



Research Paper

Effectiveness of Play Therapy on Anxiety and Shyness in Elementary School Students



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ABSTRACT

Background: Play therapy is a structured approach based on therapy theories that establish children's learning and communication processes.

Objectives: The purpose of this research was to investigate the effectiveness of play therapy on anxiety and shyness of elementary school children.

Materials & Methods: This pre-test post-test with a control group design was conducted on students of both sexes studying at Rezvan Khutbehsarai Elementary School in the academic year 2020-2021, in Talesh, North of Iran. Students who had a high score on anxiety and shyness test were selected by purposive sampling method and then randomly allocated into experimental and control groups. Anxiety and shyness were assessed using Spence Children's Anxiety Scale and Children's Shyness Questionnaire. Cognitive-behavioral play therapy intervention was performed during ten sessions. Data were analyzed using analysis of covariance.

Results: Play therapy significantly decreased the mean score of shyness and anxiety in the experimental group. The adjusted post-test mean score of anxiety (52.13, SD= 3.775) and shyness (77.88, SD= 5.947) in the experimental group was significantly lower than the adjusted post-test mean score of anxiety (61.42, SD= 3.671) and shyness in the control group (94.11, SD= 4.332).

Conclusion: The finding showed effectiveness of cognitive behavioral therapy in reducing anxiety and shyness in elementary school students. Parents should be motivated to learn concepts such as the need for play, types of games, and the role of play in repairing the parent-child relationship.

Keywords: Cognitive Behavioral Therapy, Play therapy, Anxiety, Shyness

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1. Introduction

Play connects the child's inner thoughts with the world around him or her and allows the child to take control of foreign objects. Play therapy is a structured approach based on therapy theories that establish children's everyday learning and communication processes [1]. Play therapy is a non-verbal approach being used by children aged 2 to 12 years old to explore their difficulties, hurts, and feelings via play with toys, sand, puppets, clay, art, dance, and music [2].

Play therapy is an auxiliary interaction between a child and an educated adult who, through symbolic communication in play, seeks out ways to create alertness and reduce the child's emotional disturbances. So that the child experiences, during interpersonal interactions with the therapist, acceptance, emotional release, reduction of painful effects, reorientation of impulses, and corrected emotional experience [3].

Shyness has been practically noticed since 1872 when Darwin called shyness a strange quality in the brain or a false shame. Shyness is characterized mainly by redness of the face, turning of the eyes or lowering of the head, and bluntness and nervous movements of the body [4]. Shyness as a form of emotional, and social isolation in social situations is a controversial topic in psychology and has been defined in various ways [5]. Shyness can be analyzed in multiple cognitive/conceptual components in terms of self-awareness, situational prediction assessment, and self-referentiality of social problems, anxiety, psychosomatic reactions, behavioral isolationist and withdrawn behaviors [6]. Embarrassment or shyness is a sign of loneliness, depression, social fear, low mood, and pessimism [7, 8]. Shy people avoid relationships with others. They deny their responsibility to build relationships with others, and their anxiety becomes apparent when exposed to social exchanges and interactions [9]. This disorder appears in children with symptoms such as extreme shyness, withdrawal from contact with others, and unwillingness to play in groups. Suppose shyness is shared as an individual problem. In that case, it can be called a social disease because it causes social anxiety, social fear, lack of self-confidence, weakness in social skills, and adjustment [10].

Anxiety disorder is one of the most common forms of childhood psychopathology, which increases the risk prediction for adulthood disorders by having an early onset and severely affecting a person's developmental trajectory [11]. About 5% of children develop an anxiety

disorder by adolescence [12]. In Iran, it is estimated between 2.6 to 41.2 percent and 20% of them have severe problem by the age of 16 [13].

Cognitive-behavioural therapy refers to a set of techniques that are used to treat a wide range of psychocognitive conditions such as depression or anxiety. This treatment is based on a framework that assumes that thoughts, emotions and behaviours are all related and more specifically, it promotes thoughts, feelings and behaviours. Therefore, a basic assumption in cognitive-behavioural therapy is that after identifying and changing a person's dysfunctional thoughts, the person's maladaptive feelings and behaviours will also change. Common techniques in cognitive-behavioural therapy for children include cognitive training, self-monitoring, emotion recognition, problem solving, coping skills, and reward programs [14]. Previous studies found the effectiveness of play therapy on fear and anxiety about some medical procedures [15], level of adaptation and positive emotions in children with cancer [16], reducing the shyness of preschool children [17], and aggression, stress, and anxiety in children [18].

So far, no study has been conducted on the effect of play therapy on shyness and anxiety in elementary school children in Guilan. So, the purpose of this study was to investigate these two variables in elementary school children.

2. Materials and Methods

This research was a pre-test, post-test with a control group design that was conducted on Rezvan Khutbeh Sarai elementary school in Talesh city in 2020-2021. A total of 32 students who were selected by purposive sampling method and had a high score in the anxiety and shyness test were divided into experimental and control groups by simple random sampling method (eight boys and eight girls in each group).

Students with the age of 10 to 13 years old, studying at the fourth to sixth grade, lack of a history of specific physical illness, lack of learning disabilities based on teachers' evaluation, taking low academic scores in Persian and Mathematics courses in previous years, having the consent of their parents, and voluntary participation by completion and signing of informed consent form at the beginning of the research were included to the study. Exclusion criteria were lack of interest or unwillingness of the participants or their parents to participate in the research group and absence of more than two sessions.

Table 1. A brief description of cognitive behavioral play therapy sessions

Session Number	Title of the Session	Activity	Homework for Next Session
1st	Introduction and communication with children	Create a safe atmosphere and a sense of calm for children, explain the rules and integrate the group by playing three-person games.	Each group member draws a picture from a memory of their choice.
2nd	Drawing activities and recognizing emotions	Check homework. Draw pictures with everyday life topics and talk about them.	Each group member should write down the words that they say to themselves.
3rd	The magic bag and its cards	A bag in which several cards with the usual positive and negative sentences that anxious and shy children say to themselves are written on both sides is given to each member. Then they read the negative sentence and, with the therapist's help, question the negative phrase and substitute the positive term in his mind.	Each group member should write down words that others say that hurt or give them hope.
4th	Thought, feeling, behaviour	The therapist prepares a table of negative statements that members address to themselves. Each group member reads one of these negative phrases, questions its inaccuracy, and writes a positive phrase in front of it. In this session, members are taught the ABC model, one of the critical concepts in cognitive-behavioral theory, and try to show them how positive or negative thoughts lead to positive or negative feelings and how it changes behavior.	Each group member should prepare a table and write down the positive thoughts and the negative thoughts that they have on the table.
5th	Enjoyable experiences and creative shaping	Using gouache and finger, members create shapes in groups of two or three with their participation and experience ways to have fun, laugh together, and create stories for their creations. The therapist then suggests ways to alleviate the loneliness, calm down, and avoid stress.	.
6th	Some people say, what do they say?	Children in the group, singing the song "some say. What do they say? They say to me, what do they say? They say slowly. What do they say?" And hold hands like a microphone. When the song is stopped, the child talks about the misconceptions that exist in society about shy children, and with the help of the therapist and others, it becomes clear that these words are wrong.	---
7th	Some love me	Members use the collage technique to create handicrafts to give to those they want to improve their relationship with, using the tools provided by the therapist.	Each group member draws a picture of a season in which they have fond memories of their life events.
8th	Chapters of my life	Colorless paintings from the four seasons are distributed among the members. Then, each member explains the tragedy that occurred in one of the months of the year, and members talk about it. Then, the therapist explains how to deal with it properly.	Each group member should bring group photos with their friends and peers.
9th	Friendship Exhibition	Members bring photos of their interactions with their friends to the meeting and tell the story like a director. With the therapist's help, emotions are examined, and the future of friendships is discussed.	Group members write their wishes.
10th	On the dream rug (goals for the future)	Encourage the child to combine his wishes with reality and the idea of flying with the rug of dreams to the future—a summary of activities.	---



After explaining the research objectives to the teachers and parents of primary school children, an informed consent was taken from the parents. Then questionnaires were provided to the participants. Participants were assured that they could withdraw from the study if they did not wish to continue their cooperation. Also, to comply with the principle of confidentiality, while assuring that the research information is confidential, they were assured that the results would be published in general.

Research instruments

Two questionnaires were used to collect information on anxiety and shyness; Spence Children's Anxiety Scale (SCAS) and Children's Shyness Questionnaire (CSQ). SCAS was developed by Spence in 1998 [19] to assess the symptoms of anxiety in children in the general population. The scale consists of 44 items including 6 filler items. The remaining 38 items are scored based on the Likert scale from 0 (never) to 3 (always) so that the maximum score is 114 and the minimum score is 0. The

Table 2. Pre-test and post-test scores of anxiety and shyness in the intervention and control group

Variable	Mean±SD		Between Group P-value	
	Intervention	Control		
Anxiety	Pre-test	67.06±4.932	63.05±4.196	0.911
	Post-test	52.13±3.775	61.42±3.671	0.001
	Within-group, P-value	0.001	0.185	
Shyness	Pre-test	117.88±6.592	96.68±4.655	0.241
	Post-test	77.88±5.947	94.1±4.332	0.001
	Within-group, P-value	0.001	0.66	



reliability of this scale is reported to be 0.92 for general anxiety and 0.60 to 0.82 for the subscale [20]. In Iran, the psychometric properties of the questionnaire were verified in the research of Zarghami et al., 2015. The calculated Cronbach's alpha coefficient was estimated above 0.7 [21].

CSQ was developed by Crozier in 1995 for measuring the shyness of children aged 8-12 developed [22]. The CSQ identifies two cognitive and physical aspects of shyness. This tool includes 26 questions. Since this questionnaire has been prepared to assess shyness in children aged 8-12 years, the method of answering should be straightforward. The children respond with the words "yes", "no", or "I do not know". For direct questions (22 questions), the answer "yes" is given two points, the answer "I do not know" is given one point, and the answer "no" is given 0-point score. Scoring is done in reverse in indirect questions (4 questions). The sum of a person's scores indicates his shyness, with a minimum score of 0 and a maximum score of 52 indicating a higher level of shyness. Crozier used the questionnaire on a sample of 137 British children within this age range and showed satisfactory reliability (Cronbach's alpha = 0.82). In Iran, Movahedi et al. [23] measured its reliability, reported through Cronbach's alpha of 0.82. They used concurrent validity to determine the validity of the present tool for use in the indigenous population. A correlation coefficient of 0.85 was established between the scores obtained from the questionnaire and the scores and rankings that teachers and educators gave to students in terms of their shyness.

Intervention protocol

The content of the play therapy protocol is briefly described in Table 1. Cognitive-behavioral play therapy intervention was performed during ten sessions; 2 sessions of 45 minutes per week. The interventions were

performed by the researcher in person at the place rented for the research. Control group were educated of play therapy and basic rules and procedure and post-test exam was taken 10 weeks after the pre-test.

Statistical analysis

Data were described using mean and Standard Deviation (SD), frequency and percentage. The analysis of covariance was used to test the research hypotheses. Prior to analysis, the assumptions of analysis of covariance including homogeneity of regression coefficients in groups, homogeneity of error variance in groups, linearity of dependent and pre-test variable, normality of dependent variable, and independence of data from each other were assessed. SPSS software was used to analyse the data.

3. Results

In this study 32 students with the mean age of 11.4 (SD=0.91) were participated. During the study, four members of the control group and four members of the experimental group were excluded from the study due to the infection of Coronavirus disease. Among 24 students, 31% of the experimental group and 37% of the control group were at the fourth grade of elementary school (10 to 11 years old), 43% of the experimental group and 43% of the members of the control group were at the fifth grade of elementary school (11 to 12 years), and 25% of the members of the experimental group and 18% of the members of the control group were at the sixth grade of elementary school (12 to 13 years old).

Table 2 summarizes descriptive statistics for the anxiety and shyness variables in the control and experimental groups. The mean score of anxiety and shyness of the two groups were not significant at baseline. In the post-test, the mean score of anxiety in the experimental group

(52.13) was significantly lower than the control group (61.42) ($F_{1,28}=53.9$, $P\text{-value}=0.001$, $\eta^2=0.67$). Similarly, the mean post-test score of shyness in the experimental group (77.88) was significantly lower than the control group (94.1) ($F_{1,28}=43.1$, $P\text{-value}=0.001$, $\eta^2=0.61$).

4. Discussion

This study aimed to investigate the effectiveness of play therapy on the anxiety and shyness of elementary school students. Research has shown that play therapy reduced the scores of both variables in children. This finding is consistent with the results of previous studies. In a quasi-experimental design with a control group with pre-test and post-test, Moridian et al. Examined 40 male fourth-grade elementary school students in Nurabad (Delfan). Findings have shown that play therapy significantly affects children's aggression, stress, and anxiety [18]. Poudineh et al. conducted a study on the effect of play therapy on anxiety in primary school children in Zahedan. Their findings showed a significant difference between pre-test and post-test between the experimental and control groups in the score of anxiety [24]. Two previous studies also found effectiveness of play therapy in reducing the shyness of school-aged children [17, 25].

Play connects the child's inner thoughts with his outer world and allows him to control foreign objects [4]. Play allows the child to express their experiences, thoughts, feelings, and desires that are threatening to them [8]. Researchers and theorists, in particular, believe that cognitive-behavioral play therapy relies on the flexibility of younger children, reduces the expectation of oral expression with children, and increases confidence in the empirical approach. Play therapy in this way is a relatively unique adaptation of cognitive-behavioral therapy for adults that has been developed for school children and the first years of primary school. The theoretical framework of this cognitive therapy is based on the cognitive model of emotional disorders. Most children usually lack the verbal ability to express their emotions, so if they are experiencing a bad feeling such as anxiety, they will not be able to use the appropriate words or sentence structure of others, such as their parents or educators, to deal with their inner pain and suffering. Also, it is possible that adults (such as parents) do not have the communication skills needed to understand the small verbal messages of these children. Hence, in an inappropriate atmosphere of communication with most adults in the community, the unpleasant emotions of these children accumulate and provide an unsuitable ground for aggravating children's behavioral problems. However, play therapy can indirectly reduce the child's unpleasant feelings through

the activities suggested by the therapist and thus diminish the child's anxiety. In addition, the child's possible censorship to express his anxiety is reduced in play therapy. In this warm and calm atmosphere, with the minor restrictions to be experienced, the child can project his feelings of anxiety more freely and thus become more psychologically relaxed. When working with children using play therapy models, interventions should focus on helping the child formulate thoughts that should be appropriate to their situation but do not try to make the child think like an adult. In this way, this model provides a combination of adaptive coping skills. Cognitive change is indirectly discussed during this method, and most of the adaptive behaviors against shyness are introduced to children. It is suggested that, in the form of group education, parents can be trained in concepts such as the need for play, types of games, and the role of play in repairing the parent-child relationship. These group training can take place in training programs of parent-teacher associations. Also, play therapy or different forms of play is an excellent mechanism to reduce children's problems. However, most of the educational concepts taught by teachers are done using traditional teaching methods such as lectures. Awareness of elementary teachers using games in the academic structure can significantly reduce students' anxiety and mood problems. Therefore, while serving educators in educational programs, teachers can be introduced to the concepts of play, its role in reducing children's pain, using games to teach science and mathematics, and reading and writing.

This study suffers from some limitations; First, the existence of pandemic conditions in the community has caused the researcher not to be able to access all the relevant people in the statistical community for fear of contracting the disease or participating in the research team. This issue is likely to cause the characteristics of the sample population to be slightly different from the characteristics of the community. At the same time, the researcher has tried to satisfy the primary audience of his research as much as possible to participate in the study. Second, although essential variables such as past experiences of subjects, their age of anxiety or shyness, and the roles of educational factors affecting the development of children were identified by the researcher, the researcher was not able to control all of them, so the researcher used a quasi-experimental research design, and has tried to neutralize the effect of these variables through the random arrangement of individuals in research groups. Third, according to the research objectives and tools used, the researcher has dealt with the effect of play therapy in reducing anxiety or shyness in general. In contrast, children's anxiety and mood prob-

lems can have various minor forms in different classes of disorders specific to this age group.

5 .Conclusion

The current study revealed that play therapy has a significant role in reducing anxiety and shyness in elementary school students. Parents should be motivated to learn concepts such as the need for play, types of games, and the role of play in repairing the parent-child relationship.

Ethical Considerations

Compliance with ethical guidelines

This study was approved by Research Ethics Committee of the Islamic Azad University-Rasht Branch (Code: IR.IAU.RASHT.REC.1399.090).

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Authors' contributions

Designed and performed and gathered data: Sima Bashash; Validated, analyzed and supervised the research: Leila Moghtader; Prepared data, wrote and edited the paper: Mohammad Pourshaban.

Conflict of interest

The authors declared no conflict of interest.

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