

Comparison of the Effectiveness of Existential Therapy and Schema Therapy in Reducing Death Anxiety among Women with Multiple Sclerosis

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ABSTRACT

Objective: This study aimed to compare the effectiveness of existential therapy and schema therapy in reducing death anxiety among married women with multiple sclerosis (MS).

Methods and Materials: This quasi-experimental study employed a pretest–posttest design with a control group. The statistical population comprised all married women diagnosed with multiple sclerosis in Tehran during the first six months of 2026 whose diagnosis had been confirmed by a specialist physician and who were receiving support from the Tehran Multiple Sclerosis Society. Using purposive sampling, 45 eligible women were selected and assigned to three groups of 15 participants: existential therapy, schema therapy, and control. Participants in the two intervention groups received the corresponding therapeutic programs, whereas the control group received no psychological intervention during the study period. Death anxiety was assessed at the pretest and posttest stages using the Templer Death Anxiety Scale. Data were analyzed using repeated-measures analysis of variance to examine changes in death anxiety across measurement occasions and differences among the three study groups.

Findings: Repeated-measures analysis of variance demonstrated a statistically significant reduction in death anxiety following psychological intervention. Both existential therapy and schema therapy produced significant improvements in death anxiety compared with the control condition, indicating that each intervention was effective in reducing death-related anxiety among women with multiple sclerosis. The between-group comparison of the two active interventions further revealed a significant difference in their therapeutic effectiveness. Existential therapy produced a greater reduction in death anxiety than schema therapy, demonstrating its comparatively stronger effect on death-related psychological distress in the study population.

Conclusion: Both existential therapy and schema therapy appear to be effective psychological interventions for reducing death anxiety among married women with multiple sclerosis; however, existential therapy may provide greater therapeutic benefits.

Keywords: Existential Therapy; Schema Therapy; Death Anxiety; Multiple Sclerosis; Women

1. Introduction

Multiple sclerosis (MS) is a chronic, immune-mediated, and potentially progressive neurological disorder that affects the central nervous system and can lead to a wide range of physical, cognitive, emotional, and social difficulties. The unpredictable course of the disease, recurrent episodes of neurological dysfunction, accumulation of disability, uncertainty regarding progression, and the possibility of transition from relapsing to progressive forms create a substantial psychological burden for patients. Although advances in pharmacological treatment have improved disease management and expanded therapeutic options, living with MS continues to involve persistent uncertainty concerning future functioning, independence, occupational roles, family responsibilities, and long-term quality of life (Dimitriou et al., 2023; Güleç et al., 2023). The psychological consequences of MS may become especially pronounced among women, who represent a substantial proportion of affected patients and may simultaneously encounter concerns related to marital functioning, family roles, body image, fertility, intimacy, and perceived dependence. Research has shown that demographic and relational factors, including gender and marital status, may influence the quality of life of individuals with MS, highlighting the importance of examining psychological outcomes within the broader interpersonal context of the disease (Sabanagic-Hajric et al., 2022). Among the psychological concerns associated with chronic and potentially disabling illness, death anxiety constitutes a particularly important but sometimes insufficiently addressed dimension.

Death anxiety generally refers to emotional, cognitive, and existential distress associated with awareness of mortality, the prospect of dying, anticipated suffering, loss of control, separation from significant others, bodily deterioration, and the unknown aspects of death. It is not restricted to individuals facing an immediately life-threatening condition; rather, it may emerge whenever illness makes mortality and bodily vulnerability more psychologically salient. Contemporary research demonstrates that death anxiety is a multidimensional phenomenon that can be influenced by perceived threat, uncertainty, illness severity, meaninglessness, psychological resilience, and coping resources (Özgüç et al., 2024; Vatikioti & Paparrigopoulos, 2024). Evidence from patients with advanced illnesses has further demonstrated that death anxiety may fluctuate over time and become particularly

relevant as individuals confront increasing uncertainty, functional limitations, or perceived closeness to death (Versluis et al., 2026; Xue et al., 2026). Qualitative research has similarly indicated that individuals facing serious disease may use a variety of cognitive, relational, spiritual, and meaning-oriented strategies to manage awareness of mortality, suggesting that death anxiety is shaped not only by objective medical circumstances but also by the ways in which individuals interpret and psychologically organize the threat of death (Luo et al., 2026).

In MS, death anxiety may arise from several interrelated sources. Patients may worry about the future course of the disease, progressive dependency, loss of mobility, cognitive decline, pain, inability to fulfill family roles, social isolation, or becoming a burden on significant others. Even when immediate mortality risk is not the primary medical issue, chronic neurological illness may repeatedly confront individuals with the limitations of the body and the finitude of life. An exploratory investigation specifically examining death anxiety among individuals with MS demonstrated that concerns about mortality and attitudes toward death constitute clinically relevant aspects of patients' psychological experience (Francalancia et al., 2021). More recent evidence has also suggested that death anxiety in MS is related to perceived stress and that self-compassion may function as an important psychological mechanism linking stressful illness experiences to mortality-related distress (Türker & Demirkaya, 2026). These findings support the view that death anxiety in MS should not be conceptualized as an isolated symptom but rather as a broader response involving stress appraisal, emotional regulation, self-perception, vulnerability, and existential meaning.

For married women with MS, these concerns may be intensified by the intersection of illness-related uncertainty with marital and family responsibilities. Concerns about deterioration in physical functioning may coexist with fears of losing independence, being unable to maintain expected roles within the family, changes in sexuality and intimacy, and dependence on the spouse. Such experiences can transform the meaning of illness from a purely medical problem into a broader existential challenge involving identity, autonomy, relationships, and life purpose. This is consistent with existential models of psychological distress, which propose that awareness of mortality becomes especially distressing when it is accompanied by unresolved concerns regarding freedom, responsibility, isolation, meaninglessness, or unrealized possibilities (Diamond, 2021; Menzies, 2022). From this perspective, death anxiety

may be intensified not only by fear of biological death but also by perceived loss of meaningful possibilities, anticipated regret, and the sense that one's life has become constrained by circumstances beyond one's control.

Existential therapy provides one conceptual and clinical framework for addressing such concerns. Rooted in existential philosophy and humanistic psychology, existential therapy emphasizes fundamental human concerns including death, freedom and responsibility, existential isolation, meaning, authenticity, and choice. Rather than attempting to eliminate awareness of mortality, existential therapy seeks to help individuals confront it in a psychologically constructive way and use that awareness to clarify values, deepen engagement with life, assume responsibility for meaningful choices, and develop a more authentic orientation toward existence (Diamond, 2021). Within Yalom's perspective, death awareness can be a source of profound anxiety, but confrontation with mortality may also stimulate psychological growth when it encourages individuals to reconsider priorities, relationships, and the meaning of their lives. More recent analyses of Yalom's conceptualization have emphasized the continuing centrality of death anxiety within existential psychotherapy and its importance for understanding psychological distress across both clinical and nonclinical contexts (Grady & Viterito, 2025).

Existential therapy may be particularly relevant for chronic illness because the medical condition often imposes objective limitations that cannot simply be cognitively disputed or behaviorally removed. In such situations, therapeutic work frequently involves helping patients distinguish between unavoidable constraints and areas in which meaningful freedom and responsibility remain possible. Contemporary process-based interpretations of existential therapies have attempted to translate traditional philosophical concerns into identifiable therapeutic processes such as acceptance of mortality, values clarification, meaning construction, self-transcendence, psychological flexibility, and engagement with personally significant action (Menzies & Menzies, 2024). Empirical reviews have also documented growing evidence for existentially oriented psychological interventions across multiple mental health and medical conditions, although methodological heterogeneity remains substantial (Vos, 2023). The relevance of existential interventions for death anxiety is supported by recent systematic and meta-analytic evidence indicating that selected existential therapies can significantly reduce death anxiety among individuals with

advanced cancer (Harahap et al., 2026). Although cancer differs from MS in prognosis and disease trajectory, such findings reinforce the potential value of interventions that directly address mortality, meaning, and existential distress.

Studies conducted in different clinical populations also provide support for this approach. Existential psychotherapy has demonstrated beneficial effects on psychological outcomes such as emotional capital, cognitive emotion regulation, and subjective well-being in individuals experiencing anxiety-related difficulties (Hatami & Tabatabaieinejad, 2023). In women with marital conflict, existential psychotherapy has also been compared favorably with acceptance and commitment therapy in relation to psychosomatic symptoms and tolerance of emotional distress (Dahmani et al., 2024). In patients with Charcot-Marie-Tooth disease, existential therapy was associated with improvement in death anxiety and broader psychological outcomes, suggesting that existential interventions may be suitable for individuals facing chronic neurological or disabling medical conditions (Faghani Toulon et al., 2023). Furthermore, research among women with MS has shown that logotherapy, another meaning-centered approach with existential foundations, can reduce death anxiety, hopelessness, and related psychological difficulties (Esmkhani Akbarnejad et al., 2021). Collectively, these findings provide a rationale for evaluating existential therapy as a direct intervention for death anxiety among women with MS.

Despite its relevance, existential therapy is not the only potentially effective approach. Schema therapy represents another comprehensive psychotherapeutic model that may be particularly useful when death anxiety is linked to enduring maladaptive beliefs, early emotional vulnerabilities, interpersonal patterns, and dysfunctional coping responses. Schema therapy was originally developed to address complex and chronic psychological problems that are insufficiently explained by more symptom-focused cognitive-behavioral models. It conceptualizes early maladaptive schemas as pervasive emotional and cognitive patterns that develop through interactions between temperament and unmet emotional needs and subsequently influence perception, affect, interpersonal behavior, and coping. Schemas related to abandonment, vulnerability to harm or illness, dependence or incompetence, defectiveness and shame, emotional deprivation, and negativity may become especially salient in individuals living with chronic disease.

The experience of MS may activate or intensify these schemas because illness can create real changes in dependency, physical vulnerability, social functioning, and perceived control. For example, a person with a pre-existing vulnerability-to-harm schema may interpret physical symptoms as evidence of imminent deterioration or death, while abandonment schemas may become activated by fears that a spouse will withdraw in response to disability. Dependence-related schemas may be reinforced by the need for assistance, and defectiveness or shame schemas may become more salient when illness alters body image, sexual functioning, or perceived competence. Schema therapy seeks to identify these patterns, understand their developmental origins, recognize maladaptive coping styles, and strengthen healthier modes of functioning through cognitive, experiential, behavioral, and relational interventions. In this sense, schema therapy may reduce death anxiety indirectly by changing the psychological structures through which illness and mortality are interpreted.

The broader evidence base for schema therapy has expanded considerably in recent years. A randomized clinical trial demonstrated that group-based and combined individual-group schema therapy can be effective for complex personality pathology, illustrating the model's capacity to produce changes in enduring emotional and interpersonal patterns (Arntz et al., 2022). A systematic review and meta-analysis further supported the efficacy of schema therapy for personality disorders and highlighted its clinical utility across settings (Zhang et al., 2023). Beyond personality disorders, research has increasingly examined schema therapy in other clinical conditions. A systematic review of schema therapy for adults with eating disorders found promising evidence, although the available literature remained relatively limited and heterogeneous (Joshua et al., 2023). Group schema therapy has also been applied to patients with severe anxiety disorders, indicating that schema-focused interventions may be useful when anxiety is chronic, complex, and maintained by longstanding maladaptive psychological patterns (Straarup et al., 2022). In chronic pain populations, group schema therapy has likewise been compared with other third-wave interventions and shown potential for reducing perceived stress, pain catastrophizing, depression, and symptom-related distress (Soleimani, 2020).

These findings are relevant to death anxiety in MS because mortality-related fear may be sustained by cognitive-emotional processes similar to those targeted by

schema therapy, including catastrophizing, perceived helplessness, maladaptive beliefs about vulnerability, low emotional tolerance, and self-critical internal dialogue. By addressing schemas and schema modes, therapy may enable patients to interpret symptoms and future uncertainty in less catastrophic ways, strengthen the healthy adult mode, regulate distress more effectively, and respond to fears of disability and death with greater psychological flexibility. At the same time, existential therapy approaches the same problem from a different conceptual direction by directly engaging mortality, meaning, freedom, isolation, and authenticity. This theoretical contrast is clinically important because both interventions may reduce death anxiety, but they may do so through different mechanisms.

The distinction between these therapeutic pathways raises an important empirical question. Existential therapy may be particularly effective when death anxiety stems from confrontation with mortality, meaninglessness, loss, and awareness of limited life possibilities, whereas schema therapy may be more effective when fear is embedded in entrenched beliefs about vulnerability, abandonment, dependence, or defectiveness. Contemporary existential research emphasizes that mortality-related distress can be transformed through meaning construction, acceptance, and values-guided engagement (Menzies & Menzies, 2024; Vos, 2023), while schema-based research emphasizes restructuring deeply rooted cognitive-emotional patterns and maladaptive coping responses (Arntz et al., 2022; Zhang et al., 2023). The comparison of these approaches is therefore theoretically informative as well as clinically relevant.

Another reason for direct comparison is that much of the existing literature has examined existential therapy against acceptance and commitment therapy or has investigated schema therapy in populations other than MS. For example, existential approaches have been compared with acceptance-based interventions in women with marital conflict and in individuals with chronic neurological conditions (Dahmani et al., 2024; Faghani Toulon et al., 2023), while schema therapy has been studied in severe anxiety, personality disorders, eating disorders, and chronic pain populations (Joshua et al., 2023; Soleimani, 2020; Straarup et al., 2022). Consequently, there remains a relative shortage of studies directly comparing existential therapy and schema therapy for death anxiety among women with MS. This gap is important because MS involves both existential threats and schema-activating experiences, making it a particularly suitable context for testing the relative efficacy of the two approaches.

The need for such research is further strengthened by contemporary evidence showing that death anxiety should be understood as a clinically meaningful psychological outcome rather than merely a philosophical concern. Systematic reviews and clinical studies across serious illnesses consistently demonstrate associations between death anxiety and psychological distress, stress responses, emotional vulnerability, and reduced adaptation (Özgüç et al., 2024; Versluis et al., 2026; Xue et al., 2026). At the same time, research indicates that meaning, resilience, self-compassion, and adaptive coping can buffer mortality-related distress (Luo et al., 2026; Türker & Demirkaya, 2026; Vatikioti & Paparrigopoulos, 2024). These findings suggest that psychotherapeutic interventions capable of modifying either existential processing or maladaptive cognitive-emotional schemas may have important benefits for patients whose chronic illness repeatedly activates concerns about death and the future.

Accordingly, the aim of the present study was to compare the effectiveness of existential therapy and schema therapy in reducing death anxiety among married women with multiple sclerosis.

2. Methods and Materials

2.1. Study design and Participant

The present study was conducted using a quasi-experimental design with three parallel groups, including an existential therapy group, a schema therapy group, and a control group, with assessments conducted at pretest, posttest, and follow-up. The statistical population consisted of all married women with multiple sclerosis (MS) living in Tehran during the second six months of 2024 whose diagnosis had been confirmed by a specialist physician and who were receiving support from the Tehran Multiple Sclerosis Society. Participants were recruited from among eligible women affiliated with the MS support system using a nonprobability sampling procedure. Based on the eligibility criteria and willingness to participate, 45 women were selected and then randomly assigned to three groups of 15 participants each: existential therapy, schema therapy, and control. The inclusion criteria were a confirmed diagnosis of multiple sclerosis, being married, being no older than 50 years, having at least lower-secondary education, having no severe physical condition that would prevent participation in the therapeutic sessions, and not taking medications or receiving treatments that could interfere with regular attendance or participation in the intervention. The

exclusion criteria included unwillingness to continue participation, absence from more than two intervention sessions, and concurrent participation in other structured psychological treatment programs during the study period. Before enrollment, the objectives and procedures of the study were explained to all participants, and written informed consent was obtained. Participants were informed that participation was voluntary and that they could withdraw from the study at any stage without adverse consequences. Confidentiality of personal information and research data was also emphasized. The two experimental groups received their respective interventions over 10 sessions, whereas the control group did not receive either of the study interventions during the treatment phase. All participants completed the study outcome measure at pretest, immediately after completion of the interventions, and again at the planned follow-up assessment.

2.2. Measures

Death anxiety was assessed using the Templer Death Anxiety Scale (DAS), developed by Templer in 1970 to measure individuals' attitudes, concerns, and emotional reactions related to death and dying. The instrument was designed to cover a relatively broad range of death-related experiences rather than focusing on a single aspect of fear of death. Conceptually, it reflects several recurring dimensions in the death-anxiety literature, including cognitive and emotional reactions to death, concerns regarding bodily changes associated with dying and death, awareness of the passage of time and the finitude of life, and anxiety concerning pain, illness, psychological distress, and the dying process. The DAS consists of 15 dichotomously scored items answered in a true-false format, and responses are summed to obtain a total score, with higher scores indicating greater death anxiety. Administration does not require specialized skills and can be completed in a relatively brief period. The scale has been translated into several languages and has been widely used in clinical and nonclinical populations. In the original psychometric evaluations, test-retest reliability of approximately .83 and internal consistency based on the Kuder-Richardson method of approximately .76 were reported. Evidence for construct validity was also demonstrated through comparisons between individuals characterized by high death anxiety and control participants, as well as through convergent associations with other measures of fear of death. In one validation study, the DAS was positively correlated with

Boyar's Fear of Death Scale, with a reported correlation of approximately .74. In the present study, the DAS was administered at the pretest, posttest, and follow-up stages to evaluate changes in death anxiety over time and to compare the effects of existential therapy and schema therapy.

2.3. Interventions

The schema therapy intervention was developed based primarily on the conceptual framework proposed by Young, Klosko, and Weishaar and was delivered in 10 group sessions, each lasting approximately 75 minutes. The first session focused on establishing psychological safety, group cohesion, and a clear therapeutic framework through discussion of confidentiality, nonjudgment, the right to remain silent, and voluntary participation. Participants were introduced to the concepts of schemas, developmental origins of maladaptive schemas, basic emotional needs, and the potential activation of schemas in the context of chronic illness, particularly changes in identity, perceived control, autonomy, and meaning associated with MS. The second session emphasized the identification of dominant early maladaptive schemas, with particular attention to defectiveness/shame, dependence, abandonment, emotional deprivation, and other patterns likely to be activated by chronic illness. Cognitive education, discussion of personal experiences, schema-oriented self-observation, and reflection on the personal meaning of illness were used to increase cognitive and emotional awareness. The third session addressed maladaptive coping styles, including surrender, avoidance, and overcompensation, and examined how these coping responses could appear in reactions to pain, disability, marital conflict, and illness-related uncertainty. The fourth session introduced schema modes, particularly the vulnerable child, punitive parent, and healthy adult modes, and used guided imagery, role-play, and two-chair dialogue to help participants recognize internal critical voices and unmet emotional needs. The fifth session focused on reducing self-criticism, increasing self-compassion, strengthening the healthy adult mode, and introducing limited reparenting principles alongside self-care and acceptance of human suffering. The sixth session directly examined the relationship between maladaptive schemas and death anxiety, especially catastrophizing, vulnerability to harm or illness, abandonment fears, and fears of disability and mortality. Cognitive restructuring, guided imagery, emotional tolerance training, and carefully structured exposure to mortality awareness were used to

modify catastrophic interpretations and reconstruct meaning in relation to life and death. The seventh session focused on marital self-regulation, interpersonal misunderstanding, unmet emotional needs, conflict cycles, and healthier emotional expression. The eighth session addressed shame, sexual avoidance, body image, fear of rejection, assertiveness, and maladaptive beliefs concerning sexuality and bodily adequacy in the context of chronic illness. The ninth session emphasized behavioral pattern breaking, problem solving, replacement of avoidant or self-defeating behaviors with healthier alternatives, enhancement of perceived competence, and commitment to value-consistent action. The final session reviewed cognitive, emotional, and behavioral changes, reinforced the healthy adult mode, developed an individualized relapse-prevention plan, consolidated meaning-based life goals, administered the posttest, and prepared participants for the follow-up assessment.

The existential therapy intervention was developed on the basis of Yalom's existential psychotherapy framework and was implemented in 10 group sessions of approximately 75 minutes each. The first session focused on therapeutic contracting, establishment of group safety and cohesion, explanation of confidentiality and voluntary participation, exploration of participants' lived experience of receiving an MS diagnosis, and introduction to the core existential concerns of death, freedom, isolation, and meaning. Phenomenological listening, empathic reflection, suspension of judgment, and structured group dialogue were used to facilitate disclosure and psychological safety. The second session concentrated on existential anxiety, insecurity, and uncertainty associated with chronic illness, with participants exploring fears about the future, disability, dependence, and instability. Techniques included gradual existential exposure, mindfulness, acceptance-oriented exercises, cognitive defusion, mapping of anxiety triggers, and learning to remain present with distress rather than avoiding it. The third session addressed the lived body, female identity, and body image, including anger toward the body, feelings of alienation, concerns regarding attractiveness and femininity, and the influence of MS on marital and sexual self-perception. Body awareness, self-compassion, narrative reconstruction, empty-chair dialogue, and reflective exercises were used to promote a more accepting relationship with the body. The fourth session explored existential loneliness, belonging, interpersonal connection, and the experience of not being understood in the context of chronic illness. Authentic dialogue, empathic

reflection, here-and-now processing, and attention to fear of rejection were used to strengthen relational engagement and reduce isolation. The fifth session directly addressed mortality, loss, and death anxiety by examining fears of death, disability, dependence, lost roles, unrealized life possibilities, and awareness of finitude. Supportive confrontation with mortality, meaning-centered reflection, personal legacy work, processing of grief and symbolic losses, and discussion of authentic living under conditions of limited time were central components. The sixth session focused on freedom, choice, responsibility, and personal agency within unavoidable limitations, helping participants distinguish uncontrollable aspects of illness from domains in which meaningful choice remained possible. Existential cognitive restructuring, responsible decision-making, acceptance of limitations, and value-based choice were used to reduce helplessness and strengthen internal agency. The seventh session addressed meaning, personal values, hope, resilience, and life direction after diagnosis, using meaning exploration, values clarification, spiritual or personal legacy reflection, and reconstruction of life narratives. The eighth session focused on marital intimacy, sexual self-assertion, expression of emotional and sexual needs, shame reduction, and authentic communication with the spouse. Emotion-focused interventions, assertiveness training, nonviolent communication, and role-play were used to strengthen intimate self-expression. The ninth session concentrated on authenticity, the distinction between the true self and socially adaptive roles, fear of judgment, self-acceptance, and living in accordance with personally endorsed values. The final session reviewed therapeutic gains, processed the ending of therapy, consolidated themes of meaning, authenticity, mortality awareness, self-care, and personal responsibility, administered the posttest, and prepared participants to continue mindfulness, self-reflection, and meaning-oriented practices until the follow-up assessment.

2.4. Data Analysis

Data analysis was performed using both descriptive and inferential statistical procedures. Descriptive statistics, including the mean and standard deviation, were calculated to summarize death-anxiety scores across the three study groups and the three assessment occasions. Before conducting the main inferential analysis, the data were examined for completeness, potential outliers, and the assumptions required for parametric repeated-measures analysis, including approximate normality of the dependent variable within groups, homogeneity of variances, and the sphericity assumption for within-subject comparisons. The primary inferential analysis was repeated-measures analysis of variance, with time representing the within-subject factor and treatment group representing the between-subject factor. This analysis was used to determine whether death-anxiety scores changed significantly from pretest to posttest and follow-up, whether the pattern of change differed among the existential therapy, schema therapy, and control groups, and whether the effects of the interventions were maintained over time. Where the omnibus analysis indicated statistically significant effects, appropriate pairwise comparisons were used to identify the specific differences between measurement occasions and treatment conditions. Statistical significance was evaluated at the conventional alpha level of .05, and effect-size indices were considered where applicable to facilitate interpretation of the magnitude of treatment effects.

3. Findings and Results

To provide an initial overview of changes in death anxiety across the three study groups, descriptive statistics were calculated for the pretest, posttest, and follow-up assessments. Table 1 presents the means and standard deviations of death anxiety scores for the control, existential therapy, and schema therapy groups at each measurement occasion. Examination of these descriptive values provides a preliminary indication of the direction and magnitude of change before inferential analyses are considered.

Table 1

Mean and Standard Deviation of Death Anxiety Scores at Pretest, Posttest, and Follow-Up

Variable	Assessment	Control Group M	Control Group SD	Existential Therapy M	Existential Therapy SD	Schema Therapy M	Schema Therapy SD
Death anxiety	Pretest	9.33	1.234	10.13	1.506	9.93	1.335
Death anxiety	Posttest	9.87	1.407	5.47	1.457	6.53	1.125
Death anxiety	Follow-up	10.00	1.927	4.93	1.280	6.33	1.397

As shown in Table 1, the three groups had relatively comparable death anxiety scores at pretest, with mean scores of 9.33 in the control group, 10.13 in the existential therapy group, and 9.93 in the schema therapy group. At posttest, the control group showed virtually no improvement and had a mean score of 9.87, whereas death anxiety decreased markedly to 5.47 in the existential therapy group and to 6.53 in the schema therapy group. The same pattern was maintained at follow-up, when the control group's mean score increased slightly to 10.00, while the mean remained substantially lower in the existential therapy group at 4.93 and in the schema therapy group at 6.33. The descriptive pattern therefore suggests that both interventions were associated with reductions in death anxiety and that the reduction appeared larger and more sustained in the existential therapy group.

Before conducting the repeated-measures analyses, the principal statistical assumptions were examined. The Kolmogorov-Smirnov test indicated that the distributions of

death anxiety scores did not significantly deviate from normality, as all obtained significance levels exceeded .05. For the comparison of existential therapy with the control group, Box's M test was nonsignificant, $p = .494$, indicating homogeneity of the covariance matrices, and Mauchly's test of sphericity was also nonsignificant, $p = .144$, supporting the sphericity assumption. Levene's tests were nonsignificant across the relevant measurement occasions, with p -values greater than .05, indicating homogeneity of variances. Similarly, for the comparison of schema therapy with the control group, Box's M test was nonsignificant, $p = .183$, and Mauchly's test of sphericity was nonsignificant, $p = .483$. The corresponding Levene's tests also yielded significance values above .05. Accordingly, the assumptions of normality, homogeneity of covariance matrices, sphericity, and homogeneity of variances were considered adequately satisfied, supporting the use of repeated-measures analysis of variance.

Table 2

Repeated-Measures Analysis of Variance for the Effects of Existential Therapy and Schema Therapy on Death Anxiety

Intervention Comparison	Effect	Sum of Squares	df	Mean Square	F	p	Partial η^2
Existential therapy vs. control	Time	94.489	2	47.244	41.282	< .001	.596
Existential therapy vs. control	Time $\times$ Group	154.756	2	77.378	67.612	< .001	.707
Existential therapy vs. control	Group	187.778	1	187.778	43.317	< .001	.607
Schema therapy vs. control	Time	42.067	2	21.033	16.637	< .001	.373
Schema therapy vs. control	Time $\times$ Group	84.467	2	42.233	33.405	< .001	.544
Schema therapy vs. control	Group	102.400	1	102.400	28.596	< .001	.505

The repeated-measures analysis presented in Table 2 demonstrated significant effects for both treatment conditions. In the comparison between existential therapy and the control group, the main effect of time was significant, $F(2) = 41.282$, $p < .001$, partial $\eta^2 = .596$, indicating significant changes in death anxiety across pretest, posttest, and follow-up. More importantly, the Time $\times$ Group interaction was significant, $F(2) = 67.612$, $p < .001$, partial $\eta^2 = .707$, demonstrating that the pattern of change

across the three measurement occasions differed significantly between the existential therapy and control groups. The between-group effect was also significant, $F(1) = 43.317$, $p < .001$, partial $\eta^2 = .607$. These findings indicate that existential therapy produced a significant reduction in death anxiety relative to the control condition. For schema therapy, the main effect of time was likewise significant, $F(2) = 16.637$, $p < .001$, partial $\eta^2 = .373$, and the Time $\times$ Group interaction was significant, $F(2) = 33.405$, $p < .001$,

partial $\eta^2 = .544$. The between-group effect was also statistically significant, $F(1) = 28.596$, $p < .001$, partial $\eta^2 = .505$. Thus, schema therapy was also effective in reducing death anxiety compared with the control group. Comparison

of the effect sizes suggests that the magnitude of change associated with existential therapy was larger than that observed for schema therapy.

Table 3

LSD Post-Hoc Comparisons of Death Anxiety Scores at Posttest and Follow-Up

Assessment	Group Comparison	Mean Difference	SE	p
Posttest	Control – Existential therapy	4.40	0.489	< .001
Posttest	Control – Schema therapy	3.33	0.489	< .001
Posttest	Existential therapy – Schema therapy	-1.07	0.489	.035
Follow-up	Control – Existential therapy	5.07	0.570	< .001
Follow-up	Control – Schema therapy	3.67	0.570	< .001
Follow-up	Existential therapy – Schema therapy	-1.40	0.570	.018

The LSD post-hoc comparisons shown in Table 3 further clarified the differences among the three groups. At posttest, the control group had significantly higher death anxiety scores than both the existential therapy group, mean difference = 4.40, SE = 0.489, $p < .001$, and the schema therapy group, mean difference = 3.33, SE = 0.489, $p < .001$. A significant difference was also observed between the two active treatment groups, mean difference = -1.07, SE = 0.489, $p = .035$, indicating lower death anxiety in the existential therapy group than in the schema therapy group. This pattern persisted at follow-up. The control group continued to report significantly higher death anxiety than the existential therapy group, mean difference = 5.07, SE = 0.570, $p < .001$, and the schema therapy group, mean difference = 3.67, SE = 0.570, $p < .001$. The difference between the two intervention groups also remained statistically significant at follow-up, mean difference = -1.40, SE = 0.570, $p = .018$. Therefore, both existential therapy and schema therapy significantly reduced death anxiety relative to the control condition, but existential therapy produced a significantly greater reduction than schema therapy at both posttest and follow-up, indicating stronger and more sustained therapeutic effectiveness.

4. Discussion

The present study compared the effectiveness of existential therapy and schema therapy in reducing death anxiety among married women with multiple sclerosis. The findings showed that both interventions significantly reduced death anxiety compared with the control condition and that these improvements were maintained at follow-up. In addition, the interaction between time and group was statistically significant for both treatment comparisons,

indicating that the pattern of change in death anxiety across pretest, posttest, and follow-up differed significantly between the intervention and control groups. Post-hoc comparisons further demonstrated that existential therapy produced a significantly greater reduction in death anxiety than schema therapy at both posttest and follow-up. Thus, although both therapeutic approaches were beneficial, existential therapy showed comparatively stronger and more sustained effects on death anxiety in women with MS.

The significant effectiveness of existential therapy in reducing death anxiety is consistent with the theoretical foundations of existential psychotherapy and with previous empirical findings. Existential therapy directly addresses fundamental human concerns such as death, freedom, responsibility, isolation, meaninglessness, and authenticity. For individuals living with a chronic and unpredictable condition such as MS, awareness of mortality may become intertwined with fears of disability, dependency, loss of autonomy, altered identity, and uncertain future functioning. Existential therapy does not attempt to suppress these concerns but instead encourages patients to confront them in a structured and psychologically safe manner, reconsider their priorities, clarify personal values, and develop a more meaningful relationship with life despite uncertainty. This interpretation is consistent with contemporary analyses of Yalom's conceptualization of death anxiety, in which mortality awareness is considered both a source of distress and a potential catalyst for psychological growth (Grady & Viterito, 2025). The findings also align with broader existential formulations emphasizing that therapeutic engagement with mortality can help individuals move from avoidance and fear toward acceptance, responsibility, and more authentic living (Diamond, 2021; Menzies & Menzies, 2024).

The present findings are also supported by empirical studies demonstrating the effectiveness of existentially oriented interventions for mortality-related distress. A systematic review and meta-analysis reported that selected existential therapies were effective in reducing death anxiety among patients with advanced cancer, providing strong evidence that direct work with mortality, meaning, and existential concerns can improve psychological adaptation in populations facing serious illness (Harahap et al., 2026). Although MS differs from advanced cancer in disease trajectory and immediate mortality risk, both conditions may activate concerns about bodily deterioration, uncertainty, loss, and finitude. Similarly, research has shown that death anxiety is clinically relevant among individuals with serious illness and may intensify when patients experience greater uncertainty and reduced perceived control (Versluis et al., 2026; Xue et al., 2026). These findings help explain why existential therapy may be especially well suited to women with MS, whose anxiety may be driven not only by fear of death itself but also by broader concerns about what may be lost before death, including independence, family roles, intimacy, and unrealized life possibilities.

The significant reduction in death anxiety observed following existential therapy is also congruent with previous studies conducted in neurological and chronic illness populations. Faghani Toulon et al. found that existential therapy improved death anxiety and related psychological outcomes in patients with Charcot-Marie-Tooth disease, suggesting that existential approaches can be useful in chronic neurological conditions characterized by progressive limitations and uncertainty (Faghani Toulon et al., 2023). Esmkhani Akbarnejad et al. similarly reported that logotherapy, which shares substantial conceptual overlap with existential therapy through its emphasis on meaning, responsibility, and purposeful living, was effective in reducing death anxiety, hopelessness, and psychological distress among women with MS (Esmkhani Akbarnejad et al., 2021). The present results extend these findings by showing that a structured existential therapy protocol can produce significant and durable reductions in death anxiety specifically among married women with MS.

One possible explanation for the stronger effect of existential therapy is that death anxiety is fundamentally existential in nature. Unlike generalized anxiety or situation-specific fear, death anxiety involves confrontation with the ultimate limits of human existence. In chronic illness, the patient may repeatedly encounter reminders of vulnerability, uncertainty, bodily fragility, and dependence. Existential

therapy directly addresses these themes, whereas many other psychotherapies approach them indirectly. Through structured discussion of mortality, meaning, freedom within limitation, existential isolation, and personal responsibility, participants may have developed greater tolerance for uncertainty and a more integrated understanding of their illness. This interpretation is compatible with work suggesting that existential concerns can be transformed through processes such as values clarification, acceptance, self-transcendence, meaning construction, and committed engagement with life (Menzies & Menzies, 2024; Vos, 2023). It also aligns with qualitative evidence showing that patients facing serious illness often cope with death anxiety through meaning-making, relational connection, cognitive reframing, and greater engagement with valued aspects of life (Luo et al., 2026).

The effectiveness of existential therapy may also have been mediated by its impact on emotional regulation and psychological well-being. Hatami and Tabatabaeinejad found that existential therapy improved emotional capital, cognitive emotion regulation, and subjective well-being in women with social anxiety (Hatami & Tabatabaeinejad, 2023). Although the population in that study differed from the present sample, these findings suggest that existential interventions can improve the capacity to process distressing emotions rather than avoid them. In women with MS, improved emotion regulation may reduce the tendency to catastrophize illness-related changes or interpret every symptom as evidence of inevitable deterioration. Similarly, Dahmani et al. reported that existential psychotherapy improved emotional distress tolerance in women with marital conflicts (Dahmani et al., 2024). Increased distress tolerance may be particularly important for patients with MS because the disease involves uncertainty that cannot be entirely removed. Learning to tolerate uncertainty without escalating into catastrophic interpretations may therefore reduce death anxiety over time.

The second major finding was that schema therapy also significantly reduced death anxiety compared with the control group. This result can be explained through the schema therapy model, which conceptualizes psychological distress as being influenced by early maladaptive schemas, dysfunctional coping styles, and schema modes. In the context of MS, schemas related to vulnerability to harm or illness, abandonment, dependence or incompetence, defectiveness or shame, emotional deprivation, and negativity may become activated by symptoms, medical uncertainty, role changes, and fears about future

dependency. When these schemas are strongly activated, patients may interpret illness-related experiences in exaggerated or catastrophic ways, which can intensify death anxiety. Schema therapy may reduce such anxiety by helping patients identify and challenge maladaptive interpretations, develop healthier coping patterns, strengthen the healthy adult mode, and replace punitive or catastrophic internal responses with more balanced and compassionate ones.

The present findings are consistent with the growing evidence base supporting schema therapy across a range of complex psychological conditions. Arntz et al. demonstrated the effectiveness of predominantly group-based and combined schema therapy for severe personality pathology, showing that schema-focused interventions can modify deeply rooted emotional and interpersonal patterns (Arntz et al., 2022). A systematic review and meta-analysis similarly supported the efficacy of schema therapy for personality disorders and highlighted its capacity to produce meaningful clinical improvements (Zhang et al., 2023). Although death anxiety was not the primary outcome in these studies, the findings support the broader proposition that entrenched maladaptive cognitive-emotional structures can be changed through schema-focused intervention.

Evidence from anxiety-related and health-related populations also supports the current results. Straarup et al. showed that group schema therapy could be effective for patients with severe anxiety disorders, suggesting that schema-focused work may be useful when anxiety is maintained by longstanding maladaptive beliefs and coping styles (Straarup et al., 2022). Joshua et al. likewise reported promising evidence for schema therapy in adults with eating disorders, indicating that schema-based treatment may have utility beyond personality disorders (Joshua et al., 2023). In chronic pain populations, schema therapy has been associated with improvements in perceived stress, pain catastrophizing, depression, and symptom severity (Soleimani, 2020). These findings are relevant to MS because pain catastrophizing, perceived vulnerability, helplessness, and negative beliefs about the body may overlap with cognitive-emotional processes that contribute to death anxiety.

The significant schema therapy effect may also be understood in terms of its focus on self-compassion and reduction of self-criticism. In the present intervention, participants were encouraged to identify punitive internal modes, strengthen the healthy adult mode, and develop more compassionate responses toward themselves. This may be

particularly important because recent research among patients with MS has shown that self-compassion can mediate the relationship between perceived stress and death anxiety (Türker & Demirkaya, 2026). By reducing self-judgment and promoting a more supportive internal stance, schema therapy may diminish the emotional intensity of illness-related fears and reduce catastrophic interpretations of physical symptoms or future disability.

Despite the effectiveness of both approaches, existential therapy produced a significantly greater reduction in death anxiety than schema therapy. This difference may reflect a closer conceptual match between the treatment target and the intervention focus. Schema therapy primarily addresses maladaptive schemas and coping patterns that may contribute to death anxiety, whereas existential therapy engages directly with mortality itself. In other words, schema therapy may reduce death anxiety through modification of vulnerability-related beliefs and maladaptive modes, while existential therapy may address the core fear more explicitly by helping individuals face mortality, redefine the meaning of illness, and reconstruct their relationship with finitude. Because death anxiety is closely related to meaninglessness, fear of nonexistence, loss of possibilities, and existential uncertainty, direct engagement with these themes may yield a stronger therapeutic effect.

This interpretation is supported by studies demonstrating that death anxiety is strongly connected with meaning and broader existential functioning. Vatikioti and Paparrigopoulos identified associations among death anxiety, life meaninglessness, and psychological resilience, highlighting the importance of existential variables in mortality-related distress (Vatikioti & Paparrigopoulos, 2024). Menzies has also emphasized that regret, unrealized possibilities, and awareness of failed potentialities can contribute to psychological disorders and existential distress (Menzies, 2022). For women with MS, concerns about death may therefore be inseparable from questions about whether important life roles, goals, and relationships can still be meaningfully pursued. Existential therapy directly addresses this domain by encouraging participants to identify what remains possible and valuable despite illness-related limitations.

The maintenance of treatment gains at follow-up is another important finding. The follow-up results suggest that both interventions produced changes that extended beyond the immediate treatment period, but the advantage of existential therapy remained evident. This persistence may

indicate that participants internalized therapeutic principles rather than simply experiencing temporary symptom relief. Existential therapy may have encouraged enduring changes in values, priorities, acceptance of uncertainty, and awareness of personal agency. Schema therapy may similarly have helped participants recognize recurring patterns and use healthier cognitive and behavioral responses outside the therapy setting. The sustained reduction in death anxiety is clinically meaningful because MS is a long-term condition in which psychological challenges recur as symptoms fluctuate and disease-related decisions arise.

The findings should also be considered within the broader clinical context of MS. Treatment changes, disease progression, and transitions between relapsing and progressive forms can intensify uncertainty and psychological stress (Dimitriou et al., 2023; Güleç et al., 2023). Quality of life in patients with MS is also influenced by demographic and relational variables, including gender, age, and marital status (Sabanagic-Hajric et al., 2022). These realities underscore the importance of psychological interventions that extend beyond symptom management and address patients' emotional, relational, and existential adaptation. The present findings suggest that both existential therapy and schema therapy may serve this purpose, with existential therapy potentially offering particular advantages when mortality-related concerns are prominent.

Death anxiety has increasingly been recognized as a clinically relevant psychological construct across medical and nonmedical contexts. Research conducted during the COVID-19 period demonstrated that heightened perceptions of mortality can significantly increase anxiety, indicating that death-related fear can become psychologically salient even when objective risk varies considerably (Özgüç et al., 2024). Similarly, studies of individuals with advanced illness have shown that death anxiety is influenced by psychological resilience, coping strategies, perceived threat, and social context (Versluis et al., 2026; Xue et al., 2026). The present study contributes to this literature by showing that death anxiety among women with MS is modifiable through structured psychological intervention and that treatment approaches differ in the magnitude of their effects.

5. Conclusion

Overall, the results indicate that both existential therapy and schema therapy are effective approaches for reducing death anxiety in married women with MS, but existential

therapy appears to produce a stronger effect. The findings support the view that death anxiety in chronic illness is multidimensional and can be addressed through both existential meaning-oriented processes and schema-focused cognitive-emotional restructuring. However, when mortality awareness itself constitutes a central source of distress, an intervention that directly addresses death, meaning, freedom, responsibility, and authenticity may produce greater therapeutic benefits.

6. Limitations and Suggestions

Several limitations should be considered when interpreting the findings. The study included a relatively small sample of 45 married women with MS recruited from a single geographical area and support setting, which limits the generalizability of the results to men, unmarried patients, individuals from other regions, and patients with different socioeconomic, cultural, or clinical characteristics. The use of a nonprobability recruitment procedure may also have introduced selection bias because individuals willing to participate in psychological treatment may differ from those who decline participation. Death anxiety was assessed through a self-report instrument, making the findings susceptible to response tendencies, social desirability, and subjective interpretation. The study also focused primarily on death anxiety and did not systematically assess potentially important mediators such as meaning in life, self-compassion, psychological flexibility, schema change, marital functioning, depression, or perceived social support. Furthermore, although follow-up data were collected, the follow-up interval was relatively short, and the long-term stability of treatment effects remains uncertain. Differences in therapist characteristics, group processes, therapeutic alliance, and adherence to the protocols may also have influenced outcomes.

Future studies should replicate these findings using larger and more diverse samples drawn from multiple clinical centers and geographical regions. Including male patients, unmarried individuals, patients from different age groups, and individuals at different stages of MS would clarify whether the comparative effects of existential therapy and schema therapy vary across demographic and clinical subgroups. Randomized controlled trials with longer follow-up periods would provide stronger evidence regarding durability of effects. Future research should also examine potential mediating mechanisms, including meaning in life, experiential avoidance, self-compassion, psychological

flexibility, vulnerability schemas, catastrophizing, perceived control, and emotional regulation, to determine how each intervention reduces death anxiety. Comparative studies involving other therapies, such as acceptance and commitment therapy, cognitive-behavioral therapy, mindfulness-based interventions, or meaning-centered therapy, would further clarify the relative effectiveness of different approaches. Mixed-methods studies incorporating qualitative interviews could also provide deeper insight into how patients experience mortality, illness, treatment, and changes in personal meaning over the course of therapy.

Psychologists and counselors working with patients with MS should routinely assess death anxiety rather than assuming that mortality-related fears are adequately captured by general measures of anxiety or depression. Existential therapy may be particularly useful for patients whose distress centers on uncertainty, loss of meaning, fear of disability, awareness of mortality, or concerns about unrealized life possibilities. Schema therapy may be especially appropriate for patients whose death anxiety is strongly linked to chronic patterns of vulnerability, abandonment, dependence, shame, or catastrophic thinking. Clinical services may benefit from integrating both approaches within multidisciplinary MS care, with intervention selection based on the patient's dominant psychological mechanisms and treatment preferences. Group-based programs may also be feasible in MS associations and rehabilitation settings, particularly when accompanied by screening, therapist training, treatment manuals, and follow-up support. Attention should additionally be paid to marital relationships, self-compassion, body image, intimacy, and family roles because these domains may shape how women with MS experience and cope with death-related anxiety.

Authors' Contributions

Authors equally contributed to this article.

Declaration

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

Transparency Statement

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

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

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