KMAN PUBLISHING INSTITUTE
Journal Website

Article history:
Received 12 January 2023
Accepted 11 March 2023
Published online 31 March 2023

Journal of Assessment and Research in Applied Counseling

Volume 5, Issue 1, pp 24-33

JARAC
Journal of Assessment and Research in Applied Counseling

E-ISSN: 3041-8518

Comparing the effectiveness of child-centered cognitive behavioral therapy (CCBT) and mother-child attachment therapy on the symptoms of oppositional defiant disorder

Alireza. Mohammadi[1], Zohreh. Zadhasan[2*], Hasan. Rahimi[3], Masoumeh. Amini[4]

[1] M.A of Family Counseling, Shahid Beheshti University, Tehran, Iran
[2] Ph.D. Student, Department of Counseling, Ahvaz Branch, Islamic Azad University, Ahvaz, Iran
[3] Assistant Professor, Faculty of Educational Psychology, Farhangian University, Tehran, Iran
[4] M.A of General Psychology, Mallard Branch, Islamic Azad University, Mallard, Iran

*** Corresponding author email address**: zadhasan.zohreh@gmail.com

A r t i c l e I n f o

Article type:
Original Research

How to cite this article:
Mohammadi, A.R., Zadhasan, Z., Rahimi, H., & Amini, M. (2023). Comparing the effectiveness of child-centered cognitive behavioral therapy (CCBT) and mother-child attachment therapy on the symptoms of oppositional defiant disorder. *Journal of Assessment and Research in Applied Counseling, 5*(1), 24-33. https://doi.org/10.61838/kman.jarac.5.1.4

A B S T R A C T

Objective: This research aimed to compare the effectiveness of child-centered cognitive behavioral therapy (CCBT) and mother-child attachment therapy on the symptoms of oppositional defiant disorder.

Method: In terms of the purpose of the present research, it was a quasi-experiment with a pre-test and post-test design with two experimental groups and a control group and a two-month follow-up period. The statistical population of the research included all children aged 10 to 12 years who referred to a counseling center in the 8th district of Tehran in 2022, 30 people were randomly selected in two experimental groups (10 people each) and one group Control (10 people) were assigned. The research tools include the Children's Symptoms Inventory (CSI-4), child-centered cognitive behavioral therapy protocol based on Kendall & Hedtke's coping cat program (2006) and mother-child attachment-based therapy (MCAT) protocol derived from Purnell (2004) and King & Newham (2008).

Results: The findings indicate that both treatments were effective on oppositional defiant disorder. The efficacy of both was stable in the follow-up phase according to the Bonferroni post hoc test. The results of data analysis show that there is no significant difference between their effectiveness and both are equally effective ($p<0.05$).

Conclusion: It can be concluded that MCAT and CCBT were effective in the treatment of children's oppositional defiant disorder. Therefore, it is suggested that specialists use these two approaches in therapy.

Keywords: *Oppositional defiant disorder, MCAT, child-centered cognitive behavioral therapy*

1. Introduction

The concern in the field of children's mental health and its impact on the evolution and psychological and behavioral functions has increased significantly with the prevalence of

children's mental disorders in recent years (Abdollahi Baghrabadi, 2018). One of the disorders that affects children's mental health is *oppositional defiant disorder* (ODD) (Liu, Chang, & Lee, 2021). A pattern of anger/irritability characterizes ODD, stubborn/disobedient behavior or vindictive behavior shown during interactions with at least one other than siblings (Arias, Aguayo, & Navas, 2021). The prevalence of this disorder in the general population is 1.4-16%, and in clinical samples, 28-50%. ODD is believed to be a risk factor for conduct disorder (Ghosh, Ray, & Basu, 2017). In addition, more than 14% of children with ODD have anxiety, and more than 9% of them have depression (Jones, 2018), also about 50% of patients with ODD are associated with They suffer from attention deficit and hyperactivity disorder (Vetter et al., 2020). Barkley (2013) states that "ODD is a persistent pattern of negativity, disobedience, stubbornness, hostility, and defiance toward authority figures" (Barkley, 2013). Signs and symptoms of ODD in children may continue until school age, and these symptoms can be a gateway to other psychiatric disorders in adulthood (Szentivanyi & Balazs, 2018). Also, the prognosis of ODD is unfavorable, and with the increase in the risk of behavior disorders, substance abuse, antisocial personality disorders, and anxiety disorders (Folino, 2011).

Child-centered Cognitive Behavioral Therapy (CCBT) interventions based on the *Coping cat Program* for children with anxiety disorders. The general approach is cognitive-behavioral; that is, an integration of the proven effects of the behavioral approach (for example, confrontation tasks, body relaxation training, role-playing exercises, practice and reward) and a double emphasis on the cognitive factors of information processing related to each person's anxieties (emotional confusion, expected fear). (Kendall & Hedtke, 2006). Cognitive-behavioral therapy intended by Kendall & Hedtke (2006) has four components: (1) the anxious child learns to recognize the feelings and physical signs of anxiety and become aware of these feelings and signs; (2) he understands what thoughts he has in anxiety-inducing situations and learns to evaluate his thoughts; (3) acquires the necessary skills to solve problems and correct anxiety-provoking thoughts; (4) Rewards oneself for not being anxious in a stressful situation and evaluates one's not being anxious (Kendall et al., 2020).

The goal of CCBT is to teach children to recognize symptoms of unwanted anxiety arousal and to allow these symptoms to serve as cues to use anxiety management strategies. Recognizing the cognitive processes related to extreme anxiety arousal, teaching cognitive strategies to manage anxiety, teaching behavioral relaxation, and performance-based training opportunities are included in this treatment so that each skill is added to the previous skill (Kendall & Hedtke, 2006; Kendall et al., 2020). In Kendall's CCBT, which lasts more than 16 sessions, behavioral and cognitive techniques are combined. In the first 8 sessions, the child learns the necessary skills to overcome anxiety, and in the second 8 sessions, he practices these skills in anxiety-inducing situations. In addition, two sessions between the therapist and the parents (one or more of the child's parents) are scheduled in session 4 and session 9 to involve parents in the treatment (Kendall et al., 2020; Schroeder & Gordon, 2002).

Throughout the treatment, concepts and skills are introduced in an orderly sequence, from the most basic steps to the most difficult steps. In this treatment, the therapist acts as a resistant and confronting model, introducing all new skills, not only explaining that skill to the child. It also explains the problems that may be experienced and the strategies to overcome these problems. The therapist explains first in every new situation. Then the child is invited to play a role with the therapist using the imitation method. Finally, the child is encouraged to act alone and practice the newly acquired skills. During each session and throughout the treatment program, anxiety is gradually increased, starting with non-stressful situations and gradually increasing anxiety levels (Kendall & Hedtke, 2006). The second part of this program is dedicated to applying and practicing newly acquired knowledge and skills in increasingly stressful situations. The same educational strategies as before have also been used here, including modeling about coping, role-playing, and assigning homework. The situations presented to each child are designed for each child based on their specific fears and concerns (as assessed during the initial and eighth sessions). The first training sessions involve visual exposure in the clinic with low anxiety levels, followed by real-life experiences in low-stress situations. Subsequent sessions include repeating this process in situations that are more stressful for the child and helping the child to master these skills through multiple exposures to different anxiety-provoking situations (Kendall & Hedtke, 2006). *Parent-child therapy* is an attachment-based therapy for children between the ages of 4 and 12 who experience emotional and behavioral problems. This intervention suits disturbed parent-child relationships that have not responded to systemic family therapy. Using narrative methods and

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E-ISSN: 3041-8518

experimental exercises based on supportive observation, It seeks to reframe the disturbed parent-child relationship. The treatment is performed in parallel for the parent and the child using a one-way mirror. It improves the parent's ability to reflect and sensitivity and the child's sense of security in the primary attachment relationship (Amos, Beal, & Furber, 2007).

Child and parent therapy is conducted by two trained psychotherapists, one for the parent (primary caregiver, usually the mother) and one for the child. It also requires access to a playroom with a one-way mirror and an observation room with a good sound system connected to the playroom. The narrative phase of the intervention is relatively short (one to six sessions) and can successfully lead to improvement in some families. The full treatment period is longer, with three to six months of weekly sessions. Sessions are usually between 60 and 90 minutes; additional time is required for the two therapists to meet before and after the sessions. Various factors affect the number of sessions, including the child's age, the type of attachment relationship, and injuries such as domestic violence or child abuse. Drug use, depression, previous childhood abuse, or maternal neglect almost always prolong the treatment process. The four stages of the intervention are parent-child narration at the same time, preparation as if they were meeting for the first time, preoperative observation, and finally, caregiving (Chambers et al., 2006)

Hodges & Clifton (2004) comprehensively describe how to implement parent-child therapy. In this model, the therapist teaches communication skills and facilitates the increase of the parent-child bond. The key elements of treatment include coordination with the child, the emotional communication of the parents, and the therapist with the child's emotional states, which seeks to help the child give meaning to emotions, behavior, and experience, leading to the regulation of emotions in the child. In this way, he can overcome past bad behavior experiences (Hodges & Clifton, 2004). The comprehensive framework model for treating children with complex attachment-self-regulation and competence trauma has presented a different approach (Ford et al., 2005). The ARC model focuses on building attachment, self-regulation, and competence through coordination, skills training, self-regulatory ability, and developmental and interpersonal competence of the caregiver. Interventions are implemented at the individual, family, and systemic levels. This approach aims to provide a framework that can be adjusted for each child individually. In this way, although this model suggests possible goals and interventions, it does not provide specific strategies for treatment. The ARC model, like some new treatments for adults affected by early maltreatment, focuses more on emotional regulation and communication issues than treating trauma, so this treatment is not appropriate for children who are emotionally very vulnerable and disturbed (Ford et al., 2005). Little research has been done regarding the mentioned treatments, and the effectiveness of these treatments on ODD has yet to be investigated. Therefore, the current study aims to investigate the effectiveness of CCBT and *MCAT* (MCAT).

2. Methods

2.1. Study design and Participant

The current research was quasi-experimental with a pre-test, post-test and follow-up design with two experimental and one control groups. This research's statistical population consisted of 10-12-year-old students referred to a private counseling center in District 8 of Tehran in 2022. A random sampling method was used for sampling. Thirty subjects were selected and 10 people were assigned to the experimental group of CCBT, 10 to the experimental group of MCAT, and 10 to the control group. Inclusion criteria include: parental consent and no diagnosis of psychiatric disorders except ODD. Exclusion criteria include: lack of parental consent to continue interventions, absence of more than one session in treatment sessions.

2.2. Measurement

In order to collect data, the *Children Symptoms Inventory* (CSI-4) were used.

2.2.1. ODD Symptoms

Gadow (1994) created CSI-4 to screen 18 behavioral and emotional disorders of children aged 5 to 12 a behavior grading scale. CSI-4 has two forms: the parent's and the teacher's forms; the parent form is used in the current study. The parent form consists of 112 items, 8 of which belong to ODD (Gadow, 1994), which was used in this research. The scoring of the questionnaire materials was 0 and 1, and as a result, the scores related to ODD disorder in the present study are minimum 1 and a maximum 8. Iranian researchers reported the reliability of the questionnaire as 0.90 through the test-retest method. In the present study, the appropriate reliability of the questionnaire was confirmed by Cronbach's alpha method with a value of 0.82 (Abdollahi, 2018)

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2.3. Interventions

CCBT protocol was based on Kendall & Hedtke's (2006) Coping cat Program (Kendall & Hedtke, 2006), and the attachment-based therapy protocol was derived from Purnell (2004) and King & Newham (2008) (King & Newnham, 2008; Purnell, 2018).

2.3.1. CCBT

Based on Kendall & Hedtke's (2006) coping cat program (Kendall & Hedtke, 2006), CCBT sessions were held in ten sessions as shown in Table 1.

2.3.2. MCAT

According to the Table 2, the MCAT sessions derived from Purnell (2004) and King & Newham (2008) were implemented in ten sessions (King & Newnham, 2008; Purnell, 2018).

Table 1

CCBT sessions

Session	Goal	Content
1	Establishing a therapeutic relationship and treatment orientation	Creating a therapeutic relationship and guiding the child towards the program. Encouraging and supporting the child's participation and cooperation, assigning the task "Show me I can", engaging in an interesting activity at the end of the session.
2	Identifying feelings of anxiety	Doing the tasks of identifying facial expressions in oneself and others, helping the child to recognize different emotions and to distinguish the feeling of anxiety and worry, setting the hierarchy of anxiety-provoking situations, assigning the task of "Show me I can".
3	Identifying physical reactions to anxiety	Reviewing the assignment "Show me, I can" from session 2. Discuss specific physical reactions to anxiety. Practice identifying physical responses. Introducing the step of fear. Preparing the child for the parents to come to the meeting. Assigning the assignment "Show me I can".
4	Relaxation training	Reviewing the assignment "Show me I can" from session 3. Introducing the concept that many bodily sensations related to anxiety involve muscle tension. Introducing the concept of body relaxation and practicing body relaxation techniques. Creating this awareness in the child that how and when relaxation can be useful. Body relaxation training by confronting and role-playing, body relaxation training with the child's parents. Assigning the assignment "Show me I can".
5	Identifying anxious self-talk and learning to challenge thoughts	Reviewing the "Show me I can" assignment from session 4. Introducing the concept of thoughts (self-talk). Discussing self-talk in anxiety-provoking situations (anxious self-talk). Distinguishing and differentiating anxiety self-talk from coping self-talk. Introducing step and (waiting for bad things to happen). Confrontational self-talk practice. Assigning the assignment "Show me I can".
6	Attitudes and actions	Reviewing the assignment "Show me I can" from session 5. In this stage, the child is taught how to modify his reactions to move forward even with feelings of anxiety. Child and therapist work together to transform anxious self-talk into coping self-talk. Assigning the assignment "Show me I can".
7	Reviewing anxiety and confrontational self-talk and expanding problem-solving skills	Review of the "Show me I can" assignment from session 5. Review and discuss the first two steps of the Tuan program. Discussing the concept of problem solving. Practicing problem solving in stressful situations. Assigning the assignment "Show me I can".
8	Introducing self-evaluation and self-rewarding and reviewing learned skills	Reviewing "Show me I can" assignment from session 7. Discussing the concept of self-evaluation and self-reward. Practice evaluating and rewarding yourself for effort. Overview of Tuan program. Apply power program. Reviewing the hierarchy of fear and discussing the coping task. Giving information for meeting with parents. Assigning the assignment "Show me I can".
9	Practice in anxiety-provoking situations using exposure tasks	Reviewing "Show me I can" assignment from session 8. Review the idea of progressing from learning new skills to practicing those skills. Practice using visual exposure in low anxiety situations. A brief overview of relaxation exercises. Designing face-to-face assignments for session 8. Assigning the assignment "Show me I can".
10	Summarizing and finishing the sessions	After all tasks are done, it is time to celebrate the child's effort and success. Over time, the child has acquired a set of strategies to deal with anxiety. They can always use these strategies in different situations.

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Table 2

MCAT sessions

Session	Goal	Content
1	Brief introduction and introduction of psychologist and mother	Explaining attachment and separation anxiety symptoms of children and how it is related to insecure attachment in children, and the defective process that forms separation anxiety in children; Explaining emotions as the central point of attachment with the aim of mother's access to extreme emotions in her disturbed communication; Explanation of secure attachment and its signs; Identifying and writing down the child's anxiety symptoms, symptoms and how the mother communicates with the child for presentation in the next session.
2	Explaining the logic of attachment therapy and determining treatment goals	Explaining the logic of attachment therapy; The need to respond to the child's psychological and physical needs by the mother by using the mother's availability technique training by citing examples and, in a practical way, responding with sensitivity to the child's signs such as hugging a crying child when he needs physical contact with the mother; Teaching and practicing playwriting techniques to find out how mothers respond to the needs of the child intending to reduce negative cycles such as attack-withdrawal that help maintain insecure attachment and block safe emotional response and participation.
3	The importance of positive verbal communication between mother and child in the normal emotional development of the child	Reviewing the previous session, explaining the importance of positive verbal communication between mother and child in the normal emotional development of the child; Teaching the technique of verbal communication with the child, the technique of telling stories for the child about questions and answers and how the mother and the child verbally communicate with the mothers, emphasizing the unconditional acceptance of the child and strengthening the sense of self-worth and self-acceptance; Explain how to shape new cycles of mother's response and availability with the aim of reducing the child's isolation, and activating and strengthening his ability to express his needs and fears; Helping mothers identify existing patterns in the process of interacting with children and discovering and expanding the processes related to attachment-oriented emotions; Helping and teaching mothers to discover their experiences and identify their emotional patterns and response to the child during the week as homework.
4	Reviewing the previous sessions, recognizing the mental representations of the parents regarding their relationship with their caregivers and its role in the relationship with the child, explaining the attachment styles.	Explaining the role of parents' mental representations of attachment in relation to the child and recognizing the mother's mental representations, identifying the mother's attachment relationship with her caregivers/parents and its role in relation to her child; Explanation about three styles sensitive to safety, development and the relationship between mother and child, and how to recognize attachment and exploratory behaviors to understand, formulate and reshape basic emotions; Teaching how to respond effectively and the importance of positive communication with the child and the necessity of continuity and stability of positive behavior in order to restore the child's disturbed sense of trust and using the metaphor of the inner child (using a teddy bear); Explaining the importance of positive communication with the child and the necessity of continuity and stability of positive behavior in order to restore the disturbed sense of trust in the child, avoiding pretense and unrealistic behaviors in relation to the child, teaching and practicing the technique of contact (physical and especially eye), writing plays about how to express love Real to the baby, hugging, caressing and kissing the baby.
5	Training parent-child games technique	Teaching parent-child game techniques and creating conditions for play and group fun for the child, facilitating the child's friendship with peers and encouraging him to build relationships, providing the context for the child's active participation in group tasks at school, writing plays about active companionship with the child, joking with The child and making him laugh.
6	Reviewing the previous sessions, creating a multi-dimensional insight in the child, encouraging the mother to change her perspective on the child	Reviewing the teachings of the previous session in order to create a multi-dimensional insight in the child, encouraging the mother to change her view towards the child according to new experiences and providing a platform to reassure the child; Helping to create a real and complete picture of a reassuring relationship between mother and child (magic wand technique) to overcome anger and pain and avoid controlling the relationship by using negative emotions and memories; performing the magic wand technique several times at home during the week; Teaching the importance of active cooperation in children's affairs in order to increase positive mother-child interaction, writing plays about how mother-child cooperation and interaction in matters related to the child and avoiding coercion, teaching the technique of strengthening the child's relationships with classmates and peers.
7	Examining unresolved behavioral problems of children and the impact of attachment therapy on previous behavioral problems of children	Examining and exchanging opinions about the unresolved behavioral problems of children and the extent of the impact of attachment therapy on the extent of the child's previous behavioral problems; Teaching the child's verbal reinforcement technique in creating safe attachment and its role in reducing the amount of conflict between mother and child; Teaching the technique of how to manage stress in the family to mothers with a focus on reducing the child's anxiety to manage tensions and curb stressful situations and parents' constant support for the child and providing practice of this technique as homework; Teaching the technique of verbally strengthening the child, writing a play about creating a positive atmosphere of communication between family members and avoiding the isolation of the child to make the child's living environment happy and exciting in order to reduce the level of depression of the mother and the child.
8	Reviewing the previous sessions, the mother's justification for restraining her emotions when	An overview of the previous sessions, the mother's justification for restraining her emotions when experiencing anxiety using the playwriting technique; Practice how to control emotions about target behaviors through cuddling experiences that enhance secure attachment;

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	experiencing anxiety using the playwriting technique	encouraging the mother to face her experiences and frame them reasonably and acceptably; Teaching the technique of stress management in the family focusing on reducing the child's anxiety, teaching the technique of reassuring the child about the constant support of the parents for the child and drawing a bright future for the child, practicing playwriting about increasing the happy parent-child pastimes.
9	Teaching managing child's emotions technique to the mother; Playwriting about how to control emotions	The justification of mothers for teaching the technique of controlling emotions to the child when experiencing anxiety, writing a play about how to control emotions about target behaviors, and practicing with mothers.
10	Paying attention to the obstacles to using the taught techniques; Explaining the importance of continuity of practices	Discussion and exchanging opinions about the barriers to applying the taught techniques, explaining the importance of continuing to follow what has been learned to create confidence and restore the mother-child attachment, determining the extent to which the primary goals of the treatment plan are achieved, and finally summarizing and concluding. It should be noted that in each session, homework is also given in addition to reviewing the session and exercises of the previous session.

2.4. Data Analysis

The statistical data was done with SPSS software and variance analysis with repeated measurements. Bonferroni's post-hoc test was used to check the stability of the intervention effects, and Tukey's test was used to compare their effects.

3. Findings and Results

Regarding demographic characteristics, the mean of the age of the CCBT group was 29.81, the MCAT group was 26.91, and the control group was 30.31. The descriptive data of all three groups in the pre-test, post-test, and follow-up stages are given in the Table 3.

Table 3

Descriptive findings

Variable	Stage	Pre-test		Post-test		Follow-up	
	Group	M	SD	M	SD	M	SD
ODD	CCPT	5.80	0.82	3.22	0.80	3.17	0.84
	MCAT	6.08	0.79	3.25	0.86	3.09	0.85
	Control	5.91	0.90	5.95	0.92	5.89	0.90

As can be seen in the Table 4, there is not much difference between the averages of confrontational disobedience symptoms in the pre-test stage in the three groups, but the scores of both test groups have increased in the post-test and follow-up stages; while the scores of the control group did not change. Multivariate analysis of variance with repeated measurements in three stages has been used to test the training effectiveness of two groups. For this purpose, first the required assumptions were checked.

Table 4

Results of normality and homogeneity of variances test

	Group	Shapiro-wilk			Levene's test			Mauchly	
Variable		df	Statistics	Sig.	Df2	Statistics	Sig.	W	X^2
ODD	CCPT	10	0.85	0.56	27	1.36	0.30	0.66	8.68
	MCAT	10	0.80	0.42	27	2.01	0.13		
	Control	10	0.85	0.56	27	1.77	0.19		

According to the Table 4, the Shapiro-Wilk's test shows that the obtained data have a normal distribution. The equality of variance is established based on the results of Levene's test. In the following, the delay test results to test the sphericity condition are reported. Based on results, the significance level of Mauchly's test confirms the sphericity.

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Table 5

The results of analysis of variance with repeated measurements in the three stages of pre-test, post-test and follow-up in the CCBT group and the control group with the assumption of data sphericity

Index	SS	df	MS	F	Sig.	Eta
Stage	459.49	2	229.74	5050	0.001	0.74
Stage × Group	710.01	2	355.00	54.16	0.001	0.77
error	100.00	36	2.77			

According to the Table 5, the between-group differences in the average scores of the pre-test, post-test and follow-up of the dependent variables of the research (marital depression and emotional alexithymia) in the two experimental and control groups are expressive of the effect of the independent variable of the research (RACT). The effect of the intervention on the research variables. The following results of the multivariate analysis of variance with repeated measurements in three stages of pre-test, post-test, and follow-up are shown.

Table 6

The results of analysis of variance with repeated measurements in the three stages of pre-test, post-test and follow-up in the MCAT group with the assumption of data sphericity

Index	SS	df	MS	F	Sig.	Eta
Stage	520.35	2	260.17	54.19	0.001	0.75
Stage × Group	791/81	2	395.90	61.46	0.001	0.79
error	130.69	36	3.63			

As seen in the Table 6, the MCAT has significantly (significance level = 0.05) increased the participants' ODD symptoms.

Table 7

Results of Bonferroni's post hoc test in the three stages of pre-test, post-test and follow-up by groups

Variable	Stage		CCPT		MCAT	
			Mean dif.	Sig.	Mean dif.	Sig.
Confrontational disobedience symptoms	Post-test	Pre-test	2.58	0.001	2.63	0.001
	Follow-up	Pre-test	2.83	0.001	2.99	0.001
	Follow-up	Post-test	0.05	1.00	0.16	1.00

The Table 7 indicates that the effects of both pieces of training on children's ODD symptoms in the follow-up phase are stable. To compare the effectiveness of the two groups of child-oriented cognitive behavioral therapy and MCAT, Tukey's post hoc test was used, which is reported in the Table 8.

Table 8

Multiple mean comparison of CCBT and MCAT

Variable	I	J	(I-J)	Standard error	Sig.
ODD	CCPT	MCAT	0.11	0.03	0.86

Based on the Table 8, the analysis using Tukey's test shows that the difference between the effectiveness of the two pieces of training on the symptoms of confrontational disobedience is insignificant at 0.05.

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4. Discussion and Conclusion

The current study compared the effectiveness of CCBT and MCAT. In addition, the comparison between the effectiveness of these two treatment methods showed no significant difference between the effectiveness of these two approaches. Therefore, both can be used to improve children's ODD disorder. In explaining the lack of significant difference in the effectiveness of the two approaches, the reason for this is the appropriate effectiveness of both methods. The results of this research are in line with the many past studies (Helland et al., 2023; Levy, Stevens, & Tolin, 2022; Mukund & Jena, 2022; Salvaris et al., 2023). In the explanation of the effectiveness of CCBT, it can be said that "coping cat program" is an evidence-based and cognitive behavioral therapy that includes teaching coping skills and gradual exposure to anxiety-provoking scenarios as well as therapeutic tasks (Mukund & Jena, 2022). CCBT helps children's cognitive restructuring through multiple steps, which can effectively treat ODD. In further explanation of this finding, it can be said that the four components of CCBT are compatible through their specific components, including teaching the treatment model (recognizing anxious feelings and physical reactions to anxiety, recognizing the relationship between thoughts, feelings, and behavior); Identifying thought patterns (clarification and recognition of thoughts and feelings in anxiety-provoking situations, recognition of cognitive distortions); Developing a coping plan and evaluating performance and self-strengthening lead to reducing the symptoms of ODD in children. Also, CCAT through cognitive restructuring (Mukund & Jena, 2022) changes children's perspectives. The exercises and techniques used in the safe space of therapy and outside of therapy sessions increase the feeling of mastery over the environment in clients and reduce physical symptoms and inconsistent cognitive evaluations in the long term. Finally, children learn to transfer the teachings of therapy sessions to everyday situations; this leads to the continuation of the treatment results after its end (Mukund & Jena, 2022).

In the explanation of the effectiveness of MCAT, it can be said that children with ODD show defects in regulating their emotions, especially negative emotions (Jones, 2018; Szentiványi & Balázs, 2018). Researchers have found that the parents of these children do not respond appropriately to the child's behaviors and emotions and use a less supportive emotional style. Improving mother-child relationships and attachment elements can improve self-control and emotion management in children and reduce their anxiety. Parents with secure attachment have higher parental sensitivity and correctly understand their child's needs, emotions, and motivations underlying their behavior and emotional experiences (Jones, 2018; Kendall et al., 2020; Szentiványi & Balázs, 2018). Effective empathy and appropriate response to the child's needs can improve emotion regulation because the child learns emotion regulation skills in interaction with the mother and in a safe relationship. Emotion regulation, in turn, reduces the symptoms of ODD. The results showed that the effectiveness of the treatment in reducing anxiety was maintained in the follow-up. Transferring the practical teachings of the treatment sessions to everyday situations leads to the continuation of the results of the treatment after its end.

5. Limitations

Every research has limitations, and the current research is no exception to this rule. Among these limitations, we can mention the sampling method of the research. Also, the quasi-experimental method makes generalizations to be made with little accuracy, and this requires caution.

6. Suggestions and Applications

Considering the lack of research, especially internal research in this field, it is suggested that other researchers conduct research and study on this issue. Also, according to the obtained results, counseling centers and child and adolescent psychotherapy clinics are suggested to use the protocols used in this research.

Acknowledgments

The cooperation of all participants in the research is thanked and appreciated.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethics principles

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were observed.

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E-ISSN: 3041-8518

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E-ISSN: 3041-8518

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E-ISSN: 3041-8518