deviation" for quantitative SAD data with normal distribution. The uniformity of the rate distribution of the quantitative variables was assessed using the non-parametric Kolmogorov-Smirnov test. In contrast, the equality of variances among the groups was assessed using the Levene test. An Independent two-sample *t*-test was used to compare the average SAD in the two investigated groups. The paired samples *t*-test was used in each group to compare the average SAD in the stages before and after the intervention. In addition, the chi-square test was used to compare the frequency of qualitative variables in the investigated groups. The significance level in all the tests used was considered equal to  $\alpha = 0.05$ .

## 4. Results

The purpose of checking the assumption of normality is to check the normality of the distribution of scores matched to the population. This assumption implies that the observed difference between the distribution of scores of the sample group and the normal distribution in the population is equal to zero. Kolmogorov-Smirnov test was used to check this assumption. The results of examining this assumption regarding the scores of the primary variable of the research in two stages of the study are presented in Table 3. The purpose of checking the presumption of equality of variances is the equality of the variances of the groups. For this purpose, Levene's test is used, and the results of this test are given in Table 4. The results showed that the average SAD score before the intervention was equal to  $78.84 \pm 1.26$  for the control group and  $78.66 \pm 1.28$  for the CBPT group. There was no statistically significant difference between these two average levels ( $P = 0.975$ ). After the intervention, the average SAD for the control and CBPT groups was  $77.50 \pm 1.65$  and  $47.75 \pm 0.76$ , respectively, which showed that there was a significant difference between the two levels ( $P < 0.001$ ) (Table 5).

## 5. Discussion

The results showed that the level of SAD between the two experimental groups (CBPT) and the control group was not significantly different before the intervention. In contrast, after the intervention, a significant difference was observed between the average SAD of the two study groups. The intervention with the CBPT method significantly reduces SAD in first-grade elementary school students. The results of the present study were in line with those of Rezayi. The study mentioned above was conducted to investigate the effectiveness of play therapy with a social cognition

**Table 2.** The Content of Sessions Related to the Implementation of CBPT

Number of Sessions	The Content of the Meetings
1 and 2	Getting to know the parents, establishing an initial relationship with the subject, and conducting a semi-structured interview
1-3	Implementing a questionnaire to evaluate the baseline of treatment
4	Deep communication with the child by making bubbles
5	Emotional awareness by showing pictures related to emotions
6	Awareness of the intensity of emotions and recognition of the cycle of thought, emotion, and action
7	Learning to cope with anxiety through game detective
8	Learning to cope with anxiety through developing positive self-talk
9	Learning to deal with anxiety through challenging negative thoughts and developing problem-solving skills
10	Step-by-step plan and encouragement to succeed and face potential problems
11	Remembering the materials presented in the meetings

Abbreviation: CBPT, cognitive-behavioral play therapy.

**Table 3.** The Finding of Kolmogorov-Smirnov Test

SAD	Kolmogorov-Smirnov	P-Value
<b>Before intervention</b>		
CBPT	0.127	0.200
Control	0.184	0.200
<b>After intervention</b>		
CBPT	0.134	0.200
Control	0.186	0.200

Abbreviations: CBPT, cognitive-behavioral play therapy; SAD, separation anxiety disorder.

**Table 4.** The Finding of the Levene Test

SAD	F	DF-1	DF-1	P-Value
<b>Before intervention</b>	0.263	2	41	0.770
<b>After intervention</b>	1.566	2	42	0.221

Abbreviations: SAD, Separation anxiety disorder; F, F-value (statistical parameter); DF, degrees of freedom.

approach on children's behavioral problems, the results of which showed that the treatment mentioned above method significantly reduces children's behavioral problems (21). Falsafi et al. conducted a study to compare the effectiveness of cognitive, behavioral, and educational play therapy on the behavioral disorders of children with SAD (23). In another study conducted by Shahabizadeh and Khageaminiyan, story therapy with a cognitive-behavioral approach can reduce mood disorders in children (24).

Since learning is a continuous process that starts from childhood, and the ways of learning and its childhood improvement affect the amount of learning a person has throughout his life, there is a particular need to improve the learning process from childhood. In this regard, the use of CBPT is one of the influencing factors for enhancing the learning of children with SAD. Using CBPT techniques, the child reviews past experiences and, through interpersonal interactions, experiences

positive outcomes, including acceptance, reduction of painful effects, and corrected emotional experience. Play therapy is a method by which the natural expression of the child's states, i.e., the game, is used in his mania to help the child control his emotional pressures. Therefore, play therapy can be used to treat maladjusted children and those who have problems in solving compatibility issues.

#### 5.1. Limitations

One of the limitations of this research is the one-dimensional examination of students' gender (only boys); therefore, the generalizability of the research results should be considered. It is suggested that this approach be used in the treatment of chronic depression, obsession, and various anxieties such as generalized anxiety, social anxiety, phobias, and other attachments, and in girl groups as well.

**Table 5.** The Comparison of Study Groups in Terms of SAD

SAD	Mean ± SD	P-Value
<b>Before intervention</b>		0.975
CBPT	78.84 ± 1.26	
Control	78.66 ± 1.28	
<b>After intervention</b>		<0.001
CBPT	77.50 ± 1.65	
Control	47.75 ± 0.76	

Abbreviations: SAD, separation anxiety disorder; CBPT, cognitive-behavioral play therapy; SD, standard of deviation.

## 5.2. Conclusions

Based on the results, CBPT can effectively reduce SAD in primary school children. Therefore, psychologists, clinical professionals, and educational counselors of elementary school students can recommend using CBPT to treat some behavioral problems of elementary students.

## Footnotes

**Authors' Contribution:** A. B.: Writing original draft and editing; M. H. and M. J.; Supervising, investigating, methodology, and project administration.

**Conflict of Interests Statement:** Authors confirm this study has no relevant financial or non-financial competing interests.

**Data Availability:** The data presented in this study are openly available in one of the repositories or will be available on request from the corresponding author by this journal representative at any time during submission or after publication. Otherwise, all consequences of possible withdrawal or future retraction will be with the corresponding author.

**Ethical Approval:** The study protocol was approved by the Ethics Committee of Bojnord Branch, Islamic Azad University, Bojnord, Iran (ethical code: IR.IAU.BOJNOURD.REC.1402.012).

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**Informed Consent:** Verbal and written consent was obtained from the participants to participate in the present study.

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