Psychiatry and Behavioral Sciences 2025;15(4):xxx-xxx

Doi:10.5455/PBS.20250710125845

SYSTEMATIC REVİEW

Psychological Protocol Guidelines and Intervention Studies to Reduce Death Anxiety in a Clinical Sample: A Systematic Review

Büşra Kavla, Burcu Uysal

Ibn Haldun University, Department of Psychology, Istanbul, Türkiye

Abstract

Objective: Researchers have identified death anxiety (DA) as a crucial factor in the onset and persistence of psychopathology, affecting both physical and mental health, and often leading to a diminished quality of life. Despite the well-established link between DA and various forms of psychopathological conditions, therapeutic interventions targeting DA, particularly in clinical samples, are limited. DA is observed across diverse populations, including university students, physicians, and mothers over the age of 18, and is not limited to aging or physiological illness. While it peaks in young to middle adulthood and declines in older age, it remains a critical concern in clinical settings, underscoring the importance of addressing DA beyond its traditional association with aging or disease. Despite the growing interest in the topic, the existing literature on DA remains limited, particularly in clinical samples. Given the link between DA and psychopathology, identifying effective psychological interventions for reducing DA in clinical samples is crucial. Yet, most studies in these populations remain descriptive, with limited interventional research. Systematic reviews can bridge this gap by synthesizing evidence to inform more effective therapies. None of the studies reviewed psychological protocol guidelines or interventions for DA within clinical populations. To address this gap, the present study aims to systematically review psychological protocols and interventions designed to alleviate DA in clinical settings conducted between January 2000 and January 2023.

Methods: Following PRISMA guidelines, a search was conducted across PsycArticles, PubMed, Web of Science, ScienceDirect, and Scopus, utilizing the keywords "death, " "death anxiety, " "death phobia, " "fear of death, " "thanatophobia, " "intervention, " "treatment, "and "therapy."

Results: Out of 3918 studies, 890 duplicates were excluded using Rayyan. Then, two independent examiners reviewed the full text of the remaining studies, and disagreements were resolved by consensus. Eight studies were identified through consensus.

Conclusion: Intervention studies in clinical settings are notably scarce and often hindered by several limitations. Key limitations include insufficient sample sizes, lack of follow-up assessments, and limited reporting on intervention effects for pre-existing psychopathology. Additionally, there is a scarcity of specifically developed DA-focused interventions, challenges in balancing online applications with therapeutic alliance, and inadequate consideration of cultural beliefs, such as afterlife perspectives. Advancing the field requires the development of innovative protocols that incorporate concepts related to the afterlife into interventions aimed at reducing DA. Future research could prioritize exploring the complex interplay between religious beliefs, particularly those concerning the afterlife, coping strategies, and psychological outcomes among individuals facing significant stressors.

Keywords: Clinical Sample, Death Anxiety, Intervention, Psychological Protocol Guideline, Systematic Review

INTRODUCTION

Death is a universal certainty that gives life profound meaning and value. This unavoidable fate adds seriousness to our existence and provokes existential fear. Unpredictable yet inevitable, the end of human life often appears in daily life, serving as a constant reminder of our mortality and that of our loved ones (1). This awareness may generate anxiety (2). Cultural anthropologist Ernest Becker argued that humans are dualistic beings, composed of a physical body and a symbolic mind. While the symbolic mind enables us to think about the universe in endless ways, it is limited by the physical struggles of the real world, creating an existential paradox (3). Terror Management Theory (TMT) expands on these ideas, suggesting that humans, like animals, have a biological system for survival. The amygdala is the most critical part of this system. Over time, humans have developed additional skills that aid survival beyond fear: the ability to use symbols for thinking and communication, imagination, and self-awareness. However, these abilities have also made us aware that, despite our fear system, death is unavoidable (2). This heightened awareness can trigger dysfunctional

Corresponding Author: Büşra Kavla, **E-mail:** busra.kavla@stu.ihu.edu.tr

Citation: Kavla B, Uysal B. Psychological protocol guidelines and intervention studies to reduce death anxiety in a clinical sample: a systematic review. Psychiatry and Behavioral Sciences. 2025;15(4):xxx-xx. doi:10.5455/PBS.20250710125845

Received: Jul 12, 2025 **Accepted:** Sep 25, 2025

coping responses, which in turn may lead to mental health problems (4). Therefore, understanding its impact on mental health and developing effective treatments for death anxiety (DA) is crucial.

DA is defined as a persistent and irrational fear of death, along with related thoughts, fears, and emotions about the end of life (5). It covers various concerns, including anxiety about one's death, the death of others, the dying process, and the unknown (6). Recent studies during the COVID-19 pandemic show that DA scores collected in 2020 and 2021 were 51% and 62%, respectively (7). This prevalence was reported as 48.3% among university students (8), 73.6% in the general population (9), and 62.7% in mothers over 18 (10). Surprisingly, DA is not limited to aging or physical illness, peaking in midlife, declining in old age, and remaining significant in both adolescents and young adults (11, 12, 13). However, previous research on DA has mainly focused on the elderly, patients, or healthcare professionals caring for the terminally ill (14, 15, 16). Despite growing interest in this area, literature on DA remains limited, especially concerning clinical samples.

It has been discovered that there is a connection between DA and different types of psychopathologies: obsessive-compulsive disorder, social anxiety disorder, generalized anxiety disorder, somatic symptoms, postpartum depression, and eating disorders (10, 17, 18, 19, 20). There is also a correlation between DA and other aspects of psychopathology, including the total number of diagnoses received, medication use, and previous hospitalizations (20). Furthermore, DA can impact several areas of life, particularly physical and mental health, and lead to a reduction in quality of life (4, 21, 22). The findings highlight the importance of addressing DA when treating psychiatric disorders. Considering the relationship of DA to psychopathology and its negative consequences, it is important to examine which psychological approach or technique is effective in reducing DA in a clinical sample.

Intervention studies help refine treatments by identifying which approaches are most effective, and systematic reviews are essential for synthesizing this evidence. A recent meta-analysis identified 15 studies on DA, but none were conducted in clinical samples, including college students, nursing students, and terminal cancer patients (23). To date, no systematic review has specifically examined psychological interventions for reducing DA in clinical populations, despite existing reviews and meta-analyses on the topic (23, 24). This gap may hinder the development of effective long-term treatments and increase the risk of relapse. Moreover, the vast amount of available information makes it difficult for clinicians to identify the most relevant research, and unsystematic selection risks introducing bias. Systematic reviews address this challenge by applying rigorous methods to transparently summarize all relevant studies, thereby providing a comprehensive understanding of the evidence base (25). Such reviews lay the groundwork for evidence-based interventions, highlight gaps and inconsistencies, and offer valuable insights into both the effectiveness and limitations of existing approaches. This study aims to systematically identify psychological interventions and protocols carried out between 2000 and 2023 to reduce DA in clinical samples. The current systematic review is the first to examine psychological protocols and interventions for DA in a clinical sample. To fill this gap, the following research question guides the investigation: What psychological interventions and protocols have been developed and tested between 2000 and 2023 to reduce death anxiety (DA) in clinical populations, and what are their strengths and limitations?

METHODS

Protocol

This systematic review was conducted and reported using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA-2020) checklist (26).

Search Strategy

The literature review, covering studies published between January 2000 and January 2023, was conducted using the following databases: PsycArticles, PubMed, Web of Science, ScienceDirect, and Scopus. Eight keywords were used in the search: “death”, “death anxiety”, “death phobia”, “fear of death”, “thanatophobia”, “intervention”, “treatment”, and “therapy”. The search query used was: (“death anxiety” OR “death phobia” OR “fear of death” OR “thanatophobia”) AND (“intervention” OR “treatment” OR “therapy”).

Inclusion and Exclusion Criteria

The inclusion criteria were (1) psychological protocol guidelines and interventions on death anxiety, (2) a sample diagnosed with a psychiatric diagnosis, and (3) studies published in English. The exclusion criteria were (1) review studies, case presentations, and descriptive studies; (2) studies conducted with children or adolescent

groups; and (3) samples with elderly, physiological patients, or health professionals who care for terminally ill patients. As the number of randomized controlled studies on reducing DA is limited, the exclusion criteria did not include non-randomized controlled studies. In addition, as there are few intervention studies to reduce DA in clinical samples, protocol guidelines were also included in the review.

Selection of Studies and Selection Process

Rayyan (27) was used to synthesize search results and remove duplicate entries. The search yielded a total of 3918 studies from PsycArticles (49), PubMed (524), Web of Science (563), ScienceDirect (2010), and Scopus (772), with 890 duplicates eliminated. After removing duplicates, Researcher 1 and Researcher 2 reviewed each study to determine its eligibility for inclusion. A total of 2,810 articles were excluded based on title and abstract screening, as they were not considered protocol or intervention studies aimed at reducing DA.

Following this, two independent examiners (Researcher 1 and Researcher 2) reviewed the full texts of the remaining studies to evaluate their suitability for inclusion more thoroughly. Any disagreements were resolved through discussion. A total of 218 articles were excluded because they did not include clinical samples; instead, their samples consisted of individuals with physical illnesses, particularly cancer (88), students (26), the elderly (13), adolescents (5), healthcare workers (28), and other non-clinical groups (12). Following the inclusion and exclusion criteria, eight studies were identified (Figure 1).

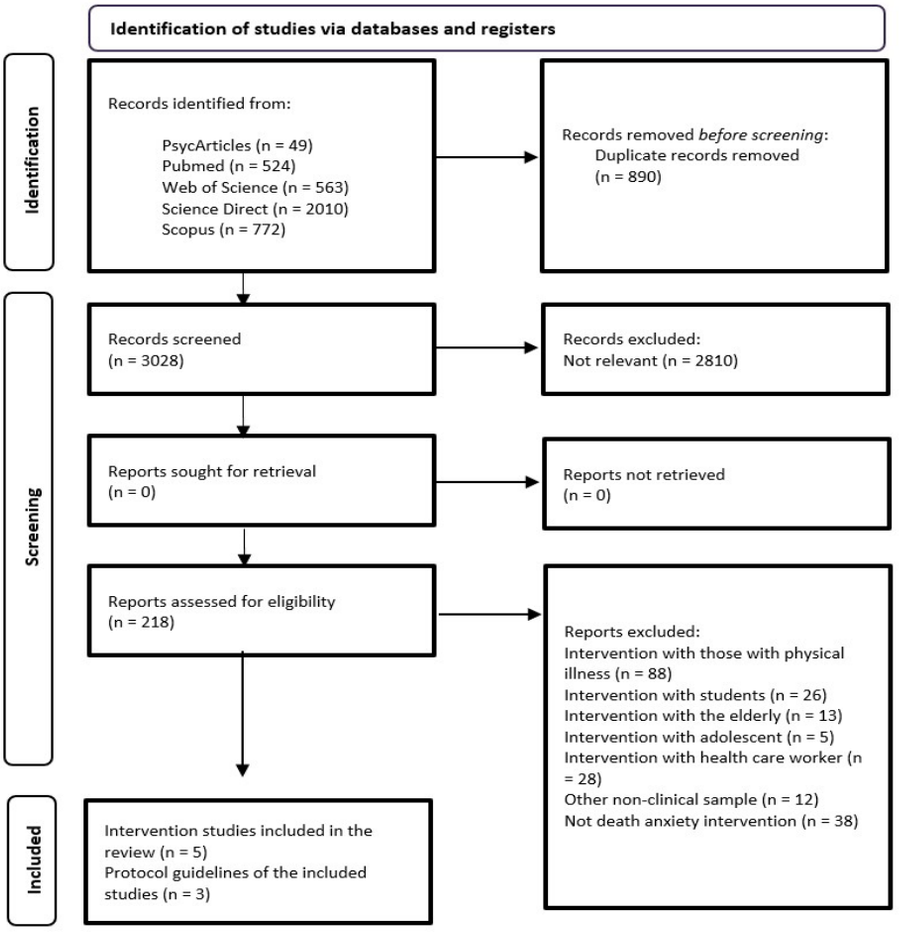

Figure 1. PRISMA diagram of selection of studies

Assessing Quality

Due to the limited number of intervention studies focused on DA in clinical samples, no studies were excluded during the quality assessment. All relevant studies identified through screening were included in the review.

RESULTS

A total of eight studies met the inclusion criteria and did not meet the exclusion criteria. This review included five intervention studies and three treatment protocol guidelines. The following sections summarize the intervention studies: (1) participants, inclusion and exclusion criteria, (2) assessment tools and points, (3) intervention strategies, (4) control methods, and (5) key findings (see Table 1). The next sections cover the protocol guidelines: (1) recommended samples, (2) assessment suggestions, (3) protocol guidelines, (4) case examples, and (5) results (see Table 2).

General Characteristics of Intervention Studies

The review included intervention studies published between 2020 and 2023. The sample sizes ranged from 4 to 30 participants. Participants included individuals with obsessive-compulsive disorder (OCD), generalized anxiety disorder (GAD), high anxiety levels, and various mental health diagnoses. Most participants were women. The interventions involved psychotherapies such as Overcome Death Anxiety, CBT-based interventions (ODA) (28,29), ACT-based therapy (30), Religious Spiritual Integrated Therapy (RSIT) (31), and Neurolinguistic Programming (NLP) (32). Only one study included a control group (31).

Measurement Tools in Intervention Studies

At least two assessments were conducted, including pre-tests and post-tests, with some studies performing up to six measurements. None conducted follow-up tests. For diagnostic purposes, three studies employed structured interviews, including the Anxiety and Related Disorders Interview Schedule – Lifetime Edition (ADIS-5L) and the Structured Clinical Interview for DSM-5 Disorders: Clinician Version (SCID-5-CV), both of which were used to confirm OCD diagnoses. One study diagnosed GAD using a semi-structured interview. Various tools measured DA, such as the Multidimensional Fear of Death Scale (MFODS), Collett-Lester Fear of Death Scale-Revised (CLFD-R), Templar Death Anxiety Scale (DAS), Death Thoughts Questionnaire (DTQ), and Death Behavior Questionnaire (DBQ). Depression and anxiety symptoms were assessed with the Patient Health Questionnaire-9 (PHQ-9) and the Depression, Anxiety, and Stress Scale-21 (DASS-21), respectively.

Content of Intervention Studies

A detailed review of the interventions used in the studies revealed the following: two studies employed a CBT-based intervention (ODA), one used an ACT-based approach, one incorporated a religious-spiritual integrated therapy, and one applied Neurolinguistic Programming (NLP). The interventions included in the studies are described in detail.

Overcome Death Anxiety (ODA) is an online CBT-based program (28,29). The ODA begins with cognitive challenges and then progresses to behavioral strategies. The modules are designed to address unhelpful beliefs and behaviors (33). It consists of seven modules: Introduction, Thinking Exercises, Challenging Your Thinking, Creating Your Model, Exposure, Living Life to the Fullest, and Relapse Prevention. Module 1 is Introduction, with a visual introduction by the therapist emphasizing the importance of confronting fears of death. Module 2 focuses on cognitive models of emotion and introduces cognitive errors. To proceed, users must pass a quiz matching death-related thoughts with cognitive distortions. Module 3 guides participants in challenging negative thoughts about death through cognitive restructuring exercises. Module 4 involves creating individualized formulations of anxiety based on avoided situations, causal thoughts, behaviors, and physical symptoms. Module 5 introduces exposure therapy, where participants complete exposure tasks and reflect on their experiences. Module 6 helps identify personal values and set goals. Module 7 covers relapse prevention strategies, encouraging realistic thinking and planning during stressful periods. In addition to the seven core DA modules, ODA includes two new tasks: reflection exercises and expansion activities. Reflection tasks encourage users to engage with death-related themes through quotes, videos, and music, offering different perspectives and brief relief from cognitive exercises. Expansion tasks are optional activities that allow participants to explore materials such as movies and books, which they may skip if they wish.

ACT-based intervention is an online ACT program (30). It consists of eight weekly sessions. The first session explores obsessions and compulsions, introduces the treatment, and establishes the therapeutic alliance. In the second session, the therapist and participants review the futility of attempting to control internal experiences, such as obsessions, illustrated by the "man in the hole" metaphor, emphasizing the pointlessness of digging deeper to regulate them. Sessions 3 and 4 focus on how attempts to control obsessions can worsen OCD and reduce quality of life. Defusion exercises, present-moment awareness techniques, and self-as-context work

are used in sessions five and six. In the last two sessions, participants identified their values and increased their commitment to living more in accordance with these values.

Religious-Spiritual Integrated Therapy (RSIT) is an innovative approach to religion-based psychotherapy (31). It combines traditional cognitive-behavioral therapy with positive coping strategies derived from religion and spirituality. The experimental group received RSIT in eight weekly individual sessions. The treatment guidelines by Khoshnoud et al. (2014) served as the foundation for RSIT (34). These guidelines are designed to enhance the quality of life and adjustment of couples experiencing infertility. Techniques used include relaxation training, cognitive restructuring, thought stopping, forgiveness, and behavioral activation.

Neurolinguistic Programming (NLP) is an approach that examines the connection between internal processes and external experiences (32). Its core principle is conditioning and programming the inner world to produce desired external outcomes. It focuses on personal communication and development, addressing how individuals manage their thoughts, emotions, and language. NLP asserts that language profoundly influences the neurological processes behind human behavior. It helps patients improve their understanding and cognitive patterns, especially in reframing perspectives on mental health. It offers strategies to control and reduce thanatophobia experienced by patients.

Table 1. General characteristics of the intervention studies

Study	Participants, Inclusion and Exclusion Criteria	Instruments	Point of Assessments	Intervention Program	Duration	Control Strategies	Relevant Findings
Menzies et al., 2023	**Participants:** 20 participants, 60% women, aged 18+, with diverse mental health diagnoses **The inclusion criteria were:** (1) ≥18 years of age; (2) a current mental health diagnosis; (3) regular access to the internet or email; (4) English fluency; and (5) a high DA (≥1SD below the community mean on the Multidimensional Fear of Death Scale; MFODS). **Exclusion criteria were:** (1) having received CBT in the past six months; (2) having a current psychotic illness; and (3) having severe symptoms of depression [i.e., scores >19 on the Patient Health Questionnaire-9 (PHQ-9) and >1 on the suicidality item].	ADIS-5L; CLFD-R; MFODS; PHQ-9; DASS-21	Pre-test and post-test were conducted	Overcome Death Anxiety (ODA)	Seven modules	No control group	Of 20 participants, 10 completed the program. Six showed significant DA reduction, and nine improved on at least one DA subscale. All six found the program effective but needed further treatment. 60% showed significant improvement in at least one DASS-21 subscale, with 40% reducing stress, 30% anxiety, and 10% depression. Of the six completing the PHQ-9 post-intervention, two (33%) improved significantly, while four showed no change.
Davazdahemami et al., 2020	**Participants:** Eight adult participants with OCD, ranging in age from 28 to 45, are all female. **The inclusion criteria included the following:** An OCD diagnosis, between 18 and 50 years old; the ability to speak and communicate; and a minimum literacy. **The exclusion criteria were:** Death awareness therapy experience in the recent six months, absences for more than two sessions, and failure to perform tasks between sessions.	SCID-5-CV; DAS; YBOCS	Baseline tests 1-2-3 and tests at sessions 4, 6, and 8 were conducted.	Acceptance and Commitment Therapy	Eight weekly sessions	No control group	Due to the exclusion criteria, three participants did not complete the treatment phase. Results demonstrate that there is a significant decrease in DA by 60-80% and obsessive-compulsive symptoms by 51-60%. ACT sessions reduced both OCD symptoms and DA. The largest reductions occurred between sessions six and eight.

Menzies et al., 2021	**Participants:** Twelve participants **Inclusion criteria were:** Individuals who had not had CBT in the past six months, who had no symptoms of psychosis or severe symptoms of depression, and who had significantly higher DA than community norms, as indicated by a score of more than one standard deviation below the mean on the Multidimensional Fear of Death Scale, who had a current mental health diagnosis, as determined by the ADIS-5L interview **The exclusion criteria were not specified.**	ADIS-5L; CLFD-R; MFODS; DBQ; DTQ; PHQ-9; DASS-21	Pre-test and post-tests were conducted.	Overcome Death Anxiety (ODA)	Seven modules	No control group	While the clinical trial is still ongoing, of those who have started the program, 33% have completed it, 50% have stopped, and 17% are still participating. There was no statistical analysis or reporting of the results.
Dadfar et al., 2023	**Participants:** 30 outpatients (56.7 % women) with generalized anxiety disorder (GAD) **Inclusion criteria were:** unspecified **The exclusion criteria were:** Individuals with a chronic physical illness, a primary diagnosis of depression, a psychotic disorder, or a substance use disorder were excluded from the study. To control for potential confounding variables, patients were not provided with any form of training or individual or group psychological treatment during the study.	A semi-structured interview; DAS; DOS; DDS	Pre-test and post-tests were conducted.	Religious Spiritual Integrated Therapy (RSIT)	Eight individual weekly sessions	The control group receives no intervention	There was no significant change in DA scores in the control group before and after the intervention (p = .898). The experimental group exhibited a significantly lower level of DA than the control group at the post-test (p = .02).
Ifdil et al., 2020	**Participants:** 4 respondents with high and very high levels of anxiety **Inclusion criteria were:** unspecified **The exclusion criteria were:** unspecified	DASS; Observation sheet	The levels of thanatophobia are assessed three times in the baseline phase (A1), three times in the intervention phase (B1), and three times in the subsequent baseline phase (A2).	Neurolinguistic Programming (NLP)	Not specified	There is no control group.	The baseline phase (A1) remained stable at a median of 8, decreasing to 5 during the intervention phase (B1), and further dropped to 3 in the final baseline (A2). This indicates that increased intervention reduces the target behavior, suggesting the thanatophobic client requires more care. The difference between A1 (8) and B1 (5) was 2, showing a reduction in the behavior, with the positive value indicating treatment effectiveness.

*ADIS-5L: The Anxiety and Related Disorders Interview Schedule – Lifetime Edition (Brown & Barlow, 2014); CLFD-R: The Collett-Lester Fear of Death Scale-Revised (Lester, 1990); DAS: Death Anxiety Scale (Templer, 1970); DASS: Depression Anxiety Stress Scale (Brown et al., 1997); DASS-21: The Depression Anxiety Stress Scales-21 (Lovibond & Lovibond, 1995); DBQ: Death Behavior Questionnaire (Menzies et al., 2021); DDS: Death Depression Scale (Templer, 1990); DOS: Death Obsession Scale (Abdel-Khalek, 1998); DTQ: Death Thoughts Questionnaire (Menzies et al., 2021); MFODS: The Multidimensional Fear of Death Scale (Hoelter, 1979); PHQ-9: The Patient Health Questionnaire-9 (Kroenke et al., 2001); SCID-5-CV: Structured Clinical Interview for DSM-5 Disorders: Clinician Version (First & Williams, 2016); YBOCS: Yale-Brown Obsessive Compulsive Scale (Goodman et al., 1989).

General Characteristics of Protocol Guidelines

The review included protocol guidelines published between 2004 and 2008. The participants were patients with symptoms or diagnoses of health anxiety, other anxiety disorders, and medically unexplained symptoms (MUS). The protocol guidelines encompass various therapeutic approaches, including a CBT-based method (33), a combination of cognitive, psychodynamic, and philosophical principles (35), and practices centered on meaning and attachment (36). Notably, a single case report (33) provides empirical evidence supporting these guidelines.

Suggestions for Assessment

Two of the studies used a clinical interview for diagnostic assessment. Only one of the studies recommended self-report measures. This study recommended the Health Anxiety Questionnaire (HAQ) for health anxiety. The study suggested two instruments to assess death anxiety, namely the thanatophobia subscales of the Illness Attitude Scale (IAS) and the Death Anxiety Scale (DAS). The Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), and Symptom Checklist-90-Revised (SCL-90-R) have been proposed to assess depressive and anxiety symptoms, respectively. Table 2 provides a detailed description of the protocol guidelines used in the studies.

Table 2. General characteristics of the protocol guidelines

Study	Applicable Samples	Suggestions for Assessment	Protocol Guidelines	Recommended Sessions and Duration
Furer & Walker, 2008	Individuals diagnosed with health anxiety and other anxiety disorders	Clinical Interview; IAS; HAQ; DAS; BDI; BAI; SCL-90-R	CBT-based approach	Not specified
Starcevic, 2005	Individuals diagnosed with hypochondriasis	Not used	Combined Cognitive, Psychodynamic, and Philosophical Principles	Not specified.
Maunder & Hunter, 2004	Individuals with medically unexplained symptoms (MUS)	Establishing a secure therapeutic relationship is essential before therapy begins. This starts during the initial assessment, which may last up to two hours in MUS, allowing the therapist to fully listen to the patient's story and assess psychological, psychiatric, and developmental history.	Meaning and Attachment-based approach	Approximately 12-15 sessions

*BAI: Beck Anxiety Inventory (Beck, Epstein, Brown, & Steer, 1988); BDI: Beck Depression Inventory (Beck, 1996); DAS: Death Anxiety Scale (Templer, 1970); HAQ: Health Anxiety Questionnaire (Lucock & Morley, 1996); IAS: The Thanatophobia subscales of the Illness Attitude Scale (IAS) (Kellner, 1987); SCL-90-R: Symptom Checklist-90—Revised (Derogatis, 1992).

Content of Protocol Guidelines

The CBT-based approach involved incorporating the restructuring of negative cognitions about death and exposure to death-related avoidance into the classical cognitive behavioral therapy (CBT) treatment protocol (33). The first part begins with the treatment rationale, which emphasizes the importance of addressing the fear of death directly. The second part of the study focused on reducing excessive checking, reassurance seeking, and safety behaviors. Such behaviors may include monitoring vital signs, researching symptoms, or engaging in superstitious rituals. The third component of the treatment is exposure, including in vivo, imaginal, and interceptive. Examples of exposure activities include writing a will, visiting a cemetery, or reading about death-related topics. The fourth component of treatment is cognitive reappraisal, which involves challenging common, unrealistic beliefs about death and fostering more balanced perspectives. Exposure exercises, including education on death experiences, can help shift catastrophic thoughts toward a more realistic appraisal of death. Then, treatment continues with an increasing focus on life goals, life enjoyment, and developing a healthy lifestyle. The last part is relapse prevention. Therapy sessions and homework assignments integrate interventions, requiring daily completion of treatment goals. The treatment is described, but its session number and duration are unspecified.

The goal of Combined Cognitive, Psychodynamic, and Philosophical Principles is to 1) foster a non-threatening perception of one's body, 2) modify attitudes and beliefs related to health, illness, and death, which may contribute to a heightened fear of death, and 3) significantly reduce or eliminate pathological DA (35). This treatment approach combines principles from cognitive theory and techniques with contributions from the psychodynamic school and philosophy. The first stage of treatment is to address the body's fears. The primary objective is to facilitate the normalization of patients' specific appraisals of physical symptoms, beliefs about the dangerousness of the body, and attitudes toward health and disease. The second treatment component entails addressing patients' attitudes and beliefs about death. It is significant to gain an understanding of the specific notions and attitudes towards death held by the patients, as this helps to elucidate the root of their fear. It is not uncommon for patients to find it challenging to articulate their thoughts and feelings about death. Therefore, it is important to approach these obstacles by respecting the boundaries and timing for discussing such sensitive topics as death. The final stage of the process is to address the pathological fear of death. Therapists can show that fear is not the only way to approach death, and that excessive fear is detrimental to one's quality of life. By engaging patients in philosophical discourse about death, it becomes evident that their fear has deprived them of the capacity for joy and pleasure. By demonstrating that the overwhelming fear of death is more detrimental than death itself, therapists can encourage patients to adopt a different attitude toward death. This approach is often effective due to

its persuasive logic, which ultimately helps patients to alleviate their DA. The treatment components are described, but the number of sessions and the treatment duration are not specified.

Meaning and Attachment-Based Intervention (MABI) is defined as the persistent occurrence of multiple physical symptoms that remain unresolved despite appropriate medical investigation, resulting in the need for medical attention, treatment, or functional limitations (36). Attachment-existential therapy was developed by revising the Brief Attachment-based Intervention (BABI) protocol. In the BABI, the treatment is brief (ten sessions), attachment-focused, and employs homework assignments to engage participants actively. The initial sessions are designed to achieve three primary goals. These are to decrease the level of anxiety, to change from focusing on symptoms to relationships and emotions, and to establish a secure base. Providing a simple symptom record as a homework assignment in the early sessions, before introducing attachment and meaning-based assignments, may be helpful for patients who are particularly rigid in their focus on somatic concerns. After the introduction of relaxation training, the early sessions provide the template for the format of subsequent sessions. The structure of sessions includes an unstructured period, homework review, and discussion of attachment-existential themes. The middle sessions of therapy represent a pivotal point in the therapeutic process. The primary objective during the middle sessions is the development of a sense of security within therapy. The exploration of existential issues typically occurs at later sessions, depending on the establishment of a secure therapeutic foundation and the capacity for reflective functioning. Homework assignments explore themes such as meaning (ex., What things do you believe in that give meaning to your life?), interpersonal engagement (ex., Is there a person or group of people whom you love or who is/are important to you?), DA (ex., What are your fantasies about your death?), responsibility (ex., What do you feel responsible for?), and coping with control and uncertainty (ex., What is your attitude when you face challenges that are realistically beyond your control?). Termination in MUS treatment is often challenging due to personal suffering, dependency, and mistrust. Addressing termination issues early is crucial, as symptoms may resurface and manifest as distress or physical complaints. Anticipating relapses and fostering coping strategies can ease the process, and successful termination should enable patients to engage with internal and external experiences more openly.

Case Example and Results

Only one study mentioned a case example and its results (33). Jane is a 43-year-old social worker in a general hospital and the mother of four children aged 6 to 14. Her anxiety focused less on illness or imminent death than on the process of dying, its meaning, and the effect it might have on her children. She avoided reminders of time and rituals such as birthdays or funerals, which amplified the disruption in her daily life. In therapy, she worked with writing tasks and gradual exposure to death-related material, including photo albums and obituaries. Cognitive techniques supported her in managing uncertainty, while renewed attention to self-care and leisure helped her reconnect with the present. Through these experiences, she was able to reduce avoidance, regain a sense of peace, and approach life with greater meaning.

DISCUSSION

This systematic review aimed to identify effective interventions and protocol guidelines for reducing DA in clinical samples. The review summarized findings from eight studies, covering five interventions and three protocol guidelines. Although DA is associated with various mental disorders, intervention studies in clinical populations are limited and have several limitations. Accurate diagnosis is a critical point for an intervention study and requires clinical interviews and appropriate measurement tools to evaluate treatment effectiveness. Only three studies used structured interviews, including the ADIS-5L and SCID-5-CV (30, 28, 29). The two studies by Menzies et al. (2021, 2023) had notable strengths and limitations. One advantage is the online delivery of the intervention, which increases accessibility (28, 29). Given the high cost of individual therapy, an online platform provides therapy to more people who might otherwise lack access. Strengths of these studies include clinical interview assessments, self-reports of death anxiety, and measurement of the intervention's effect on anxiety and depression symptoms using the PHQ and DASS. However, in the 2021 study, only six out of twelve participants remained, while the other six dropped out. In 2023, Menzies et al. reported that 10 out of 20 participants completed the treatment (29). These high drop rates raise important questions. A strong therapeutic alliance is essential for treatment success, continuity, and outcomes (37). Forming this bond can be challenging in online settings, and the absence of a strong therapeutic connection may contribute to dropouts.

Additionally, assessing how well participants understand the intervention in an online setting is difficult. The lack of a control group in these studies is another limitation. Reevaluating the effectiveness of ODA is necessary, given the small sample sizes and absence of control groups.

Out of five studies, only two focused on a specific psychopathology group (31, 30), and only one used a measurement tool specific to psychopathology. The ACT-based intervention reduced both DA and OCD symptoms, as measured by the Yale-Brown Obsessive Compulsive Scale (YBOCS). However, this study has some limitations. The components of the applied intervention are a classical OCD treatment, not based on DA. Further investigation is required to ascertain the impact of ACT-based interventions targeting DA on existing psychopathology symptoms. Secondly, the study commenced with eight participants, and three did not complete the treatment program. A sample size of five is insufficient for evaluating the effectiveness of an intervention, and statistical analysis is also limited. The lack of a control group and follow-up are major limitations (30). The lack of follow-up assessments highlights the necessity of establishing the long-term efficacy of these interventions.

Among the five included studies, only Dadfar et al. (2023) is an RCT (31). In psychological intervention trials, RCTs typically compare experimental and control psychotherapy groups (38). However, no-treatment controls are problematic, as they fail to account for placebo effects (39) and preclude meaningful comparisons. Future research should address this limitation. Strengths of the study include the presence of a control group, adequate sample size (15 per group), and the use of validated instruments to assess DA. Nonetheless, several limitations warrant consideration. GAD was diagnosed via a semi-structured interview without details, using structured tools such as the SCID or GAD-7, with pre- and post-assessments would have provided more robust data. Moreover, the effects of DA-based interventions on comorbid psychopathology remain unexplored. The intervention components were insufficiently described. RSIT, adapted from Khoshnoud et al. (2014), was originally developed to improve the quality of life in infertile couples, and its adaptation for DA is unclear (34). The religious and spiritual elements were also underdefined; forgiveness appeared as the only non-CBT component, yet its rationale and application were not explained. Furthermore, the religious background of participants was not reported. Future studies should clarify these aspects and examine how participants' beliefs shape treatment efficacy.

DA is considered a primary and fundamental source of anxiety, significantly influencing various other forms of anxiety (6). Not surprisingly, participants in intervention studies are primarily patients with symptoms or diagnoses of OCD, GAD, and high levels of anxiety. This situation aligns with the participants in previous descriptive research (19, 20). Indeed, in the context of anxiety disorders, DA has frequently been a subject of study. However, studies have also identified a relationship with DA in clinical samples beyond anxiety disorders, including eating disorders (18), somatic symptoms (17), and postpartum depression (10). Since DA is a transdiagnostic construct that could affect the onset of numerous mental health disorders (20), it is essential to evaluate the potential impact of DA on the recovery and treatment of mental health disorders in future research.

The interplay of religious beliefs and cultural norms is central to shaping views on mortality and, consequently, levels of DA. Religious teachings often provide frameworks for interpreting death that may either alleviate or intensify anxiety, while cultural contexts contribute rituals, narratives, and attitudes that further influence these perceptions. Including participants from diverse cultural and religious backgrounds would allow research to capture both the unique and shared aspects of DA across societies. Religion, as a pervasive aspect of human life, plays a significant role in coping with stressors (40). Some studies suggest that religious beliefs can lower DA (41, 42), and positive views of the afterlife are associated with reduced anxiety (43, 44). Nevertheless, this review highlights a gap: no studies have yet tested interventions explicitly integrating the concept of life after death. Treatment protocols should therefore consider religious commitment, practices, and beliefs in an afterlife. Designing interventions with these factors in mind may enhance their effectiveness, offering therapeutic benefits through the integration of religious and cultural perspectives. Exploring how afterlife beliefs inform coping strategies and well-being could provide valuable insights. Greater methodological attention to these dimensions will strengthen the reliability and applicability of findings on DA.

Limitations and Strengths

This review has important strengths. To our knowledge, it is the first systematic attempt to synthesize evidence on psychological interventions for DA in clinical populations, covering research conducted between 2000 and 2023.

The review process followed PRISMA guidelines, ensuring transparency in reporting and consistency in the search and selection strategy. By highlighting both the strengths and weaknesses of existing studies, the review provides a structured overview of the current evidence base and identifies key directions for future research. Nonetheless, certain limitations should be acknowledged. Restricting the search to English-language publications may have excluded relevant studies in other languages. The small number of available studies, along with their heterogeneity in design, interventions, outcome measures, and populations, precluded a meta-analysis and limited direct comparisons. Finally, a formal quality or risk-of-bias assessment of the included studies was not conducted. Given the limited number of intervention studies on DA in clinical samples, all identified studies were included regardless of methodological rigor.

CONCLUSION

This systematic review is the first to examine psychological interventions targeting DA in clinical populations between 2000 and 2023. The findings reveal strengths, such as the use of validated measures and the presence of control groups in some studies, as well as limitations, including small sample sizes, a lack of follow-up assessments, and insufficient description of intervention components. Notably, none of the reviewed studies systematically integrated cultural or religious perspectives despite their pivotal role in shaping attitudes towards death. Future research should address these methodological shortcomings and incorporate beliefs about the afterlife, religious commitment, and cultural context into the design of interventions. This may enhance the clinical relevance, effectiveness, and generalizability of psychological protocols for DA.

Acknowledgement: *This study was conducted without any technical or material support.*
Funding: *The authors received no financial support for the research.*
Conflicts of interest: *The authors declare that they have no conflicts of interest.*
Ethics Committee Approval: *This study does not require ethical approval, as it does not involve experimental research on human or animal subjects.*
Peer-review: *Externally peer-reviewed.*
Author Contributions:
Research idea: BK, BU
Design of the study: BK, BU
Acquisition of data for the study: BK, BU
Analysis of data for the study: BK, BU
Interpretation of data for the study: BK, BU
Drafting the manuscript: BK
Revising it critically for important intellectual content: BK, BU
Final approval of the version to be published: BK, BU

REFERENCES

[1] Alparslan, Kenan. "Ölüm Kaygısı ve Dindarlık Arasındaki İlişki Üzerine Bir Değerlendirme". Dini Araştırmalar 25/63 (Aralık 2022), 529-552. http://doi.org.10.15745/da.1171650

[2] Pyszczynski T. What are we so afraid of?: a terror management theory perspective on the politics of fear. Social Research: An International Quarterly. 2004;71(4):827–848. doi:10.1353/sor.2004.0012.

[3] Bassett JF. Psychological defenses against death anxiety: integrating terror management theory and Firestone's separation theory. Death Stud. 2007;31(8):727–50. doi:10.1080/07481180701490628.

[4] Neimeyer RA, Wittkowski J, Moser RP. Psychological research on death attitudes: an overview and evaluation. Death Studies. 2004;28(4):309–40. doi:10.1080/07481180490432324.

[5] Sharif Nia H, Pahlevan Sharif S, Koocher GP, Yaghoobzadeh A, Haghdoost AA, Mar Win MT, et al. Psychometric properties of the Death Anxiety Scale-Extended among patients with end-stage renal disease. Omega (Westport). 2020;80(3):380–96. doi:10.1177/0030222817733220.

[6] Zuccala M, Menzies RE, Hunt CJ, Abbott MJ. A systematic review of the psychometric properties of death anxiety self-report measures. Death Stud. 2022;46(2):257–79. doi:10.1080/07481187.2019.1699203.

[7] Patra I, Muda I, Dwijendra NKA, Najm MA, Alshahrani SH, Kadhim SS, et al. A systematic review and meta-analysis on death anxiety during COVID-19 pandemic. Omega (Westport). 2025 Aug;91(3):1079–97. doi:10.1177/00302228221144791.

[8] Söğütlü L, Göktaş SŞ. The effect of the COVID-19 pandemic on health anxiety, death anxiety, and somatic symptoms in university students. Journal of Contemporary Medicine. 2021;11(3):323-7. doi:10.16899/jcm.878671.

[9] Mani A, Fereidooni R, Salehi-Marzijarani M, Ardekani A, Sasannia S, Habibi P, et al. The prevalence and risk factors of death anxiety and fear of COVID-19 in an Iranian community: a cross-sectional study. Health Sci Rep. 2022;5(4):e706. doi:10.1002/hsr2.706.

[10] Andrei AM, Webb R, Enea V. Health anxiety, death anxiety, and coronaphobia: predictors of postpartum depression symptomatology during the COVID-19 pandemic. Midwifery. 2023;124:103747. doi:10.1016/j.midw.2023.103747.

[11] Ens C, Bond JB Jr. Death anxiety in adolescents: the contributions of bereavement and religiosity. OMEGA-Journal of Death and Dying. 2007;55(3):169-84. doi:10.2190/OM.55.3.a.

[12] Gesser G, Wong PT, Reker GT. Death attitudes across the life-span: the development and validation of the Death Attitude Profile (DAP). OMEGA-Journal of Death and Dying. 1988;18(2):113-28. doi:10.2190/0DQB-7Q1E-2BER-H6YC.

[13] Russac RJ, Gatliff C, Reece M, Spottswood D. Death anxiety across the adult years: an examination of age and gender effects. Death Stud. 2007;31(6):549-61. doi:10.1080/07481180701356936.

[14] Khodabakhshi-Koolaee A, Falsafinejad MR, Zoljalali T, Ghazizadeh C. Dialectical behavior therapy: effect on emotion regulation and death anxiety in older female adults. Omega (Westport). 2024;88(3):1218-31. doi:10.1177/00302228211065960.

[15] Moradi M, Akbari M, Alavi M. The effect of cognitive-behavioral therapy on death anxiety and depression in patients with heart failure: a quasi-experimental study. Perspect Psychiatr Care. 2022;58:2791-9. doi:10.1111/ppc.13125.

[16] Potash JS, Ho AH, Chan F, Wang XL, Cheng C. Can art therapy reduce death anxiety and burnout in end-of-life care workers? A quasi-experimental study. Int J Palliat Nurs. 2014;20(5):233-40. doi:10.12968/ijpn.2014.20.5.233.

[17] Abdel-Khalek AM, Lester D. Death anxiety as related to somatic symptoms in two cultures. Psychol Rep. 2009;105(2):409-10. doi:10.2466/PR0.105.2.409-410.

[18] Le Marne KM, Harris LM. Death anxiety, perfectionism and disordered eating. Behaviour Change. 2016;33(4):193-211. doi:10.1017/bec.2016.11.

[19] Menzies RE, Dar-Nimrod I. Death anxiety and its relationship with obsessive-compulsive disorder. J Abnorm Psychol. 2017;126(4):367-77. doi:10.1037/abn0000263.

[20] Menzies RE, Sharpe L, Dar-Nimrod I. The relationship between death anxiety and severity of mental illnesses. Br J Clin Psychol. 2019;58(4):452-67. doi:10.1111/bjc.12229.

[21] Neel C, Lo C, Rydall A, Hales S, Rodin G. Determinants of death anxiety in patients with advanced cancer. BMJ Support Palliat Care. 2015;5(4):373-80. doi:10.1136/bmjspcare-2012-000420.

[22] Lau BHP, Wong DF, Fung YL, Zhou J, Chan CL, Chow AY. Facing death alone or together? Investigating the interdependence of death anxiety, dysfunctional attitudes, and quality of life in patient-caregiver dyads confronting lung cancer. Psychooncology. 2018;27:2045-51. doi:10.1002/pon.4773.

[23] Menzies RE, Zuccala M, Sharpe L, Dar-Nimrod I. The effects of psychosocial interventions on death anxiety: a meta-analysis and systematic review of randomised controlled trials. J Anxiety Disord. 2018;59:64-73. doi:10.1016/j.janxdis.2018.09.004.

[24] Jong J, Ross R, Philip T, Chang SH, Simons N, Halberstadt J. The religious correlates of death anxiety: a systematic review and meta-analysis. Religion, Brain & Behavior. 2018;8(1):4-20. doi:10.1080/2153599X.2016.1238844.

[25] Kranke P. Evidence-based practice: how to perform and use systematic reviews for clinical decision-making. Eur J Anaesthesiol. 2010;27(9):763-72. doi:10.1097/EJA.0b013e32833a560a.

[26] Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ. 2021;372:n71. doi:10.1136/bmj.n71.

[27] Ouzzani M, Hammady H, Fedorowicz Z, Elmagarmid A. Rayyan—a web and mobile app for systematic reviews. Syst Rev. 2016;5:210. doi:10.1186/s13643-016-0384-4.

[28] Menzies RE, Sharpe L, Helgadóttir FD, Dar-Nimrod I. Overcome death anxiety: the development of an online cognitive behaviour therapy programme for fears of death. Behaviour Change. 2021;38(4):235-49. doi:10.1017/bec.2021.14.

[29] Menzies RE, Julien A, Sharpe L, Menzies RG, Helgadóttir FD, Dar-Nimrod I. Overcoming death anxiety: a phase I trial of an online CBT program in a clinical sample. Behav Cogn Psychother. 2023;51(4):374-9. doi:10.1017/S135246582300005X.

[30] Davazdahemami MH, Bayrami A, Petersen JM, Twohig MP, Bakhtiyari M, Noori M, et al. Preliminary evidence of the effectiveness of acceptance and commitment therapy for death anxiety in Iranian clients diagnosed with obsessive-compulsive disorder. Bull Menninger Clin. 2020;84(Suppl A):1-11. doi:10.1521/bumc.2020.84.suppA.1.

[31] Dadfar M, Atoofi MK, Rezaei A. Effectiveness of religious spiritual integrated therapy (RSIT) for reduction of death distress in Iranian outpatients with generalized anxiety disorder (GAD). Mankind Quarterly. 2023;63(3):427-42. doi:10.46469/mq.2023.63.3.4.

[32] Ifdil I, Zola N, Putri YE, Zatrahadi MF, Darmawati D, Ardi Z. Thanatophobia and its treatment using neurolinguistic programming. Addict Disord Their Treat. 2020;19(2):84-7. doi:10.1097/ADT.0000000000000186.

[33] Furer P, Walker JR. Death anxiety: a cognitive-behavioral approach. J Cogn Psychother. 2008;22(2):167-82. doi:10.1891/0889-8391.22.2.167.

[34] Khoshnoud QA, Lavasani MGA, Hamdi O, Khoshnoud A. Improving the quality of life and adaptation of infertile couples with spiritual and religious integrated therapy. Positive Psychology. 2014;1(1):1-12.

[35] Starcevic V. Fear of death in hypochondriasis: bodily threat and its treatment implications. J Contemp Psychother. 2005;35:227-37. doi:10.1007/s10879-005-4317-0.

[36] Maunder R, Hunter J. An integrated approach to the formulation and psychotherapy of medically unexplained symptoms: meaning- and attachment-based intervention. Am J Psychother. 2004;58(1):17-33. doi:10.1176/appi.psychotherapy.2004.58.1.17.

[37] Beutler LE, Harwood TM. What is and can be attributed to the therapeutic relationship? Journal of Contemporary Psychotherapy. 2002;32(1):25-33. doi:10.1023/A:1015579111666.

[38] Mohr DC, Spring B, Freedland KE, Beckner V, Arean P, Hollon SD, et al. The selection and design of control conditions for randomized controlled trials of psychological interventions. Psychother Psychosom. 2009;78(5):275-84. doi:10.1159/000228248.

[39] Boot WR, Simons DJ, Stothart C, Stutts C. The pervasive problem with placebos in psychology: why active control groups are not sufficient to rule out placebo effects. Perspect Psychol Sci. 2013;8(4):445-54. doi:10.1177/1745691613491271.

[40] Mohammadzadeh A, Najafi M. The comparison of death anxiety, obsession, and depression between the Muslim population with positive and negative religious coping. J Relig Health. 2020;59(2):1055-64. doi:10.1007/s10943-018-0679-y.

[41] Henrie J, Patrick JH. Religiousness, religious doubt, and death anxiety. Int J Aging Hum Dev. 2014;78(3):203-27. doi:10.2190/AG.78.3.a.

[42] Solaimanizadeh F, Mohammadinia N, Solaimanizadeh L. The relationship between spiritual health and religious coping with death anxiety in the elderly. J Relig Health. 2020;59(4):1925-32. doi:10.1007/s10943-019-00906-7.

[43] Rose BM, O'Sullivan MJ. Afterlife beliefs and death anxiety: an exploration of the relationship between afterlife expectations and fear of death in an undergraduate population. Omega (Westport). 2002;45(3):229-43. doi:10.2190/RV40-6NBR-66GF-UJMU.

[44] Silton NR, Flannelly KJ, Ellison CG, Galek K, Jacobs MR, Marcum JP, et al. The association between religious beliefs and practices and end-of-life fears among members of the Presbyterian Church (USA). Review of Religious Research 2011;53(3):357-70. doi:10.1007/s13644-011-0015-4.