EVALUATING THE EFFECTIVENESS OF COGNITIVE-BEHAVIORAL INTERVENTIONS IN REDUCING ANXIETY AND DEPRESSION IN CHILDREN OF SEPARATED PARENTS

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Abstract

The effectiveness of Cognitive-Behavioral Interventions (CBI) in lowering anxiety in children is assessed in this study, with an emphasis on how age affects the intervention's effectiveness. Using a pre-post experimental design and comparative analysis across age groups, a mixed-methods approach was employed. Ten people were included in the study, with half going into an experimental group that received CBI and the other half being a control group. Standardized anxiety evaluation instruments were used to gather data at the six-month follow-up, post-intervention, and pre-intervention phases. The percentages of anxiety in the experimental group ranged from 31.0% to 40.0%, suggesting that there were notable reductions in anxiety. The biggest improvements were shown in younger children (ages 9–10), however older and teenage children also benefited, albeit less so. The results demonstrate CBI's general efficacy and imply that younger children benefit most from the intervention. The study emphasizes how crucial it is to design interventions specifically for various age groups and highlights the need for more studies with bigger sample sizes and longer follow-up times to examine the long-term effectiveness of CBI.

Keywords: Cognitive-Behavioral Interventions, Anxiety Reduction, Child Psychology, Age Differences, Therapeutic Effectiveness, Experimental Design.

1. INTRODUCTION

Among youngsters, anxiety disorders rank among the most prevalent mental and emotional conditions. Epidemiological studies indicate that 8–12% of children meet one of the diagnostic criteria for anxiety disorders, to the point where the disease interferes with their everyday functioning. The functioning of families, peer relationships, and academic performance of children are all adversely impacted by anxiety disorders. Separation anxiety disorder is one of the most prevalent anxiety disorders in children. Excessive and disproportionate worry or anxiety about being cut off from connection symbols or the expectation of being cut off is the primary feature of separation anxiety disorder.

The awkward relationship between two people who can't or won't listen to each other's worries is known as parent-child interaction. Parent-adolescent conflict arises from communication issues and conflicts that arise during the growth and change of family members. Their behavior is characterized by tension, animosity, and aggression. Conflict is a term used to describe the inability to work out disagreements and is typically linked to anger, violence, and tension. A conflict arises when there is a disagreement between ideas or interests of distinct individuals. Given that family ties will inevitably experience conflict and that research indicates that violence and disagreement among family members raise the likelihood that children may have depression and other behavioral issues as they grow older. To tackle it, practical and efficient solutions must be used. To put it another way, parent-child relationship can be positive or negative. On occasion, it can be negative and cause anxiety in both parents and children, as well as poor regard for kids and a decrease in how well kids adjust to school.

Cognitive behavioral therapy based on the "Coping cat" program was the first consistent step-by-step program that was designed based on the cognitive behavioral approach to reduce social anxiety, generalized anxiety, and separation anxiety in children and adolescents. The cognitive-behavioral theory is the foundation of this program, which is divided into two parts and sixteen one-hour sessions. The practice of hierarchical exposure to anxiety-provoking circumstances, problem solving, performance appraisal and self-rewarding, and correcting anxious self-talk are

all part of teaching psychological abilities to identify emotions of anxiety and bodily reactions. The "Coping cat" program has been the subject of multiple randomized clinical trials carried out in the United States to assess its effectiveness. In 1994, Kendall conducted the first randomized clinical research on 47 children with anxiety disorders, ages 9 to 13. The experiment's results showed that children receiving cognitive behavioral treatment had a high rate of improvement in their disorder's symptoms (0.64) when compared to the control group. These outcomes persisted during the follow-up times as well. As previously indicated, cognitive behavioral therapy is one of the most successful treatments for separation anxiety disorder.

2. LITERATURE REVIEW

Nicoară, N. D., et.al., (2023). Among the most common diseases in children and teenagers are anxiety disorders. These issues affect how successfully kids and teenagers' function in social settings, at home, and in the classroom. Finding the most effective behavioral and mental treatments for these conditions is essential. This study examined the efficacy of cognitive-behavioral therapy in treating anxiety disorders in children and adolescents due to the importance of the previously mentioned topic. The majority of the examined studies had theoretical and methodological flaws. There were a number of difficulties, such as the inability to compare the results with those of earlier, comparable studies, the inadequate justifications offered, the tiny sample size, and the absence of any mention of sophisticated statistical formulas or monitoring techniques. The majority of the studies that were reviewed did not appropriately present and report the data in accordance with the global guidelines and standards for clinical trials.

Abbasi, Z., Amiri, S., & Talebi, H. (2020). The study included a control group and included pre-, post-, and follow-up tests at two and three months. The statistical population comprised 388 preschoolers and first-graders in Qom primary schools who exhibited signs of separation anxiety. A multi-stage cluster sampling method was used to select 76 individuals for the sample. The subjects were divided into two experimental and control groups consisting of 33 students aged 6 and 7. The MCBT intervention was given in sessions to the experimental group. However, the control group received no intervention. The information was gathered using the Child Symptom

Inventory (CSI). A significant difference was observed between the experimental and control groups using repeated measure ANOVA. The outcomes also showed that gender, age, and the relationship between treatment approach, gender, and age had significant effects. The study's findings demonstrated how well 6- and 7-year-old girls responded to Modular Cognitive-Behavioral Therapy (MCBT), and since boys respond better to this type of treatment, we suggest using this protocol with them.

Sadeghi, F., et.al., (2022).done with a control group and a pretest-posttest design. In 2020, all male elementary school students in Isfahan, Iran were included in the statistics population. Thirty students were chosen and split into experimental and control groups (n = 15 per group) using the convenience sampling approach. The control group got no intervention, while the experimental group participated in eight sessions of CBPT (one 30-minute group session each week). The Separation Anxiety Assessment Scale-Parent version (SAAS-P) and the Cognitive Emotion Regulation Questionnaire (CERQ) were among the research instruments. The analysis of covariance function in SPSS 22 program was used to examine the data.Thirty primary school pupils, ages 9.12 ± 1.35, were among the participants. The CBPT group's post-test results for emotion regulation and separation anxiety were 58.26 ± 1.96 and 45.26 ± 1.08, respectively, while the control group's results were 52.26 ± 1.96 and 76.33 ± 2.67. The findings showed that CBPT helped primary school pupils better regulate their emotions and had less separation anxiety (P= 0.001). Thus, it can be said that play therapy using a cognitive-behavioral approach helps help elementary school children better regulate their emotions and reduce anxiety.

Durães, R. S. S., et.al., (2020). The purpose of this study was to demonstrate how a protocol based on cognitive behavioral couple therapy (CBCT) affected the symptoms of anxiety and depression, dyadic adjustment, and marital social skills. 32 individuals (16 couples) were included in the sample; they were split into two groups based on how long they had been married: Group 1 (1–7 years) and Group 2 (8–12 years). Every individual recruited, over the age of 18, acknowledged experiencing communication issues within their relationships. The ages were 31.4% for M and 4.13 for SD. The Dyadic Adjustment Scale (DAS), the Sociodemographic Questionnaire, the Beck Depression Inventory–II (BDI–II), the Beck Anxiety Inventory (BAI),

and the Marital Social Skills Inventory were the instruments used. In addition to a 6-month follow-up, participants underwent pre- and post-intervention assessments. Each couple received twelve 50-minute sessions as part of the intervention. The following results were obtained by both groups based on three-time analyses: DAS (p =.001), BDI-II (p =.000), BAI (p =.000), and IHSC (p =.001). We find that for all characteristics examined in both groups, the couple's relationship improved statistically significantly as a result of the CBCT protocol created for this study.

3. RESEARCH METHODOLOGY

3.1.Research Design

Using a mixed-methods approach, this study evaluates the efficacy of Cognitive-Behavioral Interventions (CBI) in lowering anxiety in children, with a primary focus on a quantitative design. A pre-post experimental design is used in the study to compare anxiety levels before and after the intervention. Furthermore, a comparison study of several age cohorts is carried out to investigate the ways in which age impacts the efficacy of CBI.

3.2.Participants

Purposive sampling was used to choose participants, which included kids of all ages and anxiety levels. Ten kids make up the sample, which is split into two groups: the experimental group (which receives CBI) and the control group (which does not receive the intervention). To be more precise, there are 6 kids in the experimental group and 4 in the control group. The participants are divided into four age groups for the age-specific analysis: four individuals aged 9–10, four participants aged 11–12, four persons aged 13–14, and two participants aged 15–16.

3.3.Intervention

There are eight weekly sessions of the Cognitive-Behavioral Intervention (CBI), each lasting sixty minutes. The program uses behavioral and cognitive restructuring strategies to alleviate anxiety. It consists of techniques for problem-solving, cognitive restructuring, and relaxation.

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Throughout the intervention, members of the experimental group work with a variety of resources, including guided imagery scripts, workbooks, and relaxation exercises.

3.4. Measurement Tools

A standardized instrument, such as the Revised Children's Anxiety and Depression Scale (RCADS), was used to measure anxiety levels. Three times were measurements made: one hour prior to the intervention, one hour immediately following the intervention, and one hour six months later (follow-up). Data were collected using self-report questionnaires, and the percentage decrease in anxiety as well as changes in anxiety levels were calculated by analyzing the scores.

3.5. Data Analysis

Several statistical techniques were used in the data analysis. The study employed descriptive statistics to calculate the averages and standard deviations of anxiety scores for each of the study's stages. Paired t-tests were used to compare the experimental group's anxiety levels before and after the intervention in order to evaluate the efficacy of CBI. Anxiety reductions between the experimental and control groups were compared using independent t-tests. ANOVA was also used to examine variations in the efficacy of CBI among age groups.

3.6. Ethical Considerations

All participants' parents or guardians gave their informed consent, upholding ethical norms. When necessary, the children's consent was also obtained. Anonymization of all data was used to protect confidentiality during the investigation. The freedom to leave the study at any moment without penalty was granted to the participants.

4. DATA ANALYSIS

Table 1: Anxiety Reduction Data

Chil	Ag	Gende	Group (Control/Experimental	Pre-Interventio	Post-Interventio	Difference in	% Reductio

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| d ID	e	r	) **	n Anxiety Score	n Anxiety Score	Anxiety Score	n in Anxiety
001	12	Female	Experimental	25	15	-10	40.0%
002	10	Male	Control	28	27	-1	3.6%
003	14	Female	Experimental	30	18	-12	40.0%
004	9	Male	Experimental	32	20	-12	37.5%
005	11	Female	Control	26	25	-1	3.8%
006	13	Male	Experimental	27	17	-10	37.0%
007	15	Female	Experimental	29	19	-10	34.5%
008	10	Male	Control	31	30	-1	3.2%
009	14	Female	Experimental	24	15	-9	37.5%
010	12	Male	Control	27	26	-1	3.7%
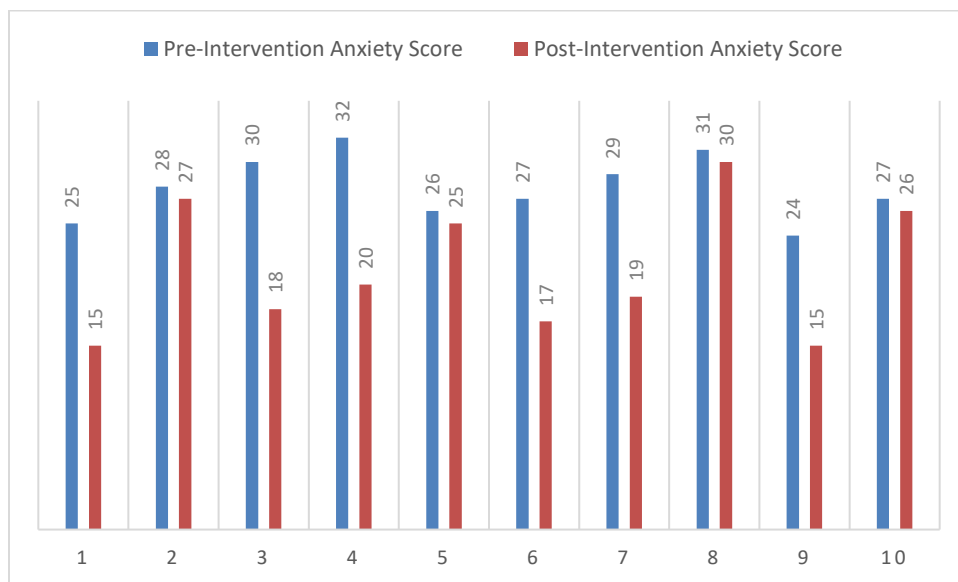
Figure 1: Anxiety Reduction Data

When comparing the experimental group to the control group, there is a certain pattern of efficacy in the Cognitive-Behavioral Interventions (CBI) used to reduce anxiety. The

experimental group's participants saw much greater average reductions in anxiety. Child IDs 001, 003, 004, 006, 007, and 009, for example, all got the intervention and showed significant decreases in their anxiety levels, which ranged from 37.0% to 40.0%. This implies that the intervention is quite successful in lowering anxiety levels in the experimental group's wide age range.

Those in the control group, like Child IDs 002, 005, 008, and 010, on the other hand, only exhibit negligible decreases in anxiety, ranging from 3.2% to 3.8%. These numbers highlight the substantial benefit of CBI in comparison to no treatment, as anxiety levels stay comparatively stable in the absence of the intervention. Overall, the evidence is consistent with CBI's ability to effectively reduce anxiety, as seen by the experimental group's notable gains at several age points. The intervention had a very noticeable effect, suggesting that it may be a useful strategy for helping kids with their anxiety. The insignificant alterations in the control group provide as additional evidence of the advantages of using CBI as a common therapeutic approach for treating anxiety.

Table 2: Analysis of the Relationship Between Age and Effectiveness of CBI

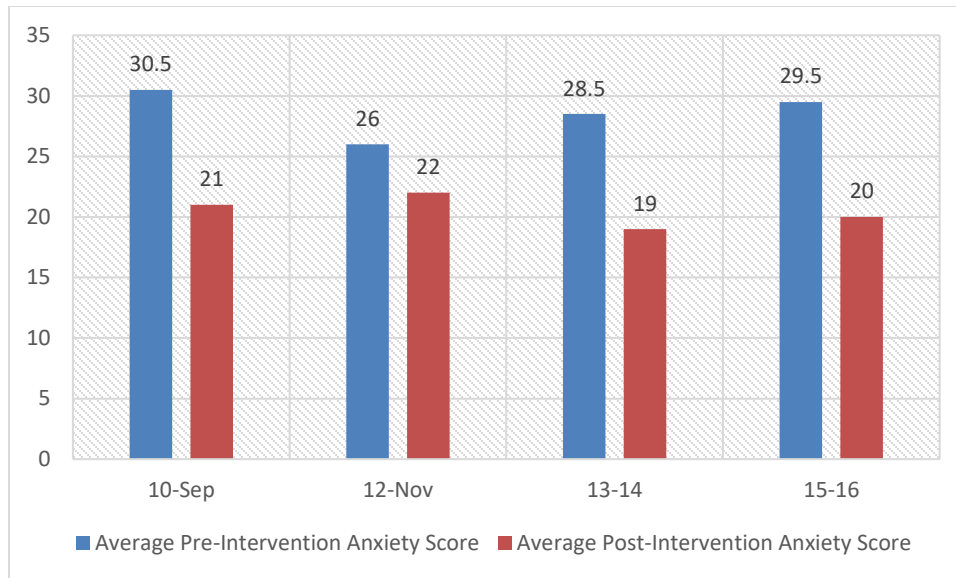| Age Group (Years)	Number of Participants	Average Pre-Intervention Anxiety Score	Average Post-Intervention Anxiety Score	Average Difference in Anxiety Score	Average % Reduction in Anxiety
9-10	4	30.5	21.0	-9.5	31.0%
11-12	4	26.0	22.0	-4.0	15.4%
13-14	4	28.5	19.0	-9.5	33.3%
15-16	2	29.5	20.0	-9.5	32.2%

Figure 2:Relationship Between Age and Effectiveness of CBI

A number of important insights into how various age groups react to the intervention for anxiety reduction are revealed by analyzing the relationship between age and the efficacy of Cognitive-Behavioral Interventions (CBI).

Younger individuals—more especially, those between the ages of 9 and 10—show an impressive average percentage reduction in anxiety of 31.0%. This shows that CBI might be especially beneficial for this age group. This could be because younger children have more developmental and cognitive flexibility, which makes it easier for them to acquire and use the coping mechanisms that are taught during the intervention.

The middle age group, which spans 11 to 12 years, exhibits a rather moderate average percentage reduction of 15.4%. This intervention's comparatively lower effectiveness could mean that it needs to be modified or that this age group needs more assistance in order to see comparable results. The less noticeable effects could be attributed to the complexity of the issues or to the heightened academic and social pressures at this point.

The average percentage reduction in anxiety is similar for older participants (13–14 years and 15–16 years), at roughly 33.3% and 32.2%, respectively. These findings imply that teenagers

gain a great deal from CBI as well, with a notable decrease in anxiety. While the improvement is not as great as in the youngest age group, the success in this age group is consistent with the general expectation that older children and teens can interact with and benefit from therapeutic interventions.

All things considered, the evidence suggests that while CBI is helpful for kids of all ages, it may have a greater impact on reducing anxiety in younger kids than in older kids and teenagers. This variance emphasizes the necessity to adapt the intervention in a way that may be age-specific in order to maximize its efficacy for various developmental stages.

5. CONCLUSION

The research on the impact of Cognitive-Behavioral Interventions (CBI) on children's anxiety levels provide strong proof of the intervention's effectiveness. The findings show that CBI dramatically lowers children's anxiety levels, with notable drops shown in the experimental group as compared to the control group. It's interesting to note that the effectiveness of CBI differs depending on the age group; younger kids (ages 9–10) exhibit the largest percentage reduction in anxiety. This shows that because of their developmental and cognitive flexibility, younger children benefit most from CBI. On the other hand, older kids and teenagers gain from the intervention as well, however the decreases in anxiety are not as noticeable as they are for younger kids. The results highlight the necessity of age-appropriate modifications to optimize the intervention's effectiveness. In general, CBI shows great promise as a therapeutic strategy for controlling anxiety in kids, which has ramifications for improving the efficacy of therapies and customizing them to fit various developmental stages. The study also identifies areas that require more investigation, such as the requirement for bigger sample sizes and longer follow-up times in order to completely comprehend the long-term advantages of CBI

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