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A Comparison of the Effectiveness of Acceptance and Commitment-Based Parenting Training and Mindful Parenting Training on Parental Burnout Symptoms and Resilience in Mothers of Children with Autism Spectrum Disorder

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A B S T R A C T

Purpose: The present study aimed to compare the effectiveness of Acceptance and Commitment-Based Parenting Training and Mindful Parenting Training in reducing parental burnout symptoms and increasing resilience among mothers of children with autism spectrum disorder.

Methods and Materials: This applied study employed a quasi-experimental pretest-posttest control-group design with a three-month follow-up. The statistical population consisted of mothers of children with autism spectrum disorder attending the Autism Association in District 5 of Tehran during October–December 2025. A total of 45 eligible mothers were selected through convenience sampling and randomly assigned to three groups of 15 participants: Acceptance and Commitment-Based Parenting Training, Mindful Parenting Training, and control. The two experimental groups each received eight two-hour training sessions held twice weekly, whereas the control group received no intervention during the study period. Data were collected using the Connor–Davidson Resilience Scale and the Parental Burnout Assessment. Data were analyzed using repeated-measures analysis of variance and Bonferroni post-hoc comparisons in SPSS version 27.

Findings: Repeated-measures analysis showed significant effects of time, group, and time-by-group interaction for parental burnout and resilience ($p < 0.001$). Both interventions significantly reduced parental burnout and increased resilience compared with the control group. Bonferroni comparisons indicated that Mindful Parenting Training produced a significantly greater reduction in parental burnout than Acceptance and Commitment-Based Parenting Training (mean difference = 3.689, $p < 0.001$). In contrast, Acceptance and Commitment-Based Parenting Training produced a significantly greater increase in resilience than Mindful Parenting Training (mean difference = 3.267, $p < 0.001$). Significant intervention effects were also observed across the respective components of parental burnout and resilience.

Conclusion: Both parenting interventions were effective, but their comparative benefits differed; Mindful Parenting Training was more effective for reducing parental burnout, whereas Acceptance and Commitment-Based Parenting Training was more effective for enhancing resilience among mothers of children with autism spectrum disorder.

Keywords: *Acceptance and Commitment-Based Parenting, Mindful Parenting, Parental Burnout, Resilience, Mothers, Autism Spectrum Disorder*

1. Introduction

Autism spectrum disorder is a neurodevelopmental condition characterized by persistent difficulties in social communication and interaction together with restricted, repetitive patterns of behavior, interests, or activities. Although the manifestations and severity of autism spectrum disorder vary considerably across children, the condition frequently creates enduring developmental, educational, behavioral, and caregiving demands that extend beyond the child and substantially influence family functioning. Parents of children with autism spectrum disorder often assume intensive caregiving responsibilities that include managing behavioral difficulties, coordinating therapeutic and educational services, responding to communication limitations, adapting family routines, advocating for the child's needs, and coping with uncertainty about developmental outcomes. These responsibilities may become particularly demanding for mothers, who in many sociocultural contexts remain the primary caregivers and therefore experience a large proportion of the day-to-day psychological and practical burden associated with raising a child with developmental needs. Over time, sustained parenting demands without adequate psychological resources or opportunities for restoration can contribute to chronic stress, exhaustion, diminished confidence, and reduced capacity to respond flexibly to family challenges. Accordingly, interventions that directly support parental functioning have increasingly become an essential component of comprehensive care for families of children with developmental and behavioral difficulties (Ghorbanikhah et al., 2025; Jalilian et al., 2025; Li et al., 2025).

One particularly important consequence of prolonged parenting stress is parental burnout. Parental burnout is a distinct psychological syndrome arising from a chronic imbalance between parenting demands and the resources available to cope with those demands. It is generally characterized by profound exhaustion related to the parental role, emotional distancing from one's children, feelings of being overwhelmed or fed up with parenting, and a perceived discrepancy between one's current functioning and one's previous image of oneself as a parent. Unlike transient parenting fatigue, parental burnout reflects a more persistent and severe erosion of psychological resources and may adversely affect both parents and children. Mothers experiencing substantial parental burnout may become less emotionally available, less patient, more reactive, and less able to maintain constructive parent–child interactions. The consequences can extend to children's emotional, behavioral, and academic functioning. Evidence has shown that parental burnout may influence children's outcomes indirectly through disruptions in parenting quality, including reductions in mindful parenting and changes in parental behavioral control (An et al., 2021). This finding underscores the systemic nature of parental burnout: it is not merely an individual emotional state but a family-level risk factor capable of altering the quality of caregiving relationships.

The risk of parental burnout may be particularly pronounced among mothers of children with autism spectrum disorder because caregiving demands are often chronic rather than temporary. These mothers may encounter repeated challenges involving behavioral rigidity, sensory sensitivities, social difficulties, educational coordination, emotional outbursts, dependency in daily activities, and uncertainty concerning future independence. The cumulative impact of these stressors may gradually deplete coping resources, especially when mothers interpret difficult parenting situations as uncontrollable, personally threatening, or incompatible with their expectations regarding family life. In such circumstances, attempts to eliminate difficult thoughts and emotions can paradoxically increase psychological strain. Acceptance and commitment-based approaches have therefore attracted attention because they do not primarily seek to remove unpleasant internal experiences; instead, they aim to increase psychological flexibility and help parents behave consistently with personally meaningful parenting values even when difficult thoughts, feelings, or circumstances are present. Recent evidence specifically involving parents of children with autism spectrum disorder suggests that acceptance and commitment-based parenting interventions can reduce parenting stress and improve a range of parent and child outcomes (Li et al., 2025). These findings provide an important rationale for examining whether such interventions can also reduce the more severe and multidimensional state of parental burnout.

Acceptance and Commitment Therapy is grounded in a contextual behavioral framework and emphasizes psychological flexibility as a core adaptive process. Within parenting interventions, this approach encourages parents to observe difficult thoughts and emotional experiences without becoming dominated by them, reduce rigid attempts to control internal events, clarify personally meaningful parenting values, and engage in committed actions

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consistent with those values. Parenting often involves situations that cannot be fully controlled, particularly when children experience developmental, emotional, or behavioral difficulties. In these contexts, excessive efforts to suppress distress, eliminate uncertainty, or force immediate behavioral change may intensify conflict and exhaustion. Acceptance and commitment-based parenting instead encourages parents to distinguish between internal experiences and chosen behaviors, allowing them to respond more deliberately to parenting challenges. Studies with mothers of children presenting behavioral and developmental difficulties have demonstrated beneficial effects of acceptance and commitment-based parenting on parent–child interaction, parental self-efficacy, psychological flexibility, and adaptive parenting processes (Jalilian et al., 2025; Mobini Kashe et al., 2024; Mottaghi, 2024). Furthermore, research has suggested that this form of parenting intervention may promote resilience and improve relational functioning in mothers caring for children with attention-deficit/hyperactivity disorder (Banani et al., 2022).

The potential relevance of acceptance and commitment-based parenting for resilience is particularly noteworthy. Resilience refers to the capacity to adapt effectively, recover, and maintain psychological functioning in the presence of adversity, chronic stress, or major life challenges. In mothers of children with autism spectrum disorder, resilience does not imply the absence of stress; rather, it reflects the ability to continue functioning adaptively despite ongoing caregiving demands. Resilient mothers may be better able to preserve a sense of competence, maintain hope, tolerate uncertainty, reorganize daily routines when difficulties arise, and recover psychologically after stressful interactions. The development of resilience is therefore highly relevant to parenting children with developmental conditions because many stressors are recurrent and cannot simply be eliminated. Acceptance and commitment-based parenting may strengthen resilience by helping mothers disengage from unproductive struggles with uncontrollable experiences, reconnect with valued parenting goals, and develop more flexible behavioral responses. The emphasis on committed action is especially relevant because resilience involves persistence and adaptive functioning rather than avoidance of adversity. Evidence from comparative intervention research has indicated that acceptance and commitment-based parenting may yield improvements in resilience and related aspects of parental functioning (Banani et al., 2022). More recent studies also suggest that acceptance- and commitment-oriented parenting models can produce meaningful changes in parenting behavior and child-related outcomes across different family contexts (Ghorbanikhah et al., 2025; Jokar et al., 2026).

Beyond structured parenting programs, the broader acceptance and commitment literature highlights the importance of sustained engagement with intervention principles. Long-term adherence and parental support may influence the effectiveness and persistence of ACT-based interventions, particularly when families are managing chronic emotional or developmental difficulties. For example, longitudinal evidence from therapist-assisted internet-delivered acceptance and commitment therapy has shown the importance of parental support and continued engagement in treatment processes over time (Larsson et al., 2025). Although that work was conducted in the context of adolescent anxiety, it provides a relevant conceptual implication for parenting interventions: psychological flexibility is likely strengthened not merely through exposure to therapeutic concepts, but through repeated application of acceptance, awareness, values clarification, and committed behavior in everyday family contexts. For mothers of children with autism spectrum disorder, this repeated application may be necessary to transform short-term improvement into more durable resilience and reduced burnout.

Mindful parenting represents another promising intervention approach for parents experiencing chronic caregiving stress. Mindful parenting applies the principles of mindfulness directly to parent–child interactions and emphasizes purposeful, present-focused, and nonjudgmental awareness during parenting experiences. Rather than reacting automatically to a child's behavior or to one's own distress, mindful parenting encourages parents to observe internal and external experiences with greater attention and reduced judgment. Core elements generally include listening to the child with full attention, developing emotional awareness during parent–child interactions, cultivating nonjudgmental acceptance of both parent and child, strengthening self-compassion, and reducing automatic or impulsive responses to parenting stressors. These processes are particularly relevant to parents of children with autism spectrum disorder because challenging behaviors or communication difficulties may repeatedly trigger frustration, worry, helplessness, or rigid expectations. By creating a psychological pause between experience and response, mindful parenting may enable mothers to respond more calmly, flexibly, and compassionately.

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A growing body of research indicates that mindful parenting is associated with lower parental stress and burnout. Mindful parenting has been shown to function as an important psychological pathway connecting maternal stress with parental burnout, suggesting that mothers who are better able to maintain mindful awareness in their parenting role may be less likely to experience severe emotional exhaustion under stressful conditions (Taştekin et al., 2025). Similarly, mindfulness-based parenting interventions have demonstrated effectiveness in reducing parental burnout among mothers of children with psychological or behavioral difficulties (Ebrahimi Rad & Sajadian, 2022; Vajihesadat & Gholamreza, 2023). These findings are particularly relevant because the mechanisms targeted by mindful parenting correspond closely to several dimensions implicated in burnout. Continuous exhaustion can be intensified by automatic stress responses, persistent rumination on difficult parenting experiences, and harsh self-evaluation. Mindful awareness may reduce the escalation of these processes by promoting more balanced attention to the present moment, greater tolerance of difficult experiences, and a less judgmental stance toward parental limitations. Consequently, mindful parenting may reduce both the immediate intensity of parenting stress and the longer-term accumulation of psychological exhaustion.

Mindful parenting may also contribute to resilience by strengthening adaptive coping and relational resources. Parents who are able to remain present during difficult interactions may be better equipped to recover from stress, recognize opportunities for positive connection, and preserve psychological stability when parenting challenges cannot be resolved immediately. Empirical research has linked mindful parenting with family resilience, parenting self-efficacy, and greater relational well-being (Pudjiati et al., 2024). Intervention research has likewise demonstrated that mindfulness-based parenting can enhance resilience and improve the quality of the parent–child relationship in mothers facing particularly demanding parenting circumstances (Bashirgonbadi et al., 2023). In addition, mindful parenting has been associated with children's adaptive emotional outcomes through family relational processes. Wang and colleagues showed that mindful parenting may influence adolescent emotional problems indirectly through maternal warmth and children's emotional resilience, suggesting that mindfulness-based parenting can generate benefits that extend from parental functioning to the emotional climate of the parent–child relationship (Wang et al., 2018). Thus, strengthening mindful parenting may provide mothers with both intrapersonal and interpersonal resources that contribute to resilience.

The relationship between resilience and parental stress is also important when considering intervention effects. Resilience can operate as a protective factor that reduces the psychological impact of sustained parenting demands and supports continued adaptive functioning. Mindfulness-based parenting interventions may strengthen resilience by fostering awareness, acceptance, patience, and reduced reactivity. In a study of single mothers, mindfulness parenting was found to reduce parenting stress, with resilience serving as an important indicator of adaptive functioning (Ihdalumam et al., 2025). This is especially relevant for mothers of children with autism spectrum disorder, who may face persistent stressors that require long-term adaptation rather than short-term problem resolution. In such cases, increasing resilience may be as clinically important as reducing distress because greater resilience can enable mothers to preserve functioning even when some external caregiving demands remain unchanged.

Although both acceptance and commitment-based parenting and mindful parenting share certain conceptual elements, they are theoretically distinct and may influence parental functioning through somewhat different pathways. Both approaches encourage greater awareness of internal experiences and reduced automatic reactivity, but acceptance and commitment-based parenting places stronger emphasis on psychological flexibility, values clarification, cognitive defusion, acceptance of unavoidable internal experiences, and committed action. Mindful parenting, by contrast, focuses more directly on sustained present-moment awareness in parenting interactions, nonjudgmental attention to the child, compassionate observation of the self, and conscious responding in place of automatic parenting reactions. These differences raise the possibility that the two interventions may not have identical effects on all outcomes. Mindful parenting may be particularly effective for reducing parental burnout because it directly addresses moment-to-moment stress responses and emotional exhaustion in the parenting context. Acceptance and commitment-based parenting, meanwhile, may have particular advantages for resilience because of its explicit emphasis on flexible adaptation, values-guided persistence, and constructive action in the presence of adversity.

Existing comparative and intervention studies support the effectiveness of both approaches, but important gaps remain. Acceptance and commitment-based parenting has been associated with improvements in parental competence,

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parent–child interaction, child behavior, and other psychological outcomes across mothers of children with behavioral or developmental difficulties (Mobini Kashe et al., 2024; Mottaghi, 2024; Zandifar & Fallahieh, 2024). Comparative studies have also shown that ACT-based parenting can perform favorably relative to other parenting approaches (Banani et al., 2022; Ghorbanikhah et al., 2025; Jokar et al., 2026). Likewise, mindful parenting interventions have demonstrated beneficial effects on parental burnout, resilience, parenting stress, parent–child relationships, and family resilience (Bashirgonbadi et al., 2023; Ebrahimi Rad & Sajadian, 2022; Ihdalumam et al., 2025; Pudjiati et al., 2024). However, relatively few studies have directly compared these two interventions in mothers of children with autism spectrum disorder while simultaneously examining both a negative outcome, parental burnout, and a positive adaptive resource, resilience.

This gap is clinically meaningful. Demonstrating that two interventions are independently effective is insufficient when practitioners must decide which intervention is more appropriate for a specific therapeutic objective. A direct comparative design can clarify whether one intervention produces stronger reductions in parental burnout while another has greater effects on resilience, or whether both approaches offer equivalent benefits. Such evidence can contribute to more precise intervention selection and can assist psychologists, counselors, rehabilitation professionals, and autism service providers in tailoring programs to the specific needs of mothers. Moreover, the inclusion of a follow-up assessment is important because improvements observed immediately after treatment may weaken over time. Parenting a child with autism spectrum disorder involves ongoing demands, meaning that the durability of intervention effects is essential for evaluating real-world usefulness. Studies emphasizing follow-up and sustained engagement suggest that maintenance of psychological gains is a central issue in acceptance-based and parenting interventions (Larsson et al., 2025; Li et al., 2025). Therefore, examining outcomes across pretest, posttest, and follow-up can provide a more rigorous assessment of whether changes persist beyond the structured intervention period.

The need for such research is also reinforced by the reciprocal relationship between parental well-being and child functioning. High parental burnout may undermine sensitive caregiving and increase emotional distancing, whereas stronger resilience may help mothers sustain supportive involvement despite persistent challenges. Mindful parenting has been implicated as a mechanism through which parental well-being influences children's outcomes (An et al., 2021), and acceptance- and commitment-based parenting interventions have shown potential for improving both parent-related and child-related outcomes (Jalilian et al., 2025; Li et al., 2025). Consequently, interventions that reduce burnout while enhancing resilience may have implications beyond maternal psychological health, potentially improving the broader quality and stability of family functioning. For mothers of children with autism spectrum disorder, this dual focus is particularly important because effective caregiving often depends on both reducing the cumulative psychological costs of parenting and strengthening the internal resources required for long-term adaptation.

Accordingly, the aim of the present study was to compare the effectiveness of Acceptance and Commitment-Based Parenting Training and Mindful Parenting Training in reducing parental burnout symptoms and increasing resilience among mothers of children with autism spectrum disorder.

2. Methods and Materials

2.1. Study Design and Participants

The present study was an applied research study conducted using a quasi-experimental design with a pretest–posttest control group and a three-month follow-up. The study included three parallel groups: an experimental group receiving Acceptance and Commitment-Based Parenting Training, an experimental group receiving Mindful Parenting Training, and a control group receiving no intervention during the study period. Measurements of parental burnout and resilience were obtained from all three groups at three assessment points, including before the interventions as the pretest, immediately after completion of the interventions as the posttest, and three months after completion of the interventions as the follow-up assessment. Participants assigned to the first experimental group received Acceptance and Commitment-Based Parenting Training, participants assigned to the second experimental group received Mindful Parenting Training, and participants in the control group did not receive any parenting or psychological training related to the study variables during the intervention period. The statistical population consisted of mothers of children diagnosed with autism spectrum disorder who attended the Autism Association in District 5 of Tehran during October–December 2025. Based on

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recommendations regarding minimum sample sizes for quasi-experimental research and an a priori estimation using G*Power version 3.1, a total sample of 45 mothers was recruited. Participants were initially selected through convenience sampling from mothers attending the association who met the general characteristics required for participation in the study. After recruitment and eligibility screening, the 45 eligible mothers were randomly assigned to three groups of 15 participants each: the Acceptance and Commitment-Based Parenting Training group, the Mindful Parenting Training group, and the control group. Before random allocation, the objectives and procedures of the study were explained to potential participants, and written informed consent was obtained from all mothers who agreed to participate. Following random assignment, all three groups completed the study questionnaires at baseline. The two experimental groups then participated in their respective eight-session parenting programs, whereas the control group received no corresponding intervention during this period. Following completion of the interventions, all participants completed the posttest measures, and the same instruments were administered again three months later to evaluate the maintenance of intervention effects.

Eligibility criteria were defined before participant recruitment and were applied consistently during the screening procedure. Mothers were eligible if they were between 30 and 50 years of age, had a child with autism spectrum disorder between 7 and 11 years of age, had completed at least a high-school diploma, provided written informed consent to participate in the research, and expressed willingness to attend the educational sessions through completion of the intervention. Participants were also required to demonstrate a need for intervention based on their scores on the measures of parental burnout and resilience used in the study. In addition, mothers were required to report no psychological treatment or psychiatric medication use during the preceding six months. Exclusion criteria consisted of absence from more than two intervention sessions, unwillingness to continue participation at any stage of the research, self-reported presence of a psychiatric disorder that could interfere with participation in the program, use of psychiatric medication during the intervention period, or simultaneous participation in another individual or group psychological, therapeutic, or educational program. Recruitment was initiated after coordination with the administrators of the Autism Association in District 5 of Tehran. Information regarding the study and initial registration requirements was provided to potentially eligible mothers. Those expressing interest were screened against the inclusion and exclusion criteria, provided informed consent, and completed the baseline questionnaires. Participants meeting the eligibility requirements were subsequently randomized into the three study groups. The same assessment procedure was applied to all groups at the pretest, posttest, and three-month follow-up stages in order to permit comparison of changes over time and between conditions.

2.2. Data Collection Tools

Connor–Davidson Resilience Scale. Resilience was assessed using the Connor–Davidson Resilience Scale, originally developed by Connor and Davidson in 2003 to evaluate individuals' capacity to cope effectively with adversity, stress, pressure, and threatening circumstances. The scale consists of 25 items and provides a global assessment of psychological resilience, representing the ability to maintain or regain adaptive functioning when confronted with stressful or difficult life circumstances. Each item is rated on a five-point Likert-type scale ranging from 0 to 4, with response options extending from “not true at all” to “true nearly all of the time.” Item scores are summed to obtain a total resilience score, with higher scores indicating greater psychological resilience and a greater perceived capacity to cope with adversity. The scale has been extensively used in psychological and health-related research and has demonstrated favorable psychometric properties across different populations. Previous studies have reported strong internal consistency, test–retest reliability, criterion-related validity, and construct validity for the instrument. Evidence from Iranian samples has similarly supported its reliability and validity across different populations. Jokar reported a reliability coefficient of 0.93, together with satisfactory indices supporting the factorability of the scale, while subsequent Iranian research has also demonstrated acceptable internal consistency. In the present study, internal consistency was evaluated using Cronbach's alpha, and the obtained coefficient was 0.78, indicating an acceptable level of reliability for assessing resilience among the participating mothers.

Parental Burnout Assessment. Parental burnout was assessed using the Parental Burnout Assessment developed by Roskam and colleagues in 2018. This instrument was specifically designed to evaluate a state of intense and persistent exhaustion associated with the parenting role rather than general occupational or psychological

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exhaustion. The final version consists of 23 items rated on a seven-point response scale ranging from 0, representing "never," to 6, representing "every day." The item scores are summed to produce an overall parental burnout score ranging from 0 to 138, with higher scores indicating greater severity of parental burnout. The instrument encompasses four major dimensions of the parental burnout experience: exhaustion in one's parental role, contrast with the previous parental self, feelings of being overwhelmed or fed up with one's parental role, and emotional distancing from one's children. The developers examined the construct and convergent validity of the scale and identified a four-factor structure that accounted for a substantial proportion of the variance in item responses. Internal consistency coefficients reported for the four dimensions were 0.93 for exhaustion in the parental role, 0.94 for contrast with the previous parental self, 0.91 for feelings of saturation or being fed up with parenting, and 0.77 for emotional distancing from children. Evidence from Iranian studies has also supported the psychometric adequacy of the measure, with satisfactory coefficients reported for both the subscales and overall parental burnout score. In the present study, the internal consistency of the total scale was assessed using Cronbach's alpha and yielded a coefficient of 0.81, demonstrating adequate reliability for measuring parental burnout in mothers of children with autism spectrum disorder.

2.3. Interventions

Acceptance and Commitment-Based Parenting Training. The Acceptance and Commitment-Based Parenting Training protocol was derived from the Acceptance and Commitment Therapy-oriented parenting principles presented by Coyne and Murrell in *The Joy of Parenting* and from parenting applications of acceptance and commitment approaches. The validity and applicability of the protocol in an Iranian context had previously been supported in the study by Safaralikhan and Danyamali. The intervention consisted of eight two-hour group sessions conducted twice weekly. The first session focused on establishing a therapeutic relationship with the mothers, introducing the importance of parenting experiences for children's development, explaining the basic principles of the acceptance and commitment approach, and distinguishing parenting governed primarily by immediate internal reactions from parenting guided by personally meaningful values. Mothers were introduced to the concept of values-based parenting and were encouraged to identify the qualities they wished to embody in their relationships with their children. The second session addressed the functioning of the mind and the influence of thoughts, feelings, memories, physical sensations, and internal urges on parental behavior. Mothers examined specific parenting situations and considered both the short-term and long-term consequences of automatically following distressing internal experiences. The third session focused on psychological flexibility and the ability to observe internal experiences without allowing them to dictate parenting behavior. Through experiential exercises and metaphors, participants practiced recognizing thoughts and internal reactions while considering alternative behaviors that were more compatible with effective parenting. The fourth session examined participants' existing parenting patterns and introduced the concept of establishing appropriate psychological boundaries between the parent and child. Ineffective control strategies, such as shouting, excessive surrender, and withdrawal from difficult parenting situations, were discussed, and mothers were encouraged to identify recurring patterns in their own parenting behaviors. The fifth session focused on analyzing antecedents, behaviors, consequences, and contextual factors that contribute to maladaptive parenting cycles. Participants learned to recognize how automatic responses could maintain unhelpful interactions and practiced creating greater psychological distance from distressing thoughts before responding to their children. The sixth session emphasized identification of personal and parenting values and encouraged mothers to clarify the qualities and principles they considered most important in their relationships with their children. Self-kindness and attention to the mother's own psychological needs were also discussed as resources for maintaining effective engagement in the parenting role. The seventh session focused on committed action and translating parenting values into specific short-term, medium-term, and long-term behavioral goals. Participants practiced selecting constructive actions despite the continued presence of difficult thoughts, emotions, or parenting stressors. The eighth session addressed parent–child communication styles, including passive, aggressive, and assertive communication, and taught constructive communication through observation rather than judgment, expression of feelings, identification of needs, and formulation of clear requests. Mothers were also encouraged to increase positive parent–child interaction through daily play and were provided with parenting strategies for responding to challenging behaviors such as noncompliance,

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tantrums, persistent worry, and oppositional behavior. Between-session assignments included monitoring parenting situations and mental reactions, identifying ineffective behavioral patterns and their consequences, clarifying parenting values, developing value-consistent goals, and engaging in structured daily interactions with the child.

Mindful Parenting Training. The Mindful Parenting Training program was based on the protocol developed by Bögels and Restifo and consisted of eight two-hour group sessions conducted twice weekly. The validity and applicability of this protocol had previously been supported in Iranian research. The first session aimed to facilitate movement from automatic parenting toward moment-to-moment awareness. After introduction of participants, establishment of group expectations, and explanation of program objectives, common sources of parenting stress were discussed, and mothers were introduced to the ways in which automatic cognitive and behavioral patterns can influence their responses to their children. Basic principles of mindfulness were introduced as a foundation for subsequent sessions. The second session focused on perceiving the child more completely and accurately in the present moment, with reduced interference from parental expectations, preconceived beliefs, and imagined ideals. Mothers practiced mindful breathing, present-moment attention, observation of thoughts and internal narratives, development of a broader perspective on parenting experiences, and cultivation of gratitude. The third session emphasized awareness of bodily experiences and recognition of physical manifestations of stress. Mothers were encouraged to reconnect with bodily sensations, recognize pleasant experiences in everyday family life, and become more attentive to physical signs of tension and stress during interactions with their children. The fourth session addressed responding consciously to parenting stress rather than reacting automatically. Participants practiced observing and labeling thoughts and emotions, approaching difficult experiences with greater patience and self-compassion, and maintaining moment-to-moment awareness during interactions with their children. The fifth session focused on parenting schemas and patterns developed through previous life experiences. Mothers explored the ways in which their own childhood experiences could influence current parenting behavior, identified recurring reactive parenting patterns, and practiced using mindfulness to interrupt automatic reactions, particularly in situations involving anger or frustration. The sixth session addressed conflict and maintenance or restoration of parent–child relationships. Mindfulness in interpersonal relationships was introduced, strategies for repairing relational ruptures were discussed, and mindful walking was practiced as an experiential exercise illustrating how mindful attention could be incorporated into everyday life. The seventh session focused on awareness of personal and interpersonal boundaries between mother and child. Participants examined the development of boundaries, parental responsibility, loving involvement without overidentification, and the importance of recognizing the child as a psychologically distinct individual. The final session integrated the content of the previous meetings and emphasized the continuation of mindful parenting practices after completion of the formal program. Participants developed a plan for continued meditation and mindfulness practice, discussed practical strategies for incorporating mindful parenting into daily family routines, practiced gratitude, and reflected on meaningful experiences throughout the program. Homework assignments across sessions included studying basic mindfulness principles, practicing mindful breathing, monitoring automatic parental reactions, engaging in nonjudgmental observation, reflecting on difficult parenting experiences, practicing mindful walking, increasing attentive parent–child interaction, and incorporating mindful awareness into everyday parenting activities.

2.4. Data Analysis

Data were analyzed using descriptive and inferential statistical procedures in IBM SPSS Statistics version 27. At the descriptive level, the mean and standard deviation were calculated for parental burnout and resilience scores separately for each study group at the pretest, posttest, and three-month follow-up assessments. Inferential analyses were selected according to the longitudinal three-group design of the study. Before conducting the main analyses, the assumptions required for parametric repeated-measures procedures were examined. The Shapiro–Wilk test was used to evaluate the normality of score distributions, Levene's test was applied to assess homogeneity of error variances across the study groups, and Mauchly's test of sphericity was used to examine the sphericity assumption for the repeated measurements. After verification of the relevant assumptions, repeated-measures analysis of variance was conducted separately for parental burnout and resilience to examine changes across the three measurement occasions, differences among the three study groups, and the interaction

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between time and group. Particular attention was given to the time-by-group interaction because this effect indicated whether changes in parental burnout and resilience across the pretest, posttest, and follow-up assessments differed according to intervention condition. When statistically significant effects were identified, Bonferroni-adjusted pairwise comparisons were performed to determine the specific differences between measurement occasions and, where appropriate, between the Acceptance and Commitment-Based Parenting Training, Mindful Parenting Training, and control conditions. The three-month follow-up scores were included in the repeated-measures analysis to determine whether changes observed immediately after treatment were maintained over time. Statistical significance was evaluated at the conventional alpha level of 0.05, and the analyses were performed using IBM SPSS Statistics version 27.

3. Findings and Results

The final sample consisted of 45 mothers of children with autism spectrum disorder, with 15 participants assigned to each of the three study conditions. Accordingly, 15 mothers (33.33%) were allocated to the control group, 15 (33.33%) to the Acceptance and Commitment-Based Parenting Training group, and 15 (33.33%) to the Mindful Parenting Training group. Regarding maternal age, 6 participants (13.30%) were between 30 and 34 years old, 9 (20.00%) were between 35 and 39 years old, 12 (26.70%) were between 40 and 44 years old, and 18 (40.00%) were between 45 and 50 years old. Thus, the largest proportion of participants belonged to the 45–50-year age group. Regarding the age of the children with autism spectrum disorder, 6 children (13.30%) were 7 years old, 9 (20.00%) were 8 years old, 15 (33.30%) were 9 years old, 9 (20.00%) were 10 years old, and 6 (13.30%) were 11 years old. Therefore, 9-year-old children constituted the largest age subgroup in the study.

Table 1

Descriptive Statistics for Parental Burnout and Resilience Across the Three Measurement Stages

Variable	Group	Pretest Mean (SD)	Posttest Mean (SD)	Follow-up Mean (SD)
Parental burnout	Control	115.60 (10.95)	115.53 (10.14)	115.66 (10.42)
	Acceptance and Commitment-Based Parenting	115.40 (10.80)	98.60 (10.21)	107.20 (10.31)
	Mindful Parenting	115.60 (10.34)	90.33 (9.26)	104.20 (9.95)
Exhaustion in parental role	Control	40.66 (3.08)	40.80 (3.00)	40.46 (2.92)
	Acceptance and Commitment-Based Parenting	40.46 (3.06)	35.33 (2.84)	37.86 (2.97)
	Mindful Parenting	40.80 (2.98)	32.93 (2.65)	37.93 (3.08)
Contrast with previous parental self	Control	34.66 (2.60)	34.46 (2.50)	34.93 (2.63)
	Acceptance and Commitment-Based Parenting	34.66 (2.60)	29.93 (2.57)	32.40 (2.44)
	Mindful Parenting	34.46 (2.44)	27.73 (2.43)	30.80 (1.89)
Feelings of being fed up	Control	25.20 (2.93)	25.40 (2.61)	25.06 (2.96)
	Acceptance and Commitment-Based Parenting	25.33 (3.03)	20.86 (2.97)	23.26 (2.96)
	Mindful Parenting	25.06 (2.81)	18.73 (2.96)	22.33 (3.03)
Emotional distancing	Control	15.06 (2.73)	14.86 (2.53)	15.20 (2.51)
	Acceptance and Commitment-Based Parenting	14.93 (2.60)	12.46 (2.50)	13.66 (2.43)
	Mindful Parenting	15.26 (2.63)	10.93 (2.15)	13.13 (2.44)
Resilience	Control	40.80 (4.72)	41.20 (4.12)	40.40 (4.03)
	Acceptance and Commitment-Based Parenting	41.00 (4.05)	56.86 (4.54)	49.00 (4.56)
	Mindful Parenting	40.53 (3.75)	51.06 (4.18)	45.46 (3.94)
Personal competence	Control	12.93 (1.43)	13.13 (1.12)	12.73 (1.27)
	Acceptance and Commitment-Based Parenting	13.06 (1.22)	16.66 (1.39)	14.73 (1.27)
	Mindful Parenting	12.73 (1.53)	15.20 (1.42)	13.93 (1.43)
Trust in personal instincts	Control	11.13 (1.06)	11.26 (0.88)	11.00 (1.13)

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	Acceptance and Commitment-Based Parenting	11.00 (0.92)	14.60 (1.05)	12.73 (0.79)
	Mindful Parenting	11.33 (0.81)	13.60 (0.91)	12.33 (0.81)
Positive acceptance of change	Control	7.86 (1.06)	8.00 (0.92)	7.73 (0.88)
	Acceptance and Commitment-Based Parenting	8.00 (0.92)	11.33 (0.89)	9.60 (1.05)
	Mindful Parenting	7.66 (0.89)	9.93 (0.88)	8.73 (0.88)
Control	Control	5.73 (1.33)	5.53 (1.30)	5.93 (1.27)
	Acceptance and Commitment-Based Parenting	5.86 (1.35)	8.73 (1.43)	7.53 (1.50)
	Mindful Parenting	5.60 (1.12)	7.60 (1.29)	6.60 (1.12)
Spiritual influences	Control	3.13 (1.12)	3.26 (1.22)	3.00 (1.00)
	Acceptance and Commitment-Based Parenting	3.06 (1.03)	5.53 (1.12)	4.40 (0.98)
	Mindful Parenting	3.20 (1.01)	4.73 (0.88)	3.86 (0.91)

As shown in Table 1, the three groups had highly similar mean scores at pretest, whereas clear differences emerged following the interventions. The mean parental burnout score remained essentially unchanged in the control group, changing only from 115.60 at pretest to 115.53 at posttest and 115.66 at follow-up. In contrast, parental burnout decreased from 115.40 to 98.60 following Acceptance and Commitment-Based Parenting Training and remained below baseline at the three-month follow-up with a mean of 107.20. A still larger immediate reduction was observed in the Mindful Parenting group, in which the mean decreased from 115.60 at pretest to 90.33 at posttest and remained lower than baseline at follow-up with a mean of 104.20. Similar patterns were observed across the four parental burnout components, with both interventions producing reductions compared with the control group and Mindful Parenting generally showing greater reductions. For resilience, the control-group mean remained relatively stable across pretest, posttest, and follow-up, whereas the Acceptance and Commitment-Based Parenting group increased from 41.00 at pretest to 56.86 at posttest and retained a mean of 49.00 at follow-up. The Mindful Parenting group also showed an increase, from 40.53 at pretest to 51.06 at posttest and 45.46 at follow-up. The same general pattern was evident across the resilience components, although descriptively the magnitude of improvement was greater in the Acceptance and Commitment-Based Parenting group.

Before conducting the repeated-measures analysis of variance, the statistical assumptions were examined. The Shapiro–Wilk test showed no statistically significant departure from normality for parental burnout, its components, resilience, or its components across the three groups and measurement occasions, with all relevant p values greater than 0.05. Levene's test likewise indicated homogeneity of error variances between the three groups at both posttest and follow-up. For example, Levene's test was nonsignificant for parental burnout at posttest, $F(2, 42) = 0.171$, $p = 0.843$, and follow-up, $F(2, 42) = 0.432$, $p = 0.652$, as well as for resilience at posttest, $F(2, 42) = 0.036$, $p = 0.965$, and follow-up, $F(2, 42) = 1.572$, $p = 0.220$. The assumption of sphericity was also satisfied. Mauchly's test was nonsignificant for parental burnout, $W = 0.932$, $\chi^2 = 2.908$, $df = 2$, $p = 0.234$, and resilience, $W = 0.962$, $\chi^2 = 1.597$, $df = 2$, $p = 0.450$. Consequently, the assumptions required for the repeated-measures analysis were considered adequately satisfied, and uncorrected degrees of freedom were used in the subsequent analyses.

Table 2

Repeated-Measures Analysis of Variance for Parental Burnout, Resilience, and Their Components

Variable	Source	SS	df	MS	F	p	Partial η^2
Parental burnout	Time	4445.881	2	2222.941	2689.730	<0.001	0.985
	Group	3735.126	2	1867.563	5.608	<0.001	0.211
	Time × Group	2474.696	4	618.674	748.588	<0.001	0.973
Exhaustion in parental role	Time	415.837	2	207.919	523.955	<0.001	0.926
	Group	296.237	2	148.119	5.807	<0.001	0.217
	Time × Group	258.163	4	64.541	162.643	<0.001	0.886
Contrast with previous parental self	Time	340.370	2	170.185	671.503	<0.001	0.941
	Group	314.015	2	157.007	8.820	<0.001	0.296

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	Time × Group	170.341	4	42.585	168.029	<0.001	0.889
Feelings of being fed up	Time	281.348	2	140.674	687.013	<0.001	0.942
	Group	234.059	2	117.030	4.633	0.015	0.181
	Time × Group	172.119	4	43.030	210.145	<0.001	0.909
Emotional distancing	Time	122.681	2	61.341	429.385	<0.001	0.911
	Group	88.637	2	44.319	3.378	0.030	0.148
	Time × Group	64.652	4	16.163	113.141	<0.001	0.843
Resilience	Time	1798.104	2	899.052	1235.788	<0.001	0.967
	Group	1516.281	2	758.141	14.544	<0.001	0.409
	Time × Group	928.119	4	232.030	318.935	<0.001	0.938
Personal competence	Time	98.904	2	49.452	287.582	<0.001	0.873
	Group	40.459	2	20.230	7.800	<0.001	0.271
	Time × Group	45.319	4	11.330	65.886	<0.001	0.758
Trust in personal instincts	Time	90.533	2	45.267	256.150	<0.001	0.859
	Group	67.378	2	33.689	14.644	<0.001	0.411
	Time × Group	45.956	4	11.489	65.012	<0.001	0.756
Positive acceptance of change	Time	82.548	2	41.274	392.000	<0.001	0.903
	Group	71.126	2	35.563	14.650	<0.001	0.411
	Time × Group	39.941	4	9.985	94.834	<0.001	0.819
Control	Time	55.393	2	27.696	206.087	<0.001	0.831
	Group	60.904	2	30.452	6.223	<0.001	0.229
	Time × Group	37.985	4	9.496	70.661	<0.001	0.771
Spiritual influences	Time	42.844	2	21.422	192.800	<0.001	0.821
	Group	33.600	2	16.800	5.571	<0.001	0.210
	Time × Group	21.156	4	5.289	47.600	<0.001	0.694

The repeated-measures analysis presented in Table 2 demonstrated statistically significant changes in both principal outcomes across time and significant differences in their patterns of change between the three groups. For parental burnout, the main effect of time was significant, $F = 2689.730$, $p < 0.001$, partial $\eta^2 = 0.985$, and the main effect of group was also significant, $F = 5.608$, $p < 0.001$, partial $\eta^2 = 0.211$. More importantly, the time-by-group interaction was significant, $F = 748.588$, $p < 0.001$, partial $\eta^2 = 0.973$, demonstrating that changes in parental burnout from pretest through posttest and follow-up differed substantially across the three study conditions. Significant time, group, and time-by-group effects were likewise found for exhaustion in the parental role, contrast with the previous parental self, feelings of being fed up, and emotional distancing. For resilience, significant effects were observed for time, $F = 1235.788$, $p < 0.001$, partial $\eta^2 = 0.967$, group, $F = 14.544$, $p < 0.001$, partial $\eta^2 = 0.409$, and the time-by-group interaction, $F = 318.935$, $p < 0.001$, partial $\eta^2 = 0.938$. Significant effects were similarly identified for all five resilience components. Taken together, these results indicate that both parenting interventions produced significant changes in parental burnout and resilience compared with the control condition, while the significant interaction effects demonstrate that the magnitude of these changes depended on the type of intervention received.

Table 3

Bonferroni Post-Hoc Comparisons of Adjusted Group Means for Parental Burnout, Resilience, and Their Components

Variable	Group I	Group J	Mean Difference (I − J)	p
Parental burnout	Control	Acceptance and Commitment-Based Parenting	8.533	<0.001
	Control	Mindful Parenting	12.222	<0.001
	Acceptance and Commitment-Based Parenting	Mindful Parenting	3.689	<0.001
Exhaustion in parental role	Control	Acceptance and Commitment-Based Parenting	1.093	0.017
	Control	Mindful Parenting	2.321	0.008
	Acceptance and Commitment-Based Parenting	Mindful Parenting	1.228	0.015

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Contrast with previous parental self	Control	Acceptance and Commitment-Based Parenting	2.356	0.006
	Control	Mindful Parenting	3.689	<0.001
	Acceptance and Commitment-Based Parenting	Mindful Parenting	1.333	0.013
Feelings of being fed up	Control	Acceptance and Commitment-Based Parenting	1.412	0.010
	Control	Mindful Parenting	2.019	0.018
	Acceptance and Commitment-Based Parenting	Mindful Parenting	0.607	0.036
Emotional distancing	Control	Acceptance and Commitment-Based Parenting	1.325	0.014
	Control	Mindful Parenting	1.546	0.007
	Acceptance and Commitment-Based Parenting	Mindful Parenting	0.521	0.043
Resilience	Control	Acceptance and Commitment-Based Parenting	−8.156	<0.001
	Control	Mindful Parenting	−4.889	<0.001
	Acceptance and Commitment-Based Parenting	Mindful Parenting	3.267	<0.001
Personal competence	Control	Acceptance and Commitment-Based Parenting	−1.889	<0.001
	Control	Mindful Parenting	−1.022	0.018
	Acceptance and Commitment-Based Parenting	Mindful Parenting	0.867	0.026
Trust in personal instincts	Control	Acceptance and Commitment-Based Parenting	−1.797	0.011
	Control	Mindful Parenting	−1.082	0.017
	Acceptance and Commitment-Based Parenting	Mindful Parenting	0.715	0.033
Positive acceptance of change	Control	Acceptance and Commitment-Based Parenting	−1.778	0.012
	Control	Mindful Parenting	−0.911	0.025
	Acceptance and Commitment-Based Parenting	Mindful Parenting	0.867	0.035
Control	Control group	Acceptance and Commitment-Based Parenting	−1.644	0.013
	Control group	Mindful Parenting	−0.867	0.035
	Acceptance and Commitment-Based Parenting	Mindful Parenting	0.778	0.041
Spiritual influences	Control	Acceptance and Commitment-Based Parenting	−1.200	0.019
	Control	Mindful Parenting	−0.600	0.048
	Acceptance and Commitment-Based Parenting	Mindful Parenting	0.600	0.048

The Bonferroni post-hoc comparisons shown in Table 3 clarified the direction of the significant group effects. Both active interventions resulted in significantly lower parental burnout than the control condition. The adjusted mean difference between the control and Acceptance and Commitment-Based Parenting groups was 8.533 points, $p < 0.001$, whereas the difference between the control and Mindful Parenting groups was 12.222 points, $p < 0.001$. A statistically significant difference of 3.689 points was also observed between the two experimental conditions, $p < 0.001$, indicating that Mindful Parenting Training produced a greater reduction in overall parental burnout than Acceptance and Commitment-Based Parenting Training. The same pattern was observed for all parental burnout components. Compared with Acceptance and Commitment-Based Parenting Training, Mindful Parenting Training produced significantly greater reductions in exhaustion in the parental role by 1.228 points, $p = 0.015$, contrast with the previous parental self by 1.333 points, $p = 0.013$, feelings of being fed up by 0.607 points, $p = 0.036$, and emotional distancing by 0.521 points, $p = 0.043$. In contrast, the pattern for resilience favored Acceptance and Commitment-Based Parenting Training. Both interventions produced significantly higher resilience scores than the control condition; however, the adjusted resilience score in the Acceptance and Commitment-Based Parenting group was

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3.267 points higher than that in the Mindful Parenting group, $p < 0.001$. Acceptance and Commitment-Based Parenting Training also produced significantly greater improvements than Mindful Parenting Training in personal competence, mean difference = 0.867, $p = 0.026$; trust in personal instincts, mean difference = 0.715, $p = 0.033$; positive acceptance of change, mean difference = 0.867, $p = 0.035$; control, mean difference = 0.778, $p = 0.041$; and spiritual influences, mean difference = 0.600, $p = 0.048$. Thus, although both interventions were effective relative to the control condition, the comparative findings showed a differentiated pattern: Mindful Parenting Training was more effective in reducing parental burnout and its components, whereas Acceptance and Commitment-Based Parenting Training was more effective in increasing resilience and its components. The descriptive findings further indicated some attenuation of treatment gains from posttest to the three-month follow-up in both intervention groups; nevertheless, scores at follow-up generally remained more favorable than their respective baseline values, suggesting that a substantial proportion of the intervention effects persisted over time.

4. Discussion and Conclusion

The present study compared the effectiveness of Acceptance and Commitment-Based Parenting Training and Mindful Parenting Training in reducing parental burnout symptoms and increasing resilience among mothers of children with autism spectrum disorder. The findings showed that both interventions were effective compared with the control condition, but their relative effects differed according to the outcome examined. Both experimental groups demonstrated significant reductions in parental burnout from pretest to posttest, and these reductions remained evident at the three-month follow-up, although some attenuation of treatment gains occurred over time. Similarly, both interventions significantly increased resilience relative to the control group, with follow-up scores remaining above baseline despite a partial decline after the immediate posttest. The comparative analyses further revealed that Mindful Parenting Training produced a greater reduction in overall parental burnout and its components than Acceptance and Commitment-Based Parenting Training, whereas Acceptance and Commitment-Based Parenting Training produced a greater increase in overall resilience and its dimensions than Mindful Parenting Training. These findings suggest that although the two programs share some therapeutic mechanisms, they may operate more strongly on different aspects of parental adaptation.

The finding that Acceptance and Commitment-Based Parenting Training significantly reduced parental burnout is consistent with the broader body of evidence indicating that acceptance- and commitment-oriented parenting interventions can improve psychological functioning in parents who face persistent caregiving demands. Li and colleagues reported beneficial effects of an acceptance and commitment-based parenting program for parents of children with autism spectrum disorder, particularly in relation to parenting stress and other parent and child health outcomes (Li et al., 2025). Although parenting stress and parental burnout are conceptually distinct, persistent parenting stress is one of the conditions through which parental resources may gradually become depleted, and therefore reductions in chronic stress may plausibly protect parents against burnout. The present findings are also compatible with research showing that acceptance and commitment-based parenting can improve parent–child interaction, self-efficacy, psychological flexibility, and adaptive parenting functioning among mothers of children with behavioral difficulties (Jalilian et al., 2025; Mobini Kashe et al., 2024; Mottaghi, 2024). Collectively, these findings support the proposition that ACT-informed parenting programs can alter the manner in which parents relate to difficult caregiving experiences rather than simply attempting to eliminate those experiences.

One explanation for the reduction in parental burnout following Acceptance and Commitment-Based Parenting Training is that the intervention encourages mothers to reduce their struggle with unavoidable thoughts, emotions, and parenting situations. Mothers of children with autism spectrum disorder may repeatedly encounter circumstances that cannot be resolved immediately, including persistent behavioral patterns, communication difficulties, social limitations, uncertainty concerning developmental progress, and recurring demands for supervision and support. If these experiences are met with constant efforts to control or eliminate internal discomfort, considerable psychological energy may be consumed. Acceptance-based parenting encourages mothers to recognize difficult internal experiences without allowing those experiences to automatically determine their parenting behavior. In addition, clarification of parenting values and engagement in committed action may restore a sense of meaning in the parental role. This process may reduce the perception that parenting consists only of burden, frustration, and failed

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attempts at control. Evidence from studies of ACT-based parenting indicates that increased psychological flexibility and more value-consistent parenting may contribute to healthier parent–child interactions and improved parental functioning (Ghorbanikhah et al., 2025; Zandifar & Fallahieh, 2024). The results of the present study therefore appear consistent with the underlying theoretical mechanisms of this approach.

The significant improvement in resilience following Acceptance and Commitment-Based Parenting Training was particularly pronounced. This result is aligned with Banani and colleagues, who found that acceptance and commitment-based parenting training was effective in improving resilience and related psychological outcomes among mothers of children with attention-deficit/hyperactivity disorder (Banani et al., 2022). The present results extend this pattern to mothers of children with autism spectrum disorder. From a theoretical perspective, resilience involves the ability to maintain or restore adaptive functioning under adverse or demanding conditions. Acceptance and commitment-based parenting may strengthen this capacity because it does not define successful coping as the absence of distress. Instead, mothers are encouraged to continue acting in accordance with personally meaningful values even when stress, fatigue, worry, or difficult parenting situations remain present. This distinction is especially important in the context of autism, where many sources of caregiving burden are chronic and cannot be eliminated by a short-term psychological intervention. By learning to tolerate difficult internal experiences while continuing to engage in valued action, mothers may develop greater persistence, confidence, adaptability, and perceived capacity to manage parenting demands. Research on acceptance and commitment approaches has similarly emphasized continued engagement and sustained application of therapeutic principles as important for maintaining adaptive functioning over time (Larsson et al., 2025).

The present findings also showed that Mindful Parenting Training significantly reduced parental burnout. This finding strongly corresponds with previous research. Ebrahimi Rad and Sajadian found that mindful parenting training reduced parental burnout among mothers of students with internalizing disorders (Ebrahimi Rad & Sajadian, 2022), while Vajihesadat and Gholamreza similarly reported beneficial effects of mindfulness-based intervention on parenting burnout among mothers of children with attention-deficit/hyperactivity disorder (Vajihesadat & Gholamreza, 2023). The current results extend these findings to mothers of children with autism spectrum disorder and provide additional evidence that mindfulness-based parenting interventions may be particularly suitable for parents exposed to chronic and emotionally demanding caregiving conditions. Taştekin and colleagues also demonstrated that mindful parenting plays an important mediating role in the relationship between maternal stress and parental burnout (Taştekin et al., 2025). Their findings support the present results by suggesting that mindful parenting may act as a protective psychological process that interrupts the progression from persistent parenting stress to emotional exhaustion and burnout.

The effectiveness of Mindful Parenting Training in reducing parental burnout can be understood through several interconnected mechanisms. Mindful parenting trains mothers to direct attention toward present-moment experiences and to observe the behavior of both themselves and their children with less immediate judgment. Parents experiencing burnout may become increasingly dominated by automatic interpretations such as perceiving challenging behavior as intolerable, viewing themselves as ineffective parents, or anticipating that stressful situations will continue indefinitely. These cognitive and emotional reactions may intensify fatigue and emotional distancing. Mindfulness interrupts this automatic cycle by encouraging parents to observe thoughts, bodily sensations, and emotional reactions as temporary experiences rather than unquestioned realities requiring immediate action. Mindful breathing, nonjudgmental observation, awareness of bodily stress signals, and compassionate responding may therefore reduce the cumulative intensity of everyday parenting stress. As emotional reactivity decreases, mothers may conserve psychological resources and experience fewer episodes of escalation, conflict, and exhaustion. The reported relationship between mindful parenting and reduced parental burnout in previous studies is consistent with this explanation (Ebrahimi Rad & Sajadian, 2022; Taştekin et al., 2025).

Mindful Parenting Training also significantly increased resilience in the present study. This finding is consistent with Bashirgonbadi and colleagues, who demonstrated that mindfulness-based parenting enhanced resilience and the quality of the parent–child relationship among mothers facing demanding parenting circumstances (Bashirgonbadi et al., 2023). It is also in line with findings linking mindful parenting with family resilience, parenting self-efficacy, and marital functioning (Pudjiati et al., 2024). Ihdalumam and colleagues likewise reported that mindfulness parenting was

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effective in reducing parenting stress among single mothers, with resilience representing an important component of adaptive functioning (Ihdalumam et al., 2025). These studies suggest that mindful parenting may enhance resilience by improving mothers' capacity to remain psychologically present during stress, recognize difficult situations without immediate avoidance or overreaction, and return to more balanced functioning following stressful interactions.

The beneficial effect of mindful parenting on resilience may also be explained through improvements in the emotional quality of the parent–child relationship. A mother who is able to listen attentively, reduce judgment, recognize her own stress reactions, and respond deliberately rather than automatically may experience greater confidence and relational stability. These experiences can reinforce a sense of competence and control, both of which are closely related to resilient functioning. Wang and colleagues showed that mindful parenting was associated with adaptive emotional outcomes through maternal warmth and emotional resilience, highlighting the potential of mindful parenting to influence both parental and family processes (Wang et al., 2018). In the present study, the increase in resilience among mothers may therefore reflect not only changes in individual coping but also more positive and manageable experiences within daily parent–child interactions.

An important finding of the present study was that Mindful Parenting Training was significantly more effective than Acceptance and Commitment-Based Parenting Training in reducing parental burnout. The superiority of mindful parenting was evident not only for the total parental burnout score but also across exhaustion in the parental role, contrast with the previous parental self, feelings of being fed up, and emotional distancing. This result may be explained by the close correspondence between the central practices of mindful parenting and the phenomenological features of parental burnout. Parental burnout develops through accumulated daily exhaustion, automatic stress responses, emotional depletion, and progressive psychological distancing from the child. Mindful parenting directly targets these moment-to-moment processes by teaching parents to notice stress responses as they emerge, disengage from automatic reactions, attend more fully to the child, and maintain a nonjudgmental and compassionate stance. Therefore, although ACT-based parenting also reduces distress, mindful parenting may exert a more immediate influence on the daily interactional mechanisms through which burnout is maintained. Previous studies linking mindful parenting specifically with parental burnout support this interpretation (Ebrahimi Rad & Sajadian, 2022; Taştekin et al., 2025; Vajihesadat & Gholamreza, 2023).

The greater effect of Mindful Parenting Training on emotional distancing is particularly meaningful. Emotional distancing represents a defensive response in which exhausted parents reduce their emotional engagement with their children as a way of preserving depleted resources. Mindfulness practices may counter this process by intentionally restoring attentive presence and awareness in parent–child interactions. Rather than withdrawing from difficult interactions or responding through habitual frustration, mothers learn to remain present while recognizing their own emotional limits. Similarly, the stronger reduction in feelings of being fed up may reflect the mindfulness emphasis on approaching daily parenting experiences individually rather than experiencing them as part of an overwhelming accumulation of difficulties. This interpretation is compatible with evidence showing that mindful parenting serves as a mechanism connecting parental stress with burnout and that higher mindful parenting is associated with more adaptive family functioning (Pudjiati et al., 2024; Taştekin et al., 2025).

In contrast, Acceptance and Commitment-Based Parenting Training was significantly more effective than Mindful Parenting Training in increasing resilience and each of its measured dimensions. This pattern can be understood from the explicit emphasis of the acceptance and commitment approach on psychological flexibility, willingness, values, and committed action. While mindfulness is an important component of ACT, ACT-based parenting extends beyond present-moment awareness by systematically teaching parents to identify personally meaningful values and establish behavioral goals in accordance with those values. Mothers are encouraged to continue value-based action even when distress remains present. Such processes are closely aligned with resilience, which involves persistence, adaptability, and continued functioning in the face of adversity. The findings are consistent with previous studies showing favorable effects of acceptance and commitment-based parenting on resilience, parental competence, self-efficacy, psychological flexibility, and parent–child functioning (Banani et al., 2022; Jalilian et al., 2025; Zandifar & Fallahieh, 2024).

The comparative advantage of ACT-based parenting for resilience may additionally stem from its emphasis on reorienting mothers toward a broader and more stable sense of direction in parenting. Chronic caregiving demands can produce a feeling that one's life is organized solely around

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responding to problems. Values clarification allows parents to define the kind of parent they wish to be independently of whether each parenting situation can be successfully controlled. This may enhance a sense of purpose and strengthen perseverance. Committed action, meanwhile, transforms abstract values into achievable short-, medium-, and long-term behavioral goals, providing mothers with a structured pathway for adaptive engagement. Previous comparative research has suggested that acceptance and commitment-based parenting can produce meaningful improvements across a range of parental and child outcomes and may compare favorably with other structured parenting interventions (Ghorbanikhah et al., 2025; Jokar et al., 2026). These findings are compatible with the present evidence that ACT-based parenting may be especially powerful when the therapeutic goal is to strengthen adaptive psychological resources rather than primarily reduce distress.

Another important result was that treatment effects were partially maintained at the three-month follow-up. Both intervention groups retained more favorable parental burnout and resilience scores than at baseline, although the magnitude of improvement decreased relative to posttest. Such attenuation is understandable because mothers returned to their ordinary caregiving environments after completion of the structured programs and continued to face persistent parenting demands. Skills learned during eight sessions may require ongoing practice to remain fully effective. The persistence of meaningful improvement despite some decline nevertheless suggests that participants had incorporated at least part of the intervention content into daily parenting. This interpretation is compatible with evidence emphasizing the importance of adherence and continued engagement in acceptance and commitment-based interventions (Larsson et al., 2025). It also highlights the potential value of booster sessions and structured home practice for both ACT-based and mindfulness-based parenting programs.

Overall, the findings support the effectiveness of both interventions while also demonstrating that their comparative strengths differ. This distinction is important because it suggests that the two approaches should not necessarily be viewed as interchangeable. Mindful Parenting Training appears particularly suitable when the principal clinical concern is severe parental exhaustion, emotional distancing, and burnout, whereas Acceptance and Commitment-Based Parenting Training may be especially appropriate when the central objective is strengthening resilience and the capacity to continue adaptive parenting under chronic stress. This differentiated pattern is consistent with the broader literature demonstrating benefits of mindful parenting for parental burnout and stress (An et al., 2021; Taştekin et al., 2025) and benefits of acceptance and commitment-based parenting for flexibility, competence, resilience, and adaptive parent–child functioning (Banani et al., 2022; Mobini Kashe et al., 2024; Mottaghi, 2024). The findings therefore add comparative evidence suggesting that intervention selection may be improved when it is guided by the specific psychological needs and treatment priorities of mothers of children with autism spectrum disorder.

The present study had several limitations that should be considered when interpreting the findings. The sample was relatively small and consisted of 45 mothers recruited from a single autism association in District 5 of Tehran, which may limit the generalizability of the results to mothers living in other geographical, socioeconomic, and cultural contexts. Convenience sampling was used at the recruitment stage, which may have introduced selection bias because mothers willing to participate in an eight-session psychological intervention may differ from those who decline participation. The study also relied primarily on self-report measures, making the findings potentially vulnerable to social desirability, response expectations, and common-method bias. Fathers and other primary caregivers were not included, and therefore the findings cannot automatically be generalized to all parents of children with autism spectrum disorder. Moreover, although a three-month follow-up was conducted, this period may be insufficient for determining the long-term stability of intervention effects. The study did not assess treatment fidelity, participants' adherence to homework assignments, or the frequency with which intervention skills were practiced outside the sessions. Finally, changes in the children's behavioral or developmental functioning during the study were not systematically controlled, although such changes could influence maternal burnout and resilience.

Future research should replicate the present study with larger and more diverse samples recruited from multiple autism centers, rehabilitation clinics, schools, and community settings. Studies involving fathers, couples, and other caregivers would provide a more comprehensive understanding of whether the effects of these interventions differ according to caregiver role. Longer follow-up periods, such as six months or one year, are recommended to evaluate the durability of improvements and identify the point at which booster sessions may be needed. Future investigations could also examine mechanisms responsible for the

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differential effects observed in this study and determine why mindful parenting appears more effective for parental burnout while acceptance and commitment-based parenting appears stronger for resilience. Including observational measures of parent–child interaction, clinician-rated outcomes, treatment-adherence indices, and qualitative interviews could reduce reliance on self-report questionnaires and provide a richer understanding of therapeutic change. Future studies may also compare standard intervention formats with blended or sequential programs that integrate elements of both approaches in order to determine whether combined interventions can simultaneously maximize reductions in parental burnout and improvements in resilience.

From a practical perspective, psychologists, counselors, rehabilitation professionals, and autism service centers can consider incorporating structured parenting interventions into routine support programs for mothers of children with autism spectrum disorder. Mindful Parenting Training may be prioritized for mothers who exhibit pronounced exhaustion, emotional distancing, or a sense of being overwhelmed by their parenting role, whereas Acceptance and Commitment-Based Parenting Training may be particularly useful for mothers who require greater psychological endurance, adaptability, and persistence in coping with continuing caregiving demands. Screening for parental burnout and resilience before treatment may help practitioners select the intervention that most closely matches the mother's needs. Given the partial decline in treatment gains during follow-up, periodic booster sessions, guided home practice, and brief follow-up consultations may help mothers maintain acquired skills. Autism associations and rehabilitation centers may also benefit from offering these programs in accessible group formats, thereby providing mothers not only with structured psychological skills but also with opportunities for mutual support and normalization of shared caregiving experiences.

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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