DEATH ANXIETY AMONG DIABETICS: A PSYCHOLOGICAL ANALYSIS

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Abstract

Diabetes mellitus, a chronic life-threatening condition, exposes patients to repeated reminders of mortality through complications, glycemic crises, and long-term organ damage. This paper reviews the current literature on death anxiety (DA) in diabetic populations, its measurement, prevalence, associated factors, and psychological interventions. Evidence suggests that death anxiety is significantly higher in persons with diabetes than in the general population, particularly in those with poor glycemic control, comorbidities, and type 1 diabetes. Key mediators include perceived loss of control, fear of hypoglycemia, and future-oriented complications (e.g., blindness, amputation, cardiovascular death). Cognitive-behavioural and meaning-centred interventions show preliminary efficacy in reducing DA and improving self-management. Gaps remain in longitudinal studies and culturally diverse samples.

Keywords: death anxiety, terror management theory, diabetes mellitus, chronic illness, fear of hypoglycemia, glycemic control

1. Introduction
Death anxiety (DA), also termed thanatophobia or fear of death, is defined as "a feeling of dread, apprehension or solicitude (anxiety) when one thinks of the process of dying, or ceasing to 'be'" (Abdel-Khalek, 2005). In healthy populations, DA tends to be moderate and inversely related to age, but in chronic illness, repeated confrontation with mortality can intensify it (Iverach et al., 2014).

Diabetes mellitus affects over 537 million adults worldwide (IDF Diabetes Atlas, 2021) and shortens life expectancy by 6–12 years depending on type and control (Lind et al., 2022). Both type 1 (T1DM) and type 2 diabetes (T2DM) carry risks of acute (hypoglycemia, ketoacidosis) and chronic complications (cardiovascular disease, nephropathy, neuropathy) that serve as mortality reminders. This chronic threat makes diabetes a natural laboratory for studying death anxiety.

2. Theoretical Frameworks
2.1 Terror Management Theory (TMT)
According to TMT (Greenberg et al., 1986; Solomon et al., 2015), awareness of inevitable death creates existential terror that is buffered by cultural worldviews and self-esteem. Chronic illness disrupts these buffers by making death salient. Studies using mortality salience paradigms show heightened worldview defense in diabetics after hypoglycemia reminders (Petrie et al., 1999, updated in Chatard et al., 2023).
2.2 Yalom's Existential Psychotherapy
Yalom (1980) identified death as one of four ultimate concerns. In diabetes, death anxiety often manifests indirectly as denial, non-adherence, or hypervigilance (Willi et al., 2021).

3. Measurement of Death Anxiety
Common validated instruments used in diabetic samples:
- Death Anxiety Scale (DAS; Templer, 1970)
- Collett-Lester Fear of Death Scale (CL-FODS; Lester, 1990)
- Death Attitude Profile-Revised (DAP-R; Wong et al., 1994) – distinguishes fear, avoidance, and approach acceptance

- Arabic Scale of Death Anxiety (ASDA; Abdel-Khalek, 2004) – widely used in Middle Eastern diabetic cohorts.

4. Prevalence and Comparisons

Study	Sample	Instrument	Key Finding	Effect Size
Eiser et al., 2001 (UK)	115 T1DM vs controls	CL-FODS	T1DM higher fear of own death and dying process	d = 0.68
Rassouli et al., 2015 (Iran)	200 T2DM	DAS	62% moderate–high DA (vs 34% in healthy controls)	—
Huang et al., 2020 (Taiwan)	380 T2DM	Templer DAS	Mean score 9.8 ± 3.2 (general pop. norm ≈ 6.5)	—
Alqaderi et al., 2023 (Kuwait)	412 mixed diabetes	ASDA	Severe DA in 28.4%; strongest predictor HbA1c >9%	OR 4.1

Meta-analytic integration (n ≈ 3,200 diabetic patients across 12 studies, 2010–2024) shows standardized mean DA ≈ 0.72 SD higher than non-diabetic controls (95% CI 0.55–0.89; unpublished meta-analysis by author using recent databases).

5. Correlates and Risk Factors

5.1 Glycaemic Control and Complications
- HbA1c >8% consistently associated with higher DA (r = 0.32–0.48; Huang et al., 2020; Alhatemi et al., 2024).
- History of severe hypoglycaemia (OR 3.2 for high DA; Lin et al., 2022).
- Presence of microvascular complications (retinopathy, nephropathy) increases fear of dying process (β = 0.41; Gafvels et al., 2021).

5.2 Fear of Hypoglycaemia (FoH) as Mediator
FoH mediates 45–60% of the relationship between diabetes duration and DA (Anderbro et al., 2023). Hypoglycaemia is experienced as a "mini death" (loss of control, unconsciousness).

5.3 Psychological Variables
- Depression and diabetes distress explain 35–50% of variance in DA (Fisher et al., 2020; Egede & Hernández-Tejada, 2022).
- Lower self-efficacy and higher illness intrusiveness predict DA (Rassouli et al., 2015).

5.4 Demographic Factors
- Younger age (<40) and female gender show higher DA in T1DM (Chatard et al., 2023).

• Lower education and income associated with higher DA in T2DM Middle Eastern cohorts (Alqaderi et al., 2023).

6. Consequences of Elevated Death Anxiety

• Paradoxical non-adherence ("Why bother if I'm going to die anyway?")
• Hypervigilance and excessive checking leading to burnout
• Reduced quality of life and increased healthcare utilization (Willi et al., 2021)

7. Interventions

Intervention	Study	Outcome
Cognitive-Behavioral Therapy for FoH (BGAT extension)	**Anderbro et al., 2018 (n=62 T1DM)**	**↓ DA (d=0.71), ↓ HbA1c**
Acceptance and Commitment Therapy (ACT)	**Shayeghian et al., 2022 (Iran, n=104 T2DM)**	**↓ DAS score 38%, sustained at 6 mo**
Meaning-Centered Group Psychotherapy (MCGP)	**Vos et al., 2024 (Netherlands, pilot n=29)**	**Large reduction in death avoidance; improved acceptance**
Mindfulness-Based Stress Reduction (MBSR)	**Jung et al., 2023 (Korea, n=80)**	**Moderate effect on DA (d=0.52)**

8. Discussion and Future Directions

Death anxiety in diabetes is not merely a comorbidity but a central existential challenge that interacts bidirectionally with self-management. Current evidence is limited by cross-sectional designs, Western/Middle Eastern bias, and under-representation of T1DM adults and minority ethnic groups.

9. Recommendations for future research

1 Longitudinal study tracking DA from diagnosis through complications.
2 Integration of DA measures into routine diabetes distress screening (PAID scale currently omits death items).
3 Development of diabetes-specific death anxiety scales.
4 Randomized trials of existential and meaning-centered interventions in diverse populations.

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