

The Effectiveness of Cognitive Behavioral Therapy on Social Anxiety and Aggression in Children from Single-Parent Families

Roya Raoufi Ahmad¹, Anousha Toosi², Nazanin Rahmatian Dehkordi³, Hamid Najafi Moghadam^{4*}, Mohammad Yazdanpoor Moghadam⁵

1 Master of General Psychology, Tonekabon Branch, Islamic Azad University, Tonekabon, Iran

2 Bachelor Student of Psychology, Sari Branch, Islamic Azad University, Sari, Iran

3 Master of Clinical Psychology, Naein Branch, Islamic Azad University, Naein, Iran

4 Master of Clinical Psychology, Ferdows Branch, Islamic Azad University, Ferdows, Iran

5 Master of Clinical Psychology, Sari Branch, Islamic Azad University, Sari, Iran

*Correspondence: Hamid_teach@yahoo.com

Article type:
Original Research

Article history:
Received 21 January 2024
Revised 2 May 2024
Accepted 12 May 2024
Published online 1 June 2024

ABSTRACT

The aim of this study was to determine the effectiveness of cognitive behavioral therapy (CBT) on social anxiety and aggression in children from single-parent families. The research method was quasi-experimental, utilizing a pre-test–post-test design with experimental and control groups. The statistical population included single-parent children who referred to counseling centers in Tehran during the year 2023. The research sample consisted of 30 individuals selected through convenience sampling and randomly assigned to two groups: an experimental group (15 participants) and a control group (15 participants). The research instruments included the Social Anxiety Questionnaire and the Aggression Questionnaire. Initially, a pre-test was administered to both groups. Subsequently, the experimental group received cognitive behavioral therapy over eight 90-minute sessions, conducted twice per week by the researcher. The findings revealed that the post-test mean scores for social anxiety and aggression in children were significantly different compared to the pre-test scores. Therefore, cognitive behavioral therapy has a significant effect on reducing social anxiety and aggression in children from single-parent families.

Keywords: Cognitive Behavioral Therapy, Social Anxiety, Aggression, Single-Parent Children.

How to cite this article:

Raoufi Ahmad, R., Toosi, A., Rahmatian Dehkordi, N., Najafi Moghadam, H., & Yazdanpoor Moghadam, M. (2024). The Effectiveness of Cognitive Behavioral Therapy on Social Anxiety and Aggression in Children from Single-Parent Families. *Mental Health and Lifestyle Journal*, 2(2), 9-15. <https://doi.org/10.61838/mhfj.2.2.2>

Introduction

The single-parent family is one of the unique familial conditions that, as an important environmental variable, has a direct and indirect significant impact on the general development and various behavioral dimensions of children—particularly in the domains of mental and physical health, as well as adaptation (1, 2). The development of a child or adolescent's personality is strongly influenced by parental presence. The

absence of one or both parents has adverse effects on their development and predisposes them to psychological disorders or future behavioral problems. The absence of a father or mother can have both direct (e.g., deprivation of a same-gender role model) and indirect (e.g., lack of emotional or financial support) effects on children (3, 4).

Social anxiety disorder is one of the most prevalent disorders among individuals and is characterized by intense fear and worry about negative evaluation or humiliation in social situations, which results in severe distress when interacting with others. This disorder is associated with avoidant behavior and disrupts the individual's social functioning. Moreover, it negatively affects education level, occupational performance, interpersonal relationships, and overall quality of life (5, 6).

Social anxiety refers to the anxiety or fear experienced in interpersonal or performance situations. Individuals with high levels of social anxiety fear negative evaluations from others or performing actions that may lead to embarrassment (7, 8). The most common fears include speaking in front of a group, delivering presentations in meetings or classrooms, meeting new people, and conversing with authority figures. While this may resemble shyness, individuals with social anxiety disorder tend to avoid social situations more often, feel more discomfort in social settings, and exhibit these symptoms over a longer period in their lives compared to those who are simply shy (9).

Behavioral problems are more frequently observed among children whose parents are divorced or separated, as compared to those whose parent(s) are deceased. Divorce represents a significant risk across a broad spectrum of society. Parental divorce is a key factor contributing to mental health problems among youth and is associated with a range of issues such as inadequate educational attainment, low self-confidence, psychological distress, criminal behavior or recidivism, drug abuse, sexual precocity, involvement in adult crimes, depression, and suicide attempts (10, 11).

Aggression in children manifests in various forms, including verbal abuse, irritability, disobedience, destructiveness, oppositional behavior, shouting, crying, and stubbornness. Typically, the intentions behind aggressive behavior are not easily visible. Even aggressive individuals themselves are often unaware of the exact reasons for their behavior or what they aim to achieve through it. Thus, although social psychologists define aggression as intentional harm to others, they recognize the difficulty in determining whether an act that caused harm was indeed carried out with intent (12, 13).

Cognitive Behavioral Therapy (CBT) is a short-term but goal-oriented treatment that offers a scientific approach to resolving individual problems. The primary objective of this therapy is to change the thought patterns or behaviors that have caused difficulties and ultimately alter associated emotional responses (David et al., 2018). In general, CBT is a therapeutic approach that helps individuals identify, understand, and change negative thought and behavior patterns. In cases of social anxiety, CBT helps students identify their fears and worries in social contexts and gradually reduce these fears through the use of effective coping strategies. Furthermore, in the case of depression, CBT can assist students in identifying and restructuring negative thoughts about themselves, their future, and the world, thereby improving mood and reducing anxiety symptoms (14, 15).

Therefore, the present study seeks to answer the following research question: Does Cognitive Behavioral Therapy have an effect on social anxiety and aggression in children from single-parent families?

Methods and Materials

Study Design and Participants

The research method was quasi-experimental, utilizing a pre-test–post-test design with experimental and control groups. The statistical population included children from single-parent families who had referred to counseling centers in Tehran in 2023. The sample consisted of 30 participants selected through convenience sampling, and they were randomly assigned to two groups: an experimental group (15 participants) and a control group (15 participants). The research instruments included the Social Anxiety and Aggression Questionnaires. Initially, a pre-test was administered to both groups. Subsequently, the experimental group received Cognitive Behavioral Therapy (CBT) over eight 90-minute sessions, held twice a week, and delivered by the researcher.

Data Collection

The first clinical instrument used was the LSAS-SR, which evaluates a wide range of social situations that individuals with social anxiety disorder may find difficult to confront. The questionnaire includes 24 items distributed across two subscales: performance anxiety (13 items) and avoidance (11 items). Each item is rated separately for anxiety or fear (0 to 3; none, moderate, severe) and avoidant behavior (0 to 3; never, rarely, often, always). This test yields an overall social anxiety score, allowing classification into four severity levels: mild, moderate, severe, and very severe social anxiety. The Cronbach's alpha for the entire scale has been reported as .95. The subscale alphas are .82 for performance anxiety and .91 for avoidant behavior.

The Nelson Aggression Scale for Children is a self-report instrument that assesses various situations that provoke anger in children, the intensity of their anger, and their social skills. It contains 39 items and comprises four subscales: frustration (11 items), physical aggression (9 items), peer relationships (9 items), and authority relationships (10 items). Items are rated using a four-point Likert scale (1: I don't care, 2: It bothers me, 3: I get really upset, 4: I get angry). The minimum possible score is 39 and the maximum is 156. Higher scores indicate greater anger intensity, while lower scores reflect lower levels of anger.

Intervention

The intervention protocol in this study was based on the principles of Cognitive Behavioral Therapy (CBT) and was delivered over eight structured sessions, each lasting 90 minutes and conducted twice a week for four consecutive weeks. The sessions were designed and implemented by the researcher to target maladaptive thought patterns and behavioral responses related to social anxiety and aggression in children from single-parent families. In the initial sessions, children were introduced to the nature of anxiety and aggression, the CBT model, and the relationship between thoughts, emotions, and behaviors. Psychoeducation was provided to help participants recognize how negative automatic thoughts contribute to emotional and behavioral difficulties. Subsequent sessions focused on identifying and challenging distorted cognitions, developing more balanced and constructive thinking patterns, and implementing behavioral strategies such as exposure to anxiety-provoking situations, role-playing, and problem-solving exercises. Techniques such as relaxation training, deep breathing, and cognitive restructuring were used to equip children with practical tools for managing their emotional responses. Additionally, the sessions

incorporated activities aimed at enhancing social skills, assertiveness, and conflict resolution, which are essential for reducing aggression and improving interpersonal functioning. Each session included homework assignments to reinforce learning and encourage the application of newly acquired skills in real-life settings. The intervention was tailored to the developmental level of the participants and delivered in an engaging and supportive group format to promote peer interaction and mutual support. Throughout the program, progress was monitored, and individualized feedback was provided to ensure the active participation of each child and the effective internalization of therapeutic concepts.

Data analysis

The data analysis in this study was conducted using Analysis of Covariance (ANCOVA) to determine the effectiveness of Cognitive Behavioral Therapy on reducing social anxiety and aggression in children from single-parent families. Prior to performing ANCOVA, assumptions such as normality, homogeneity of variances, and the linear relationship between the covariate (pre-test scores) and the dependent variables (post-test scores) were evaluated. ANCOVA was employed to control for the potential effects of pre-test scores and to examine whether there were statistically significant differences between the experimental and control groups in the post-test scores. The significance level was set at $p < .05$, and all analyses were performed using SPSS software.

Findings and Results

Table 1 presents the mean scores of social anxiety and aggression in the experimental and control groups.

Table 1. Mean and Standard Deviation of Pre-test and Post-test Scores for Social Anxiety and Aggression

Variable	Group	Pre-test Mean	Pre-test SD	Post-test Mean	Post-test SD
Social Anxiety	Control	40.37	5.23	39.78	5.68
	Experimental	39.74	5.56	30.57	3.14
Aggression	Control	75.37	8.54	52.45	6.86
	Experimental	73.78	9.67	70.53	8.76

As shown in the table below, the F-value for the difference between groups (control and experimental) is statistically significant. This means that, after controlling for the pre-test factor, a significant difference exists between the social anxiety scores of the control and experimental groups. Therefore, it can be concluded that Cognitive Behavioral Therapy has an effect on social anxiety in children from single-parent families.

Table 2. ANCOVA Results for Social Anxiety Variable

Source	Sum of Squares	df	Mean Square	F	Sig.	Power
Pre-test	102.757	1	102.757	9.458	0.127	0.186
Group	331.456	1	331.456	12.698	0.006	0.621
Error	245.861	27	9.105			
Total	686.000					

As shown in the table below, the F-value for the difference between groups (control and experimental) is statistically significant. This indicates that, after controlling for the pre-test factor, a significant difference

exists between the aggression scores of the control and experimental groups. Therefore, it can be concluded that Cognitive Behavioral Therapy has an effect on aggression in children from single-parent families.

Table 3. ANCOVA Results for Aggression Variable

Source	Sum of Squares	df	Mean Square	F	Sig.	Power
Pre-test	153.377	1	12.398	5.214	0.123	0.458
Group	254.412	1	97.355	10.678	0.007	0.354
Error	153.358	27	5.679			
Total	1053.000					

Discussion and Conclusion

The findings indicated that the mean scores of children's social anxiety in the post-test were significantly lower than in the pre-test. Therefore, Cognitive Behavioral Therapy (CBT) has an effect on reducing social anxiety in children from single-parent families.

CBT, as an effective intervention method, helps children reduce tension and inhibition in social situations through the use of coping strategies and the restructuring of negative thoughts. According to the cognitive-behavioral approach, one of the primary causes of inhibition and tension in social contexts is the presence of dysfunctional thoughts and negative beliefs about oneself and others' reactions. Individuals with social anxiety often believe that they are constantly being judged and evaluated by others, and that any mistake could lead to ridicule or rejection. These negative beliefs cause the individual to feel tense and inhibited in social situations, preventing them from behaving naturally or spontaneously. CBT, by targeting and modifying these maladaptive thought patterns and by teaching coping techniques, has been shown to reduce social inhibition in these children. This therapy teaches children to identify their dysfunctional thoughts and to shift their focus from negative consequences to the positive and reinforcing aspects of social interactions (5-7).

Furthermore, the findings showed that the mean scores of children's aggression in the post-test were significantly lower than in the pre-test. Thus, CBT has an effect on reducing aggression in children from single-parent families.

In CBT, the therapeutic process is structured in such a way that negative thoughts or cognitions are identified, the interrelationships between cognition, emotion, and behavior are clarified, and evidence contrary to distorted automatic thoughts is examined, ultimately leading to the replacement of these distortions with more realistic cognitions. One of the fundamental principles of CBT is the assertion that unrealistic and irrational thoughts—more precisely, distorted thoughts—are the source of emotional distress and maladaptive behaviors (14, 15). In contrast, realistic and objective thinking enables individuals not only to overcome disorders such as depression and anxiety but also to respond appropriately to life's most difficult challenges.

CBT therapists emphasize the role of belief systems and thought processes in behavior and emotion. Thus, by identifying distorted beliefs and changing maladaptive thought patterns with the help of cognitive techniques—which also include emotional and behavioral techniques—individuals can become aware of previously unrecognized thoughts, erroneous beliefs, and cognitive schemas. They can then learn how to change their beliefs, leading to a more accurate understanding of themselves. Given that CBT is considered

one of the most crucial factors in child development, it can enhance cognitive growth, social functioning, and communication skills in children (11-13).

One of the primary limitations of this study was the small sample size, which included only 30 participants, potentially limiting the generalizability of the findings to broader populations. Additionally, the sampling method was convenience-based, which may have introduced selection bias and reduced the representativeness of the sample. The intervention was also conducted by a single researcher, which, although ensuring consistency, may raise concerns regarding experimenter bias. Moreover, the reliance on self-report questionnaires may have been influenced by social desirability or subjective interpretation by children, especially considering their developmental stage. Lastly, the study did not include a follow-up phase, thereby restricting the ability to assess the long-term effectiveness of the cognitive behavioral intervention on social anxiety and aggression.

Future research should consider using larger and more diverse samples across different geographical and cultural contexts to improve external validity and the ability to generalize results. Employing random sampling techniques and including multi-informant data—such as parent and teacher reports in addition to self-report—could enhance the reliability and objectivity of behavioral assessments. It is also recommended to incorporate longitudinal follow-ups to evaluate the persistence of treatment effects over time. Furthermore, exploring the moderating roles of gender, age, and socioeconomic status may yield valuable insights into which subgroups benefit most from CBT. Future studies could also compare the effectiveness of CBT with other therapeutic modalities, such as Acceptance and Commitment Therapy (ACT) or play therapy, particularly in child populations. From a practical standpoint, it is essential to integrate CBT-based programs into school counseling services and community mental health centers, equipping professionals with standardized protocols and age-appropriate materials tailored to the needs of single-parent children. Training workshops for educators and caregivers on how to support children in implementing CBT techniques in everyday settings can further reinforce therapeutic outcomes and promote emotional regulation and social competence in these vulnerable populations.

Acknowledgments

We would like to express our appreciation and gratitude to all those who cooperated in carrying out this study.

Authors' Contributions

All authors equally contributed to this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants. Written consent was obtained from all participants in the study.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

Funding

This research was carried out independently with personal funding and without the financial support of any governmental or private institution or organization.

References

1. Esteki Azad N, Golparvar M, Sajjadian I. The Effectiveness of Play Therapy based on Child-Parent Relationships and Cognitive-Behavioral Art-Play Therapy on Mother's Affective Capital of Single Parents' Children. *Journal of Nursing Education*. 2022;10(6):53-64.
2. Staki Azad N, Gol Paror M, Sajjadian I. The effectiveness of cognitive-behavioral art-play therapy and play therapy based on parent-child relationships in single-parent children. *Pediatric Nursing*. 2021;8(2):53-63.
3. Wu Y. Single-Parent Families and Domestic Child Violence: The Role of Low Income as a Mediating Factor. *Ijsspa*. 2024;4(2):403-7. doi: 10.62051/ijsspa.v4n2.53.
4. Harahap K, Sahputra D. Democratic Parenting of Single-Parent Men and Women in Instilling Social Interaction in Children. *Scaffolding: Jurnal Pendidikan Islam dan Multikulturalisme*. 2023;5(2):95-109. doi: 10.37680/scaffolding.v5i2.2774.
5. Hamidi Fard S, Dasht Bozorgi Z, Hafezi F. Effectiveness of play therapy based on a cognitive-behavioral approach on social anxiety and self-harming behaviors in children with autism spectrum disorder. *Psychiatric Nursing*. 2023;11(3):70-80.
6. Egbe CI, Ugwuanyi LT, Ede MO, Agbigwe IB, Onuorah AR, Okon OE, et al. Cognitive Behavioural Play Therapy for Social Anxiety Disorders (SADs) in Children with Speech Impairments. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*. 2023;41(1):24-44. doi: 10.1007/s10942-022-00442-6.
7. Rajaeinia A. Effectiveness of Cognitive Behavior Group Therapy on decreasing perfectionism, increasing positive affect and mental performance in Female Clergies. *International Journal of Education and Cognitive Sciences*. 2022;2(4):45-53. doi: 10.22034/injoeas.2022.160688.
8. Egbe C, Tochukwu LU, Ede M. Cognitive behavioural play therapy for social anxiety disorders (SADs) in children with speech impairments. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*. 2022;41(5). doi: 10.1007/s10942-022-00442-6.
9. Obiweleozo PE, Ede MO, Onwurah CN, Uzodinma UE, Dike IC, Ejiofor JN. Impact of cognitive behavioural play therapy on social anxiety among school children with stuttering deficit: a cluster randomised trial with three months follow-up. *Medicine*. 2021;100(19). doi: 10.1097/MD.00000000000024350.
10. Kwon M, Lee JS. Influence of Negative Parenting Behavior Perceived by School-Aged Children on Aggression: Mediating Effects of Basic Psychological Needs Frustration. *Soc Cognitive Enhancement Intervention*. 2025;16(1):69-83. doi: 10.21197/jcei.16.1.4.
11. Mehrafza M, Nokhostin Goldoust A, Kiamarsi A. The effectiveness of cognitive-behavioral play therapy on aggression and anxiety in children with intellectual disabilities. *Applied Family Therapy*. 2022;3(3):192-210. doi: 10.61838/kman.aftj.3.3.12.
12. Sukhodolsky DG, Smith SD, McCauley SA, Ibrahim K, Piasecka JB. Behavioral Interventions for Anger, Irritability, and Aggression in Children and Adolescents. *Journal of Child and Adolescent Psychopharmacology*. 2016;26(1):58-64. doi: 10.1089/cap.2015.0120.
13. Najafi M, Sarpoolaki B. The Effectiveness of Cognitive-Behavioral Play Therapy on Aggression and Behavioral Disorders in Elementary School Children. *Exceptional Individuals Quarterly*. 2016;6(21):103-21.
14. Rajabi Z, Najafi M, Reza'i A. Effectiveness of Cognitive-Behavioral Group Therapy in Reducing Children's Aggression. *Clinical Psychology Studies*. 2013;3(10):55-71.
15. Hofmann SG, Asnaani A, Vonk IJJ, Sawyer AT, Fang A. The Efficacy of Cognitive Behavioral Therapy: A Review of Meta-analyses. *Cognitive Therapy and Research*. 2012;36(5):427-40. doi: 10.1007/s10608-012-9476-1.