

Comparison of the Effectiveness of Acceptance and Commitment-Based Parenting Training and Choice Theory-Based Parenting Training on Parent-Child Relationship Quality in Parents of Children with Attention-Deficit/Hyperactivity Disorder

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ABSTRACT

Purpose: This study aimed to compare the effectiveness of acceptance and commitment-based parenting training and choice theory-based parenting training in improving parent-child relationship quality among parents of children with attention-deficit/hyperactivity disorder. This applied quasi-experimental study used a pretest-posttest control-group design with a two-month follow-up. The statistical population comprised parents of children with attention-deficit/hyperactivity disorder who attended counseling and psychological service centers in Sanandaj, Iran, between August and December 2025. Using purposive sampling, 45 eligible parents were selected and randomly assigned to acceptance and commitment-based parenting, choice theory-based parenting, and control groups, with 15 participants in each group. Each experimental group received ten weekly 90-minute group sessions, whereas the control group received no intervention. Data were collected using the Conners' Parent Rating Scale and Pianta's Parent-Child Relationship Scale. Repeated-measures analysis of variance and Bonferroni post hoc tests were conducted in SPSS version 28. Repeated-measures analysis showed significant effects of time on conflict, closeness, dependency, and overall parent-child relationship quality ($p < .001$). The time-by-group interaction was significant only for closeness ($p = .049$) and was nonsignificant for conflict, dependency, and overall relationship quality. Bonferroni comparisons demonstrated that acceptance and commitment-based parenting produced significantly greater improvements than choice theory-based parenting in closeness (mean difference = 5.00, $p = .031$) and overall parent-child relationship quality (mean difference = 8.79, $p = .046$). No significant differences were found between the two interventions in conflict or dependency. Within-group comparisons indicated that both interventions significantly improved most outcomes from pretest to posttest and follow-up. Both parenting interventions effectively improved parent-child relationship quality among parents of children with attention-deficit/hyperactivity disorder; however, acceptance and commitment-based parenting was more effective in strengthening emotional closeness and overall relationship quality, suggesting its greater value when deeper relational and emotional improvement is the primary therapeutic objective.

Keywords: Acceptance and commitment-based parenting; choice theory-based parenting; parent-child relationship quality; attention-deficit/hyperactivity disorder; parenting intervention.

1. Introduction

Attention-deficit/hyperactivity disorder (ADHD) is a prevalent neurodevelopmental disorder characterized by persistent and developmentally inappropriate patterns of inattention, hyperactivity, and impulsivity that interfere with children's academic performance, social functioning, behavioral adjustment, and family relationships. Although the manifestations of ADHD vary according to age, developmental level, and environmental demands, affected children commonly experience difficulties sustaining attention, organizing tasks, inhibiting inappropriate responses, following instructions, and regulating activity levels. These difficulties may emerge across several settings, including the home, school, and community, and frequently persist beyond childhood. ADHD is therefore not limited to isolated behavioral problems but represents a complex condition involving cognitive, emotional, behavioral, interpersonal, and educational impairments (Magnus et al., 2023; Sadr-Salek et al., 2023). Physiological investigations have also demonstrated that hyperactivity may be associated with distinctive patterns of psychophysiological arousal and regulation, indicating that the observable behaviors of children with ADHD reflect broader regulatory difficulties rather than intentional misconduct or simple noncompliance (Satterfield & Dawson, 2024). Consequently, effective management requires interventions that address not only the child's symptoms but also the relational and environmental contexts in which these symptoms are experienced.

The cognitive and behavioral difficulties associated with ADHD can substantially disrupt children's learning processes and daily functioning. Deficits in executive functions, including inhibitory control, working memory, planning, cognitive flexibility, and self-monitoring, may reduce children's capacity to initiate and complete academic tasks, seek help appropriately, adapt to classroom expectations, and regulate goal-directed behavior. Children with ADHD may therefore display less efficient academic help-seeking and weaker executive functioning than typically developing children (Derakhshandeh et al., 2021). Difficulties in cognitive and motor performance may further affect participation in educational and developmental activities, particularly when tasks require sustained attention, response adaptation, or the coordinated use of cognitive and physical skills (Lotfi et al., 2022). Cognitive rehabilitation research has shown that targeted interventions may improve behavioral symptoms and related functional problems, including sleep difficulties, among children with

ADHD, reinforcing the importance of structured psychosocial intervention (Yazdanbakhsh et al., 2018). Nevertheless, child-focused treatment alone may be insufficient because the expression, interpretation, and management of ADHD symptoms are deeply embedded in everyday parent-child interactions.

Parents are often the primary individuals responsible for managing the child's impulsivity, distractibility, emotional outbursts, resistance to instructions, incomplete tasks, and inconsistent behavioral responses. The repetitive nature of these challenges may expose parents to chronic stress, frustration, self-doubt, and emotional exhaustion. Parents may interpret their child's behavior as intentional disobedience, lack of motivation, or rejection of parental authority, while children may experience frequent correction, criticism, punishment, and control as evidence that they are misunderstood or rejected. Over time, these reciprocal interpretations can establish coercive interaction patterns in which the child's behavior intensifies parental control and the parent's controlling response further increases the child's resistance, emotional dysregulation, or withdrawal. Caregivers of children with ADHD may also experience affiliate stigma, through which negative social attitudes toward the child's condition are internalized by the family and contribute to greater parenting stress (Lin et al., 2023). These pressures can weaken parents' perceived competence and undermine their ability to respond calmly, consistently, and supportively.

Parental self-efficacy is an especially important factor in families of children with ADHD because it influences how parents interpret challenging behavior, select disciplinary strategies, persist in difficult situations, and evaluate their own performance. Parents with greater self-efficacy are generally more capable of implementing consistent expectations, regulating their emotional responses, and adapting their behavior to the child's developmental needs. In contrast, low parental self-efficacy may contribute to avoidance, overcontrol, inconsistent discipline, or excessive reliance on punitive reactions. Research examining parents of adolescents with ADHD has shown that parental self-efficacy is associated with multiple individual, relational, and contextual variables, suggesting that parents' confidence in managing their children is not a fixed trait but may be strengthened through education and psychological intervention (Chou et al., 2020). Parent-child relationship quality and parental self-efficacy are also closely related to children's learning behaviors, particularly under conditions of environmental disruption and heightened family stress

(Hewson et al., 2024). Parenting interventions may therefore improve child outcomes indirectly by increasing parents' confidence, psychological resources, and relational competence.

The quality of the parent–child relationship constitutes a central protective or risk factor in the developmental course of ADHD. A positive relationship is typically characterized by emotional warmth, closeness, acceptance, responsiveness, constructive communication, appropriate boundaries, and a sense of security. By contrast, low-quality relationships may involve frequent conflict, emotional distance, excessive dependency, criticism, unpredictability, and repeated struggles for control. The developmental significance of this relationship extends beyond the immediate home environment because children's emotional regulation, self-concept, social behavior, and capacity to respond to educational demands are partly formed through interactions with caregivers. Evidence concerning biological and rearing influences on ADHD indicates that the development and expression of symptoms reflect an interaction between inherited vulnerability and environmental experience, including parenting and family relationships (Harold et al., 2023). Parenting should not therefore be viewed as the sole cause of ADHD; rather, it represents a modifiable relational context that can either aggravate or buffer the functional effects of the disorder.

Assessing and improving parent–child relationships in families affected by ADHD is complicated by the emotional distress experienced by parents. Parental reports may be influenced by stress, socioeconomic conditions, and the parents' own emotional state, which can shape how they perceive and describe their parenting behavior and their child's responses (Herbers et al., 2017). This does not diminish the importance of parents' perceptions; instead, it underscores that the subjective experience of the relationship is itself clinically meaningful. A parent who perceives the relationship as conflictual, distant, or unmanageable may respond differently from a parent who experiences emotional closeness and confidence, even when the child's observable symptoms are similar. Accordingly, interventions must address both parenting behavior and the psychological processes through which parents interpret their child, evaluate themselves, and respond to difficult internal experiences.

Positive parenting programs have been developed to enhance communication, warmth, consistency, problem-solving, and relational security. Evidence suggests that such programs can improve various dimensions of parent–child

relationship quality by helping parents replace reactive interaction patterns with more supportive and structured responses (Keyvani et al., 2023). However, families of children with ADHD may require approaches that extend beyond general behavioral instruction because parents frequently encounter recurring thoughts, emotions, and interpersonal pressures that are not easily resolved by teaching behavioral techniques alone. For example, parents may know that calm communication is preferable but remain unable to use it when confronted with intense frustration, fear about the child's future, shame regarding social judgment, or beliefs that they have failed as parents. This gap between knowledge and action has increased interest in interventions that promote psychological flexibility, acceptance, mindful awareness, and value-guided parenting.

Acceptance and commitment therapy (ACT) is a contextual behavioral approach that seeks to increase psychological flexibility rather than eliminate all unpleasant thoughts and emotions. Psychological flexibility refers to the capacity to remain in contact with present-moment experience, including distressing internal events, while selecting behavior that is consistent with personally meaningful values. ACT includes six interrelated processes: acceptance, cognitive defusion, present-moment awareness, self-as-context, values clarification, and committed action (Hayes et al., 2016). Within parenting, these processes help parents notice difficult thoughts and emotions without automatically allowing them to determine behavior. A parent may, for instance, experience anger, disappointment, or thoughts such as “my child never listens,” yet learn to observe these internal events without immediately shouting, punishing, withdrawing, or attempting to control the child. The parent can then select a response that is more consistent with values such as compassion, responsibility, patience, or emotional availability.

Acceptance-based parenting does not imply passivity, permissiveness, or the abandonment of behavioral expectations. Instead, it helps parents distinguish between accepting internal experiences and approving all forms of behavior. Parents learn to acknowledge the reality of their child's neurodevelopmental difficulties while maintaining appropriate limits and engaging in purposeful action. Through cognitive defusion, they may reduce the influence of rigid beliefs about themselves or their child. Through mindfulness, they may become more attentive to the child's emotional signals and less dominated by anticipatory worry or past conflict. Through values clarification, they define the type of parent they wish to be, and through committed

action, they translate these values into observable relational behavior. Qualitative evidence from individuals receiving ACT has shown that therapeutic change may involve a different relationship with difficult emotions, greater self-awareness, and more value-consistent action (Ma et al., 2023). ACT-informed psychoeducation has also demonstrated feasibility in ADHD-related contexts, suggesting that acceptance and commitment principles can be meaningfully adapted for populations experiencing attention-regulation difficulties and associated psychological distress (Seery et al., 2024).

Recent evidence has increasingly supported the use of ACT-based interventions for parents of children with developmental and behavioral difficulties. A pilot randomized controlled trial of an acceptance and commitment-based parenting program for parents of children with autism spectrum disorder reported beneficial effects on parenting stress and other parent- and child-related outcomes, indicating that psychological flexibility may improve parental functioning in families facing persistent developmental challenges (Li et al., 2025). Similarly, a brief ACT-based intervention designed for parents of children with neurodevelopmental disorders demonstrated the practical applicability of acceptance, mindfulness, and values-based action in reducing psychological burden and strengthening adaptive parental responses (Lobato et al., 2025). Meta-analytic evidence has further indicated that ACT can reduce parental stress among parents of children with special needs (Resch et al., 2025), while another meta-analysis found beneficial effects on depressive symptoms in this population (Wang & He, 2025). These findings are especially relevant to parents of children with ADHD because persistent parenting stress, helplessness, self-criticism, and emotional reactivity can directly affect the quality of parent-child interactions.

Evidence specific to parenting and ADHD also supports the potential value of acceptance and commitment-based training. A comparative study of mothers of children with ADHD showed that acceptance and commitment-based parenting training could improve the mother-child relationship, demonstrating that changes in parental psychological flexibility may translate into relational benefits (Amini et al., 2023). More recent comparative work has examined acceptance and commitment-based parenting alongside integrative parenting interventions and has shown that ACT-oriented training may improve children's behavioral problems and assertiveness through changes in parental responses and family interaction patterns (Jokar et

al., 2026). Collectively, these studies suggest that acceptance-based parenting may be particularly effective for enhancing emotional closeness because it addresses the parent's relationship with difficult internal experiences while encouraging mindful and compassionate engagement with the child.

Choice theory offers a different but potentially complementary framework for parenting. Developed by William Glasser, choice theory proposes that human behavior is purposeful and is directed toward satisfying basic psychological needs, including survival, love and belonging, power or achievement, freedom, and enjoyment. According to this perspective, individuals cannot directly control the behavior of others; they can primarily control their own choices and responses. Psychological and relational difficulties often intensify when individuals rely on external control, coercion, criticism, blame, threats, punishment, or manipulation in an attempt to make others behave according to their expectations (Glasser, 2021). In parenting, this proposition is highly relevant because parents of children with ADHD may repeatedly attempt to control the child's behavior through commands, warnings, punishment, or escalating pressure, particularly when the child's inattention and impulsivity are interpreted as deliberate refusal.

Choice theory-based parenting encourages parents to replace external-control strategies with internal responsibility, need-focused understanding, respectful communication, and collaborative problem-solving. Parents are taught to examine how their own choices contribute to relational patterns, identify the needs underlying the child's behavior, and select responses that preserve both structure and connection. The approach emphasizes constructive relational behaviors such as listening, supporting, encouraging, respecting, trusting, negotiating, and accepting, while discouraging destructive habits such as criticizing, blaming, complaining, threatening, punishing, and bribing. Reality therapy-based group interventions derived from choice theory have used these principles to strengthen responsibility, self-evaluation, and more adaptive interpersonal behavior (Glasser & Glasser, 2010). Within families of children with ADHD, such training may help parents understand that effective boundaries do not require psychological control and that children are more likely to cooperate when they experience belonging, respect, and participation in decision-making.

Empirical research has supported the application of choice theory to parent-child relationships. Choice theory-based parenting education has been found to improve the

quality of the mother–son relationship, suggesting that teaching parents about basic needs, internal control, responsible choice, and effective communication can reduce relational tension and promote healthier interaction patterns (Khayyamfar et al., 2019). This approach may be especially useful for decreasing conflict because it directly challenges controlling communication and emphasizes negotiation, shared problem-solving, and parental responsibility. In ADHD-related contexts, where repeated behavioral correction can dominate family life, choice theory may help parents shift their focus from forcing immediate compliance to building a relationship in which the child's needs and choices can be understood within appropriate limits.

Although acceptance and commitment-based parenting and choice theory-based parenting share several features, they differ in their principal mechanisms of change. Both approaches oppose rigid external control, emphasize parental responsibility, and encourage purposeful rather than reactive behavior. However, acceptance and commitment-based parenting primarily targets the parent's relationship with internal experiences. It helps parents accept distress, separate from unhelpful thoughts, remain mindful during difficult interactions, clarify values, and act in accordance with those values. Choice theory-based parenting focuses more directly on interpersonal choice, basic needs, communication habits, internal control, and responsibility within relationships. Thus, ACT may exert stronger effects on emotional presence, acceptance, and closeness, whereas choice theory may be especially effective in improving communication structures, reducing coercion, and promoting collaborative interaction.

Despite growing evidence for each approach, direct comparisons between acceptance and commitment-based parenting training and choice theory-based parenting training remain limited, particularly among parents of children with ADHD. Existing research has commonly compared ACT-based parenting with positive psychology or other parenting programs, examined choice theory in non-ADHD family samples, or evaluated broader outcomes such as stress, depression, behavioral problems, or parental self-efficacy. Consequently, it remains unclear whether the two approaches differ in their effects on specific dimensions of parent–child relationship quality, including conflict, closeness, dependency, and the overall positive relationship. A direct comparative study can clarify whether an approach centered on acceptance and psychological flexibility produces different relational outcomes from an approach centered on needs, responsible choice, and internal control.

Such evidence may assist counselors, psychologists, and family therapists in selecting or integrating parenting interventions according to the primary relational needs of families raising children with ADHD.

Therefore, the present study aimed to compare the effectiveness of acceptance and commitment-based parenting training and choice theory-based parenting training in improving parent–child relationship quality among parents of children with attention-deficit/hyperactivity disorder.

2. Methods and Materials

2.1. Study Design and Participants

This applied study employed a quasi-experimental pretest–posttest design with two experimental groups, a control group, and a two-month follow-up assessment. The statistical population consisted of all parents of children diagnosed with attention-deficit/hyperactivity disorder who attended counseling and psychological service centers in Sanandaj, Iran, between August and December 2025. After the required institutional approvals had been obtained, arrangements were made with the administrators of four counseling and psychological service centers in Sanandaj. The researcher reviewed the clinical records available at these centers and prepared an initial list of parents whose children had received a confirmed diagnosis of attention-deficit/hyperactivity disorder from a clinical psychologist based on the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision criteria and specialized diagnostic assessments. Potential participants were contacted by telephone and invited to attend an initial interview in which their eligibility for participation was assessed. Following an explanation of the objectives, procedures, potential benefits, and ethical considerations of the study, written informed consent was obtained from eligible participants. A total of 45 parents were then selected through purposive nonprobability sampling and randomly assigned to three equal groups: an acceptance and commitment-based parenting training group, a choice theory-based parenting training group, and a control group, with 15 participants in each group. The inclusion criteria were being between 30 and 50 years of age, providing informed consent, having sufficient physical and psychological ability to participate in the training sessions, having completed at least lower-secondary education, having a child whose diagnosis of attention-deficit/hyperactivity disorder had been confirmed by a

clinical psychologist according to the DSM-5-TR criteria and the Conners' Parent Rating Scale, not participating concurrently in another psychological or psychotherapeutic intervention, and not using psychiatric medication for at least one month before the initial assessment. The exclusion criteria included participation in another psychological intervention during the study, unwillingness to continue participation, absence from more than two intervention sessions, and failure to complete the study questionnaires at the pretest, posttest, or follow-up stage. Before the intervention began, all participants completed the Parent–Child Relationship Scale as the pretest measure. The two experimental groups subsequently received their respective parenting programs in group-based, face-to-face sessions held once per week. Each intervention consisted of 10 sessions lasting 90 minutes. The control group received no psychological intervention during the study period and remained on a waiting list. Immediately after completion of the final intervention session, all participants completed the research instrument again as the posttest. A follow-up assessment was conducted two months later to examine the stability of the intervention effects. Throughout the study, ethical principles were observed, including confidentiality of personal information, voluntary participation, the right to withdraw from the study without penalty, respect for participants' dignity, and restricted use of the collected data for research purposes. To maintain educational fairness, arrangements were also made to provide the control group with condensed parenting training after completion of the follow-up assessment.

2.2. Measures

The Conners' Parent Rating Scale was developed by Goyette et al. in 1978 to assess behavioral symptoms associated with attention-deficit/hyperactivity disorder in children. The parent form used in the present study contains 48 items and represents a revised and shortened version of the original 93-item questionnaire. It is completed by a parent or primary caregiver and evaluates children's behavior across six domains, including conduct problems, psychosomatic problems, learning problems, hyperactivity–impulsivity problems, anxiety problems, and the hyperactivity index. Each item is rated on a four-point Likert scale ranging from 0, indicating “not at all,” to 3, indicating “very much.” Total scores can therefore range from 0 to 144, with higher scores indicating greater severity of behavioral and attention-related symptoms. An average item score of

1.5 or higher is considered suggestive of attention-deficit/hyperactivity disorder and may be used as part of the diagnostic screening process. In the present study, this scale was used alongside clinical assessment and DSM-5-TR diagnostic criteria to confirm the presence of attention-deficit/hyperactivity disorder in the participants' children. Conners reported satisfactory content validity for the instrument and a Cronbach's alpha coefficient of 0.90. In the study by Lotfi et al., the content validity of the questionnaire was confirmed by a panel of specialists, and a Cronbach's alpha coefficient of 0.91 was reported. In the present study, the internal consistency of the scale was also satisfactory, with a Cronbach's alpha coefficient of 0.88, indicating that the instrument had adequate reliability for use with the study sample.

The Parent–Child Relationship Scale was originally developed by Pianta in 1994 to assess parents' perceptions of the emotional and relational quality of their interactions with their children. The instrument consists of 33 self-report items and measures four related dimensions: conflict, closeness, dependency, and overall positive relationship. The conflict dimension reflects negative aspects of the parent–child relationship, including interpersonal struggles, anger, disobedience, resistance to parental control, tension, and unpredictability. The closeness dimension assesses the degree to which the parent perceives the relationship with the child as warm, affectionate, emotionally supportive, intimate, and comfortable. The dependency dimension evaluates maladaptive or excessive dependence in the relationship between the parent and child. The overall positive relationship score represents a composite index reflecting the general quality, warmth, and emotional security of the parent–child relationship. The scale is rated on a five-point Likert continuum ranging from 1, indicating “definitely does not apply,” to 5, indicating “definitely applies.” The conflict dimension is measured by Items 2, 3, 4, 7, 12, 14, 17, 19, 21, 23, 24, 25, 26, 27, 28, 31, 32, and 33; closeness is measured by Items 1, 5, 6, 8, 10, 13, 16, 29, and 30; and dependency is assessed through Items 9, 11, 15, 18, 20, and 22. To calculate the overall positive relationship score, the scores for the conflict and dependency items are reverse-scored and then combined with the closeness score. Higher scores on each dimension indicate a greater presence of the corresponding characteristic, whereas a higher overall positive relationship score reflects a stronger and more favorable parent–child relationship. The Persian version of the instrument was translated by Tahmasian and Khorramabadi, and its content validity was evaluated and

confirmed by specialists. Previous studies have used the measure to assess parent–child relationships across different developmental and age groups. Abarshi reported Cronbach’s alpha coefficients of 0.84, 0.69, 0.46, and 0.80 for conflict, closeness, dependency, and overall positive relationship, respectively, while Driscoll and Pianta reported corresponding coefficients of 0.75, 0.74, 0.69, and 0.80. In the present study, the total Cronbach’s alpha coefficient was 0.88, demonstrating satisfactory internal consistency for evaluating parent–child relationship quality among the participating parents.

2.3. Interventions

The acceptance and commitment-based parenting intervention was adapted from the acceptance and commitment therapy framework presented by Hayes et al. and was implemented in 10 weekly group sessions, each lasting 90 minutes. The first session focused on establishing the therapeutic structure, introducing the researcher and group members, explaining group rules and commitments, familiarizing participants with the general principles of acceptance and commitment-based parenting, and encouraging present-moment awareness during interactions with the child. Participants were instructed to practice mindful breathing for 5 to 10 minutes each day. The second session addressed parents’ experiences of raising a child with attention-deficit/hyperactivity disorder and introduced the principal concepts of acceptance and commitment therapy, including mindful awareness, acceptance of internal experiences, recognition of thoughts and emotions, and commitment to personal values. Parents were asked to record stressful parenting situations, the thoughts and emotions associated with them, and whether their behavioral responses were consistent with their parenting values. The third session focused on increasing awareness and acceptance of thoughts and emotions related to parenting a child with attention-deficit/hyperactivity disorder. Participants learned to distinguish thoughts from emotions, observe negative internal experiences without attempting to suppress or change them, and apply cognitive defusion, observer-perspective exercises, and body-awareness meditation. The fourth session emphasized awareness of automatic parenting behaviors and the development of conscious and responsible choices. Parents identified habitual reactions to their child’s challenging behavior, practiced reducing automatic responding, and learned to choose deliberate responses consistent with their values. The

fifth session concentrated on identifying central parenting values and goals and connecting those values to observable parenting behavior. Participants established short- and long-term goals for their relationship with their child and practiced behaviors aligned with their selected parenting values. The sixth session introduced psychological and cognitive flexibility and helped parents identify self-limiting thoughts, reconsider inflexible patterns of interpretation, develop alternative perspectives, and overcome barriers to value-consistent action. The seventh session addressed stress management and parental self-care through deep breathing, meditation, awareness of emotional exhaustion, and the development of value-based responses to defiance or other challenging child behaviors. The eighth session aimed to strengthen parental self-efficacy by helping participants recognize their parenting strengths and weaknesses, identify effective skills, plan manageable parenting successes, and remain mindfully present during ordinary conversations with their child. The ninth session focused on improving parent–child communication through attentive listening, child-focused awareness, positive emotional communication, and constructive responses to difficult behaviors. Parents reviewed challenging interactions from the previous week and designed alternative responses using acceptance and commitment processes. The tenth session reviewed common parental reactions to difficult child behaviors and emphasized acceptance without blame, condemnation, or excessive control. Participants practiced nonjudgmental exposure to challenging behavior, reviewed the acquired skills, completed the posttest, developed plans for continued skill use, and formulated a personal commitment to value-based parenting behavior.

The choice theory-based parenting intervention was adapted from the protocol developed by Glasser and Glasser and was delivered in 10 weekly group sessions, each lasting 90 minutes. The first session included the introduction of the researcher and group members, administration of the pretest, explanation of the structure, objectives, rules, and therapeutic commitments of the group, and familiarization with the general principles of choice theory. Participants were introduced to the concept of the “quality world” and were asked to describe the relationship they desired with their child and identify child characteristics and behaviors they considered desirable. The second session introduced the basic human needs described in choice theory, including the needs of both parents and children, and explored how unmet needs could influence behaviors associated with attention-deficit/hyperactivity disorder. Parents learned to identify the

needs underlying their child's behavior and to connect recent behavioral incidents with the needs that might have motivated them. The third session focused on parental responsibility and behavioral choice. Participants examined how their own behavioral decisions influenced parent-child interactions, evaluated controlling responses, and practiced replacing external-control strategies with alternatives based on internal control and personal responsibility. The fourth session addressed self-control and emotion management by helping parents identify their emotional responses to challenging child behavior and regulate their actions under stressful conditions. Techniques included deep breathing, thought stopping, positive thinking, and deliberate selection of constructive responses. The fifth session concentrated on strengthening the parent-child relationship through effective communication and the application of choice theory principles. Participants practiced active listening without judgment, attended more closely to the child's needs, identified limiting beliefs about the child, and reconstructed those beliefs according to choice theory concepts. The sixth session emphasized encouraging and reinforcing positive behavior by shifting parental attention away from exclusive focus on negative behaviors and toward recognition and reinforcement of desirable behaviors. Parents practiced positive reinforcement and nonjudgmental listening during everyday conversations with their children. The seventh session addressed the establishment of clear limits and structure within parenting. Participants learned to set boundaries in a respectful, kind, and effective manner through dialogue, negotiation, open-ended questioning, and practical limit-setting rather than commands or coercion. The eighth session focused on joint problem-solving, shared decision-making, and responsible goal setting. Parents learned the choice theory questioning process, developed specific and realistic goals based on internal control, and evaluated their interactions in terms of destructive behaviors such as criticizing, blaming, threatening, punishing, and complaining, as well as constructive behaviors such as listening, supporting, respecting, and encouraging. The ninth session emphasized the creation of a positive and supportive family environment designed to promote the child's motivation, self-confidence, sense of belonging, and positive behavior. Participants selected shared activities capable of meeting both the parent's and the child's needs and reviewed the relational effects of these activities. The tenth session reviewed the knowledge and skills acquired throughout the program and focused on planning for their continued use in daily parenting. Participants evaluated their progress,

established future parenting goals, completed the posttest, developed a personal plan for maintaining choice theory principles, formulated a commitment to continued practice, and identified strategies for managing future parenting challenges.

2.4. Data Analysis

The collected data were analyzed using descriptive and inferential statistical procedures in SPSS version 28. Descriptive statistics, including means and standard deviations, were calculated to summarize parent-child relationship quality and its components at the pretest, posttest, and two-month follow-up assessments in the acceptance and commitment-based parenting group, the choice theory-based parenting group, and the control group. Before conducting the principal inferential analyses, the assumptions required for repeated-measures analysis of variance were examined. The normality of score distributions was assessed using the Shapiro-Wilk test, while the homogeneity of variances across groups was evaluated through Levene's test. Box's M test was used to assess the homogeneity of the variance-covariance matrices, and Mauchly's test was applied to evaluate the sphericity assumption. Because the sphericity assumption was violated for parent-child relationship quality, the Greenhouse-Geisser correction was applied when interpreting the within-subject effect of time and the time-by-group interaction. Repeated-measures analysis of variance was then used to examine changes in parent-child relationship quality and its components across the three measurement occasions and to determine whether patterns of change differed among the study groups. The analysis included the between-subject effect of group, the within-subject effect of time, and the interaction between time and group. Partial eta squared was reported as an index of effect size. Bonferroni-adjusted post hoc comparisons were conducted to compare adjusted scores between the two intervention groups and to examine pairwise differences among the pretest, posttest, and follow-up assessments within each intervention group. Statistical significance was evaluated at the conventional alpha level of .05.

3. Findings and Results

Examination of the participants' demographic characteristics indicated that the three groups were comparable at baseline. The chi-square test showed no statistically significant difference among the acceptance and

commitment-based parenting group, the choice theory-based parenting group, and the control group in terms of educational attainment ($p > .05$). The mean age of participants was 39.75 years in the acceptance and commitment-based parenting group, 40.60 years in the choice theory-based parenting group, and 40.41 years in the control group. The results of one-way analysis of variance also indicated that the groups did not differ significantly in

age ($p > .05$). All 45 participants were married women. These findings demonstrated that the three groups were homogeneous with respect to the examined demographic characteristics and that the observed differences in the outcome variables were unlikely to be attributable to baseline differences in age, educational level, sex, or marital status.

Table 1

Descriptive Statistics for Parent–Child Relationship Quality and Its Components by Group and Measurement Time

Variable	Measurement Time	Acceptance and Commitment-Based Parenting, M	SD	Choice Theory-Based Parenting, M	SD	Control, M	SD
Conflict	Pretest	40.19	24.78	39.80	24.21	39.47	23.73
	Posttest	57.44	25.18	54.73	23.30	40.29	23.48
	Follow-up	57.69	24.96	54.33	23.70	40.80	23.43
Closeness	Pretest	22.69	2.82	20.13	3.38	22.35	4.81
	Posttest	30.88	6.81	23.93	4.46	21.76	4.10
	Follow-up	29.25	6.88	23.80	3.71	21.29	4.10
Dependency	Pretest	12.63	7.47	13.13	6.76	13.29	6.54
	Posttest	22.94	7.86	20.40	8.61	13.47	4.61
	Follow-up	22.69	8.17	19.67	7.10	12.88	5.01
Overall Positive Relationship	Pretest	75.51	10.93	73.06	7.97	75.11	9.20
	Posttest	111.26	14.50	99.06	11.25	75.52	8.99
	Follow-up	109.63	13.34	97.80	7.62	74.97	8.29

As shown in Table 1, the pretest means for parent–child relationship quality and its components were generally similar across the three groups. Following the interventions, the mean overall positive relationship score in the acceptance and commitment-based parenting group increased from 75.51 at pretest to 111.26 at posttest and remained high at the two-month follow-up, with a mean of 109.63. In the choice theory-based parenting group, the corresponding mean increased from 73.06 at pretest to 99.06 at posttest and remained relatively stable at follow-up, with a mean of 97.80. By contrast, the overall positive relationship score in the control group remained nearly unchanged across the three assessments, increasing only from 75.11 at pretest to 75.52 at posttest and then decreasing slightly to 74.97 at follow-up. Similar descriptive patterns were observed for conflict, closeness, and dependency, with both intervention groups showing higher posttest and follow-up scores than their baseline scores, whereas the control group demonstrated minimal change. The largest descriptive improvements in closeness and overall positive

relationship were observed in the acceptance and commitment-based parenting group.

The assumptions required for repeated-measures analysis of variance were examined before testing the study hypotheses. The Shapiro–Wilk test indicated that the distributions of parent–child relationship quality scores at the pretest, posttest, and follow-up assessments did not depart significantly from normality, supporting the normality assumption. Levene’s test yielded nonsignificant results ($p > .05$), indicating that the variances of the scores were homogeneous across the three groups. Box’s M test was also nonsignificant, supporting the assumption of homogeneity of the variance–covariance matrices. However, Mauchly’s test of sphericity was statistically significant for parent–child relationship quality ($p < .001$), indicating that the sphericity assumption had been violated. Consequently, the Greenhouse–Geisser correction was applied when interpreting the within-subject effect of time and the time-by-group interaction. On the basis of these evaluations and corrections, the data were considered appropriate for repeated-measures analysis of variance.

Table 2

Repeated-Measures Analysis of Variance for Parent–Child Relationship Quality and Its Components

Variable	Source	Sum of Squares	df	Mean Square	F	p	Partial η^2
Conflict	Group	51.01	1	51.01	1.42	.244	.047
	Time	654.77	2	327.39	28.65	< .001	.497
	Time $\times$ Group	20.96	2	10.48	0.917	.405	.031
Closeness	Group	576.46	1	576.46	11.64	.002	.286
	Time	648.85	2	324.43	26.19	< .001	.475
	Time $\times$ Group	77.06	2	38.53	3.11	.049	.097
Dependency	Group	94.46	1	94.46	0.692	.412	.023
	Time	460.69	2	230.34	11.22	< .001	.279
	Time $\times$ Group	11.52	2	5.76	0.281	.756	.010
Overall Parent–Child Relationship Quality	Group	1,670.40	1	1,670.40	6.49	.016	.183
	Time	5,241.66	2	2,620.83	41.93	< .001	.591
	Time $\times$ Group	181.36	2	90.68	1.45	.243	.048

The repeated-measures analysis of variance presented in Table 2 showed statistically significant effects of time on conflict, $F = 28.65$, $p < .001$, partial $\eta^2 = .497$; closeness, $F = 26.19$, $p < .001$, partial $\eta^2 = .475$; dependency, $F = 11.22$, $p < .001$, partial $\eta^2 = .279$; and overall parent–child relationship quality, $F = 41.93$, $p < .001$, partial $\eta^2 = .591$. These findings indicated that the outcome scores changed significantly across the pretest, posttest, and follow-up assessments. The main effect of group was statistically significant for closeness, $F = 11.64$, $p = .002$, partial $\eta^2 = .286$, and overall parent–child relationship quality, $F = 6.49$,

$p = .016$, partial $\eta^2 = .183$, but was not significant for conflict or dependency. The time-by-group interaction was statistically significant only for closeness, $F = 3.11$, $p = .049$, partial $\eta^2 = .097$, indicating that the pattern of change in closeness differed significantly between the intervention groups. In contrast, the interaction effects were not statistically significant for conflict, $F = 0.917$, $p = .405$, partial $\eta^2 = .031$; dependency, $F = 0.281$, $p = .756$, partial $\eta^2 = .010$; or overall parent–child relationship quality, $F = 1.45$, $p = .243$, partial $\eta^2 = .048$.

Table 3

Bonferroni Post Hoc Comparisons of the Intervention Effects and Measurement Times

Panel A. Between-Group Comparisons of Adjusted Posttest Means

Variable	Group	Adjusted Posttest Mean	SE	Mean Difference	p
Conflict	Acceptance and Commitment-Based Parenting	27.05	0.925	1.91	.182
	Choice Theory-Based Parenting	25.14	0.958		
Closeness	Acceptance and Commitment-Based Parenting	29.93	1.46	5.00	.031
	Choice Theory-Based Parenting	24.94	1.51		
Dependency	Acceptance and Commitment-Based Parenting	42.06	1.77	0.729	.787
	Choice Theory-Based Parenting	41.33	1.83		
Overall Parent–Child Relationship Quality	Acceptance and Commitment-Based Parenting	99.61	3.00	8.79	.046
	Choice Theory-Based Parenting	90.82	3.11		

Panel B. Within-Group Pairwise Comparisons Across Measurement Times

Variable	Group	Reference Time	Comparison Time	Mean Difference	p
Conflict	Acceptance and Commitment-Based Parenting	Pretest	Posttest	−7.25	< .001
		Pretest	Follow-up	−5.50	.004
		Posttest	Follow-up	1.75	.268

Closeness	Choice Theory-Based Parenting	Pretest	Posttest	-4.93	< .001
		Pretest	Follow-up	-4.53	< .001
		Posttest	Follow-up	0.40	.713
	Acceptance and Commitment-Based Parenting	Pretest	Posttest	-8.19	< .001
		Pretest	Follow-up	-6.56	.002
		Posttest	Follow-up	1.62	.101
Dependency	Choice Theory-Based Parenting	Pretest	Posttest	-3.80	.002
		Pretest	Follow-up	-3.67	.004
		Posttest	Follow-up	0.13	.873
	Acceptance and Commitment-Based Parenting	Pretest	Posttest	-5.31	.007
		Pretest	Follow-up	-3.06	.151
		Posttest	Follow-up	2.25	.167
Overall Parent-Child Relationship Quality	Choice Theory-Based Parenting	Pretest	Posttest	-5.27	.010
		Pretest	Follow-up	-4.53	.009
		Posttest	Follow-up	0.73	.457
	Acceptance and Commitment-Based Parenting	Pretest	Posttest	-20.75	< .001
		Pretest	Follow-up	-15.12	.002
		Posttest	Follow-up	5.62	.039
	Choice Theory-Based Parenting	Pretest	Posttest	-14.00	< .001
		Pretest	Follow-up	-12.73	< .001
		Posttest	Follow-up	1.27	.526

As presented in Table 3, the Bonferroni-adjusted between-group comparisons showed that acceptance and commitment-based parenting training was significantly more effective than choice theory-based parenting training in improving closeness and overall parent-child relationship quality. The adjusted posttest mean for closeness was 29.93 in the acceptance and commitment-based parenting group and 24.94 in the choice theory-based parenting group, resulting in a statistically significant mean difference of 5.00 points ($p = .031$). Similarly, the adjusted posttest mean for overall parent-child relationship quality was 99.61 in the acceptance and commitment-based parenting group and 90.82 in the choice theory-based parenting group, producing a significant mean difference of 8.79 points ($p = .046$). By contrast, the two interventions did not differ significantly in their effects on conflict ($p = .182$) or dependency ($p = .787$). The within-group pairwise comparisons further indicated that conflict and closeness improved significantly from pretest to posttest and from pretest to follow-up in both intervention groups, whereas the posttest-to-follow-up differences were nonsignificant, demonstrating relative maintenance of the intervention effects. Dependency increased significantly from pretest to posttest in both groups and from pretest to follow-up in the choice theory-based parenting group; however, the pretest-to-follow-up

difference in dependency was not statistically significant in the acceptance and commitment-based parenting group ($p = .151$). Overall parent-child relationship quality improved significantly from pretest to posttest and from pretest to follow-up in both intervention groups. In the acceptance and commitment-based parenting group, the posttest-to-follow-up difference was also statistically significant ($p = .039$), indicating some decline after posttest, although the follow-up score remained significantly higher than the pretest score. In the choice theory-based parenting group, the posttest-to-follow-up difference was nonsignificant ($p = .526$), indicating that the post-intervention improvement was maintained. Collectively, these findings confirmed the effectiveness of both interventions while demonstrating the greater effect of acceptance and commitment-based parenting training on closeness and overall parent-child relationship quality.

4. Discussion and Conclusion

The present study compared the effectiveness of acceptance and commitment-based parenting training and choice theory-based parenting training in improving parent-child relationship quality among parents of children with attention-deficit/hyperactivity disorder. The findings indicated that both interventions produced meaningful

changes in parent–child relationship quality across the pretest, posttest, and two-month follow-up assessments. Significant effects of time were observed for conflict, closeness, dependency, and overall parent–child relationship quality, demonstrating that the outcome scores changed over the three measurement occasions. Within-group comparisons further showed that both experimental groups generally obtained significantly better posttest and follow-up scores than pretest scores, whereas the control group demonstrated no substantial change. The effects were largely maintained at follow-up, although a significant posttest-to-follow-up reduction in the overall relationship score was found in the acceptance and commitment-based parenting group. The comparative findings also showed that acceptance and commitment-based parenting training produced significantly greater adjusted improvements in closeness and overall parent–child relationship quality than choice theory-based parenting training. However, the two interventions did not differ significantly in their effects on conflict or dependency. Although the overall time-by-group interaction for total parent–child relationship quality was not statistically significant, the adjusted posttest comparison showed a significant advantage for acceptance and commitment-based parenting, indicating that the superiority of this approach was most evident in the direct comparison of the two active interventions after baseline adjustment.

The effectiveness of both interventions in improving overall parent–child relationship quality is consistent with the view that parenting is a modifiable relational context in the management of children with attention-deficit/hyperactivity disorder. Children with ADHD commonly experience persistent difficulties in attention, impulse control, behavioral regulation, task completion, and compliance with environmental demands (Magnus et al., 2023; Sadr-Salek et al., 2023). Such difficulties frequently produce repetitive cycles of correction, frustration, criticism, resistance, and emotional escalation within the family. When parents interpret impulsivity or inattention as deliberate disobedience, they may rely increasingly on controlling responses, whereas children may respond with greater opposition, withdrawal, or emotional dysregulation. Both interventions used in the present study attempted to interrupt this coercive cycle. Acceptance and commitment-based parenting encouraged parents to respond to difficult behavior with psychological flexibility, mindful awareness, and value-guided action, while choice theory-based parenting encouraged them to abandon external control, recognize the needs underlying behavior, and assume

responsibility for their own relational choices. Consequently, both programs provided parents with alternative frameworks for understanding the child's behavior and regulating their own responses.

The observed improvements are also compatible with research emphasizing the importance of parental self-efficacy and relational competence in families of children with ADHD. Parents who feel capable of managing challenging situations are more likely to remain consistent, regulate their emotions, use constructive communication, and persist when behavioral change is gradual. Conversely, low parental self-efficacy may contribute to helplessness, excessive control, inconsistent discipline, and emotional exhaustion. Research has demonstrated that parental self-efficacy among parents of adolescents with ADHD is associated with several individual and relational factors and can influence parents' ability to manage difficult behaviors effectively (Chou et al., 2020). Parent–child relationship quality and parental self-efficacy have also been linked to children's learning behavior, suggesting that improvements in parental functioning may have implications beyond the immediate emotional relationship (Hewson et al., 2024). Both interventions in the present study included exercises designed to strengthen parental responsibility, awareness, and competence. These components may have helped participants reinterpret challenging interactions as manageable situations rather than evidence of personal failure, thereby facilitating more constructive and emotionally regulated parenting.

The effectiveness of acceptance and commitment-based parenting training aligns with previous studies showing that acceptance-based interventions can improve parenting-related psychological and relational outcomes. Amini et al. found that acceptance and commitment-based parenting training improved the mother–child relationship among mothers of children with ADHD (Amini et al., 2023). This consistency may be explained by the central processes of acceptance and commitment therapy, particularly acceptance, cognitive defusion, present-moment awareness, values clarification, and committed action (Hayes et al., 2016). Parents of children with ADHD frequently experience distressing thoughts such as believing that they are inadequate parents, that the child is intentionally difficult, or that family problems will never improve. When these thoughts are experienced as literal truths, parents may react impulsively or rigidly. Cognitive defusion helps parents observe such thoughts as mental events rather than unquestionable facts, while acceptance reduces attempts to

avoid, suppress, or control difficult emotions. These processes can create a pause between the child's behavior and the parent's response, allowing the parent to select an action consistent with values such as compassion, patience, responsibility, and emotional availability.

The present findings are also supported by broader evidence concerning ACT-based interventions for parents of children with developmental and special needs. Acceptance and commitment-based parenting programs have reduced parenting stress and improved parent- and child-related outcomes among parents of children with autism spectrum disorder (Li et al., 2025). Brief ACT protocols have similarly shown beneficial psychological effects among parents of children with neurodevelopmental disorders (Lobato et al., 2025). Meta-analytic evidence indicates that ACT can significantly reduce parental stress among parents of children with special needs (Resch et al., 2025), while another meta-analysis has supported its effectiveness in reducing depressive symptoms in this population (Wang & He, 2025). These findings help explain the improvements observed in the current study because reductions in parental distress, experiential avoidance, and emotional reactivity may enable parents to respond to their children with greater consistency and warmth. Furthermore, qualitative research on successful ACT experiences has shown that participants may develop greater awareness of their internal experiences, a more accepting relationship with distress, and a stronger orientation toward valued action (Ma et al., 2023). These changes are directly relevant to parenting a child with ADHD, where difficult emotions cannot always be eliminated but can be managed in a more flexible and purposeful manner.

The significant superiority of acceptance and commitment-based parenting training in improving closeness is particularly noteworthy. Closeness reflects warmth, affection, emotional availability, comfort, and intimacy in the parent-child relationship. Improving closeness requires more than reducing overt conflict or teaching parents behavioral management techniques. It requires parents to remain emotionally present with the child, listen without immediate judgment, tolerate uncomfortable feelings, and communicate acceptance even when the child displays persistent inattention, impulsivity, or defiance. ACT directly addresses these relational conditions by teaching mindful presence and acceptance of both the parent's and the child's difficult experiences. Through values clarification, parents are also encouraged to identify the quality of relationship they wish to create rather

than evaluating success solely according to the child's immediate compliance. This may shift the parent's role from that of a constant behavior controller to that of an emotionally available guide. The findings of Jokar et al., who compared acceptance and commitment-based parenting with another integrative parenting intervention, similarly support the capacity of ACT-oriented parenting programs to improve children's behavioral and interpersonal outcomes through changes in parents' responses (Jokar et al., 2026).

The greater effect of acceptance and commitment-based parenting on overall relationship quality may therefore be attributable to its simultaneous influence on emotional regulation, cognition, behavior, and relational values. Parents were taught not only how to communicate differently but also how to relate differently to frustration, guilt, anxiety, and negative judgments. This distinction is important because parental behavior is often maintained by internal processes that are not directly observable. For example, a parent may understand the importance of active listening but be unable to listen when dominated by anger, fear, or rigid expectations. ACT addresses this difficulty by increasing willingness to experience discomfort while continuing to behave in accordance with parenting values. The feasibility of combining psychoeducation with ACT principles has also been demonstrated in ADHD-related interventions, suggesting that the model can be adapted effectively to contexts involving attention and behavioral regulation difficulties (Seery et al., 2024). Accordingly, the stronger overall effect found in the present study may reflect the depth of change produced when practical parenting behavior is integrated with psychological flexibility.

Choice theory-based parenting training was also effective in improving the parent-child relationship, which is consistent with previous research demonstrating that choice theory-based parenting education can enhance the quality of mother-child relationships (Khayyamfar et al., 2019). Choice theory proposes that behavior is purposeful and directed toward satisfying basic needs, including love and belonging, freedom, power, enjoyment, and survival (Glasser, 2021). From this perspective, many family conflicts arise when parents attempt to control children through criticism, blame, threats, punishment, or coercion. Such strategies may be particularly ineffective for children with ADHD because difficulties with inhibition and attention are not simply corrected through stronger external pressure. The choice theory program taught parents to identify the needs underlying their child's behavior, evaluate their own choices, replace destructive communication habits

with supportive behaviors, and use dialogue, negotiation, and shared problem-solving. These skills may have reduced relational tension and increased parents' ability to establish boundaries without undermining the child's sense of belonging.

The findings concerning choice theory are also compatible with the broader principles of reality therapy-based group counseling, which emphasize responsibility, self-evaluation, purposeful choice, and the replacement of ineffective behavior with more adaptive alternatives (Glasser & Glasser, 2010). Parents in the choice theory group learned that they could not directly control their child but could control their own responses and influence the relationship through constructive choices. This recognition may have reduced repeated power struggles and helped parents shift from coercive management to collaborative interaction. Positive parenting research similarly indicates that programs emphasizing constructive communication, reinforcement, and relational responsiveness can improve dimensions of parent-child relationship quality (Keyvani et al., 2023). Thus, the effectiveness of choice theory-based parenting may be explained by its practical focus on communication patterns, basic needs, internal control, responsible decision-making, and supportive relational behavior.

The absence of significant differences between the two interventions in conflict and dependency suggests that both approaches may reach similar outcomes through different mechanisms. In relation to conflict, acceptance and commitment-based parenting may reduce parental reactivity by helping parents observe anger and frustration without acting automatically, whereas choice theory may reduce conflict by discouraging external-control behaviors and teaching supportive communication. Both pathways can decrease criticism, punishment, blame, and escalating interaction patterns. Regarding dependency, both interventions may help parents create healthier relational boundaries. ACT encourages parents to tolerate uncertainty and avoid overprotective behavior driven by anxiety, while choice theory emphasizes responsibility, autonomy, and the satisfaction of needs without excessive control. Therefore, neither intervention demonstrated a clear advantage because both contained components capable of modifying the processes underlying relational tension and maladaptive dependency.

The maintenance of most intervention effects at the two-month follow-up also deserves attention. Parenting a child with ADHD involves recurring challenges, and treatment

benefits are meaningful only when parents can apply learned skills outside the intervention setting. In both experimental groups, most posttest-to-follow-up differences were nonsignificant, indicating relative stability of the improvements. This maintenance may be related to the practical homework assignments included in both programs. Parents repeatedly applied mindfulness, value-consistent behavior, active listening, need identification, constructive limit-setting, and problem-solving in everyday family situations. Repeated practice may have transformed abstract therapeutic principles into usable parenting habits. Nevertheless, the significant decline in overall relationship quality from posttest to follow-up in the acceptance and commitment-based parenting group indicates that some intervention gains may weaken after structured sessions end. Although follow-up scores remained significantly better than pretest scores, this finding suggests that continued practice, booster sessions, or periodic clinical support may be required to preserve the strongest effects over longer periods.

The results should also be understood in relation to the broader developmental complexity of ADHD. Executive-function deficits, learning difficulties, behavioral symptoms, and problems in daily adaptation may continue even when the parent-child relationship improves (Derakhshandeh et al., 2021; Lotfi et al., 2022). Biological vulnerability and rearing experiences interact in shaping ADHD symptoms, meaning that parenting intervention should not be interpreted as replacing child-focused treatment or implying that parents cause the disorder (Harold et al., 2023). Instead, parenting programs modify an important environmental factor that can buffer the adverse effects of the condition. Interventions targeting children's working memory and behavioral functioning may improve specific symptoms (Yazdanbakhsh et al., 2018), while parenting interventions may strengthen the emotional and relational environment in which children manage those symptoms. An integrated approach combining child-focused treatment, parent training, school collaboration, and, where necessary, pharmacological management may therefore provide the most comprehensive support.

Parental distress and social context should likewise be considered when interpreting the findings. Parents' evaluations of their relationships may be influenced by their emotional distress and socioeconomic circumstances (Herbers et al., 2017). In addition, caregivers of children with ADHD may experience stigma and social judgment, which can intensify stress and alter their interactions with the

child (Lin et al., 2023). Both interventions may have provided benefits not only through their specific theoretical techniques but also through the supportive group setting. Meeting other parents facing similar difficulties may have normalized participants' experiences, reduced isolation, and created opportunities for mutual learning. These nonspecific therapeutic factors may partly explain why both interventions were effective. However, the greater improvement in closeness and overall relationship quality in the ACT-based group suggests that intervention-specific processes, particularly acceptance, mindfulness, and values-based action, contributed additional benefits beyond general group support.

Overall, the findings suggest that acceptance and commitment-based parenting and choice theory-based parenting are both useful interventions for parents of children with ADHD. Choice theory appears valuable for restructuring communication, reducing external control, understanding the child's basic needs, and promoting responsible relational choices. Acceptance and commitment-based parenting appears to offer these families an additional pathway by helping parents manage their internal distress and remain emotionally present during challenging interactions. Its greater effectiveness in improving closeness and overall relationship quality indicates that interventions focused on psychological flexibility may be particularly beneficial when the clinical goal is not merely behavioral management but the development of a warmer, more accepting, and emotionally secure parent-child relationship.

The study had several limitations that should be considered when interpreting its findings. The sample consisted of only 45 participants recruited through purposive sampling from counseling and psychological service centers in Sanandaj, which limits the generalizability of the results to parents in other geographical, cultural, and socioeconomic contexts. All participants were married women, and the experiences and responses of fathers, single parents, and other caregivers were not represented. The relatively small sample size may also have reduced the statistical power to detect some interaction effects, particularly for conflict, dependency, and overall relationship quality. The outcomes were assessed using parent-reported measures, which may have been affected by social desirability, expectations regarding treatment, or participants' emotional states. The control group received no active intervention, making it impossible to separate the specific effects of the treatment models from attention, group support, or therapist contact.

In addition, the two-month follow-up period was relatively brief and did not establish whether the observed improvements would persist over longer periods. Finally, the intervention was delivered by the researcher, and treatment fidelity was not independently assessed, which may have introduced therapist-related or implementation bias.

Future studies should replicate this comparison with larger and more diverse samples drawn from different regions, socioeconomic groups, and service settings. Fathers, single parents, grandparents, and other primary caregivers should be included to determine whether caregiver role or family structure influences responsiveness to each intervention. Randomized controlled trials using active comparison groups would provide stronger evidence regarding the specific therapeutic effects of the two parenting models. Future research should incorporate observational assessments of parent-child interaction, reports from children and teachers, and objective indicators of child behavior in addition to parental self-report measures. Longer follow-up periods of six months or one year are recommended to evaluate the durability of treatment gains and determine the need for booster sessions. Researchers should also examine potential mediators, such as psychological flexibility, parental self-efficacy, emotion regulation, experiential avoidance, communication patterns, and perceived parenting stress. Studies comparing combined or sequential interventions could determine whether integrating acceptance-based emotional processes with choice theory-based communication and problem-solving produces greater or more durable improvements than either approach alone.

Authors' Contributions

All authors significantly contributed to this study.

Declaration

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

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

In this study, to observe ethical considerations, participants were informed about the goals and importance of the research before the start of the interview and participated in the research with informed consent.

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