

Enhancing Emotional Awareness in Children with Symptoms of Oppositional Defiant Disorder: A Comparison of the Effectiveness of Parent–Child Interaction Therapy and the Coping Cat Program

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ABSTRACT

Children with symptoms of oppositional defiant disorder commonly experience difficulties in identifying, understanding, and regulating their emotions. These difficulties may negatively affect the quality of parent–child relationships, social adjustment, and emotional development. Therefore, identifying effective interventions for improving emotional awareness in this population is of particular importance. This study aimed to examine and compare the effectiveness of Parent–Child Interaction Therapy and cognitive behavioral therapy based on the Coping Cat program in improving emotional awareness among children with symptoms of oppositional defiant disorder. The study employed a sequential explanatory mixed-methods design. In the quantitative phase, a quasi-experimental pretest–posttest design with a control group was used. The statistical population comprised all children with symptoms of oppositional defiant disorder in District 2 of Tehran during the 2025–2026 academic year. From this population, 45 children were selected through convenience sampling and randomly assigned to three groups: Parent–Child Interaction Therapy, the Coping Cat program, and a control group. Data were collected using Rieffe’s Emotional Awareness Questionnaire and analyzed using mixed-design analysis of variance. In the qualitative phase, 21 parent–child dyads from the two intervention groups participated in semi-structured interviews, and the data were examined using deductive content analysis. The quantitative findings indicated that the interaction effect of time and group on emotional awareness was statistically significant. Compared with the control group, Parent–Child Interaction Therapy produced a significant improvement in emotional awareness, whereas the Coping Cat program did not differ significantly from the control group. Moreover, the direct difference between the two interventions was not statistically significant. The qualitative findings further indicated that the two interventions contributed to the enhancement of emotional awareness through different mechanisms.

Keywords: emotional awareness, oppositional defiant disorder, Coping Cat program

1. Introduction

Oppositional defiant disorder is among the most common disruptive behavioral conditions in childhood and is characterized by a persistent pattern of irritability, argumentative behavior, defiance, hostility, and resistance toward authority figures. Although oppositional behaviors may occasionally occur as part of normative development, their persistence, intensity, and occurrence across interpersonal settings can substantially impair children's family relationships, educational adjustment, peer functioning, and emotional development. Children with oppositional defiant symptoms often respond to frustration, limits, criticism, or unmet expectations with anger, blame, verbal conflict, and noncompliance. These behavioral manifestations are not merely isolated conduct problems; rather, they are closely associated with limitations in self-regulation, emotional processing, interpersonal understanding, and the ability to interpret and communicate internal experiences. When such difficulties remain untreated, they may increase vulnerability to escalating externalizing problems, impaired social functioning, and more persistent forms of antisocial behavior. Accordingly, protective factors that strengthen children's regulatory capacities, relational security, and adaptive self-perceptions are central to preventing the consolidation of disruptive behavioral patterns (Goebbels, 2024).

A central construct in understanding the emotional functioning of children with oppositional defiant symptoms is emotional awareness. Emotional awareness refers to the ability to identify, differentiate, interpret, and communicate one's emotional states, recognize the bodily sensations associated with emotions, and attend to the emotions of others. It provides an essential foundation for emotion regulation because children must first recognize and understand an emotional response before they can modify its intensity, expression, or behavioral consequences. A child who cannot distinguish anger from fear, shame, disappointment, or sadness may express a wide range of distressing experiences through aggression, defiance, avoidance, or conflict. In contrast, the ability to label emotional experiences accurately can facilitate cognitive reflection, help-seeking, verbal problem solving, and the selection of contextually appropriate coping responses. Emotional awareness is therefore not restricted to knowledge about emotions but represents an integrated developmental capacity involving attention, bodily

perception, language, cognition, and interpersonal understanding.

The development of emotional awareness is embedded in broader processes of self-understanding and self-evaluation. As children develop, they construct increasingly differentiated representations of their personal characteristics, abilities, relationships, and emotional states. Self-concept refers to the organized set of perceptions that individuals hold about themselves, whereas self-esteem concerns the evaluative and affective judgments attached to those self-perceptions. Although related, these constructs are theoretically distinct and may follow different developmental pathways (Bengtsson & Arvidsson, 2022). Emotional awareness contributes to this developing self-system by enabling children to understand their internal reactions and integrate them into a coherent representation of the self. Children who recognize why they become angry, anxious, embarrassed, or hurt may be better able to separate temporary emotional states from global negative self-evaluations. By contrast, limited emotional differentiation may contribute to confusion, unstable self-evaluation, and behavioral responses that protect the child from perceived threats to competence or worth.

Developmental changes in self-understanding become particularly salient as children approach adolescence, when self-representations grow more abstract, multidimensional, and dependent on social comparison and interpersonal feedback (Harter, 2020). During this developmental transition, children become increasingly sensitive to how they are perceived by parents, teachers, and peers. They must integrate sometimes inconsistent experiences, such as feeling competent in one context but inadequate in another, or feeling close to family members while simultaneously seeking autonomy. Emotional awareness may facilitate this integration by allowing children to identify complex and mixed feelings rather than responding to interpersonal tensions through rigid opposition or hostility. This issue is especially relevant for children aged 7–12 years, who are developing more advanced emotional vocabulary and perspective-taking abilities while remaining highly dependent on caregivers for co-regulation and emotional interpretation.

Adolescence and the transition toward it are also shaped by social and cultural processes that influence how children interpret emotions, identity, belonging, and acceptable behavior. Social expectations, family values, gender norms, school environments, and cultural beliefs regarding authority and emotional expression may affect whether

children perceive emotions as legitimate, threatening, shameful, or manageable (Cheng et al., 2024). These contextual factors may be especially important in oppositional defiant presentations because behavior that appears defiant may sometimes represent an inflexible attempt to maintain autonomy, avoid perceived humiliation, or respond to invalidating interactions. A culturally sensitive understanding of emotional awareness therefore requires attention to both the child's intrapersonal capacities and the relational environments in which emotions are expressed and interpreted.

Contemporary developmental contexts have also expanded the sources of social feedback available to children and adolescents. Social media and digital interaction can shape physical self-concept, social comparison, and perceptions of acceptance, desirability, and competence (Cho & Lee, 2021). Although younger children may use social media less intensively than adolescents, exposure to digital standards and peer evaluation increasingly begins during middle childhood. Such environments may contribute to heightened self-consciousness, frustration, and emotional reactivity, particularly among children who already experience difficulties with emotion identification and self-regulation. Positive self-concept can serve as a protective factor against psychological distress, whereas negative or unstable self-perceptions may increase susceptibility to emotional and behavioral problems (Kim & Choi, 2022). Interventions that improve emotional awareness may therefore offer benefits beyond immediate emotional labeling by strengthening reflective self-understanding and reducing the need to express distress through oppositional behavior.

The family is one of the most important developmental contexts for acquiring emotional awareness. Through repeated interactions, children learn which emotions can be expressed, how emotions are named, how conflict is managed, and whether distress elicits comfort, criticism, coercion, or rejection. Parent-child attachment and relational quality influence not only children's security within the family but also the ways in which they establish peer relationships and interpret social cues (Delgado, 2022). Secure and responsive interactions provide opportunities for caregivers to label emotions, validate experiences, model regulation, and help children understand the relationship between feelings, thoughts, and actions. In contrast, coercive interaction cycles may amplify emotional arousal and reduce reflective communication. In families of children with oppositional behaviors, parents may repeat commands,

criticize, threaten, or withdraw, while children may escalate noncompliance until parental demands are removed. Over time, these patterns can reinforce oppositional behavior and restrict opportunities for constructive emotional learning.

Parent-Child Interaction Therapy is particularly relevant to these relational processes. It is an evidence-based, behaviorally oriented intervention designed to improve the quality of the parent-child relationship and reduce disruptive behavior through live coaching of parenting skills. The treatment typically includes a child-directed interaction phase, in which parents learn to follow the child's lead, provide labeled praise, reflect speech, describe appropriate behavior, and communicate enjoyment, followed by a parent-directed interaction phase emphasizing clear commands, consistent consequences, and predictable discipline. A meta-analysis of Parent-Child Interaction Therapy demonstrated its effectiveness in reducing externalizing behavior and parenting stress while improving parenting practices and child compliance (Thomas & Zimmer-Gembeck, 2017). These findings support the use of Parent-Child Interaction Therapy for children whose oppositional behaviors are maintained within dysfunctional patterns of parent-child interaction.

The potential influence of Parent-Child Interaction Therapy on emotional awareness may extend beyond its explicit behavioral objectives. During child-directed interaction, parents are encouraged to observe the child attentively, reflect verbal content, reduce criticism, and respond positively to appropriate behavior. These practices can create a relational environment in which children feel safer expressing internal experiences. When parents reflect emotional language and respond without immediate correction or confrontation, children may become more capable of identifying and verbalizing feelings. Parent-Child Interaction Therapy may also improve parental self-regulation and reflective functioning, enabling caregivers to interpret children's behavior as communication rather than deliberate provocation. Evidence indicates that participation in Parent-Child Interaction Therapy is associated with improvements in parents' perceived emotion-regulation abilities and reflective functioning (Zimmer-Gembeck et al., 2019). These parental changes may promote more accurate emotional mirroring and help children understand the emotional meanings underlying their behavior.

Recent findings further demonstrate that Parent-Child Interaction Therapy can improve parental behavior, self-regulation, and self-perceptions in high-risk family contexts (Skowron et al., 2024). Such outcomes are important

because parents' own emotional awareness and regulatory capacity influence whether they can remain calm, consistent, and emotionally available during child misbehavior. A parent who can recognize personal frustration before reacting harshly is more likely to model adaptive regulation and maintain the structure necessary for the child to learn from the interaction. Parent–Child Interaction Therapy may therefore enhance children's emotional awareness indirectly by modifying the relational system in which emotional experiences are communicated, interpreted, and regulated.

Evidence also supports the effectiveness of Parent–Child Interaction Therapy among families exposed to maltreatment and other serious relational risks. A meta-analysis of randomized controlled trials involving maltreated families showed that the intervention can improve parenting outcomes and reduce child behavioral problems (Zhang et al., 2024). This finding suggests that the therapeutic model has sufficient relational and behavioral potency to produce change even when family interaction patterns are severely disrupted. Although maltreatment and oppositional defiant symptoms are distinct phenomena, both may involve heightened emotional arousal, insecure interaction, ineffective discipline, and limited parental responsiveness. The demonstrated effectiveness of Parent–Child Interaction Therapy in complex family environments strengthens the rationale for examining whether it can improve emotional awareness in children with oppositional symptoms.

Parent-focused and dyadic interventions have also shown beneficial effects in other childhood clinical populations. Parent–Child Interaction Therapy has improved mother–child relationships and reduced behavioral problems among children with attention-deficit/hyperactivity disorder (Masjedsaraei et al., 2021). It has also produced improvements in family relationships among children with autism spectrum disorder (Javadi et al., 2020). These studies indicate that the intervention can influence relational functioning across diagnostic categories characterized by behavioral dysregulation, communication difficulties, or strained caregiver–child interactions. Furthermore, comparative evidence among children with oppositional defiant disorder suggests that Parent–Child Interaction Therapy can improve executive functioning and parent–child interaction (Shiroud Aghaei et al., 2020). Because executive functions support inhibition, flexible attention, and reflective responding, their improvement may facilitate children's ability to pause, recognize emotions, and select alternatives to oppositional reactions.

The value of targeting emotional development through parent–child treatment is also supported by research on early childhood psychopathology. A randomized trial of parent–child psychotherapy specifically targeting emotion development produced meaningful benefits for young children with depression (Luby et al., 2018). This evidence illustrates that emotional capacities can be modified through interventions centered on the caregiver–child relationship. It also reinforces the broader developmental principle that emotional learning is often most effective when embedded in emotionally significant interactions rather than taught exclusively as an individual cognitive skill. For children with oppositional defiant symptoms, whose difficulties frequently emerge in interactions with caregivers, a dyadic intervention may be particularly appropriate for changing both emotional understanding and the interpersonal contingencies surrounding emotional expression.

Nevertheless, not all children's emotional difficulties are best addressed exclusively through parent-mediated approaches. Cognitive behavioral interventions directly teach children to identify emotions, examine thoughts, recognize physiological arousal, solve problems, and practice adaptive coping. The Coping Cat program is a structured cognitive behavioral treatment originally developed for childhood anxiety. It teaches children to recognize anxious feelings and bodily cues, identify thoughts associated with distress, develop coping plans, evaluate their performance, and gradually confront challenging situations. Although the program primarily targets anxiety, its components are closely related to emotional awareness. Children are repeatedly required to attend to internal sensations, distinguish among emotional states, connect situations with thoughts and feelings, and describe their emotional reactions. These skills may also benefit children with oppositional symptoms, particularly when defiance functions as an avoidance response to fear, embarrassment, uncertainty, or perceived failure.

Research has consistently supported the effectiveness of the Coping Cat program for childhood anxiety. Hajmohammadi and Hajializadeh found that the intervention reduced symptoms of generalized anxiety disorder and social phobia in children (Hajmohammadi & Hajializadeh, 2019). Coping Cat-based training has also been associated with reductions in anxiety symptoms and increases in cognitive emotion regulation and resilience among children aged 7–12 years (Shakerimanesh et al., 2021). These findings are directly relevant to emotional awareness because successful cognitive emotion regulation requires

children to identify and interpret the emotional experience that is to be regulated. Improvements in resilience may similarly reflect greater confidence in tolerating and managing negative emotions rather than reacting through avoidance, aggression, or defiance.

The Coping Cat program may additionally strengthen interpersonal functioning by helping children communicate needs and respond more effectively to emotionally demanding situations. Evidence indicates that Coping Cat cognitive behavioral therapy can enhance assertiveness among children with anxiety disorders (Shokri Mirhosseini et al., 2021). Assertiveness requires awareness of one's feelings, preferences, and boundaries, as well as the capacity to express them without excessive passivity or aggression. For children with oppositional symptoms, this distinction is especially important. Defiant behavior may sometimes substitute for adaptive self-expression when children lack the emotional language or interpersonal skills needed to communicate disagreement, distress, or perceived unfairness. By developing emotional recognition, coping self-talk, problem solving, and assertive communication, Coping Cat may provide a pathway from reactive opposition to more regulated expression.

Recent international evidence further supports the cultural adaptability and clinical utility of the Coping Cat model. A randomized trial among anxious children in India demonstrated the program's effectiveness in reducing anxiety within a non-Western cultural context (Mukund, Tiwari, et al., 2025). Additional research has described Coping Cat as an effective cognitive behavioral modality for Indian children with elevated anxiety (Mukund, Sharma, et al., 2025). These studies are important because treatment mechanisms and engagement may vary across cultural settings. Their findings suggest that structured cognitive behavioral techniques for emotional recognition and coping can be adapted successfully beyond the cultural contexts in which they were originally developed. This provides a basis for evaluating the program among Iranian children, while recognizing that oppositional defiant symptoms differ clinically from anxiety disorders and may require different levels of caregiver involvement and behavioral management.

Broader cognitive behavioral evidence also suggests that structured psychological programs can influence both behavioral problems and self-perceptions. A cognitive behavioral program for institutionalized children with conduct disorder reduced aggression and improved self-concept (Mohamed et al., 2022). Although conduct disorder

is generally more severe than oppositional defiant disorder, the findings demonstrate that cognitive and behavioral skill development can modify externalizing behavior and internal self-representations simultaneously. Emotional awareness may be one mechanism connecting these outcomes. As children become better able to recognize emotional triggers and reinterpret social situations, they may experience less need for aggressive responses and develop more positive perceptions of their capacity to manage challenges.

An important consideration in comparing Parent-Child Interaction Therapy and the Coping Cat program concerns the pathway through which change is expected to occur. Parent-Child Interaction Therapy primarily modifies the interpersonal environment, parenting behavior, reinforcement contingencies, and emotional climate of the parent-child relationship. The Coping Cat program primarily targets children's cognitive appraisal, emotional recognition, physiological awareness, coping skills, and behavioral responses. The first approach may improve emotional awareness through co-regulation, parental reflection, reduced criticism, and increased relational safety, whereas the second may improve it through explicit instruction, cognitive rehearsal, and structured practice. These mechanisms are not mutually exclusive, but their relative effectiveness may depend on the developmental and clinical characteristics of children with oppositional defiant symptoms.

Therapeutic alliance may also influence the effectiveness of both approaches. A three-level meta-analysis found a meaningful association between therapeutic alliance and outcomes in child and adolescent psychotherapy (Roest et al., 2023). In Parent-Child Interaction Therapy, alliance involves the therapist's relationships with both parent and child, as well as the parent's willingness to receive live coaching and change established interaction patterns. In Coping Cat, alliance may affect the child's willingness to discuss emotions, engage in cognitive exercises, complete exposure tasks, and practice coping skills. Children with oppositional tendencies may resist adult direction, making collaborative engagement particularly important. Thus, differences in outcome may reflect not only the content of the interventions but also the extent to which each model establishes a credible, safe, and developmentally appropriate therapeutic relationship.

Despite growing evidence for both interventions, important gaps remain. Parent-Child Interaction Therapy has been extensively studied in relation to disruptive behavior, parenting practices, family relationships, and child

compliance, but fewer studies have directly examined emotional awareness as an outcome. Conversely, the Coping Cat program has a strong evidence base for anxiety, cognitive emotion regulation, resilience, and assertiveness, yet its effectiveness for emotional awareness among children with oppositional defiant symptoms is less clear. Moreover, few studies have directly compared a parent–child behavioral intervention with a child-focused cognitive behavioral program within the same research design. Such a comparison can clarify whether emotional awareness in children with oppositional symptoms is more responsive to changes in parent–child interaction or to direct cognitive behavioral instruction.

A mixed-methods approach is particularly valuable for addressing this gap. Quantitative findings can determine whether emotional awareness changes significantly and whether one intervention produces larger effects than another. However, statistical scores alone cannot fully explain how parents and children experience these changes or why interventions with different theoretical foundations may produce similar or different outcomes. Qualitative inquiry can identify perceived mechanisms such as improved emotional communication, greater parental patience, enhanced recognition of bodily cues, more accurate emotion labeling, or increased use of coping strategies. Integrating quantitative and qualitative evidence can therefore provide a more comprehensive understanding of treatment effects and may help explain why an intervention succeeds for some children but not others.

Given the developmental importance of emotional awareness, the interpersonal nature of oppositional defiant symptoms, and the distinct therapeutic mechanisms of Parent–Child Interaction Therapy and the Coping Cat program, direct empirical comparison is warranted. Accordingly, the present study aimed to examine and compare the effectiveness of Parent–Child Interaction Therapy and Coping Cat-based cognitive behavioral therapy in enhancing emotional awareness among children with symptoms of oppositional defiant disorder.

2. Methods and Materials

2.1. Study Design and Participants

This study employed a sequential explanatory mixed-methods design to compare the effectiveness of Parent–Child Interaction Therapy and the Coping Cat cognitive behavioral program in enhancing emotional awareness among children with symptoms of oppositional defiant

disorder. In the quantitative phase, a quasi-experimental pretest–posttest design with two intervention groups and a wait-list control group was used. The qualitative phase was conducted after completion of the quantitative phase to provide a deeper explanation of the statistical findings and clarify how participants experienced the therapeutic processes and perceived changes in the children’s emotional awareness. The statistical population for the quantitative phase consisted of children aged 7–12 years who exhibited symptoms of oppositional defiant disorder and resided in District 2 of Tehran during 2025. From this population, 45 eligible children were selected through purposive sampling and subsequently assigned at random to three equal groups of 15 participants: the Parent–Child Interaction Therapy group, the Coping Cat program group, and the control group. The control group received no psychological intervention during the study and remained on a waiting list; after completion of the posttest assessments, therapeutic services were made available to these participants. Eligibility criteria included being between 7 and 12 years of age, presenting symptoms of oppositional defiant disorder based on established diagnostic criteria, having at least one parent willing and able to participate in the therapeutic process, and obtaining written informed consent from the parent or legal guardian. The exclusion criteria included insufficient cooperation by the child or parent, concurrent participation in another psychological or psychiatric intervention, absence from more than three intervention sessions, a history of psychiatric hospitalization, a diagnosis of obsessive–compulsive disorder, previous participation in comparable therapeutic programs, simultaneous attendance in other educational or counseling courses, and voluntary withdrawal from the study. Before enrollment, the purpose, procedures, potential benefits, and conditions of participation were explained to the parents, and informed consent was obtained. The Emotional Awareness Questionnaire was administered as the pretest, after which the participants were allocated to the three study groups. Following completion of the interventions, the same questionnaire was administered as the posttest in all three groups. In the qualitative phase, 21 parent–child dyads from the two intervention groups participated in semi-structured interviews. The interviews focused on participants’ experiences of the interventions, perceived emotional changes in the children, and the mechanisms through which each treatment may have influenced emotional awareness. Qualitative sampling continued until adequate conceptual coverage of the participants’ experiences was achieved.

2.2. Measures

The Emotional Awareness Questionnaire developed by Rieffe et al. (2008) was used to assess the primary dependent variable of the study. This self-report instrument was designed to evaluate emotional awareness in school-aged children and adolescents and contains 28 items distributed across five dimensions: differentiating emotions, verbal sharing or expression of emotions, bodily awareness, attending to others' emotions, and analysis of emotions. The items are rated on a three-point Likert-type scale consisting of "not true," "sometimes true," and "often true," which are scored from 1 to 3 in accordance with the scoring instructions for each item. After reverse-scored items are recoded, the item scores are summed to produce dimension scores and an overall emotional awareness score. Total scores may range from 28 to 84, with higher scores indicating a greater ability to identify, differentiate, understand, express, and reflect on emotional experiences. Rieffe et al. (2008) reported a test-retest reliability coefficient of .82 for the overall questionnaire. The reliability coefficients reported for differentiating emotions, verbal sharing of emotions, bodily awareness, attending to others' emotions, and analysis of emotions were .69, .66, .79, .72, and .74, respectively. Evidence supporting the psychometric adequacy of the instrument has also been reported in Iran. In a study involving 585 male and female students, Yousefi and Taghiani (2019) reported a test-retest reliability coefficient of .82 for the total score and coefficients ranging from .66 to .79 for the questionnaire dimensions.

A semi-structured interview protocol was used to collect the qualitative data. The interview questions were developed in accordance with the quantitative findings and the conceptual dimensions of emotional awareness assessed in the study. The interviews explored participants' perceptions of changes in the children's ability to recognize and name emotions, distinguish among different emotional states, identify bodily signs associated with emotions, express emotional experiences, attend to the emotions of other people, and analyze the causes and consequences of emotional responses. Parents were also asked to describe any observed changes in parent-child interactions, conflict situations, emotional communication, and the child's responses to frustration or parental demands. Children were encouraged to describe their experiences of the therapeutic activities and any changes they noticed in understanding or communicating their emotions. Follow-up and probing

questions were used to obtain clarification and concrete examples. The interviews were conducted in an appropriate private setting, audio-recorded with the participants' permission, and transcribed verbatim for analysis. Identifying information was removed from the transcripts, and codes were assigned to participants to protect confidentiality.

2.3. Intervention

After the pretest assessment, the first intervention group received Parent-Child Interaction Therapy, a behavioral and relationship-based intervention implemented through direct parent coaching during interactions with the child. The protocol consisted of two principal phases. The child-directed interaction phase focused on strengthening the quality of the parent-child relationship through parental use of labeled praise, behavioral description, reflection of the child's speech, imitation of appropriate play, and expressions of enjoyment, while reducing criticism, unnecessary questioning, and excessive commands. Parents were taught to follow the child's lead during structured play and to respond sensitively to the child's emotional and behavioral signals. The parent-directed interaction phase focused on improving parental consistency, effective instruction delivery, limit setting, and management of oppositional behavior. Parents learned to give clear, direct, developmentally appropriate commands, praise compliance, and apply predictable consequences to noncompliance. Emotional awareness was supported indirectly through responsive parent-child interaction, emotion labeling, validation of emotional experiences, reduction of coercive interaction patterns, and development of a safer relational context for emotional expression. The second intervention group received cognitive behavioral therapy based on the Coping Cat program. This intervention emphasized psychoeducation about emotions, recognition of physiological signs of emotional arousal, identification of thoughts and feelings, cognitive restructuring, problem solving, coping self-talk, relaxation, graded exposure to emotionally challenging situations, and reinforcement of adaptive behavior. Children were taught to identify emotional triggers, differentiate emotional states, recognize bodily responses, evaluate anxious or maladaptive thoughts, generate more realistic interpretations, and select effective coping responses. Structured exercises, role-playing, behavioral practice, homework assignments, and parental involvement were used to facilitate the generalization of

acquired skills to everyday situations. Both interventions were delivered by a therapist trained in the relevant treatment protocols, and intervention fidelity was supported through adherence to the principal components of each therapeutic model. The control group received no intervention during the study period and completed the assessments according to the same timetable as the intervention groups.

2.4. Data Analysis

Quantitative data were analyzed at both descriptive and inferential levels. Means and standard deviations were calculated to summarize emotional awareness scores for each group at the pretest and posttest stages. Because the study included three independent groups and repeated measurement of the dependent variable at two time points, a 3×2 mixed-design analysis of variance was conducted. In this model, group was defined as the between-subjects factor with three levels—Parent–Child Interaction Therapy, the Coping Cat program, and control—whereas time was defined as the within-subjects factor with two levels, namely pretest and posttest. The total emotional awareness score was entered as the dependent variable. The statistical model examined the main effect of time, the main effect of group, and the group-by-time interaction effect. The main effect of time represented the overall change in emotional awareness scores from pretest to posttest irrespective of group membership, whereas the main effect of group represented overall differences among the three groups. The group-by-time interaction indicated whether the magnitude and direction of change in emotional awareness differed across the study groups and was therefore considered the principal criterion for determining the differential effectiveness of the interventions. When statistically significant effects were detected, appropriate pairwise comparisons were performed to identify differences between the intervention and control groups and to compare the two interventions directly. Before conducting the inferential analysis, the relevant assumptions of mixed-design analysis of variance were examined, including the absence of influential outliers, approximate normality of score distributions, homogeneity of variances,

and homogeneity of covariance matrices. Because the within-subjects factor contained only two measurement occasions, the sphericity assumption was inherently satisfied. Statistical significance was evaluated at an alpha level of .05, and the quantitative analyses were performed using IBM SPSS Statistics.

The qualitative data were analyzed through deductive content analysis. After the audio-recorded interviews had been transcribed verbatim, the transcripts were reviewed repeatedly to achieve familiarity with the data. A preliminary coding framework was developed based on the dimensions of emotional awareness and the mechanisms proposed by Parent–Child Interaction Therapy and the Coping Cat program. Meaning units relevant to the research questions were identified, condensed where necessary without altering their underlying meaning, and assigned conceptual codes. The codes were subsequently organized into predetermined and emergent subcategories reflecting changes in emotional differentiation, emotional expression, bodily awareness, attention to others' emotions, emotional analysis, parent–child communication, and coping with emotionally challenging situations. Comparisons were made between the experiences reported by participants in the two intervention groups to identify shared and intervention-specific mechanisms of change. The researchers repeatedly reviewed the correspondence among the original transcripts, codes, subcategories, and broader categories to enhance analytic consistency. The qualitative data were organized and managed using MAXQDA software, and the resulting findings were integrated with the quantitative results during the interpretation stage of the sequential explanatory mixed-methods design.

3. Findings and Results

A total of 45 children with symptoms of oppositional defiant disorder participated in the study and were assigned to the Parent–Child Interaction Therapy, Coping Cat program, and control groups. Each group consisted of 15 participants. The means and standard deviations of emotional awareness scores at the pretest and posttest stages are presented in Table 1.

Table 1*Descriptive Statistics for Emotional Awareness Scores by Group and Measurement Time*

Group	Pretest, M	Pretest, SD	Posttest, M	Posttest, SD	n
Parent–Child Interaction Therapy	87.86	4.406	112.20	9.675	15
Coping Cat program	88.67	2.845	94.33	18.352	15
Control	85.27	15.568	84.73	21.697	15
Total	86.93	9.372	97.09	20.475	45

As shown in Table 1, the mean emotional awareness score in the Parent–Child Interaction Therapy group increased from 87.86 at pretest to 112.20 at posttest, representing a mean increase of 24.34 points. In the Coping Cat group, the mean score increased from 88.67 to 94.33, corresponding to a smaller increase of 5.66 points. In contrast, the control group demonstrated a slight reduction in emotional awareness, with the mean score decreasing from 85.27 at pretest to 84.73 at posttest. Thus, at the descriptive level, the greatest improvement in emotional awareness was observed in the Parent–Child Interaction Therapy group.

Before conducting the mixed-design analysis of variance, the relevant statistical assumptions were examined. Inspection of the data indicated no severe or influential outliers that would substantially distort the results. The distributions of emotional awareness scores within the study groups were approximately normal, and the assumption of homogeneity of variance was satisfied. The covariance structure was also considered sufficiently homogeneous for the analysis. Because the within-subjects factor of time included only two measurement occasions, namely pretest and posttest, the sphericity assumption was automatically satisfied. Accordingly, the data were considered appropriate for analysis using a 3×2 mixed-design analysis of variance.

Table 2*Results of the Mixed-Design Analysis of Variance for Emotional Awareness Scores*

Source	Sum of Squares	df	Mean Square	F	p	Partial η^2
Time	2320.544	1	2320.544	18.295	< .001	.303
Time $\times$ Group	2735.756	2	1367.878	10.784	< .001	.339
Group	3180.022	2	1590.011	6.034	.005	.223

As presented in Table 2, the main effect of time on emotional awareness was statistically significant, $F(1, 42) = 18.295$, $p < .001$, partial $\eta^2 = .303$. This finding indicates that, regardless of group membership, emotional awareness scores changed significantly from pretest to posttest. The effect size showed that approximately 30.3% of the variance associated with changes in emotional awareness was attributable to the time factor. More importantly, the time-by-group interaction effect was statistically significant, $F(2, 42) = 10.784$, $p < .001$, partial $\eta^2 = .339$. This result demonstrates that the pattern and magnitude of change in emotional awareness from pretest to posttest differed significantly among the Parent–Child Interaction Therapy, Coping Cat, and control groups. The interaction effect

accounted for approximately 33.9% of the variance in emotional awareness scores and provided the primary evidence that the interventions did not produce equivalent patterns of change. The main effect of group was also statistically significant, $F(2, 42) = 6.034$, $p = .005$, partial $\eta^2 = .223$, indicating that, when scores were averaged across the two measurement occasions, the three groups differed significantly in emotional awareness. Approximately 22.3% of the variance in emotional awareness scores was associated with between-group differences. Bonferroni-adjusted pairwise comparisons were subsequently conducted to determine which groups differed significantly from one another.

Table 3*Bonferroni-Adjusted Pairwise Comparisons of Emotional Awareness Scores*

Group (I)	Group (J)	Mean Difference (I – J)	SE	p	95% CI Lower Bound	95% CI Upper Bound
Parent–Child Interaction Therapy	Coping Cat program	8.03	4.191	.186	–2.42	18.49
Parent–Child Interaction Therapy	Control	14.53*	4.191	.004	4.08	24.99
Coping Cat program	Control	6.50	4.191	.385	–3.95	16.95

As shown in Table 3, the adjusted mean emotional awareness score in the Parent–Child Interaction Therapy group was significantly higher than that in the control group, with a mean difference of 14.53, $SE = 4.191$, $p = .004$, 95% CI [4.08, 24.99]. Because the confidence interval did not include zero, this comparison confirmed a statistically significant difference between the two groups. By contrast, the difference between the Parent–Child Interaction Therapy and Coping Cat groups was not statistically significant, with a mean difference of 8.03, $SE = 4.191$, $p = .186$, 95% CI [–2.42, 18.49]. Similarly, the difference between the Coping Cat and control groups did not reach statistical significance, with a mean difference of 6.50, $SE = 4.191$, $p = .385$, 95% CI [–3.95, 16.95]. Overall, the mixed-design analysis of variance indicated that changes in emotional awareness differed significantly across the three groups. The descriptive findings showed the largest increase in the Parent–Child Interaction Therapy group, and the pairwise comparisons confirmed that this group differed significantly from the control group. However, no statistically significant difference was found between the two active interventions or between the Coping Cat program and the control group. Therefore, the findings provided clearer statistical evidence for the effectiveness of Parent–Child Interaction Therapy relative to the control condition, but they did not establish the superiority of either active intervention over the other.

4. Discussion

The present study examined and compared the effectiveness of Parent–Child Interaction Therapy and cognitive behavioral therapy based on the Coping Cat program in enhancing emotional awareness among children with symptoms of oppositional defiant disorder. The quantitative findings indicated a statistically significant main effect of time, showing that emotional awareness scores changed from pretest to posttest across the study sample. More importantly, the significant time-by-group interaction demonstrated that the pattern of change differed across the Parent–Child Interaction Therapy, Coping Cat, and control groups. Descriptive findings showed that the greatest increase in emotional awareness occurred in the Parent–Child Interaction Therapy group, whereas the Coping Cat group exhibited a smaller improvement and the

control group showed a slight decline. Bonferroni-adjusted pairwise comparisons further indicated that Parent–Child Interaction Therapy produced significantly higher emotional awareness scores than the control condition. However, the difference between Parent–Child Interaction Therapy and the Coping Cat program was not statistically significant, and the difference between the Coping Cat program and the control group also failed to reach statistical significance. Therefore, the clearest evidence obtained in this study concerned the effectiveness of Parent–Child Interaction Therapy relative to no intervention, while the superiority of one active treatment over the other was not established.

The significant improvement observed following Parent–Child Interaction Therapy can be explained by the relational and regulatory mechanisms embedded in this intervention. Emotional awareness develops within repeated interpersonal exchanges in which caregivers identify, reflect, validate, and organize children’s emotional experiences. Children with oppositional defiant symptoms frequently become involved in coercive cycles characterized by repeated commands, criticism, escalating resistance, and emotionally charged interactions. Such cycles may prevent children from pausing to recognize the underlying emotions associated with frustration, fear, disappointment, shame, or perceived loss of autonomy. Parent–Child Interaction Therapy interrupts these patterns by teaching parents to attend selectively to adaptive behavior, reflect the child’s verbalizations, offer labeled praise, communicate warmth, and reduce criticism and unnecessary confrontation. These changes can create a safer relational context in which children are more willing and able to notice, label, and express emotional experiences rather than communicating distress through defiance or hostility.

This interpretation is consistent with evidence demonstrating that Parent–Child Interaction Therapy improves parenting behavior, child compliance, and family functioning. The meta-analysis conducted by Thomas and Zimmer-Gembeck showed that Parent–Child Interaction Therapy is effective in reducing externalizing behavior and improving parenting-related outcomes (Thomas & Zimmer-Gembeck, 2017). Although emotional awareness was not the primary focus of that meta-analysis, reductions in coercive behavior and improvements in parent–child interaction may provide the conditions necessary for children to become

more attentive to internal emotional states. When behavioral conflict decreases, both parents and children may have greater cognitive and emotional capacity to reflect on what the child is feeling and why the emotional response has emerged. Thus, the present findings extend the established behavioral effects of Parent–Child Interaction Therapy by suggesting that the intervention may also support an important emotional-developmental capacity.

The findings are also aligned with research showing that Parent–Child Interaction Therapy can enhance parental emotion regulation and reflective functioning. Zimmer-Gembeck et al. found that parents participating in Parent–Child Interaction Therapy reported improved perceptions of their emotional regulation and reflective functioning (Zimmer-Gembeck et al., 2019). Reflective functioning refers to the ability to understand behavior in terms of underlying mental and emotional states. A parent who develops this capacity may become less likely to interpret opposition solely as intentional misconduct and more likely to consider whether the child is anxious, overwhelmed, embarrassed, angry, or unable to communicate a need. This shift can lead to more accurate emotional labeling and validation during parent–child interactions. Repeated exposure to such emotionally attuned responses may gradually help children distinguish their feelings, recognize bodily signals, and understand the causes and consequences of emotional reactions.

The results are further supported by the randomized trial conducted by Skowron et al., which demonstrated that Parent–Child Interaction Therapy improved parental behavior, self-regulation, and self-perceptions among parents involved in the child welfare system (Skowron et al., 2024). Parental self-regulation is particularly relevant when working with oppositional children because these children may evoke intense frustration and reactive discipline. When parents regulate their own emotional responses more effectively, they can remain consistent and emotionally available during conflict. Such regulated parental behavior models the process of identifying and managing emotions and provides children with repeated opportunities for co-regulation. The greater improvement in emotional awareness observed in the Parent–Child Interaction Therapy group may therefore have resulted not only from direct changes in the child but also from changes in parental emotional behavior and the overall affective climate of the family.

The significant difference between Parent–Child Interaction Therapy and the control group is also consistent with the findings of Zhang et al., whose meta-analysis

indicated that Parent–Child Interaction Therapy produced beneficial outcomes among maltreated families (Zhang et al., 2024). Families affected by maltreatment and families of children with oppositional symptoms may differ substantially, but both contexts can involve relational stress, emotional dysregulation, negative attribution patterns, and ineffective discipline. The capacity of Parent–Child Interaction Therapy to improve outcomes in high-risk and relationally disrupted families supports the assumption that its mechanisms are sufficiently robust to influence children’s emotional and behavioral functioning. The present findings suggest that these mechanisms may include enhanced emotional awareness, particularly when parents learn to replace criticism and escalating control with observation, reflection, praise, and predictable behavioral guidance.

Research conducted in Iranian clinical populations also provides support for the present findings. Masjedsaraei et al. reported that Parent–Child Interaction Therapy improved the mother–child relationship and reduced behavioral problems among children with attention-deficit/hyperactivity disorder (Masjedsaraei et al., 2021). Javadi et al. similarly found beneficial effects on family relationships among families of children with autism spectrum disorder (Javadi et al., 2020). Although these diagnostic groups differ from children with oppositional defiant symptoms, they commonly experience difficulties in self-regulation, social communication, behavioral control, or family interaction. Improvements in relationship quality may increase the frequency of emotionally meaningful exchanges and reduce the likelihood that children’s emotional expressions are ignored, misunderstood, or punished. These relational changes could explain why Parent–Child Interaction Therapy had a particularly strong descriptive effect in the present study.

The results are especially compatible with the findings of Shiroud Aghaei et al., who compared cognitive behavioral play therapy and Parent–Child Interaction Therapy among children with oppositional defiant disorder and reported improvements in executive functions and parent–child interaction (Shiroud Aghaei et al., 2020). Executive functions, particularly inhibitory control, cognitive flexibility, and working memory, are closely related to emotional awareness. A child must inhibit an immediate behavioral response, attend to internal cues, hold emotional information in mind, and consider alternative explanations before accurately identifying an emotional state. Improvements in executive functioning may therefore support better emotional differentiation and analysis. The present findings may reflect a similar process in which

changes in parent–child interaction and behavioral regulation enabled children to process emotional information more deliberately.

The effectiveness of relationally oriented treatment for emotional development is also supported by the randomized trial conducted by Luby et al. Parent–child psychotherapy targeting emotion development produced significant benefits for young children with depression (Luby et al., 2018). This study demonstrates that emotional capacities can be strengthened through interventions that actively involve caregivers in the therapeutic process. Emotional development is not exclusively an individual cognitive achievement; it is constructed through interpersonal exchanges in which emotions are named, accepted, discussed, and regulated. The present findings are consistent with this developmental perspective and indicate that, for children with oppositional defiant symptoms, improving the relational context may be particularly important for increasing emotional awareness.

The lack of a statistically significant difference between Parent–Child Interaction Therapy and the Coping Cat program requires careful interpretation. Descriptively, Parent–Child Interaction Therapy produced a substantially larger increase, but the direct comparison between the two interventions did not reach statistical significance. This result may indicate that both interventions contain potentially beneficial components for emotional awareness, even though their pathways of change differ. Parent–Child Interaction Therapy primarily works through parental responsiveness, co-regulation, reinforcement contingencies, and improved interaction quality, whereas Coping Cat directly teaches children to recognize emotions, identify physiological arousal, examine thoughts, and apply coping strategies. Both approaches may therefore influence emotional awareness, but the limited sample size and variability in posttest scores may have reduced the statistical power needed to detect a difference between the two active treatments.

The modest increase observed in the Coping Cat group is theoretically plausible because emotional recognition is a central component of the program. Children are taught to identify emotional and bodily signs of anxiety, distinguish thoughts from feelings, evaluate threatening interpretations, and practice coping responses. Previous studies have demonstrated that Coping Cat reduces anxiety symptoms and can enhance emotional and behavioral competencies. Hajmohammadi and Hajjalizadeh found that the program reduced generalized anxiety and social phobia symptoms in

children (Hajmohammadi & Hajjalizadeh, 2019). Shakerimanesh et al. also reported that Coping Cat-based training reduced anxiety and improved cognitive emotion regulation and resilience among children aged 7–12 years (Shakerimanesh et al., 2021). These findings suggest that the program can strengthen children’s ability to identify and manage internal emotional experiences. The improvement observed in the present Coping Cat group is therefore compatible with the existing evidence, even though it was not sufficiently large to differ significantly from the control group.

The results may also be considered in light of the study by Shokri Mirhosseini et al., who found that Coping Cat cognitive behavioral therapy improved assertiveness in children with anxiety disorders (Shokri Mirhosseini et al., 2021). Assertiveness involves recognizing one’s feelings, preferences, and interpersonal needs and communicating them in a direct but nonaggressive manner. Children with oppositional symptoms may express disagreement through anger or defiance because they have difficulty identifying and verbalizing the underlying emotional need. Coping Cat may help some children replace reactive opposition with more reflective communication. Nevertheless, because the program was originally designed for anxiety rather than oppositional behavior, its standard structure may not fully address the coercive parent–child interactions and reinforcement patterns that maintain defiance. This may explain why the program produced some descriptive improvement but did not significantly outperform the control condition.

Recent research by Mukund et al. has supported the effectiveness and cultural adaptability of the Coping Cat program among anxious children in India (Mukund, Tiwari, et al., 2025). A related study also described Coping Cat as a useful cognitive behavioral modality for Indian children with elevated anxiety (Mukund, Sharma, et al., 2025). These findings indicate that the program’s emotional-recognition and coping components can be successfully implemented in non-Western settings. However, cultural adaptability does not necessarily ensure equal effectiveness across diagnostic populations. Children with oppositional defiant symptoms may be less willing to engage in therapist-directed cognitive exercises, complete homework, or discuss vulnerable emotional experiences than children primarily presenting with anxiety. Greater parental participation, motivational preparation, or behavioral reinforcement may be required to optimize the Coping Cat program for this group.

The absence of a significant difference between the Coping Cat and control groups may also be related to heterogeneity in the emotional mechanisms underlying oppositional behavior. Some children may display opposition in response to anxiety, fear of failure, social threat, or low perceived competence and may benefit from cognitive restructuring and coping training. Others may primarily be affected by coercive family interactions, inconsistent discipline, irritability, impulsivity, or entrenched reinforcement patterns. A child-focused cognitive behavioral intervention may be less effective when the central maintaining factors exist within the parent–child relationship. By contrast, Parent–Child Interaction Therapy directly modifies both parental behavior and child responses, which may explain its clearer effect relative to the control group.

The broader literature on self-concept and emotional development also helps explain the findings. Emotional awareness contributes to the organization of self-understanding because children need to recognize their internal states to form coherent and differentiated views of themselves. Bengtsson and Arvidsson emphasized the distinction between self-concept and self-esteem in development (Bengtsson & Arvidsson, 2022), while Harter described increasingly complex self-understanding and self-evaluation during the transition to adolescence (Harter, 2020). Children with oppositional symptoms may protect a vulnerable self-concept by denying distress, externalizing blame, or resisting adult feedback. Parent–Child Interaction Therapy may reduce threats to the child’s self-system by increasing positive attention and labeled praise, thereby making it safer for the child to acknowledge difficult emotions. Coping Cat may support similar processes by helping children reinterpret threatening situations and view themselves as capable of managing distress.

Kim and Choi identified positive self-concept as a protective factor in adolescent mental health (Kim & Choi, 2022). Similarly, Mohamed et al. found that a cognitive behavioral intervention reduced aggression and improved self-concept among institutionalized children with conduct disorder (Mohamed et al., 2022). These findings suggest that behavioral and emotional improvements may occur alongside changes in children’s perceptions of competence and personal worth. In the present study, greater emotional awareness may have emerged as children experienced more successful interactions, received more positive parental feedback, or developed greater confidence in coping with difficult situations. These improvements may reduce the

need to defend the self through aggression or oppositional behavior.

Developmental and contextual influences must also be considered. Children aged 7–12 years are moving toward increasingly complex social and emotional understanding, while becoming more sensitive to peer evaluation and cultural expectations. Cheng et al. emphasized that adolescent development is shaped by social and cultural processing (Cheng et al., 2024), and Cho and Lee showed that social media can influence physical self-concept among adolescents (Cho & Lee, 2021). Although these factors were not measured in the present study, they illustrate the wider social environment in which emotional awareness develops. Children who face frequent comparison, criticism, or perceived rejection may experience emotions that are difficult to identify or express. Parent–Child Interaction Therapy may offer a corrective relational experience within the family, while Coping Cat may provide individual strategies for interpreting and coping with socially induced distress.

Attachment and relational security may be another mechanism underlying the observed findings. Delgado emphasized the links between parent–child attachment and peer relationships (Delgado, 2022). A more secure and responsive parent–child relationship may improve children’s capacity to interpret emotions both in themselves and in others. When children trust that emotions will be received with interest rather than punishment, they may communicate more openly and develop more nuanced emotional understanding. The significant advantage of Parent–Child Interaction Therapy over the control condition may therefore reflect changes in attachment-related interaction patterns, even though attachment was not directly assessed.

The findings also accord with research on protective factors against antisocial behavior. Goebbels highlighted the role of relational, individual, and regulatory protective factors in reducing antisocial developmental trajectories (Goebbels, 2024). Emotional awareness can be considered one such protective factor because it allows children to recognize rising anger, understand interpersonal triggers, anticipate behavioral consequences, and seek support before conflict escalates. Parent–Child Interaction Therapy may strengthen this protection by combining improved emotional communication with consistent behavioral boundaries. The intervention does not merely encourage emotional expression; it places that expression within a structured environment in which expectations and consequences are predictable.

The therapeutic alliance may have contributed to outcomes in both intervention groups. Roest et al. demonstrated a meaningful association between therapeutic alliance and treatment outcomes in child and adolescent psychotherapy (Roest et al., 2023). Children with oppositional tendencies may challenge adult authority and resist participation, making the quality of the therapeutic relationship particularly important. Parent–Child Interaction Therapy may foster engagement through play and direct parental involvement, whereas Coping Cat requires children to participate in structured cognitive and behavioral exercises. Variability in alliance, motivation, and treatment adherence may therefore have contributed to the greater dispersion of posttest scores in the Coping Cat group and reduced the likelihood of detecting a significant effect.

Overall, the quantitative findings and the qualitative indication that the interventions operated through different pathways support a multidimensional interpretation. Parent–Child Interaction Therapy appears to enhance emotional awareness primarily by changing the relational environment, improving parental responsiveness, reducing coercive interactions, and facilitating emotional reflection and co-regulation. Coping Cat may influence emotional awareness more directly through emotional education, recognition of bodily cues, cognitive analysis, and coping practice. In children with oppositional defiant symptoms, however, relational change may be especially influential because emotional difficulties are frequently expressed and reinforced within interactions with caregivers. The results therefore provide stronger support for Parent–Child Interaction Therapy relative to the control group, while also suggesting that Coping Cat may offer clinically meaningful benefits for some children despite the absence of a statistically significant group difference.

The findings should be interpreted in light of several limitations. First, the sample consisted of only 45 children from District 2 of Tehran, which limits the generalizability of the results to children from other geographic, socioeconomic, cultural, and clinical backgrounds. Second, purposive sampling may have resulted in a sample of families who were more motivated or available to participate in psychological treatment than the broader population of children with oppositional symptoms. Third, the study included only pretest and posttest assessments, and the absence of a follow-up measurement prevented evaluation of whether the improvements were maintained over time. Fourth, emotional awareness was assessed primarily using a self-report questionnaire, which may be influenced by

children's reading abilities, response tendencies, current mood, or limited capacity for self-observation. Fifth, the relatively small sample size reduced statistical power and may have contributed to the nonsignificant difference between the two intervention groups. Finally, variation in therapist–participant alliance, parental adherence, completion of home practice, and the severity or comorbidity of children's symptoms may have influenced treatment outcomes but was not examined systematically.

Future studies should replicate the present research with larger and more diverse samples recruited from multiple schools, clinics, and districts to improve statistical power and external validity. Longitudinal designs with several follow-up assessments are recommended to determine the durability of treatment effects and whether improvements in emotional awareness are accompanied by subsequent reductions in oppositional behavior, aggression, or family conflict. Researchers should incorporate multi-informant and multi-method assessments, including parent and teacher reports, observational coding of parent–child interactions, performance-based emotional recognition tasks, and physiological indicators of emotional arousal. Future studies could also examine mediating mechanisms such as parental emotion regulation, reflective functioning, attachment security, executive functioning, therapeutic alliance, and cognitive emotion regulation. It would be useful to test an adapted version of the Coping Cat program that includes stronger parent-management components or to investigate a combined intervention integrating Parent–Child Interaction Therapy with direct cognitive behavioral emotional-skills training. Moderator analyses should also explore whether age, symptom severity, anxiety, attention-deficit/hyperactivity symptoms, family stress, and baseline emotional awareness predict differential response to the two interventions.

Clinicians working with children who display oppositional defiant symptoms should assess emotional awareness alongside disruptive behavior rather than focusing exclusively on compliance and discipline. Parent–Child Interaction Therapy may be particularly useful when oppositional behavior occurs within frequent coercive exchanges, inconsistent discipline, high parental distress, or limited emotional communication. Therapists should explicitly help parents notice and label children's emotions, validate emotional experiences without reinforcing inappropriate behavior, and model calm emotional expression during conflict. Cognitive behavioral techniques from the Coping Cat program may be added when children

have difficulty identifying bodily signs of distress, interpreting threatening situations, or generating coping responses. Schools and child mental health services should consider involving parents actively in intervention planning, monitoring emotional and behavioral change across settings, and providing opportunities for children to practice emotional vocabulary, perspective taking, and assertive communication. Treatment selection should be individualized according to the child's emotional profile, family interaction patterns, motivation, and co-occurring difficulties rather than based solely on the diagnostic label.

5. Conclusion

Overall, the findings support an integrated conceptualization of specific learning difficulties. Self-control appears to be directly related to students' ability to engage effectively in learning, while disobedience constitutes a significant behavioral pathway through which weak self-control may contribute to greater academic difficulty. This interpretation is consistent with research emphasizing attentional control, executive functioning, self-regulated learning, emotional adjustment, oppositional behavior, parenting, and educational support as interrelated dimensions of student functioning. The findings therefore reinforce the need to move beyond a narrow remediation model focused exclusively on academic deficits. Effective assessment and intervention should simultaneously consider the student's academic skills, executive and self-regulatory capacities, emotional responses, behavioral patterns, and family and school contexts.

One limitation of the present study was its cross-sectional and correlational design, which restricts definitive causal interpretation despite the use of structural equation modeling. The study was conducted only among sixth-grade students in Urmia, and the use of purposive sampling may limit the generalizability of the findings to students in other grades, cities, cultural contexts, or educational systems. The data were obtained primarily through questionnaire measures, which may have been influenced by response bias, parental perceptions, social desirability, or differences between behavior at home and at school. Potentially relevant variables such as intelligence, socioeconomic status, comorbid attention-deficit/hyperactivity symptoms, anxiety, parenting style, teacher behavior, and severity or type of learning difficulty were not included in the model. In addition, the use of a general learning-difficulties measure

did not permit separate examination of reading, writing, and mathematics difficulties.

Future studies should employ longitudinal designs to determine the temporal sequence among self-control, disobedience, and specific learning difficulties and to examine whether changes in self-control predict subsequent changes in behavior and academic performance. Researchers should replicate the model in larger, randomly selected, and more diverse samples and compare the structural paths across sex, grade level, socioeconomic status, and different types of learning difficulty. Future models could incorporate executive functions, anxiety, academic self-efficacy, parenting practices, teacher-student relationships, and classroom climate as additional mediators or moderators. Multi-informant assessment involving students, parents, teachers, and direct behavioral observations would provide a more comprehensive understanding of disobedience and self-control. Experimental studies should also evaluate whether interventions targeting self-control and oppositional behavior produce measurable improvements in reading, writing, mathematics, and general academic engagement.

In practice, school psychologists and counselors should assess self-control and defiant behavior whenever students are referred for persistent learning difficulties. Intervention programs should integrate academic remediation with training in impulse control, emotional regulation, frustration tolerance, goal setting, task persistence, and adaptive help-seeking. Teachers should interpret refusal or noncompliance within the context of the student's learning profile and avoid punitive responses that may intensify avoidance and conflict. Parent-training programs should promote consistent expectations, emotionally supportive communication, and structured responses to homework-related resistance. Collaboration among teachers, parents, counselors, and learning-disability specialists is necessary to develop individualized plans that address both academic and behavioral needs. Early screening and coordinated multidimensional interventions may prevent the reciprocal escalation of learning failure, poor self-control, and disobedience and may improve students' educational adjustment and psychological well-being.

Authors' Contributions

Authors equally contributed to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

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