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Comparison of the Effectiveness of Acceptance and Commitment-Based Parenting and Schema-Based Parenting on Competence and Self-Control in Children with Oppositional Defiant Disorder

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A B S T R A C T

This study was conducted with the aim of comparing the effectiveness of acceptance and commitment-based parenting and schema-based parenting on competence and self-control in children with oppositional defiant disorder. The research employed a quasi-experimental design with three phases: pretest, posttest, and follow-up, along with a control group. The statistical population consisted of all mothers and their children who visited three child counseling and psychotherapy centers in Isfahan during Autumn 2024, from whom 60 mother–child pairs were selected through convenience sampling and assigned to two experimental groups and one control group (20 participants per group). The Competence Questionnaire (Merrell et al., 2011) and the Self-Control Questionnaire (Humphrey, 1982) were used to measure the dependent variables across the three phases. The acceptance and commitment-based parenting group and the schema-based parenting group each received training separately across nine sessions of 75 to 95 minutes, while the control group received no training. Data were analyzed using repeated-measures ANOVA and Bonferroni post-hoc tests via SPSS version 26. The results showed a significant difference in competence and self-control between the acceptance and commitment-based parenting group and the schema-based parenting group compared to the control group ($p < .05$). When comparing the two parenting approaches, no significant difference was found in competence ($p > .05$); however, regarding self-control, acceptance and commitment-based parenting demonstrated greater effectiveness than schema-based parenting ($p < .05$). Based on the findings, acceptance and commitment-based parenting and schema-based parenting can be used to enhance competence and self-control in children with oppositional defiant disorder.

Keywords: *acceptance and commitment-based parenting, schema-based parenting, competence, self-control, children with oppositional defiant disorder*

1. Introduction

Oppositional Defiant Disorder (ODD) is one of the most prevalent disruptive behavior disorders in childhood, characterized by patterns of angry and irritable mood, argumentative and defiant behavior, and vindictiveness that significantly impair social, emotional, and academic functioning. Recent conceptual and empirical work has emphasized that ODD not only affects immediate interpersonal relationships but also functions as a developmental risk factor for later psychopathology, including conduct disorder, mood disorders, and academic underachievement (Mattis & Lachman, 2022; Walls, 2020). Studies indicate that behavioral dysregulation and high emotional reactivity in these children create persistent negative cycles within families, where coercive interactions reinforce maladaptive patterns between parents and children (Lowet et al., 2023). Furthermore, comorbidity with other conditions such as ADHD magnifies these challenges, leading to elevated levels of inattentiveness, impulsivity, and defiance that intensify parental stress and impede effective parenting (Luo et al., 2023). Thus, interventions targeting parenting practices and parent–child emotional exchanges have become essential components of early therapeutic efforts.

A growing body of literature suggests that the quality of parenting practices plays a decisive role in shaping the trajectory of children with ODD, influencing their emotional regulation, social competence, and self-control outcomes (Fu, 2024). Parenting practices provide the foundational structure through which children learn to regulate emotions, internalize social norms, and navigate interpersonal demands. Poorly calibrated parenting—particularly harshness, inconsistency, or enmeshment—can exacerbate defiant tendencies, while responsive, structured, and attuned parenting improves emotional regulation and behavioral adjustment (Fooladvand et al., 2021). Research has further demonstrated that parenting is not merely a set of behavioral techniques but reflects deeper cognitive, emotional, and developmental schemas in parents themselves. Thus, interventions that directly target parental emotion regulation, cognitive schemas, and value-based action have received increasing attention.

One major advancement in recent years has been the application of Acceptance and Commitment Therapy (ACT) principles to parenting. ACT-based parenting interventions aim to increase psychological flexibility, help parents disengage from maladaptive cognitive–emotional processes, and align parenting behaviors with core personal values (Keen & Morrell, 2018). Through mindfulness, acceptance practices, and committed action, parents learn to respond to children's oppositional behaviors with greater calm, clarity, and consistency. Studies show that ACT-based parenting reduces parenting stress, improves emotional self-regulation, and strengthens parent–child relationships in families of children with ODD (Mehri et al., 2025). ACT-based parenting also equips parents with tools to manage internal barriers—such as frustration, self-judgment, and cognitive fusion—that often interfere with constructive parenting choices (Ghorbanikhah et al., 2025). This approach helps transform reactive parenting patterns into deliberate, value-driven actions, demonstrating considerable promise for families under emotional strain.

In parallel, schema therapy-based parenting interventions—derived from schema-focused cognitive therapy—have demonstrated meaningful benefits for addressing maladaptive cognitive–emotional patterns that parents bring into their interactions with children. Schema theory posits that early maladaptive schemas, shaped by caregivers' unresolved emotional needs, influence how parents perceive and respond to their children, often perpetuating intergenerational cycles of emotional dysregulation and unmet needs (Lewis & Lewis, 2024). Schema-based parenting helps parents identify dysfunctional schemas—such as defectiveness, dependence, insufficient self-control, or unrelenting standards—and replace them with healthier cognitive and behavioral responses. Research indicates that schema-based parenting improves emotional regulation, enhances attunement, and increases parental resilience in managing children with behavioral problems (Karimi Moghadam et al., 2023). Moreover, this approach fosters healthier parent–child interactions by targeting the cognitive roots of harshness, overcontrol, or permissiveness in parenting styles (Salehi Kelishadi et al., 2022). Given that emotional misattunement and rigid expectations are common parental responses to oppositional behaviors, schema-based interventions provide a corrective emotional and cognitive framework that can yield long-term benefits.

Comparative studies have begun to examine the relative strengths of ACT-based versus schema-based parenting approaches. ACT emphasizes experiential flexibility, acceptance, and mindful awareness, whereas schema-based parenting focuses on cognitive restructuring, emotional repair, and addressing unmet childhood needs. Some evidence suggests that ACT-based parenting is particularly

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effective for improving emotional self-regulation and reducing parental stress in mothers of ODD children because of its focus on reducing reactivity and promoting acceptance (Mehri et al., 2025). Other research indicates that schema-based parenting may be more effective for modifying entrenched cognitive patterns and interpersonal schemas that influence long-term parenting behavior (Hosseini et al., 2024). Despite the theoretical distinctions, both approaches demonstrate significant positive outcomes in reducing behavioral symptoms in children and improving parental functioning, though the exact mechanisms of change differ.

Emerging evidence supports the idea that combining behavioral parenting skills with deeper emotional–cognitive interventions yields the most comprehensive outcomes. Behavioral parent management training has long been considered the gold standard for reducing ODD symptoms, reinforcing desired behaviors, and shaping compliance (Agha Babaei-Pour et al., 2025). However, behavioral-only interventions may be insufficient when parents struggle with emotional regulation difficulties, high parenting stress, or maladaptive beliefs that interfere with consistent parenting practices. Thus, contemporary research advocates integrative models of parenting intervention that address both skills training and psychological flexibility or schema modification. This trend reflects a broader shift toward considering parenting as an emotionally embedded and cognitively mediated process, not simply a set of structured behavioral contingencies (Azimi Far et al., 2019).

Furthermore, studies have shown that children's competence—encompassing emotional regulation, social functioning, empathy, responsibility, and behavioral adaptability—is significantly shaped by parenting quality (Sedaqat & Akbari, 2023). Children with ODD often display deficits in social competence and self-control, making them vulnerable to peer rejection, academic struggles, and later psychosocial risk. Strengthening these capacities requires parenting interventions that modify both parental behavior and parent–child emotional exchanges. For example, ACT-based parenting enhances mindful awareness of children's emotional needs, helping parents respond more constructively to defiant behaviors (Brown et al., 2025). Schema-based parenting, on the other hand, targets multi-generational patterns that impede parents from providing nurturing, consistent, and emotionally attuned caregiving (Jokar et al., 2025). Both pathways ultimately contribute to building children's emotional and behavioral competencies.

A related line of research highlights self-control as a crucial developmental outcome for children with ODD. Self-control deficits in these children predict increased risk for aggression, impulsive behavior, academic difficulties, and long-term psychosocial problems. Parenting practices that emphasize structure, limit-setting, emotional safety, and supportive scaffolding are essential for the development of self-control (Fucà et al., 2023). This aligns with findings showing that warm, consistent, and mindful parenting fosters children's internalization of rules and enhances emotional regulation capacities. Conversely, punitive or inconsistent parenting increases behavioral dysregulation and perpetuates cycles of resistance and oppositionality. As such, interventions designed to strengthen parents' ability to navigate emotionally charged interactions with children serve as a foundation for improving children's self-control outcomes (Badaghi et al., 2021).

A number of Iranian studies have echoed international findings, highlighting the benefits of ACT-based and schema-based interventions for improving social competence, reducing behavioral problems, and enhancing parent–child relationships in culturally diverse samples (Barabadi et al., 2021; Hosseini Yazdi et al., 2015). These studies reinforce the applicability of such interventions in Iranian contexts, where parent–child relational patterns and social expectations may differ from Western models. Local evidence also emphasizes that mothers of children with ODD frequently experience elevated stress, maladaptive coping patterns, and limited access to effective psychological interventions, making structured parenting programs especially valuable (Fucà et al., 2023; Mehri et al., 2025). Given the cultural emphasis on parental responsibility, emotional closeness, and social harmony, interventions that enhance parental psychological flexibility or modify maladaptive schemas may have strong relevance in Iranian families.

Although the literature clearly supports both ACT-based and schema-based parenting interventions, direct comparative studies remain rare. Few studies have systematically examined how these two approaches differentially influence children's competence and self-control—two central developmental outcomes for ODD. Some work has compared ACT with positive parenting or other behavioral frameworks (Ghorbanikhah et al., 2025), while others have compared schema-based parenting with ACT-based formats in domains such as social competence (Jokar et al., 2025) or emotional regulation (Hosseini et al., 2024). However, there is still insufficient evidence to determine which approach yields stronger or more sustained improvements in competence and self-control in children

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diagnosed with oppositional behaviors, especially in early and middle childhood. Moreover, few studies incorporate follow-up assessments to evaluate the durability of treatment effects, an essential factor given the chronic nature of ODD (Fooladvand et al., 2021).

The growing interest in evidence-based parenting interventions for ODD underscores the urgent need for robust comparative research. As ODD continues to impose emotional, behavioral, and relational burdens on families, identifying the most effective parenting approach for enhancing children's competence and self-control becomes both a clinical and social priority. Understanding how ACT-based and schema-based parenting differentially influence child outcomes will help clinicians, educators, and policymakers design interventions that target the specific needs of families navigating ODD. Additionally, such research contributes to the refinement of culturally responsive models of parenting intervention in Iran and globally.

Accordingly, the aim of this study is to compare the effectiveness of acceptance and commitment–based parenting and schema-based parenting on competence and self-control in children with oppositional defiant disorder.

2. Methods and Materials

2.1. Study Design and Participants

The present study was a quasi-experimental research with three groups, including one acceptance and commitment-based parenting group, one schema-based parenting group, and one control group, conducted across three stages: pretest, posttest, and a two-month follow-up. The statistical population consisted of mothers and their children diagnosed with oppositional defiant disorder in the city of Isfahan during October and November 2024, who had visited three child and adolescent counseling centers. Sixty mothers and their children were selected from the statistical population—20 for each group—based on inclusion criteria through convenience sampling, and were then randomly assigned to the three groups using simple randomization (lottery method). The inclusion criteria consisted of obtaining written informed consent from the mothers, confirmation of the child's oppositional defiant disorder diagnosis through a diagnostic interview based on the criteria of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR; American Psychological Association), willingness to participate in the study, acceptance of and adherence to the principles and rules of group training, absence of chronic psychological disorders, and not receiving any parallel training or treatment. The exclusion criteria included lack of cooperation or unwillingness to continue attending training sessions, failure to complete assignments, and absence from two or more educational sessions. Confidentiality, use of data solely for research purposes, complete freedom of mothers regarding continuation of participation in the study, and accurate debriefing upon request, along with providing the control group with training after completion of the experimental intervention, were among the ethical principles observed in this study.

In data collection, following the random assignment of mothers and their children to the three groups—acceptance and commitment-based parenting, schema-based parenting, and control—the mothers completed the competence and self-control questionnaires at the pretest stage. Afterwards, the acceptance and commitment-based parenting group and the schema-based parenting group participated in group-based training across nine 75–95-minute sessions held at a child and adolescent counseling and psychotherapy center. After completion of the training sessions, mothers in the experimental and control groups completed the questionnaires again at the posttest stage, and then once more two months later during the follow-up stage. The acceptance and commitment-based parenting package was developed by Kavin and Morrell (2018) and has been validated in Iran in several studies, including Barabadi et al. (2021), for its effectiveness in improving parenting styles. The schema-based parenting package was developed by Lewis and Lewis (2019) and has been validated in Iran in several studies, including Karimi Moghadam et al. (2023), for its effectiveness in enhancing resilience among adolescents with behavioral problems. It should be noted that both intervention programs were delivered by a psychologist certified to implement these parenting approaches at a child and adolescent counseling center.

2.2. Measures

To assess children's competence, the 52-item questionnaire developed by Merrell et al. (2011) was used, which covers four domains: emotional self-regulation, social-emotional competence, responsibility, and empathy. The response scale is a four-point Likert scale (Always = 4, Often = 3, Sometimes = 2, Never = 1). The total score of child competence is obtained by summing all the items. Based on this scoring method, the range of scores on this

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questionnaire is 52 to 208, with higher scores indicating higher levels of child competence. Merrell et al. (2011) documented the factorial construct validity of the questionnaire through exploratory factor analysis, and as evidence of convergent validity, they reported positive and significant correlations between SEARS scores and other child strength questionnaires. As evidence of discriminant validity, they reported significant differences between boys' and girls' scores (with girls scoring higher). Inter-rater reliability (independent parent ratings) and internal consistency based on Cronbach's alpha were also reported as satisfactory (Merrell et al., 2011). The questionnaire has been used in several studies in Iran, with evidence supporting its validity and reliability. For example, Hosseini Yazdi et al. (2015), citing previous studies, reported test–retest reliability over a one-month interval (ranging from .76 to .89, significant at $p < .01$) and Cronbach's alpha values of .78 and .89 (Hosseini Yazdi et al., 2015). In the present study, the Cronbach's alpha coefficient for the total score was .88.

To measure children's self-control, the 11-item scale developed by Humphrey (1982) was used, which covers three domains: interpersonal self-control, personal self-control, and self-judgment. This tool measures children's perceived self-control and is completed by children with the help of their parents. The response scale is dichotomous (Usually Yes = 1, Usually No = 0), yielding a total score between 0 and 11, with higher scores indicating higher self-control. In Humphrey's (1982) study, evidence of validity and reliability was reported. Exploratory factor analysis confirmed the factorial structure of the questionnaire, and the test–retest reliability over 2 to 3 weeks was .71. As evidence of convergent validity, correlations between CPSCS scores and other established self-control measures ranged from .65 to .71 (Humphrey, 1982). This questionnaire has been used in several studies in Iran. For example, Sedaghat and Akbari (2023) reported significant positive correlations between CPSCS scores and parental self-efficacy as well as parental resilience. In the present study, the Cronbach's alpha coefficient was .87.

2.3. Interventions

The ACT-based parenting intervention began with an introductory session focused on group familiarization, establishing trust and collaboration, presenting group rules, clarifying goals related to parenting skill improvement, strengthening parent–child relationships, administering the pretest, conceptualizing parenting from an ACT perspective, and highlighting the role of parental thoughts and emotions in parenting behaviors along with developmental challenges and common behavioral issues in children and the parental role in dealing with them. The second session reviewed previous material and introduced parenting values by differentiating values from goals, discussing impulsive versus value-based parenting, defining values as actions, and learning how to live according to those values. The third session continued with a review, followed by identifying antecedents, behaviors, and consequences, examining how parenting strategies influence child behavior and parental experience, comparing emotion control to effective behavior management, and introducing concepts of control and experiential avoidance in parenting. The fourth session reviewed prior content, introduced mindfulness, mindful parenting, understanding the child through awareness, and mindfulness skills that strengthen the parent–child relationship. The fifth session emphasized operationalizing supportive behaviors toward the child, maintaining value-based committed action, recognizing elements of committed action, understanding coordinated parenting, and fostering unconditional parental support. The sixth session focused on conceptualizing a healthy parent–child relationship, teaching strategies to prepare the child for success, training antecedent-based strategies (setting the stage for positive behavior), and teaching effective instruction-giving. The seventh session involved learning reinforcement strategies, practicing effective communication with the child, adjusting expectations, aligning with the child's developmental abilities, using dependency statements, and emphasizing parental flexibility and consistency. The eighth session taught parenting strategies tailored to common childhood behavioral problems, including managing tantrums, responding to defiance, analyzing triggers, environmental conditions, and consequences, and explaining how to teach compliance. Finally, the ninth session continued training strategies for common behavioral issues such as aggression, introduced token economy and time-out procedures, reviewed all skills taught, addressed parents' questions, summarized the program, collected feedback, and administered the posttest.

The schema-based parenting intervention began with group introductions and pretesting, followed by a clear and simplified explanation of schema theory, the development of early maladaptive schemas, their characteristics, developmental origins, domains, functions, and maladaptive coping styles. The second session focused on educating

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parents about schemas and conceptualizing their parenting problems within the schema framework by gathering information obtained during assessment. The third session helped parents identify dysfunctional schema domains and examine confirming and disconfirming evidence from past and current life experiences. The fourth session taught two cognitive schema therapy techniques—schema validity testing and redefinition of evidence supporting a schema—alongside the introduction of competent, healthy parenting. The fifth session trained parents in two additional cognitive techniques: evaluating the advantages and disadvantages of their coping styles and establishing dialogue between the schema-driven part and the healthy part of the self, enabling parents to adopt healthier responses; this session also addressed core emotional needs such as acceptance and autonomy. The sixth session introduced the preparation of schema educational cards for use in schema-activating situations, training parents to complete daily schema monitoring records when activated, and addressing core emotional needs such as acceptance of reasonable limits. The seventh session provided parents with space to explore their emotions toward their own parents and their unmet childhood needs, helping them release blocked emotions related to past traumas while receiving emotional support; realistic expectations as a core emotional need were emphasized. The eighth session focused on developing new ways of relating, reducing avoidance and overcompensation coping styles, creating a detailed list of problematic parenting behaviors, prioritizing targets for change, and moving toward healthier outcomes. The ninth and final session reviewed and integrated all prior discussions, summarized the material, and administered the posttest.

2.4. Data analysis

For statistical analysis, the assumptions of normality were examined using the Shapiro–Wilk test, equality of error variances using Levene's test, equality of variance–covariance matrices using Box's M test, and sphericity using Mauchly's test. Means and standard deviations were analyzed, followed by repeated-measures ANOVA and Bonferroni post-hoc tests. Data were analyzed using SPSS version 26.

3. Findings and Results

The three research groups were compared in terms of mothers' age, mothers' education, child age, and number of children using the chi-square test. The results of the demographic variables are presented in Table 1.

Table 1

Comparison of Frequency Distributions of Research Groups on Demographic Variables

Variable and Levels	ACT Parenting Frequency (%)	Schema-Based Parenting Frequency (%)	Control Frequency (%)	Chi-square (p-value)
Mothers' Age: ≤40	7 (35)	7 (35)	7 (35)	0.72 (p>0.05)
41–45	9 (45)	10 (50)	8 (40)	
≥46	4 (20)	3 (15)	5 (25)	
Mothers' Education: ≤Diploma	2 (10)	4 (20)	3 (15)	0.921 (p>0.05)
Associate/Bachelor	13 (65)	12 (60)	12 (60)	
Master/PhD	5 (25)	4 (20)	5 (25)	
Child Age: 7	3 (15)	7 (35)	7 (20)	5.158 (p>0.05)
8	7 (35)	7 (35)	8 (65)	
9	4 (20)	3 (20)	3 (15)	
10	4 (20)	2 (20)	2 (60)	
11	2 (10)	1 (10)	0 (0)	
Number of Children: 1	17 (85)	19 (95)	18 (90)	3.72 (p>0.05)
2	3 (15)	1 (5)	1 (5)	
≥3	0 (0)	0 (0)	1 (5)	

As shown in Table 1, there is no significant difference among the three research groups in demographic variables. It should be noted that based on the matching process, 70% of the participating children were boys and the remaining 30% across all groups were girls. Table 2 presents the means and standard deviations of competence and self-control in the three research stages (pretest, posttest, and follow-up) across the study groups.

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Table 2

Means and Standard Deviations of Competence and Self-Control

Variable	Time	ACT Parenting Mean	ACT SD	Schema Parenting Mean	Schema SD	Control Mean/SD
Competence	Pretest	56.55	4.76	56.25	4.18	57.65 / 2.50
	Posttest	63.25	4.54	63.75	4.50	58.60 / 2.76
	Follow-up	64.95	4.60	65.10	4.45	59.30 / 3.08
Self-Control	Pretest	2.55	1.10	2.75	1.12	2.00 / 1.12
	Posttest	5.95	1.00	4.10	1.94	2.05 / 0.76
	Follow-up	7.25	1.52	4.30	1.89	2.35 / 1.04

As shown in Table 2, the mean scores of competence and self-control indicate that the acceptance and commitment-based parenting group and the schema-based parenting group showed greater changes in both the posttest and follow-up stages compared to the control group. Before conducting repeated-measures ANOVA, the results of the Shapiro–Wilk test for competence and self-control indicated that the distribution of these variables was normal ($p \geq .05$), and Levene's test showed equality of variances among the experimental and control groups for both variables ($p \geq .05$). Box's M test for competence and self-control also confirmed equality of the variance–covariance matrices ($p \geq .05$). Mauchly's test of sphericity indicated a violation of the sphericity assumption for competence and self-control. Therefore, based on the epsilon correction for degrees of freedom for the time factor and the time × group interaction factor, the Greenhouse–Geisser corrected values are reported. Table 3 presents the results of the repeated-measures ANOVA for competence and self-control.

Table 3

Repeated-Measures ANOVA Results for Competence and Self-Control

Source	SS	df	MS	F	p	Partial Eta²	Power
Competence: Time	1335.10	1.64	812.79	420.45	0.001	0.88	1
Time × Group	390.57	3.28	118.89	61.50	0.001	0.68	1
Error (Time)	181.00	93.63	1.93	-	-	-	-
Group	391.03	2	195.52	4.32	0.018	0.13	0.73
Error	2581.50	57	45.29	-	-	-	-
Self-Control: Time	155.20	1.70	91.23	106.33	0.001	0.65	1
Time × Group	110.27	3.40	32.41	37.77	0.001	0.57	1
Error (Time)	83.20	96.97	0.86	-	-	-	-
Group	291.43	2	145.72	37.46	0.001	0.57	1
Error	221.70	57	3.89	-	-	-	-

As shown in Table 3, for competence, in the within-group section, the effect of time ($F = 420.45$, $df = 1.64$, $p < .01$) and the time × group interaction ($F = 118.89$, $df = 3.28$, $p < .01$) indicate that both time and the interaction between time and group (the three research groups) show a significant difference ($p < .01$). The partial eta squared for the time factor is .88, and the test power is 1; for the time × group interaction factor, partial eta squared is .68, with a test power of 1. This result indicates that 88% and 68% of the variance in competence associated with the time factor and the time × group interaction, respectively, are due to the implementation of acceptance and commitment-based parenting and schema-based parenting, with 100% statistical power confirming the finding. Additionally, as shown in the between-group section of Table 3 ($F = 4.32$, $df = 2$, $p < .01$), there is a significant difference among the groups for competence ($p < .01$). The partial eta squared for the group factor is .13, and the test power is .73. This indicates that the conducted ANOVA, with 73% power, shows that 13% of the difference among the acceptance and commitment-based parenting group, the schema-based parenting group, and the control group is statistically significant.

Furthermore, as shown in the between-group section of Table 3 ($F = 37.46$, $df = 2$, $p < .01$), there is a significant difference among the groups for the self-control variable ($p < .01$). The partial eta squared for the group factor in self-

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control is .57 with a test power of 1. This means that the conducted ANOVA, with 100% power, demonstrated that at least 57% of the difference between one of the experimental groups (either acceptance and commitment-based parenting or schema-based parenting) and the control group, or between the two parenting approaches themselves, is statistically significant.

To determine differences across time stages and pairwise comparisons between groups, the Bonferroni post-hoc test was performed. The results of the Bonferroni test for competence and self-control are presented in Table 2

Table 4

Bonferroni Post-Hoc Test Results for Competence and Self-Control Based on Time and Group Comparisons

Variable	Row	Reference Group	Comparison Group	Mean Difference	Standard Error	Sig.
Competence						
Time	1	Pretest	Posttest	-5.05	0.24	.001
	2	Pretest	Follow-up	-6.30	0.27	.001
	3	Posttest	Follow-up	-1.25	0.17	.001
Group	4	ACT Parenting	Schema-Based Parenting	-0.12	1.23	1
	5	ACT Parenting	Control	3.07	1.23	.046
	6	Schema-Based Parenting	Control	3.18	1.23	.036
Self-Control						
Time	1	Pretest	Posttest	-1.60	0.14	.001
	2	Pretest	Follow-up	-2.20	0.19	.001
	3	Posttest	Follow-up	-0.60	0.13	.001
Group	4	ACT Parenting	Schema-Based Parenting	1.53	0.36	.001
	5	ACT Parenting	Control	3.12	0.36	.001
	6	Schema-Based Parenting	Control	1.58	0.36	.001

As shown in Table 2, for competence and self-control, significant differences exist between pretest and posttest, pretest and follow-up, and between posttest and follow-up ($p < .05$). This indicates that from the pretest stage to the posttest and follow-up stages, competence and self-control increased, and from posttest to follow-up, further improvement also occurred.

In the group comparisons for competence, there is a significant difference between the acceptance and commitment-based parenting group and the control group, and between the schema-based parenting group and the control group ($p < .05$), but there is no significant difference between the two parenting groups ($p > .05$). This indicates that the effectiveness of acceptance and commitment-based parenting and schema-based parenting on children's competence was similar.

For self-control, there is a significant difference between both parenting groups and the control group ($p < .05$), and also a significant difference between the acceptance and commitment-based parenting group and the schema-based parenting group ($p < .05$). This indicates that, based on the reported means, acceptance and commitment-based parenting was more effective than schema-based parenting in improving children's self-control.

4. Discussion and Conclusion

The purpose of this study was to compare the effectiveness of acceptance and commitment–based parenting (ACT-parenting) and schema-based parenting on competence and self-control in children with oppositional defiant disorder (ODD). The results indicated significant improvements in both competence and self-control among children whose mothers participated in ACT-based or schema-based parenting interventions, whereas the control group did not show similar changes across pretest, posttest, and follow-up assessments. These findings demonstrate the value of structured psychological parenting interventions in modifying the behavioral and emotional functioning of children with ODD, supporting the premise that parental cognitive, emotional, and behavioral processes strongly shape child developmental outcomes (Fooladvand et al., 2021; Fu, 2024). Moreover, the results revealed that although both parenting approaches improved competence similarly, ACT-parenting yielded greater gains in children's self-control compared to schema-based parenting. This pattern underscores the importance of targeting parental emotional flexibility and in-the-moment behavioral responses when addressing self-regulation difficulties in children with oppositional behaviors.

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The improvement in competence observed in both intervention groups aligns with previous research demonstrating that parenting programs grounded in ACT or schema therapy principles enhance children's socio-emotional functioning (Jokar et al., 2025; Karimi Moghadam et al., 2023). Competence, which encompasses emotional regulation, social functioning, responsibility, and empathy, is highly sensitive to the quality of parent–child interaction. ACT-based parenting emphasizes mindfulness, acceptance, and value-guided actions, helping parents maintain calmer, more consistent interactions with their children—conditions necessary for fostering social competence. This is consistent with evidence showing that mindful or acceptance-based parenting reduces parenting stress and improves children's emotional and behavioral outcomes (Mehri et al., 2025). Similarly, schema-based parenting addresses deeper parental schemas and unmet emotional needs, allowing parents to shift away from maladaptive patterns and toward nurturing and attuned interactions, thereby strengthening the developmental conditions in which competence can flourish (Lewis & Lewis, 2024). Thus, the comparable impact of the two approaches on competence in this study supports the view that enhancing either parental flexibility (as in ACT) or parental schemas and emotional processing (as in schema therapy) can help create healthier relational climates that promote competence in children with ODD.

The study found a differential effect between the two interventions on self-control: ACT-based parenting produced significantly higher improvements than schema-based parenting. This finding is consistent with theoretical expectations and prior research showing that ACT, with its emphasis on increasing psychological flexibility, acceptance of difficult emotions, and reduction of experiential avoidance, directly influences children's regulatory environment. When parents respond with greater calm, reduced reactivity, and consistent behavioral boundaries, children with ODD gain more opportunities to internalize rules and develop inhibitory control (Fu, 2024). Studies have repeatedly demonstrated the strong association between effective parenting and children's self-control across developmental stages. For example, parenting styles characterized by consistency, warmth, and structure are known to enhance children's regulatory abilities, whereas chaotic or emotionally volatile family environments reduce opportunities for self-regulation development (Lowet et al., 2023; Luo et al., 2023). ACT-based parenting directly targets parental reactivity and promotes behavioral consistency, which are instrumental in shaping children's emerging regulatory systems. This may explain why ACT-based parenting had a stronger impact on self-control in this study than schema-based parenting.

While schema-based parenting also improved self-control significantly compared to the control group, its relative effect was smaller. Schema-based parenting focuses primarily on modifying parents' deep-rooted cognitive and emotional patterns, which contributes to long-term transformations in the parent–child relationship but may require more time for behavioral changes to manifest in children's moment-to-moment regulatory abilities. Previous studies show that schema-focused interventions lead to improvements in resilience, emotional regulation, and relational functioning among adolescents and children with behavioral problems (Karimi Moghadam et al., 2023; Salehi Kelishadi et al., 2022). However, these changes tend to occur gradually as parents apply new insights into schemas and relational patterns. Conversely, ACT interventions often introduce more immediate behavioral tools, such as mindfulness practices and value-consistent behavioral commitments, which may directly influence parental responses in high-conflict situations. This distinction may partly account for the greater impact of ACT-based parenting on children's self-control in this study.

The significant gains observed in both intervention groups also reinforce broader evidence that parent-focused interventions are essential in the treatment of ODD. As previous works demonstrate, ODD is strongly influenced by family dynamics and parental responses, especially in early childhood (Mattis & Lachman, 2022; Walls, 2020). Children with ODD often display strong emotional reactivity, rigidity, and difficulty following instructions, which can escalate in families where parents struggle with stress, schema-driven reactions, or inconsistent parenting. Interventions that help parents develop healthier emotional and cognitive coping methods reduce coercive cycles, which is consistent with the improvements documented here. The results also align with research indicating that behavioral and emotional outcomes of children improve when parents receive structured training grounded in evidence-based psychological models (Agha Babaei-Pour et al., 2025). For example, parent management training has consistently been found to reduce disruptive behaviors and increase social competence in children with ODD—a pattern reflected in the competence enhancements found in the present study.

The substantial increases in competence and self-control noted at follow-up indicate strong maintenance of

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therapeutic effects. This durability reflects the long-term nature of psychological changes introduced through ACT- and schema-based interventions. ACT teaches parents to adopt flexible responses and remain anchored in their values despite challenging child behaviors, while schema therapy helps parents reshape deeply embedded patterns, leading to sustainable relational improvements. These findings closely mirror evidence showing that both ACT- and schema-based parenting interventions produce lasting benefits for emotional regulation, relational quality, and behavioral adjustment (Barabadi et al., 2021; Hosseini et al., 2024). Additionally, research in Iranian cultural contexts supports the maintenance of treatment effects in parenting interventions, partly due to the central role of parent–child relational cohesion in Iranian families (Hosseini Yazdi et al., 2015). Such cultural alignment may have also helped sustain improvements in the present study.

The fact that both interventions effectively improved child outcomes suggests that integrating ACT and schema therapy principles could be an even more powerful approach for families dealing with ODD. Prior works support the idea that multi-layered interventions—those that target both immediate behavioral responses and deeper cognitive/emotional parental patterns—yield optimal outcomes, particularly when children present with chronic defiant behaviors (Azimi Far et al., 2019; Brown et al., 2025). Parents of children with ODD often grapple with emotional overwhelm, frustration, and negative self-beliefs, along with difficulties implementing consistent behavioral strategies. Schema therapy addresses long-standing cognitive–emotional processes, while ACT addresses moment-to-moment emotional reactivity and value-based action. Together, these approaches could potentially offer a comprehensive framework for altering both parental internal processes and observable parenting behaviors.

Furthermore, the finding that ACT-based parenting produced stronger self-control improvements underscores the importance of emotional and attentional mechanisms in families of children with ODD. ACT explicitly targets parental difficulties in emotion regulation, cognitive fusion, and avoidance—factors that have been linked to children's behavioral dysregulation (Mehri et al., 2025). Given that self-control reflects a child's ability to inhibit impulses, tolerate frustration, and comply with instructions, it is reasonable that children benefit more when parents learn in-the-moment emotional acceptance and mindful awareness. This observation is consistent with findings from mindfulness-related interventions, which show strong links between parental presence, emotional stability, and improved child self-regulation (Sedaqat & Akbari, 2023). Notably, ACT's emphasis on values may also help parents adopt more consistent and nurturing patterns, contributing further to self-control development.

Overall, the findings affirm that both ACT- and schema-based parenting interventions are effective in enhancing competence and self-control in children with ODD. The stronger impact of ACT-based parenting on self-control suggests that interventions addressing parental emotional flexibility play a particularly pivotal role in shaping children's inhibitory and regulatory capacities. The improvements in competence in both groups underscore the shared strength of relationally oriented parenting approaches that enhance emotional attunement and reduce maladaptive patterns. Taken together, these results contribute to the expanding literature emphasizing the utility of psychological parenting interventions in managing oppositional behaviors in children across developmental contexts (Badaghi et al., 2021; Fucà et al., 2023).

This study has several limitations that warrant consideration. First, the sample size was relatively small, which may limit generalizability to broader populations of children with ODD. Second, the study relied on maternal reports for assessments of competence and self-control, which may introduce biases related to parental perception or social desirability. Third, the interventions were delivered over nine sessions, which may not reflect real-world variations in program length, fidelity, or clinical implementation. Fourth, the study was conducted in a single cultural context, and family dynamics may differ in other cultural or socioeconomic settings. Finally, the two-month follow-up period, while informative, does not capture long-term developmental trajectories.

Future studies should examine these parenting interventions using larger and more diverse samples to enhance the generalizability of findings. Research should also include multi-informant and observational assessments to reduce reliance on parent-report measures. Comparative studies with extended follow-up periods would help determine the long-term sustainability of improvements. It would also be beneficial to evaluate hybrid parenting models integrating ACT and schema therapy principles to explore whether combined approaches amplify treatment outcomes. Finally, future research could examine the differential impacts of these interventions across various age groups, genders, and comorbid conditions.

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Practitioners should consider incorporating ACT-based strategies when working with families of children who struggle with self-regulation, as these techniques appear particularly effective for improving self-control. Schema-based strategies may be valuable for addressing deeper cognitive-emotional patterns that shape parenting behavior. Clinicians may enhance treatment effectiveness by tailoring intervention components to the unique emotional and cognitive needs of each family. Schools and community mental health centers may also benefit from integrating structured parenting programs into early intervention services for disruptive behavior disorders.

Authors' Contributions

Authors contributed equally 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

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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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