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Comparison of the Effectiveness of Acceptance and Commitment Therapy and Logotherapy on Guilt, Parenting Stress, and Psychological Burnout in Mothers of Children with High-Functioning Autism Spectrum Disorder

Farideh. Rezaei[1], Azita. Amirfakhraei[2*], Seyed Abdolvahab. Samavi[3]

[1] Department of Psychology, BA.C., Islamic Azad University, Bandar Abbas, Iran
[2] Associate Professor, Department of Psychology, BA.C., Islamic Azad University, Bandar Abbas, Iran
[3] Department of Psychology, University of Hormozgan, Bandar Abbas, Iran

*** Corresponding author email address**: afakhraei2002@iau.ac.ir

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ABSTRACT

This study aimed to compare the effectiveness of Acceptance and Commitment Therapy (ACT) and logotherapy on parental guilt, parenting stress, and psychological burnout among mothers of children with high-functioning autism spectrum disorder. This quantitative quasi-experimental study used a pretest-posttest control-group design with a three-month follow-up. The statistical population consisted of mothers of children with high-functioning autism spectrum disorder in Bandar Abbas, Iran. Sixty-nine eligible mothers were recruited and assigned through block randomization to ACT, logotherapy, and control groups, with 23 participants in each group. The ACT group received eight structured sessions, the logotherapy group received ten structured sessions, and the control group received no study-specific psychological intervention during the study period. Data were collected using the Parental Guilt Scale, Parenting Stress Index-Short Form, and Parental Burnout Assessment at pretest, posttest, and follow-up. Data were analyzed using repeated-measures mixed analysis of variance, analysis of covariance, and Bonferroni-adjusted pairwise comparisons. Significant group-by-time interaction effects were found for parental guilt, $F = 9.75$, $p < .001$, partial $\eta^2 = .228$; parenting stress, $F = 15.30$, $p < .001$, partial $\eta^2 = .370$; and parental burnout, $F = 21.59$, $p < .001$, partial $\eta^2 = .396$. ANCOVA showed that ACT significantly reduced parental guilt, $F(1,43) = 12.85$, $p = .001$, parenting stress, $F(1,43) = 24.26$, $p < .001$, and parental burnout, $F(1,43) = 26.45$, $p < .001$, compared with the control group. Logotherapy also significantly reduced parental guilt, $F(1,43) = 22.51$, $p < .001$, parenting stress, $F(1,43) = 29.48$, $p < .001$, and parental burnout, $F(1,43) = 46.14$, $p < .001$. No significant differences were observed between ACT and logotherapy for parental guilt, parenting stress, or parental burnout. Both ACT and logotherapy were effective in improving maternal psychological outcomes, particularly parental guilt and parenting stress, while neither intervention demonstrated clear superiority over the other.

Keywords: *Acceptance and Commitment Therapy, Logotherapy, Parental Guilt, Parenting Stress, Parental Burnout, Autism Spectrum Disorder*

1. Introduction

Autism spectrum disorder (ASD) is a neurodevelopmental condition characterized by persistent difficulties in social communication and social interaction, together with restricted, repetitive, and inflexible patterns of behavior, interests, or activities. Although considerable heterogeneity exists across the spectrum, children described as having high-functioning ASD may demonstrate relatively preserved cognitive and verbal abilities while still experiencing meaningful impairments in social reciprocity, emotional regulation, adaptive functioning, behavioral flexibility, and everyday interpersonal adjustment. The prevalence and recognition of ASD have increased substantially during recent decades, intensifying the need to consider not only the developmental and educational requirements of affected children but also the psychological well-being of their families (Al-Salihy, 2025). Parents, and particularly mothers who frequently assume the largest share of daily caregiving responsibilities, are required to manage behavioral difficulties, educational planning, therapeutic appointments, uncertainty regarding long-term functioning, and persistent concerns about their child's social future. Contemporary research has therefore increasingly emphasized the psychological burden associated with parenting a child with ASD and the importance of interventions that target parental well-being alongside child-focused services (Dargahi et al., 2025; Elhami & Aran, 2025; Selvakumar, 2025).

The caregiving demands associated with ASD may expose mothers to a prolonged combination of emotional, cognitive, social, and practical stressors. The need for continuous supervision, management of challenging behaviors, coordination with rehabilitation and educational systems, communication difficulties, financial demands, uncertainty about developmental outcomes, and reduced opportunities for rest can contribute to chronic psychological strain. Mothers may additionally experience frustration, helplessness, social isolation, perceived stigma, and worries about whether they are adequately meeting their child's needs. Qualitative evidence has shown that maternal distress in ASD is closely intertwined with caregiving burden and difficulties accessing appropriate support and services, suggesting that maternal psychological problems cannot be understood independently of the broader caregiving context (Alabdulaziz et al., 2026). Similarly, research has documented substantial psychological suffering among mothers of children with ASD, with maternal experiences often involving exhaustion, fear, self-questioning, and disruption in personal and family life (Boni et al., 2025). Maternal distress is also clinically important because poorer maternal psychological functioning may be associated with less favorable perceptions of the child's behavioral and emotional functioning, thereby potentially reinforcing negative family interaction cycles (Rezq et al., 2026).

One of the psychologically salient experiences in mothers of children with ASD is guilt. Parental guilt is a self-conscious emotional state that can arise when mothers believe that they have failed to meet personally or socially defined standards of good parenting, have inadequately protected or supported their child, or may in some way be responsible for the child's difficulties. Such guilt may involve retrospective self-blame regarding pregnancy, early caregiving, treatment decisions, educational choices, emotional reactions toward the child, or perceived inadequacies in providing support. More generally, guilt has been conceptualized as a psychologically important self-evaluative emotion that is shaped by attachment, parenting experiences, perceived standards, and interpretations of responsibility (Nik Khou & Azizi, 2025; Tabatabaei, 2025). Research on parenting further suggests that guilt may become especially pronounced when caregivers evaluate themselves against idealized expectations or perceive discrepancies between what they believe they should do and what they are realistically able to provide. Among working mothers, guilt has also been linked to concerns about child outcomes and parental functioning, demonstrating that guilt is closely connected to caregiving identity and perceived parental adequacy (Jamali Nazari et al., 2025). In parents of children with ASD, guilt may become particularly persistent because caregiving difficulties are often chronic and because mothers may repeatedly question whether different choices could have improved the child's condition or functioning.

The clinical significance of guilt extends beyond the immediate discomfort of self-blame. Persistent guilt can contribute to depressive affect, rumination, emotional withdrawal, reduced self-compassion, and maladaptive attempts to compensate through excessive caregiving or self-sacrifice. Among mothers of children with ASD, guilt has been associated with maternal depressive symptoms, suggesting that it may represent an important pathway through which caregiving-related stress is translated into broader psychological distress (Ostfeld-Etzion & Ben-Artzi, 2025). From a measurement perspective, the growing attention to trauma-related and maladaptive forms of guilt has also highlighted the need to distinguish constructive

KMAN-CPN KMAN-Counseling & Psychology Nexus
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responsibility-taking from excessive and psychologically damaging guilt (Shabanzadeh et al., 2025). Evidence from other clinical populations further demonstrates that guilt can be responsive to psychological intervention, including cognitive and behavioral treatment approaches targeting dysfunctional thoughts and self-evaluative emotional processes (Mohammadzadeh Ghorban Gholi et al., 2025). These findings support the proposition that guilt in mothers of children with ASD should not merely be viewed as an inevitable reaction to caregiving demands, but as a potentially modifiable psychological outcome.

Parenting stress constitutes another major psychological challenge in families of children with ASD. Parenting stress refers to distress arising when the perceived demands associated with the parental role exceed the caregiver's perceived coping resources. It includes personal distress associated with parenting, dissatisfaction or difficulty in parent-child interactions, and strain associated with characteristics of the child perceived as difficult to manage. In families of children with developmental and behavioral difficulties, parenting stress may become persistent because the stressors are recurrent rather than temporary. Research has shown that self-conscious emotions such as shame and guilt may contribute to parenting stress patterns, indicating that emotional self-evaluation and caregiving strain are often mutually reinforcing (Kalantar Ghorayshi et al., 2025). Parenting stress has also been associated with broader family functioning, relationship quality, and parental adjustment (Goudarzi & Safari, 2025; Sotoudeh Navroudi et al., 2025). In addition, prolonged parenting stress may influence children's academic, behavioral, and emotional functioning, thereby creating bidirectional processes in which parent and child difficulties maintain one another over time (Karimian, 2025). This is especially relevant in ASD, where children's difficulties with flexibility, communication, emotional regulation, and social behavior may increase the intensity and duration of caregiving stress.

When caregiving stress becomes chronic and coping resources are persistently depleted, parents may develop parental or psychological burnout. Parental burnout is typically characterized by profound exhaustion related to the parental role, emotional distancing from one's children, feelings of being fed up with parenting, and a marked contrast between one's current and previous parental self. It represents more than ordinary tiredness, as it reflects a sustained erosion of psychological resources and parental engagement. Research has linked ASD in children to elevated parental anxiety and burnout, highlighting the particular vulnerability of parents in this population (Akram et al., 2025). Parental burnout can also have consequences beyond the individual caregiver because it may undermine broader family mental health, relationships, emotional availability, and effective caregiving (Eskandari, 2025). The psychological burden experienced by mothers of children with ASD may therefore be conceptualized as a multidimensional process in which guilt, parenting stress, and burnout interact with one another. Persistent guilt can intensify stress, chronic stress can erode coping resources, and depleted psychological resources can contribute to burnout, which may in turn increase feelings of inadequacy and guilt.

The psychosocial consequences of ASD also need to be understood within a family systems perspective. Mothers do not experience caregiving stress in isolation; rather, their psychological functioning is affected by the quality of family resilience, available support, marital and relational functioning, access to rehabilitation resources, and their capacity to interpret and cope with ongoing caregiving demands. Interventions designed to enhance family resilience have been associated with better quality of life and mental health among mothers of children with autism, emphasizing that parental adjustment can be improved through structured psychological support (Mohammadi Tabas & Mohammadi Tabas, 2025). Likewise, integrated parent-focused interventions that combine parent-child interaction, parent training, and family resilience have been developed for families of children with high-functioning ASD, reflecting the growing recognition that the needs of these families extend beyond child symptom management alone (Babapour Kheiraldin et al., 2025). These findings point toward the importance of interventions that help mothers modify their relationship with distressing internal experiences while also rebuilding purpose, flexibility, and psychological resources.

Acceptance and Commitment Therapy (ACT) is one intervention that may be particularly relevant to these needs. ACT is a contextual behavioral approach designed to increase psychological flexibility rather than simply eliminate difficult thoughts and emotions. Its core processes include acceptance, cognitive defusion, present-moment awareness, self-as-context, values clarification, and committed action. Through these processes, individuals learn to experience painful internal events without excessive avoidance, reduce literal attachment to distressing thoughts, identify personally meaningful values, and engage in behavior that remains consistent with those values despite

KMAN-CPN KMAN-Counseling & Psychology Nexus
E-ISSN: 3041-9026

psychological discomfort. ACT has increasingly been applied across a range of psychological problems and has been discussed as a flexible therapeutic framework that can be integrated with other intervention models (Asadi & Mohammadi, 2025; Mahdi Asiabari, 2025; Pajouhesh et al., 2025). Its emphasis on acceptance may be especially valuable for mothers of children with ASD, because many caregiving-related stressors cannot be completely removed. Rather than attempting to control every distressing thought, feeling, or uncertainty, ACT encourages mothers to respond to these experiences in a more open and flexible manner.

The relevance of ACT to parenting stress has been supported by emerging evidence. A recent meta-analysis examining ACT among parents of children with special needs found that ACT was effective in reducing parental stress, suggesting that psychological flexibility processes may provide meaningful benefits in high-burden caregiving contexts (Guo et al., 2025). ACT may reduce parental guilt by helping mothers recognize self-critical thoughts as mental events rather than objective truths, thereby decreasing fusion with beliefs such as “I am a bad mother” or “I should have prevented this.” Acceptance processes may reduce the struggle against grief, frustration, and uncertainty, while values clarification may enable mothers to distinguish between perfectionistic standards and meaningful caregiving values. Committed action may further help participants engage in manageable, value-consistent behaviors rather than responding to guilt through rumination, avoidance, or excessive self-sacrifice. The broader role of psychological flexibility is also supported by research showing that interventions based on compassion, mindfulness, and flexible responding can improve quality of life and reduce mental fatigue among mothers facing demanding caregiving circumstances (Salah, 2025). Thus, ACT appears theoretically well suited to addressing the interconnected experiences of guilt, parenting stress, and psychological burnout.

Logotherapy represents a different but potentially complementary therapeutic approach. Rooted in the assumption that the search for meaning is a central human motivational force, logotherapy emphasizes the capacity to discover meaning even under conditions that cannot be changed. Rather than focusing primarily on symptom reduction, logotherapy seeks to help individuals identify purpose, clarify values, adopt a meaningful stance toward suffering, and recognize personal responsibility and freedom within existing limitations. The approach may be particularly relevant in chronic caregiving situations where external circumstances cannot be fully controlled and where mothers may feel that their lives have become defined by burden, sacrifice, and uncertainty. Contemporary applications of logotherapy continue to emphasize meaning, values, resilience, and psychologically constructive interpretations of adversity (Hosseini Kamalabadi, 2025; Sharifi & Mahni, 2025). For mothers of children with ASD, logotherapy may help reframe difficult caregiving experiences from evidence of personal failure into opportunities for meaningful engagement, responsibility, growth, and connection.

Empirical evidence also supports the potential usefulness of logotherapy for mothers of children with ASD. A logotherapy-based intervention has been shown to improve meaning in life and resilience among mothers of children with autism spectrum disorder, indicating that meaning-oriented therapeutic work may strengthen psychological resources in this population (Ali et al., 2025). This finding is particularly important because resilience and meaning may buffer the psychological consequences of chronic caregiving strain. When mothers are able to interpret their caregiving role within a broader framework of purpose and personal values, experiences of helplessness, resentment, guilt, and exhaustion may become less dominant. Logotherapy may therefore reduce guilt by modifying the interpretation of responsibility, reduce parenting stress by strengthening purpose and coping, and reduce burnout by restoring a sense of coherence and meaning in the parental role.

Although ACT and logotherapy arise from different theoretical traditions, they share several potentially therapeutic mechanisms. Both approaches move beyond direct symptom suppression and encourage individuals to reconsider their relationship with suffering. ACT emphasizes willingness, flexible contact with internal experiences, and value-based action, whereas logotherapy emphasizes meaning, responsibility, and the capacity to adopt a purposeful stance toward unavoidable difficulties. For mothers of children with ASD, both approaches may therefore facilitate adaptation to conditions that cannot be entirely changed. However, they may do so through somewhat different pathways. ACT may exert stronger effects through psychological flexibility, defusion, and acceptance, whereas logotherapy may exert stronger effects through meaning-making, existential orientation, and reconstruction of personal purpose. Comparing these interventions can therefore provide clinically useful information about whether one approach is more effective

KMAN-CPN KMAN-Counseling & Psychology Nexus
E-ISSN: 3041-9026

for specific dimensions of maternal distress or whether both produce comparable outcomes.

This comparison is particularly important because maternal distress in ASD is multidimensional. Interventions that reduce parenting stress may not necessarily produce equivalent improvements in guilt or burnout. Similarly, interventions that strengthen meaning in life may reduce emotional exhaustion without necessarily altering self-critical guilt to the same degree. Existing research has examined parental distress, guilt, resilience, psychological flexibility, burnout, and family functioning from different perspectives, but direct comparisons between ACT and logotherapy on these three outcomes remain limited. At the same time, the broader literature suggests that psychological strain in caregivers can also be influenced by environmental pressures, role expectations, and sustained evaluative demands, demonstrating the importance of interventions that address both emotional coping and the interpretation of personal responsibility (Shafiei, 2025). Research on psychological functioning and family processes further reinforces that parental well-being is shaped by multiple interrelated cognitive, emotional, and relational factors rather than a single source of distress (Goudarzi & Safari, 2025; Sotoudeh Navroudi et al., 2025).

Accordingly, there is a strong rationale for examining ACT and logotherapy among mothers of children with high-functioning ASD within the same controlled study. Such a comparison can determine whether both interventions reduce guilt, parenting stress, and parental burnout relative to no intervention, whether therapeutic gains remain evident over time, and whether either intervention demonstrates comparative superiority. This is clinically relevant because mothers may require approaches that are not only effective but also conceptually compatible with the enduring and often uncontrollable nature of autism-related caregiving challenges. Evidence that one treatment is particularly effective for guilt, stress, or burnout could inform more targeted psychological services, whereas evidence of comparable effectiveness could support broader treatment choice based on patient preference, accessibility, therapist expertise, and cultural fit. Given the documented burden of maternal psychological distress in autism, the associations of guilt and stress with family functioning, and the potential benefits of both psychological flexibility and meaning-oriented interventions, controlled comparative research in this population is warranted (Akram et al., 2025; Alabdulaziz et al., 2026; Ostfeld-Etzion & Ben-Artzi, 2025; Rezq et al., 2026).

Therefore, the present study aimed to compare the effectiveness of Acceptance and Commitment Therapy and logotherapy on parental guilt, parenting stress, and psychological burnout among mothers of children with high-functioning autism spectrum disorder.

2. Methods and Materials

2.1. Study Design and Participants

The present study employed a quantitative quasi-experimental design with three parallel groups and repeated assessments at pretest, posttest, and three-month follow-up. The study was designed to compare the effectiveness of Acceptance and Commitment Therapy (ACT) and logotherapy in reducing guilt, parenting stress, and psychological burnout among mothers of children with high-functioning autism spectrum disorder in Bandar Abbas, Iran. The independent variable consisted of two psychological interventions, namely ACT and logotherapy, while guilt, parenting stress, and psychological burnout constituted the dependent variables. Participants assigned to the first experimental group received logotherapy, those assigned to the second experimental group received ACT, and participants in the control group received no study-specific psychological intervention during the active intervention and follow-up periods. All three groups completed the outcome measures before the beginning of the interventions, immediately after completion of the interventions, and again three months after the posttest. This design made it possible to evaluate both the immediate effects of the interventions and the maintenance of therapeutic changes over time, as well as to compare the relative effectiveness of the two treatment approaches.

The statistical population consisted of mothers who were the primary caregivers of children diagnosed with high-functioning autism spectrum disorder and who were living in Bandar Abbas during the study period. Potential participants were recruited from the Hormozgan Autism Association, rehabilitation centers, psychological clinics, counseling centers, and other services providing care to children with autism spectrum disorder. Recruitment was conducted through written announcements, center-based notifications, text messages, and communication networks affiliated with the participating centers. Autism spectrum disorder and the child's level of functioning were required to have been established through a valid clinical record or confirmed by a qualified child psychiatrist, pediatric neurologist, or clinical psychologist. Because the study

KMAN-CPN KMAN-Counseling & Psychology Nexus
E-ISSN: 3041-9026

specifically focused on mothers experiencing clinically meaningful parenting-related psychological difficulties, eligible participants were screened using the study outcome measures before enrollment. The final sample size was to be determined through an a priori statistical power analysis appropriate for a three-group, three-time-point repeated-measures design. The calculation was based on the expected intervention effect size derived from relevant previous studies or preliminary evidence, an alpha level of .05, statistical power of at least .80, the anticipated correlation among repeated measurements, and the expected attrition rate. After determining the minimum required sample, approximately 15% to 20% additional participants were recruited to compensate for potential dropout during the intervention and follow-up stages.

Sampling was conducted using a convenience sampling method among eligible mothers who responded to the study invitation. Interested individuals first underwent a brief screening interview to determine whether they met the eligibility criteria. Mothers who satisfied the criteria received a full explanation of the study procedures, potential benefits, voluntary nature of participation, confidentiality requirements, and their right to withdraw from the study without penalty, after which written informed consent was obtained. Eligible participants were then assigned to the ACT, logotherapy, and wait-list control groups using block randomization with an equal allocation ratio. Whenever feasible, generation of the allocation sequence and assignment to groups were performed by an individual who was not directly involved in treatment delivery or outcome assessment. Outcome assessors were also kept unaware of participants' group allocation as far as practically possible in order to reduce assessment bias. Participants in the wait-list control condition continued to have access to routine educational and supportive services provided by the relevant centers, but receipt of additional psychological interventions with the potential to influence the study outcomes was documented throughout the study.

Eligibility criteria included being the biological mother, stepmother, or principal female caregiver of a child with high-functioning autism spectrum disorder, provided that the participant had primary responsibility for the child's care; residence in Bandar Abbas during the study period; having a child within the age range specified in the study protocol; confirmation of autism spectrum disorder and the child's level of functioning through a valid clinical record or assessment by an appropriately qualified professional; obtaining the required screening score on the designated study outcome measure or measures; having at least lower-secondary education; being able to attend the intervention sessions regularly and complete the study questionnaires; not receiving concurrent individual or group psychotherapy substantially similar to either study intervention; having a stable type and dose of psychiatric medication for the predefined period before enrollment if psychiatric medication was being used; and providing written informed consent. Severe psychiatric disorders, an acute psychological crisis that could interfere with safe participation, an acute disabling physical illness that prevented session attendance, a major stressful life event during the preceding six months when judged clinically likely to substantially affect the study outcomes, concurrent participation in a similar psychological intervention, and inability to attend the scheduled sessions were considered non-entry criteria. Withdrawal or discontinuation criteria included voluntary withdrawal at any stage, absence from more than two intervention sessions, initiation of another similar psychological treatment during the study, a substantial change in psychiatric medication type or dosage, emergence of a serious psychological or physical condition making continued participation inappropriate or unsafe, or severe nonparticipation in the assessment procedures. Wherever possible, outcome data from participants who did not complete the intervention were retained for analysis according to an intention-to-treat principle rather than being excluded solely because of treatment discontinuation.

2.2. Data Collection Tools

The Parental Guilt Scale developed by Hosseini-Tari and colleagues was used to assess guilt related to the parenting role. The instrument consists of 9 items distributed across three dimensions: perceived impact on the child's condition, inadequate care and support, and violation of personal or parental standards. Items are rated on a four-point Likert scale ranging from 1 for “completely false” to 4 for “completely true,” producing a total score between 9 and 36. Higher scores indicate greater parental guilt. In the original psychometric evaluation, the total scale demonstrated satisfactory internal consistency, with a Cronbach's alpha coefficient of .82, and acceptable temporal stability, with a test-retest correlation coefficient of .77. Cronbach's alpha coefficients of .83, .73, and .71 were reported for the impact on illness, inadequate care and support, and violation of standards subscales, respectively. Subsequent Iranian research also reported acceptable reliability for the scale,

KMAN-CPN KMAN-Counseling & Psychology Nexus
E-ISSN: 3041-9026

with an internal consistency coefficient of approximately .72. In the present study, the total score was used as the primary indicator of parental guilt, while subscale scores could additionally be examined to describe more specific patterns of guilt experienced by mothers.

The Parenting Stress Index–Short Form (PSI-SF), originally developed by Abidin, was used to assess parenting stress. The short form contains 36 items derived from the original 101-item version and assesses three major dimensions of parenting-related stress: Parental Distress, represented by Items 1 through 12; Parent–Child Dysfunctional Interaction, represented by Items 13 through 24; and Difficult Child, represented by Items 25 through 36. A total parenting stress score is obtained by summing responses across all items. Items are rated on a five-point Likert scale ranging from 1 for strong disagreement to 5 for strong agreement. Higher total and subscale scores represent greater levels of parenting stress. The Persian version has demonstrated satisfactory psychometric properties among Iranian parents, with Cronbach's alpha coefficients for the total scale and dimensions ranging approximately from .59 to .86 and test-retest reliability coefficients over a 16-day interval ranging from .92 to .97. In the present study, both the overall parenting stress score and the three component scores were available for analysis, although the total score was considered the principal indicator for testing the primary treatment effects on parenting stress.

The Parental Burnout Assessment (PBA) developed by Roskam and colleagues was used to measure psychological burnout associated with the parenting role. The questionnaire consists of 23 items covering four dimensions: exhaustion in the parental role, contrast with one's previous parental self, feelings of being fed up or aversion toward the parental role, and emotional distancing from one's children. Items are rated according to the reported frequency of each experience, using a seven-category response format ranging from 0 for “never” to the highest frequency category representing daily occurrence. The total score can range from 0 to 138, with higher scores indicating greater parental burnout and more severe psychological depletion associated with parenting. The Persian adaptation has demonstrated favorable content, face, and criterion-related validity, and Iranian research has reported very high internal consistency, with Cronbach's alpha exceeding .97. In the present study, the total burnout score was used to evaluate changes in overall psychological burnout across the three assessment occasions, while the four dimensions were available for complementary analyses of specific aspects of parental exhaustion and disengagement.

2.3. Interventions

The logotherapy intervention was delivered to participants assigned to the first experimental group through 10 structured group sessions. The intervention was organized around helping participants identify current psychological difficulties, clarify personally meaningful goals, reconsider their relationship with unavoidable suffering, and develop more adaptive and purposeful responses to parenting-related challenges. The first session focused on orientation to the group, establishing therapeutic rules, introducing members, and identifying the participants' principal concerns. The second session reviewed current difficulties and clarified the expectations and therapeutic goals of both the participants and therapist. The third session addressed participants' experiences in completing assigned exercises and explored barriers to implementing therapeutic tasks. The fourth session focused on examining activity patterns and important areas of life, with attention to sources of meaning, responsibility, and personally valued engagement. The fifth session examined triggers and maintaining factors involved in maladaptive cycles of distress, avoidance, and reduced meaningful activity. The sixth session addressed negative automatic thoughts, repetitive thinking, and patterns of rumination that interfered with adaptive engagement in the caregiving role. The seventh session focused on problem-solving skills and on replacing avoidance with deliberate, meaning-oriented action. The eighth session reviewed secondary difficulties arising from the parenting situation and participants' achievements in identifying and addressing these concerns. The ninth session reviewed previous assignments and emphasized recognition of situations that could reactivate maladaptive psychological patterns. The final session consolidated the skills learned throughout treatment, reviewed strategies for maintaining therapeutic gains, and encouraged participants to generalize meaning-oriented coping, purposeful action, and adaptive behavioral engagement to other areas of their lives. Sessions were conducted by a therapist trained in the intervention protocol, and therapeutic adherence was monitored using a structured fidelity checklist.

The Acceptance and Commitment Therapy intervention was delivered to the second experimental group in eight structured group sessions and was based on the principal

KMAN-CPN KMAN-Counseling & Psychology Nexus
E-ISSN: 3041-9026

processes of psychological flexibility, including acceptance, cognitive defusion, contact with the present moment, self-as-context, values clarification, and committed action. During the first session, group members became acquainted with one another, a therapeutic relationship was established, the purpose and structure of treatment were explained, and participants' current difficulties, previous attempts to control distressing internal experiences, and the degree of helplessness associated with those attempts were explored. The second session focused on creative hopelessness and on helping participants recognize the limitations of rigid attempts to control unwanted thoughts and emotions. Participants were introduced to the ACT perspective that excessive experiential control may itself become part of the problem, and barriers to greater psychological openness were identified. The third session focused on identifying personally meaningful values, differentiating values from specific goals, setting value-consistent goals, and planning behaviors consistent with those values. The fourth session deepened the clarification of individual values and used experiential exercises to connect previously discussed concepts to participants' daily parenting experiences. During the fifth session, the concept of cognitive fusion was introduced, and participants learned to notice thoughts and emotions without automatically treating them as literal facts or commands. Cognitive defusion exercises were practiced to weaken the behavioral dominance of distressing thoughts. The sixth session continued defusion practice and strengthened participants' ability to respond flexibly to difficult internal experiences rather than avoiding or struggling with them. The seventh session emphasized mindfulness and present-moment awareness through experiential exercises designed to increase nonjudgmental attention to ongoing experience. The eighth session reviewed participants' life narratives, consolidated skills taught across the previous sessions, and emphasized committed action based on identified goals and values. Particular attention was given to applying acceptance, defusion, mindfulness, and value-directed behavior to guilt, parenting stress, emotional exhaustion, and the ongoing demands associated with caring for a child with autism spectrum disorder. Treatment was delivered by a therapist appropriately trained in ACT, and adherence to the manualized protocol was monitored throughout the intervention.

The control group did not receive ACT, logotherapy, or another study-specific psychological intervention during the intervention period or before completion of the follow-up assessment. Participants were permitted to continue routine educational, rehabilitation-related, or supportive services normally available through the autism association and participating centers, and any additional psychological or psychiatric services received during the study were recorded. To minimize contamination between conditions, the complete therapeutic content and exercises from the two intervention programs were not provided to control participants before completion of the three-month follow-up. After the final assessment, participants in the wait-list condition were offered access to an appropriate structured psychological intervention or educational program in accordance with ethical requirements and the available services of the collaborating centers.

2.4. Data Analysis

Data analysis was conducted using SPSS and, when required for psychometric evaluation, AMOS. Before hypothesis testing, the data were screened for accuracy, missing values, outliers, distributional characteristics, and patterns of attrition. Descriptive statistics, including means, standard deviations, frequencies, and percentages, were calculated to summarize participants' demographic characteristics and the distribution of guilt, parenting stress, and psychological burnout scores across the three groups and three assessment occasions. Internal consistency of the outcome instruments in the current sample was evaluated using Cronbach's alpha coefficients. Where examination of the measurement structure was required, confirmatory factor analysis was performed using AMOS and model fit was assessed through standard fit indices. Baseline comparability of the groups was examined descriptively and, where appropriate, inferentially for important demographic and clinical characteristics. The principal inferential analyses were based on linear mixed-effects models because the study included repeated observations nested within participants and because this approach allows more flexible use of incomplete longitudinal data than conventional repeated-measures analysis of variance. Separate models were estimated for parental guilt, parenting stress, and psychological burnout. Each model included fixed effects for group, time, and the group-by-time interaction, with the interaction term representing the primary test of whether changes over time differed between ACT, logotherapy, and the control condition. Participant-level random effects were incorporated to account for dependency among repeated measurements within the same individual. When a

KMAN-CPN KMAN-Counseling & Psychology Nexus
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statistically significant interaction was observed, planned pairwise comparisons were conducted to compare ACT with the control group, logotherapy with the control group, and ACT with logotherapy at posttest and follow-up, while also examining within-group changes from pretest to posttest and from pretest to follow-up. Adjustment for multiple comparisons was applied using an appropriate procedure such as Bonferroni correction. Effect sizes and 95% confidence intervals were reported alongside probability values to demonstrate the magnitude and precision of treatment effects. Statistical significance was set at $p < .05$. Analyses were conducted according to the intention-to-treat principle wherever feasible, with all randomized participants retained in the primary longitudinal models to the extent permitted by the available data. Sensitivity analyses could additionally be performed using participants who completed the intervention protocol in order to examine the robustness of the primary findings.

3. Findings and Results

A total of 69 mothers of children with high-functioning autism spectrum disorder participated in the study and were equally allocated to the Acceptance and Commitment Therapy (ACT), logotherapy, and control groups, with 23 participants in each group. All 69 participants completed the pretest, posttest, and three-month follow-up assessments; therefore, no attrition or missing outcome data were observed. The mean age of mothers was 36.49 ± 4.90 years, with an age range of 27–50 years. The mean ages of mothers in the ACT, logotherapy, and control groups were 37.50 ± 4.75, 36.83 ± 4.89, and 35.13 ± 4.10 years, respectively. The mean age of the children in the total sample was 9.04 ± 1.89 years, ranging from 5 to 14 years. The corresponding mean ages of children were 9.43 ± 1.31 years in the ACT group, 9.00 ± 2.26 years in the logotherapy group, and 8.70 ± 1.99 years in the control group.

Table 1

Descriptive statistics for the study outcomes across groups and assessment times

Outcome	Assessment	ACT, Mean ± SD	Logotherapy, Mean ± SD	Control, Mean ± SD
Parental guilt	Pretest	27.35 ± 3.02	28.65 ± 4.02	28.26 ± 3.03
	Posttest	22.13 ± 3.57	22.39 ± 4.73	25.87 ± 3.85
	Follow-up	23.26 ± 3.61	23.04 ± 4.33	26.30 ± 4.11
Parenting stress	Pretest	124.26 ± 14.49	126.48 ± 18.51	128.96 ± 14.40
	Posttest	105.61 ± 17.01	107.09 ± 19.66	126.17 ± 16.95
	Follow-up	110.78 ± 17.70	108.30 ± 19.56	127.26 ± 15.65
Parental burnout	Pretest	75.83 ± 15.57	88.43 ± 19.78	83.96 ± 15.10
	Posttest	56.30 ± 21.21	67.04 ± 18.86	80.83 ± 19.20
	Follow-up	59.78 ± 19.22	71.04 ± 18.15	81.35 ± 18.30

As shown in Table 1, both intervention groups exhibited substantial reductions in parental guilt, parenting stress, and parental burnout from pretest to posttest, whereas changes in the control group were considerably smaller. In the ACT group, parental guilt decreased from 27.35 ± 3.02 at pretest to 22.13 ± 3.57 at posttest and remained below baseline at follow-up, with a mean of 23.26 ± 3.61. A similar pattern was observed in the logotherapy group, in which parental guilt decreased from 28.65 ± 4.02 to 22.39 ± 4.73 and remained at 23.04 ± 4.33 at follow-up. Parenting stress decreased from 124.26 ± 14.49 to 105.61 ± 17.01 in the ACT group and from 126.48 ± 18.51 to 107.09 ± 19.66 in the logotherapy group. At follow-up, the corresponding means were 110.78 ± 17.70 and 108.30 ± 19.56, indicating maintenance of a substantial proportion of the initial improvement. Parental burnout also decreased markedly in both intervention groups. The ACT group showed a reduction from 75.83 ± 15.57 to 56.30 ± 21.21, whereas the logotherapy group decreased from 88.43 ± 19.78 to 67.04 ± 18.86. Although some increase was observed at follow-up, burnout remained clearly below baseline in both intervention conditions. By contrast, the control group showed only limited changes across the three assessments.

Before inferential analyses were conducted, the statistical assumptions were examined. Shapiro–Wilk tests indicated that the total scores of the three principal outcomes were approximately normally distributed across groups and assessment occasions. Of the 27 group-by-time combinations for the three total outcome scores, 26 yielded nonsignificant Shapiro–Wilk tests, with only pretest parenting stress in the control group showing a small departure from normality ($p = .044$). Because this departure was isolated and the remaining distributions were acceptable, the normality assumption was considered

KMAN-CPN KMAN-Counseling & Psychology Nexus E-ISSN: 3041-9026

sufficiently satisfied. Levene's tests were nonsignificant for parental guilt at pretest, posttest, and follow-up (p = .121, .505, and .411, respectively), parenting stress (p = .300, .490, and .459), and parental burnout (p = .426, .759, and .905), supporting homogeneity of variances. Mauchly's test indicated violation of the sphericity assumption for parental guilt, W = .669, $\chi^2(2) = 25.94$, p < .001; parenting stress, W = .599, $\chi^2(2) = 33.11$, p < .001; and parental burnout, W = .581, $\chi^2(2) = 35.03$, p < .001. Accordingly, Greenhouse–Geisser corrections were applied to the repeated-measures analyses, with epsilon values of .751, .714, and .705, respectively. For the posttest ANCOVA comparisons, the homogeneity-of-regression-slopes assumption was satisfied for the principal comparisons, with the exception of the direct ACT-versus-logotherapy comparison for parental burnout, for which the interaction between baseline burnout and treatment group was marginally significant, F(1, 42) = 4.14, p = .048. Consequently, that specific ANCOVA comparison should be interpreted with additional caution.

Table 2

Analysis of covariance for posttest outcomes after adjustment for corresponding pretest scores

Outcome	Comparison	F	p	Partial η^2
Parental guilt	ACT vs. Control	12.85	.001	.230
	Logotherapy vs. Control	22.51	< .001	.344
	ACT vs. Logotherapy	1.15	.289	.026
Parenting stress	ACT vs. Control	24.26	< .001	.361
	Logotherapy vs. Control	29.48	< .001	.407
	ACT vs. Logotherapy	0.03	.872	.001
Parental burnout	ACT vs. Control	26.45	< .001	.381
	Logotherapy vs. Control	46.14	< .001	.518
	ACT vs. Logotherapy	0.29	.595	.007

As presented in Table 2, after adjustment for baseline scores, ACT produced a significant reduction in parental guilt compared with the control condition, F(1, 43) = 12.85, p = .001, partial η^2 = .230. Logotherapy also resulted in significantly lower parental guilt than the control condition, F(1, 43) = 22.51, p < .001, partial η^2 = .344. However, the direct comparison between ACT and logotherapy was not significant, F(1, 43) = 1.15, p = .289, partial η^2 = .026. A comparable pattern emerged for parenting stress. ACT significantly reduced parenting stress compared with the control condition, F(1, 43) = 24.26, p < .001, partial η^2 = .361, and logotherapy also demonstrated a significant effect relative to the control group, F(1, 43) = 29.48, p < .001, partial η^2 = .407. The two active treatments did not significantly differ from one another, F(1, 43) = 0.03, p = .872, partial η^2 = .001. Regarding parental burnout, ACT was significantly more effective than the control condition, F(1, 43) = 26.45, p < .001, partial η^2 = .381, while logotherapy also demonstrated a significant adjusted effect relative to the control group, F(1, 43) = 46.14, p < .001, partial η^2 = .518. The adjusted difference between ACT and logotherapy was not statistically significant, F(1, 43) = 0.29, p = .595, partial η^2 = .007. Overall, both interventions were associated with significant improvements relative to the control condition, whereas no statistically significant evidence supported the superiority of one active intervention over the other on any of the three primary outcomes.

Table 3

Bonferroni-adjusted post-hoc comparisons at posttest and follow-up

Outcome	Assessment	Comparison	Mean Difference	SE	Adjusted p	95% CI
Parental guilt	Posttest	ACT − Control	-3.73	1.20	.008	-6.69 to -0.78
		Logotherapy − Control	-3.47	1.20	.016	-6.43 to -0.52
		ACT − Logotherapy	-0.26	1.20	1.000	-3.21 to 2.69
	Follow-up	ACT − Control	-3.04	1.18	.037	-5.96 to -0.12
		Logotherapy − Control	-3.26	1.18	.022	-6.17 to -0.34
		ACT − Logotherapy	0.21	1.18	1.000	-2.70 to 3.13
Parenting stress	Posttest	ACT − Control	-20.56	5.28	.001	-33.54 to -7.58
		Logotherapy − Control	-19.08	5.28	.002	-32.06 to -6.10

KMAN-CPN KMAN-Counseling & Psychology Nexus
E-ISSN: 3041-9026

		ACT − Logotherapy	-1.47	5.28	1.000	-14.45 to 11.49
	Follow-up	ACT − Control	-16.47	5.22	.007	-29.30 to -3.64
		Logotherapy − Control	-18.95	5.22	.002	-31.78 to -6.12
		ACT − Logotherapy	2.47	5.22	1.000	-10.35 to 15.30
Parental burnout	Posttest	ACT − Control	-24.52	5.83	.001	-38.85 to -10.19
		Logotherapy − Control	-13.78	5.83	.063	-28.11 to 0.55
		ACT − Logotherapy	-10.73	5.83	.210	-25.07 to 3.59
	Follow-up	ACT − Control	-21.56	5.47	.001	-35.01 to -8.11
		Logotherapy − Control	-10.30	5.47	.193	-23.75 to 3.14
		ACT − Logotherapy	-11.26	5.47	.131	-24.70 to 2.18

The Bonferroni-adjusted comparisons presented in Table 3 further clarified the pattern of group differences. At posttest, both ACT and logotherapy groups had significantly lower parental guilt than the control group, with mean differences of -3.73 and -3.47, respectively. These differences remained significant at follow-up, indicating that the reductions in guilt were largely maintained over the three-month period. No significant difference was observed between ACT and logotherapy at either posttest or follow-up. For parenting stress, ACT and logotherapy both produced significantly lower posttest scores than the control condition, with mean differences of -20.56 and -19.08, respectively. The advantages of both treatments remained statistically significant at follow-up, whereas ACT and logotherapy did not differ significantly from one another at either assessment. A somewhat different pattern emerged for parental burnout. ACT produced significantly lower burnout than the control condition at both posttest, mean difference = -24.52, $p = .001$, and follow-up, mean difference = -21.56, $p = .001$. Although the logotherapy group also showed descriptively lower burnout than the control group, the Bonferroni-adjusted differences did not reach statistical significance at posttest, $p = .063$, or follow-up, $p = .193$. Direct comparisons between ACT and logotherapy were nonsignificant at both time points. Taken together, the findings indicate that both ACT and logotherapy were effective in reducing parental guilt and parenting stress relative to the control condition and that these improvements were maintained at follow-up. For parental burnout, the clearest and most consistently significant between-group effect was observed for ACT relative to the control condition, while the direct comparison between the two active interventions provided no statistically significant evidence that either treatment was superior.

4. Discussion

The present study compared the effectiveness of Acceptance and Commitment Therapy (ACT) and logotherapy on parental guilt, parenting stress, and psychological burnout among mothers of children with high-functioning autism spectrum disorder. The findings showed that both interventions were associated with meaningful reductions in parental guilt and parenting stress compared with the control condition, and these improvements were largely maintained at the follow-up assessment. With respect to psychological burnout, ACT demonstrated a clearer and more consistent advantage over the control group across both posttest and follow-up assessments, whereas the effects of logotherapy on burnout were less consistent across the different statistical analyses. Direct comparisons between ACT and logotherapy did not reveal significant differences in any of the three principal outcomes, indicating that although both approaches were therapeutically beneficial, neither intervention could be considered statistically superior to the other. Overall, the findings suggest that both psychological flexibility-based and meaning-oriented interventions can reduce important dimensions of maternal psychological distress in the context of caring for a child with autism spectrum disorder.

The first important finding was that ACT significantly reduced parental guilt relative to the control condition. This finding is theoretically consistent with the central mechanisms of ACT, particularly cognitive defusion, acceptance, self-as-context, values clarification, and committed action. Mothers of children with autism may develop persistent self-critical thoughts regarding the causes of their child's condition, perceived inadequacies in caregiving, or failures to meet internalized standards of ideal motherhood. Such thoughts can become fused with personal identity, resulting in beliefs such as being an inadequate mother or being responsible for the child's difficulties. ACT does not necessarily challenge the literal factual content of these thoughts; instead, it helps individuals recognize thoughts as passing psychological events and reduces the degree to which self-critical cognitions govern behavior. This process may reduce the intensity and functional impact of guilt even when difficult caregiving circumstances remain

KMAN-CPN KMAN-Counseling & Psychology Nexus E-ISSN: 3041-9026

unchanged. This interpretation is compatible with studies emphasizing the role of guilt as a self-conscious emotion shaped by parenting expectations, attachment-related processes, and perceived personal responsibility (Jamali Nazari et al., 2025; Kalantar Ghorayshi et al., 2025; Tabatabaei, 2025). It is also consistent with evidence showing that maladaptive guilt can be modified through psychological intervention when dysfunctional appraisals and rigid self-evaluations are targeted (Mohammadzadeh Ghorban Gholi et al., 2025).

The significant effect of ACT on parental guilt may also be understood through values-based action. Mothers caring for children with autism frequently face situations in which there is no perfect solution and where competing caregiving demands can produce a chronic sense of inadequacy. ACT helps individuals differentiate between values and unattainable standards, which can reduce guilt generated by perfectionistic expectations. Rather than evaluating motherhood according to whether every difficulty has been prevented or resolved, participants may learn to evaluate their behavior according to whether they are acting in a caring, committed, and value-consistent manner. This shift may weaken the cycle of rumination and self-blame. The finding is also broadly compatible with evidence highlighting the importance of psychological flexibility in reducing distress and mental fatigue among mothers facing demanding caregiving roles (Salah, 2025). More broadly, the result supports the clinical relevance of ACT as an intervention capable of changing the individual's relationship with distressing internal experiences rather than requiring complete elimination of those experiences (Asadi & Mohammadi, 2025; Mahdi Asiabari, 2025; Pajouhesh et al., 2025).

Logotherapy also significantly reduced parental guilt compared with the control group, and the magnitude of the adjusted effect was substantial. This finding can be explained by the emphasis of logotherapy on meaning, responsibility, freedom of attitude, and the reconstruction of suffering within a broader existential framework. Parental guilt may be intensified when mothers interpret the child's condition or their own limitations as evidence of personal failure. Logotherapy may help mothers distinguish realistic responsibility from excessive self-blame and may encourage them to reinterpret unavoidable difficulties as experiences through which meaning, commitment, and personal growth can still be realized. In this respect, the present findings are consistent with research showing that logotherapy-based intervention can improve meaning in life and resilience among mothers of children with autism spectrum disorder (Ali et al., 2025). They are also compatible with contemporary applications of logotherapy that emphasize the role of meaning and existential orientation in coping with adversity (Hosseini Kamalabadi, 2025; Sharifi & Mahni, 2025). The fact that both ACT and logotherapy reduced guilt, while not differing significantly from each other, suggests that different therapeutic mechanisms may lead to a similar reduction in maladaptive self-evaluation.

A second major finding was that both ACT and logotherapy significantly reduced parenting stress relative to the control condition, with these effects remaining evident at follow-up. The effect of ACT on parenting stress is strongly consistent with previous research. A recent meta-analysis demonstrated that ACT is effective in reducing parental stress among parents of children with special needs (Guo et al., 2025). The present findings extend that evidence specifically to mothers of children with high-functioning autism spectrum disorder. ACT may reduce parenting stress by increasing willingness to experience difficult emotions without engaging in excessive avoidance, reducing cognitive fusion with catastrophic or self-critical thoughts, and increasing present-moment awareness. In addition, values clarification can help mothers prioritize meaningful caregiving behaviors while reducing unproductive attempts to control every aspect of the child's development or behavior. This may be particularly relevant in autism, where many daily stressors are chronic and cannot be rapidly resolved.

The reduction in parenting stress is also meaningful because parenting stress is closely associated with broader family and psychological functioning. Previous studies have linked parenting stress to family functioning, relationship processes, and self-conscious emotions such as shame and guilt (Goudarzi & Safari, 2025; Kalantar Ghorayshi et al., 2025; Sotoudeh Navroudi et al., 2025). Chronic parenting stress may also affect children's functioning and academic or behavioral outcomes, creating reciprocal patterns between caregiver distress and child-related difficulties (Karimian, 2025). Therefore, the observed reduction in parenting stress may have implications beyond maternal well-being alone. By helping mothers respond more flexibly to recurring caregiving demands, ACT may interrupt cycles in which child-related challenges increase maternal stress and heightened maternal stress then contributes to less adaptive family interactions.

Logotherapy also produced a significant reduction in parenting stress relative to the control group. This finding

KMAN-CPN KMAN-Counseling & Psychology Nexus
E-ISSN: 3041-9026

may be explained by the role of meaning-making in reducing the perceived burden of difficult life circumstances. Stress is not determined solely by objective demands but also by the meaning attributed to those demands. When caregiving is experienced as uncontrollable, purposeless, or as an endless sequence of failures, the psychological burden may become particularly severe. Logotherapy encourages individuals to identify meaning and purpose even in circumstances that cannot be changed. In mothers of children with autism, this may transform the appraisal of caregiving from an exclusively exhausting burden into a role that, despite its difficulties, remains connected to personal values and meaningful commitment. The result is consistent with evidence that meaning-oriented intervention can strengthen resilience among mothers of children with autism (Ali et al., 2025). It also corresponds with studies documenting substantial emotional burden, service-related difficulties, and chronic distress in mothers of children with autism, which indicate a clear need for interventions that improve coping with enduring caregiving demands (Alabdulaziz et al., 2026; Boni et al., 2025; Selvakumar, 2025).

An important result was that there was no significant direct difference between ACT and logotherapy in reducing parenting stress. The adjusted means of the two groups were highly similar, and the difference between interventions was negligible. This suggests that although ACT and logotherapy are theoretically distinct, both may influence shared higher-order processes such as acceptance of difficult circumstances, clarification of values, reduction of experiential struggle, enhancement of psychological coherence, and engagement in purposeful behavior. ACT approaches distress primarily through psychological flexibility, whereas logotherapy approaches distress through meaning and existential responsibility. Nevertheless, both may ultimately reduce the sense of helplessness and uncontrollability that characterizes parenting stress. The absence of significant superiority also suggests that treatment selection may reasonably consider individual preference, cultural compatibility, therapist expertise, and the mother's specific psychological needs rather than assuming that one intervention is universally preferable.

The findings regarding psychological burnout were somewhat more differentiated. ACT showed a significant and consistent reduction in parental burnout compared with the control group, both at posttest and follow-up. This finding is clinically important because parental burnout reflects more than transient stress and includes exhaustion in the parenting role, emotional distancing, feelings of being fed up with parenting, and a perceived contrast between the current and previous parental self. Parents of children with autism have been shown to experience elevated levels of anxiety and burnout (Akram et al., 2025), and parental burnout may negatively affect the mental health of other family members as well (Eskandari, 2025). ACT may reduce burnout by diminishing the continuous psychological effort involved in suppressing difficult thoughts and emotions. Experiential avoidance can consume considerable psychological resources, particularly when stressors are chronic. By increasing acceptance and reducing the struggle against internal experiences, ACT may conserve psychological energy and improve the mother's capacity to remain engaged with valued aspects of parenting.

ACT may also influence burnout through committed action and values clarification. Burnout often develops when individuals feel disconnected from the meaning of their role and experience only its demands. ACT helps participants reconnect with personally meaningful reasons for action while also encouraging realistic behavioral commitments rather than rigid overfunctioning. This distinction may be particularly valuable for mothers who feel pressure to provide constant care without recognizing their own psychological limits. The present findings therefore fit with broader work showing that psychological flexibility and compassion-oriented approaches can improve quality of life and reduce mental fatigue in mothers exposed to demanding caregiving circumstances (Salah, 2025). They are also consistent with the conceptual literature positioning ACT as a flexible intervention for chronic psychological distress and complex emotional difficulties (Asadi & Mohammadi, 2025; Pajouhesh et al., 2025).

The effects of logotherapy on psychological burnout were more complex. ANCOVA indicated a significant reduction in posttest burnout relative to the control group after adjustment for baseline scores, and the associated effect size was large. However, Bonferroni-adjusted pairwise comparisons from the longitudinal analysis did not show a statistically significant difference between logotherapy and the control group at posttest or follow-up. This discrepancy suggests that the effect of logotherapy on burnout was present but less robust across analytic approaches. One possible explanation is that the logotherapy group had a relatively higher baseline burnout score, making baseline-adjusted analysis particularly important. Once initial differences were controlled, logotherapy showed a substantial treatment effect. However, the more conservative Bonferroni-adjusted comparisons reduced statistical power

KMAN-CPN KMAN-Counseling & Psychology Nexus
E-ISSN: 3041-9026

and may have made the between-group difference less likely to reach significance. Therefore, the most appropriate interpretation is not that logotherapy was ineffective for burnout, but rather that its effect was less consistently demonstrated than the effect of ACT.

The potential effect of logotherapy on burnout remains theoretically plausible and is supported by research showing that meaning in life and resilience can be improved through logotherapy-based interventions among mothers of children with ASD (Ali et al., 2025). Burnout is frequently characterized by depletion, detachment, and a loss of meaning in the parental role. Logotherapy directly addresses meaninglessness and existential exhaustion, potentially helping mothers reinterpret the caregiving role in ways that restore purpose. Nonetheless, the present results suggest that meaning reconstruction alone may not be sufficient to produce equally consistent reductions across all components of burnout. ACT may have an additional advantage in directly targeting experiential avoidance, cognitive fusion, and inflexible patterns that perpetuate emotional exhaustion.

The lack of a significant direct difference between ACT and logotherapy in overall burnout further indicates that the two interventions were broadly comparable when directly contrasted. This finding should, however, be interpreted with caution because the homogeneity-of-regression-slopes assumption was slightly violated in the direct ANCOVA comparison of the two treatments for burnout. Even so, the adjusted effect size for the treatment difference was very small, and the multivariate analyses of burnout components did not identify significant differences between the interventions. The descriptive pattern also lacked a consistent direction across subcomponents. These findings suggest that both approaches may offer useful benefits for burnout, but the current data do not support a definitive claim that either ACT or logotherapy is superior.

5. Conclusion

Taken together, the findings can be understood within the wider context of maternal psychological distress in autism. Mothers of children with ASD frequently experience substantial caregiving burden, emotional distress, worry about child outcomes, and limitations in access to adequate support (Alabdulaziz et al., 2026; Rezq et al., 2026). The psychological suffering associated with this caregiving role may involve guilt, chronic stress, exhaustion, and disruption of family and personal functioning (Akram et al., 2025; Boni et al., 2025). Family-based and resilience-oriented approaches have therefore increasingly emphasized the need to support the psychological functioning of parents alongside interventions directed toward the child (Babapour Kheiraldin et al., 2025; Mohammadi Tabas & Mohammadi Tabas, 2025). The present findings contribute to this perspective by indicating that both ACT and logotherapy can serve as viable parent-focused interventions, particularly for guilt and parenting stress, while ACT may produce a somewhat more consistent pattern of improvement in parental burnout.

A limitation of the present study is that participants were recruited from one geographical area and from mothers who were willing and able to participate in structured psychological interventions, which may limit generalizability to mothers in other cultural, socioeconomic, or service contexts. The sample size was also relatively modest, and although sufficient to detect several meaningful effects, it may have reduced statistical power for detecting smaller differences between ACT and logotherapy. In addition, the study relied primarily on self-report measures, which may be influenced by response tendencies, expectations regarding treatment, or temporary emotional states. The follow-up period was limited to three months, and therefore the longer-term durability of therapeutic effects remains uncertain. Furthermore, differences in the number and content of ACT and logotherapy sessions may have introduced variation in treatment intensity, and therapist-specific factors could not be entirely separated from intervention effects.

Future studies are recommended to replicate these findings with larger and more diverse samples drawn from multiple clinical and community settings. Longer follow-up periods, such as six months and one year, would provide stronger evidence regarding the durability of treatment effects. Future research could also employ active comparison conditions rather than wait-list control groups and incorporate multimethod assessment, including clinician ratings, behavioral indicators, family functioning measures, and reports from other family members. It would also be useful to examine potential mediators such as psychological flexibility, experiential avoidance, meaning in life, resilience, self-compassion, and cognitive fusion in order to determine how ACT and logotherapy produce change. Moderator analyses could further identify whether baseline guilt, burnout severity, child symptom severity, maternal age, family support, or socioeconomic conditions influence responsiveness to either intervention.

KMAN-CPN KMAN-Counseling & Psychology Nexus
E-ISSN: 3041-9026

From a practical perspective, psychological and rehabilitation centers serving families of children with autism may consider incorporating structured ACT and logotherapy programs into services for mothers experiencing elevated guilt, parenting stress, or psychological burnout. ACT may be particularly useful when mothers demonstrate rigid self-critical thinking, experiential avoidance, emotional exhaustion, or difficulty tolerating persistent distress, whereas logotherapy may be especially appropriate when loss of meaning, hopelessness, existential burden, or diminished sense of purpose are prominent. Clinicians should assess the specific pattern of maternal distress and select or adapt interventions accordingly rather than relying on a single standardized approach. Group-based delivery may also provide an efficient format for increasing access to psychological support while allowing mothers to normalize their experiences, learn adaptive coping strategies, and strengthen sustained engagement with caregiving roles.

Authors' Contributions

Authors equally contributed to this article.

Declaration

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

Transparency Statement

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Declaration of Interest

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KMAN-CPN KMAN-Counseling & Psychology Nexus
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