

The Effectiveness of Sand Play Therapy on Social Skills and Adaptation of Children with Separation Anxiety

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ABSTRACT

Objective: The aim of this current research was to examine the effectiveness of sand play therapy in improving the social skills and adjustment of children experiencing separation anxiety.

Methods: The research methodology utilized in this investigation was semi-experimental, employing a pre-test, post-test design with a control group. The specific population targeted for this study encompassed all children aged between 7 and 12 who had been diagnosed with separation anxiety disorder and were receiving counseling at the educational and training facility centers in Tehran in 2022. A sample of 30 individuals was chosen through convenience sampling and then randomly split into two groups of 15 participants each, designated as the experimental group and the control group. The research tools employed in this study consisted of the social skills questionnaires created by Karamati (2012) and the adaptability questionnaire by Sinha and Singh (1997). The sand play therapy sessions, comprising 8 sessions lasting 60 minutes each, were conducted by the researcher for the experimental group, while the control group did not undergo any training or therapy.

Results: The outcomes of this study indicated that sand play therapy had a beneficial effect on the social skills and social adjustment of children with separation anxiety, resulting in an enhancement of their overall social functioning and adaptation.

Conclusions: In light of these findings, it is recommended that educational counselors and psychologists integrate sand play therapy as an intervention to boost the social skills and adaptability of children grappling with separation anxiety in educational environments.

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Introduction

Separation anxiety disorder is a prevalent mental health condition observed in children and adolescents, characterized by common symptoms such as reluctance to be alone or away from adults in any setting, as well as anxiety surrounding separation from caregivers or familiar environments ([Elbay et al., 2021](#); [Mohammadi et al., 2020](#)). Onset typically occurs around the age of 8 and can persist into mid-childhood or adolescence, leading to distress for both the affected children and their caregivers. Manifestations of this disorder often include unwarranted concerns, disruptions in sleep patterns, heightened stress in social and academic contexts, and various physical manifestations that impede overall well-being and adjustment ([Francis et al., 2020](#)). The concept of adaptation encompasses the gradual alignment with changes and the establishment of a harmonious relationship between an individual and their surroundings, facilitating personal development and societal welfare while acknowledging external realities. It is essential to note that compatibility does not entail conformity to societal norms ([Hosseini & Ashori, 2022](#); [Pahlavi & Ashori, 2021](#)). [Zeidner and Kloda \(2013\)](#) define adaptation as the congruence between the current circumstances and the anticipated outcomes, emphasizing that compatibility is achieved when an individual's present situation aligns with their expectations. Psychological adjustment refers to an individual's motivational, perceptual, cognitive, and emotional tendencies in reacting to life's challenges, ultimately shaping observable behaviors in various contexts ([Attaran & Mohammadi, 2018](#)). Within educational settings, psychological adaptation to academic demands represents a fundamental objective. Learners navigating academic challenges must draw upon their behavioral, cognitive, and emotional capabilities to effectively address and adapt to these changes ([Valås, 2001](#)).

Numerous students experience separation anxiety, detachment, lack of motivation, and despondency, all of which can impact their social aptitude significantly ([Foley et al., 2008](#); [Scaini et al., 2012](#)). Social skills encompass a range of behaviors that facilitate successful interactions with others and preempt negative responses, encompassing both verbal and non-verbal communication strategies that enhance one's ability to interpret and anticipate others' actions while managing and regulating interpersonal exchanges ([Gresham et al., 2006](#)).

Social skills can be defined as the behaviors that an individual learns and adopts within a given society, enabling them to engage with others in a manner that elicits positive reactions while

avoiding negative ones ([Jelvegar et al., 2014](#)). It is essential for every individual to possess both personal skills and social skills in order to navigate successfully within a societal setting. These social skills encompass a collection of behaviors that are assimilated through the processes of observation, imitation, practical application, and feedback. They encompass both verbal and non-verbal actions, entailing appropriate and efficient responses that are interactive in nature, maximizing social reinforcement. Moreover, these skills evolve based on the individual's characteristics and environment, maturing further through educational experiences ([Jacob et al., 2022](#)).

A variety of intervention schemes have been devised and implemented to enhance the communication, cognitive, social, and behavioral competencies of anxious children. Among these, sand play therapy has proven to be particularly effective, especially when employing a cognitive-behavioral approach, as proposed in the form of cognitive-behavioral sand play therapy ([Farzane et al., 2022](#)). This form of therapy operates indirectly, adopting a non-directive and non-verbal approach that allows children to express and alleviate their challenging behaviors within a tranquil, secure, and stress-free environment, devoid of direct interference from a play therapist ([Turner, 2013](#)). By engaging in cognitive behavioral sand play therapy, children are presented with numerous opportunities to articulate a wide spectrum of emotions through activities involving sand manipulation such as digging, pouring, and concealing, as well as through the use of symbolic objects ([Shamsi pour et al., 2019](#)). Given that cognitive-behavioral sand play therapy aligns with the verbal and cognitive developmental capacities of children and is perceived as an enjoyable experience by them, it effectively facilitates the exploration and identification of children's issues and challenges. Consequently, it establishes a safe and accepting communication platform through the utilization of sand and symbolic representations, aiding in the expression and resolution of children's concerns ([Roesler, 2019](#)).

Separation anxiety disorder stands as one of the most prevalent anxiety disorders experienced during childhood. Research findings suggest that separation anxiety often stems from an unhealthy family structure and the communication dynamics between parents and the child. Hence, the current study was undertaken with the objective of assessing the efficacy of sand play therapy in enhancing the social skills and adjustment of children afflicted with separation anxiety. The study

endeavors to address the query regarding the effectiveness of sand play therapy in ameliorating the social skills and adjustment levels of children grappling with separation anxiety.

Material and Methods

The methodology employed in the current study was characterized as semi-experimental, involving a pre-test, post-test design with a control group. The statistical population under investigation consisted of all individuals between the ages of 7 and 12 who had been diagnosed with separation anxiety disorder and sought assistance at the counseling center located in the Panj Shahr region of Tehran in 2022. The participants were allocated into either the experimental group or the control group, with the latter comprising a total of 15 individuals. Inclusion criteria encompassed a confirmed diagnosis of separation anxiety disorder, a basic understanding of mental health principles, enrollment in primary education, while exclusion criteria involved incomplete responses to the research instruments and a lack of willingness to participate. The research instruments utilized in this study comprised the following questionnaires.

Instruments

The Social Skills Questionnaire: This evaluation tool consists of 40 items focusing on various aspects of social skills development, with responses rated on a 3-point scale (1 for "no," 2 for "sometimes," and 3 for "yes"). These dimensions include competencies related to interpersonal respect, adherence to rules, task execution, engagement in group activities, and tolerance levels. The questionnaire was originally developed and validated by [Karamati \(2003\)](#) for his doctoral dissertation with a reported reliability coefficient of 0.89. In the study conducted by [Soltani and Hosseininasab \(2011\)](#), reliability was assessed using Cronbach's alpha method, yielding a coefficient of 0.74.

The Adaptation Questionnaire: This survey was devised by Sinha and Singh ([Kumar & Singh, 2013](#)) to assess emotional, social, and educational adaptation across three distinct domains. Responses to the questionnaire items are dichotomous (either "yes" or "no"). The cumulative scores from the three subscales provide an overall measure of adaptability, whereby each item score indicates potential discrepancies. Each subscale has a maximum score of 20, leading to a total maximum score of 60; thus, higher scores across all subscales and the overall score indicate poorer levels of adaptation. The cut-off threshold for satisfactory adaptation stands at 30, with

scores below indicating inadequacy and those above reflecting a higher degree of adaptability. [Kumar and Singh \(2013\)](#) reported high reliability coefficients for the high school students' adjustment questionnaire: 0.95 for overall adjustment and 0.94, 0.93, and 0.96 for emotional, social, and educational sub-scales, respectively. Through the split-half method, a reliability coefficient of 0.93 was determined for overall adaptability and 0.90, 0.96, and 0.93 for emotional, social, and educational subscales, respectively.

Karami (2012) provided a detailed account on the reliability assessment of the questionnaire utilizing the Kuder-Richardson method. The overall consistency was reported to be 0.94 for the emotional, social, and educational scales, with individual values of 0.92, 0.92, and 0.96 respectively. Moreover, the content validity was rigorously confirmed by esteemed psychology professors through a series of comprehensive studies.

Within the context of this particular study, the sand play therapy intervention method established by [Homeyer and Sweeney \(2022\)](#) was meticulously employed. To ensure the validity of the content, the intervention package underwent a thorough review by supervisors, consultants, and several domain experts. The valuable suggestions put forth by these experts were duly considered and implemented to resolve any identified issues. The sand play therapy sessions, totaling 8 sessions of 60 minutes each, were adeptly conducted by the researcher. A concise overview of these sessions can be found in Table 1.

Table 1. Description of sand play therapy intervention sessions

Session	Content	Strategy	Aim
1	Creating the world A: Introduction of Sand therapy to clients B: Building the world	Cognitive-behavioral	Creating a safe, protected and free space, being in a position where the child feels comfortable. Creating an opportunity for the child to create whatever he wants and use anything and the object on the table to tell a story.
2	A: To experience and make up the world again B: To experience	Cognitive-behavioral	Encouraging the child to experience the whole world; creating space for deep experience; Create the ability to change in your world; Reaching the fact that by making changes, the child can leave that world if he wants to.
3	travel around the world	Cognitive-behavioral	Recording the child's feelings about the created world, recording verbal and non-verbal signs, encouraging the client to express his feelings.
4	Shaping the scenario in order to create space for the intervention	Cognitive-behavioral	Creating a scenario to determine how the child interacts with the world, playing a role by creating the impression of another person in the world

5	Identifying the child's behaviors, beliefs and feelings	Cognitive-behavioral	Recounting the child's feelings towards the objects and people in the world, specifying the child's thoughts and feelings towards the characters added to the world, helping the child to recognize his feelings.
6	Therapeutic intervention	Cognitive-behavioral	Teaching how to interact with the world and its characters, teaching problem solving skills, rebuilding negative thoughts, the ability to control emotions and feelings indirectly while interacting with the world and the characters added in the world being experienced.
7	The transition stage A: Making meaning - making B: Communicating the sand world of the child's real loss	Cognitive-behavioral	Explanation about how to build the world, understand the connection between the world, play with the world, communicate with the child's memories and current issues.
8	Destroying the world A: Understanding the world B: Erasing the world	Cognitive-behavioral	Creating awareness for the child regarding his real needs and concerns, encouraging the child to interact with the reality-based environment, awareness for the child regarding how to interact with others and real life.

Subsequently, in the implementation phase, following due coordination and acquisition of necessary permissions, a pre-test was meticulously administered in strict adherence to the ethical research principles. The sand play therapy intervention program was then executed by the researcher across 8 one-hour sessions for the experimental group, while the control group remained devoid of any training during this period. Post the conclusion of the training sessions, a post-test assessment was conducted for both groups. Throughout the course of this research endeavor, utmost attention was paid to upholding all ethical standards, including obtaining informed consent from the participants to engage in the study. Additionally, efforts were made to foster trust among the subjects regarding the confidentiality of their personal information and ensuring their freedom to withdraw from the research at any stage. Detailed explanations were provided to the participants, who in turn completed the requisite questionnaires. The data analysis was carried out employing the SPSS version 24 software, with covariance analysis being utilized for a comprehensive examination of the data.

Results

In table 2, descriptive findings of pre-test - post-test scores of social skills and compatibility of the experimental and control groups are shown.

Table 2. Descriptive findings of pre-test - post-test scores of social skills and adaptation of the experimental and control groups

Variable	Phase	Experimental		Control	
		Mean	SD	Mean	SD
Social skills	Pretest	26.40	5.49	25.80	5.59
	Posttest	32	5.41	25.23	5.87
Adaptation	Pretest	28.53	5.57	28.87	5.12
	Posttest	39.07	5.42	27.47	5.93

As can be seen in table 2, the average of social skills and adaptation in the post-test of the experimental group is higher than the pre-test. In order to investigate the effectiveness of sand play therapy based on social skills and adaptation of children with separation anxiety, multivariate analysis of covariance test was used. The results of the homogeneity test of regression slope of pre-test and post-test scores in the experimental and control groups showed that the regression slope is equal in both groups. The results of Levene's test to check the homogeneity of the variance of the dependent variables in the groups showed that the variance of the variables in the groups is equal. The results of the M-box test to check the equality of the covariance matrix of the dependent variables between the experimental and control groups also showed that the covariance matrix of the dependent variables is equal in the two groups. The results of Bartlett's chi-square test to check the sphericity or significance of the relationship between the variables showed that the relationship between these components is significant. After examining the assumptions of multivariate covariance analysis, the test results showed that there is a significant difference between the two groups in social skills and adaptation ($p < 0.01$, $F_{(3,23)} = 7.850$), $0.494 = 0.01$ Wilks Lambda). The results of univariate analysis of covariance are reported in table 3.

Table 3. The results of univariate covariance analysis of the difference between the experimental and control groups in social skills and adaptation

Variable	Source	Mean	Mean difference	Std. error	F	P	Effect size
Social skills	Experimental	32.26	3.72	0.625	17.52	0.001	0.41
	Control	28.54					
Adaptation	Experimental	34.34	3.025	0.556	14.63	0.001	0.36
	Control	31.32					

According to Table 3, it can be said that sand play therapy was effective on the social skills and adaptation of children suffering from separation anxiety and increased the social skills and adaptation of children suffering from separation anxiety.

Discussion

Children's separation anxiety is a psychological condition that significantly impacts the adjustment and social abilities of young individuals ([Elbay et al., 2021](#)). This disorder can give rise to various challenges in the affected individual's life. Hence, it becomes imperative to explore and implement effective therapeutic interventions to alleviate the symptoms associated with this condition. Consequently, the current research endeavor was undertaken with the primary objective of evaluating the efficacy of utilizing sand play therapy as a means of enhancing the social skills and adaptation levels of children grappling with separation anxiety. The outcomes of the study revealed a positive correlation between sand play therapy and the enhancement of social skills among children experiencing separation anxiety. This finding resonates with the conclusions drawn by [Rezaee and Rasouli \(2020\)](#), whose investigation demonstrated the beneficial impact of sand play therapy on not only social skills but also on reducing anxiety and aggression levels in children diagnosed with Down syndrome. In essence, cognitive behavioral sand play therapy emerges as a non-verbal modality through which a child can externalize their inner conflicts, desires, and emotions by constructing a symbolic world within a sand therapy. The therapeutic facilitator assumes the role of a silent observer during the construction process, refraining from offering interpretations until the child has created several sand therapies over a defined timeframe. This approach fosters a natural unfolding of the healing process, devoid of external influences, thereby fostering a profound cognitive awareness within the child regarding their sand play experiences, often leading to newfound insights and perspectives.

The study findings underscored the effectiveness of sand play therapy in enhancing the adjustment levels of children contending with separation anxiety. This particular discovery aligns with prior research endeavors in the field of therapeutic interventions for children, such as the study conducted by [Barimani et al. \(2018\)](#), which highlighted the positive impact of play therapy on the social adaptation and communication skills of deaf children.

Furthermore, within the context of sand play therapy, a unique opportunity emerges wherein the young individual can establish a harmonious connection between their mind, body, and imagination. An additional crucial aspect contributing to the healing process within sand play therapy is the provision of a safe yet liberating space, overseen by the therapist, incorporating elements of water and earth. Within this setting, the child is encouraged to breathe life into their fantasies and innermost experiences, thereby constructing a communicative framework. The secure and non-judgmental utilization of sand and symbolic figurines serves as a conduit for the expression and resolution of the child's underlying issues. As the child grapples with and resolves internal conflicts through this medium, the path towards treatment and amelioration of their challenges is paved, ultimately fostering a process of adaptation and growth.

The limitations of the present study are multifaceted, encompassing the reliance on self-reported data from the research tool utilized and the absence of a designated follow-up period for further investigation. In order to address these limitations and enhance the comprehensiveness of future research endeavors, it is imperative to conduct comparative studies across genders, specifically focusing on girls.

By undertaking comparative analyses of research outcomes among both male and female subjects, counselors and educational psychologists can leverage the therapeutic benefits of sand play therapy training. This approach aims to bolster the social skills and adaptability of children grappling with separation anxiety within educational settings. Furthermore, in light of the profound impact that teachers wield in shaping the educational experiences of young learners, it is recommended that educational authorities consider the integration of sand play therapy training programs within schools. This proactive measure is designed to equip teachers with the necessary tools and insights to effectively support students facing separation anxiety and other related challenges.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving human participants were reviewed and approved by the ethics committee of the Islamic Azad University. The patients/participants provided their written informed consent to participate in this study.

Author contributions

All authors contributed to the study conception and design, material preparation, data collection, and analysis. All authors contributed to the article and approved the submitted version.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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