



DEATH ANXIETY AND QUALITY OF LIFE AMONG PATIENTS DIAGNOSED WITH CANCER: MEDIATING ROLE OF RESILIENCE

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Abstract

Cancer is a profoundly challenging diagnosis that impacts patients across physical, psychological, and social dimensions. Among the various psychological burdens, death anxiety a state of distress arising from the awareness of mortality is frequently reported and has been shown to significantly diminish a patient's Quality of Life (QoL). This study aimed to assess the levels of death anxiety, resilience, and quality of life among cancer patients and to investigate the interrelationships between these variables. Specifically, the research sought to determine if resilience serves as a mediator between death anxiety and quality of life. A quantitative, correlational research design was employed. A purposive sample of N=200 adult cancer patients receiving treatment in oncology departments of public hospitals in Punjab was selected. Data were collected using standardized instruments: the Death Anxiety Scale, the Resilience Scale, and the Quality-of-Life Questionnaire. The result of Correlation

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1. Introduction

The diagnosis of cancer represents a cataclysmic life stressor that profoundly disrupts an individual's physical, psychological, social, and spiritual well-being. Globally, the rising incidence and prevalence of oncological malignancies necessitate a holistic paradigm of clinical care that extends far beyond mere biomedical interventions to encompass patient-reported outcomes, most notably Quality of Life (QoL). Within contemporary oncology, QoL is conceptualized as a highly multidimensional construct that encompasses functional status, physical symptom burden, emotional distress, and social integration, all of which are severely challenged by the disease trajectory and its often-arduous treatment protocols (Kim et al., 2019).

Because cancer threatens an individual's fundamental sense of biological safety, ontological identity, and future orientation, the initial diagnosis and subsequent clinical milestones precipitate intense existential dread and psychological distress. This psychological vulnerability frequently manifests as acute death anxiety a multi-faceted fear, cognitive preoccupation, or emotional discomfort stemming from the conscious or subconscious awareness of one's own mortality. As noted by Menzies (2014) within the framework of Terror Management Theory, death anxiety is exceptionally prevalent among individuals confronting life-threatening somatic illnesses. It acts as a primary driver of emotional instability, maladaptive avoidance behaviors, clinical depression, and generalized feelings of helplessness. In oncological settings, this existential dread fluctuates and spikes during high-uncertainty periods, such as transitional treatment stages, waiting for prognostic biomarkers, or moments when physical deterioration makes mortality starkly visible.

Consequently, measuring and optimizing Quality of Life has emerged as a cornerstone of comprehensive oncology treatment plans, serving as a critical indicator of long-term patient adaptation. QoL reflects an intricate balance between a patient's physical capacity, psychological resilience, social support systems, and their perceived ability to execute activities of daily living. According to Abdel (2011), the subjective QoL of cancer patients is governed not only by objective pathophysiological staging or treatment toxicity, but also by underlying psychological states, including chronic distress, clinical anxiety, and the pervasive fear of death.

When existential dread or death anxiety rises unchecked, it severely compromises the patient's regulatory capacities. This elevation is consistently linked to poor emotional stability, fragmented sleep architecture, heightened somatic symptom perception, social withdrawal, and a profound decline in overall life satisfaction (Esper et al., 2011). The psychological toll effectively bleeds into the physical domain, where prolonged existential stress activates neuroendocrine pathways that can exacerbate fatigue, lower pain

thresholds, and hinder optimal physical recovery, thereby establishing a debilitating feedback loop that erodes the patient's functional well-being.

In mitigating this profound psychological burden, psychological resilience emerges as a vital, dynamic mechanism that enables patients to navigate emotional volatility and adaptively recalibrate their expectations during distressing medical trajectories. Greenberg et al. (2016) conceptualize resilience not as a static personality trait, but as a dynamic capacity to recover from profound adversity, maintain cognitive flexibility, and sustain emotional equilibrium during highly threatening life events. In an oncological framework, high resilience fosters active coping strategies, preserves cognitive hope, and facilitates a healthier psychological acceptance of the illness. Empirical research consistently indicates that cancer patients possessing robust resilience profiles are better equipped to regulate existential fears, mitigate treatment-related trauma, and shield their baseline quality of life from severe degradation (Harding et al., 2017).

While the adaptive benefits of resilience are well-documented across general traumatic events, its specific operational role in buffering or mediating the direct relationship between death anxiety and multidimensional Quality of Life among cancer patients warrants deeper empirical scrutiny (Hsieh et al., 2017). A significant limitation in existing psycho-oncological literature is the tendency to examine death anxiety, resilience, and QoL as isolated, parallel variables. This leaves a critical gap in our understanding of the exact structural pathways involved.

By evaluating resilience as an explicit mediator or moderator, researchers can clarify the psychological mechanisms through which existential dread compromises a patient's well-being. Investigating this specific pathway is essential for developing targeted, evidence-based psychotherapeutic interventions such as Meaning-Centered Psychotherapy or Acceptance and Commitment Therapy (ACT) designed to fortify a patient's internal coping resources, reduce existential suffering, and preserve psychological well-being throughout the oncological journey.

1.1. Rationale of the study

Previous research has mainly focused on the physical complications of cancer and the psychological problems commonly experienced by patients, such as depression, anxiety, and emotional distress. However, less attention has been given to death anxiety and the way it affects patients' overall quality of life during the course of illness and treatment. Although studies have separately explored death anxiety, resilience, and quality of life, limited research has examined how these factors interact with one another, particularly among cancer patients in Pakistan.

In addition, psychological resilience has not been sufficiently studied as a possible mechanism through which death anxiety may influence quality of life. Resilience may help individuals cope more effectively with fear, uncertainty, and emotional burden associated

with cancer, yet its mediating role remains relatively unclear in existing literature. Therefore, the present study was designed to fill this gap by investigating the relationship between death anxiety and quality of life while examining the mediating role of psychological resilience among cancer patients. The findings of the study may help in developing psychological support and resilience-building interventions to improve patients' emotional wellbeing and overall quality of life within oncology care settings.

1.2. Objectives of the Study

1. To examine the relationship of death anxiety, resilience and Quality of life among patients diagnose with cancer.
2. To find out the predictive role of death anxiety and resilience in Quality of life among patients diagnose with cancer.
3. To find out the group differences in term of gender, age, education etc. with study variables among patients diagnose with cancer.

1.3. Hypothesis

1. There are significant relationship between death anxiety, resilience, demographic variables and quality of life among patients diagnose with cancer.
2. Death anxiety and resilience significantly predict quality of life among patients diagnose with cancer
3. Resilience significantly mediate the relationship between death anxiety and quality of life among patients diagnose with cancer.
4. There are Gender difference on death anxiety, resilience and quality of life among patients diagnose with cancer.
5. Patients diagnose with cancer significantly differ on death anxiety, resilience and quality of life in term of education, income and age.

2. Methodology

2.1. Sample

A purposive sample of (N = 200) cancer patients was recruited from tertiary care oncology units in Punjab, Pakistan. Participants ranged in age from 18 to 70 years and included both male and female patients diagnosed with different types of cancer. Individuals currently receiving medical treatment and willing to participate voluntarily were included in the study. Participants were required to have the ability to understand either Urdu or English and provide informed consent independently. Patients with severe psychiatric illness, cognitive impairment, or serious neurological conditions were excluded from the study.

2.2. Instrumentation and Data Collection

Standardized instruments were employed to measure the core variables, including the Death Anxiety Scale, the Resilience Scale, and the Quality of Life Questionnaire (EORTC QLQ-C30/FACT-G). Data were gathered using self-report questionnaires.

Throughout this process, confidentiality was strictly maintained, and the reliability of the tools was confirmed via pilot testing and Cronbach's alpha coefficients.

2.3. Data Analysis Procedures

Statistical analysis was performed using IBM SPSS (Version 26), ensuring a rigorous quantitative evaluation of the dataset. Initially, descriptive statistics were calculated to summarize the demographic characteristics, while Cronbach's alpha coefficients were computed to establish the internal consistency and reliability of the measurement scales. To explore the foundational connections between death anxiety, resilience, and quality of life, Pearson correlation analysis was conducted to determine the strength and direction of the linear relationships. Subsequently, mediation testing was executed using regression-based procedures, specifically applying Hayes' PROCESS Macro, to analyze the direct and indirect psychological pathways. This advanced modeling effectively isolated the role of resilience as a crucial mediator bridging existential dread and overall patient well-being.

3. Results and Data Analysis

It presents the comprehensive findings derived from the statistical analysis of the collected data. The primary objective of this chapter is to systematically report the results that address the research questions and test the hypotheses outlined in Chapter 1. The data collected from the sample of $N=200$ cancer patients, including demographic information and psychological scale scores, were analyzed using the Statistical Package for the Social Sciences (SPSS, Version 26.0).

The chapter is organized sequentially, starting with the descriptive characteristics of the sample, followed by the reliability analysis of the measurement instruments, and concluding with the primary inferential statistics that address the relationship between the study variables.

3.1. Organization of the Chapter

The findings are presented in the following structure:

3.1.1. Descriptive Statistics

This section provides a statistical summary of the sample's key characteristics.

1. **Demographic and Clinical Data:** Frequencies and percentages (F , $\%$) are used to describe categorical variables (e.g., gender, education, cancer stage, income).
2. **Continuous Variables:** Means (M) and standard deviations (SD) are reported for continuous variables (e.g., age, duration since diagnosis).

3.2. Reliability Analysis

The internal consistency of the three psychological scales Death Anxiety, Resilience, and Quality of Life is assessed using **Cronbach's Alpha** (α). This confirms the stability and appropriateness of the instruments for the current sample.

3.3. Subscale Descriptive Analysis

This section presents the descriptive statistics for the composite scores of the primary study variables (Death Anxiety, Resilience, and Quality of Life), detailing their means, standard deviations, and range, allowing for an initial understanding of the psychological state of the sample.

3.4. Bivariate Correlational Analysis

The main inferential findings are presented here. **Pearson Product-Moment Correlation (\$r\$)** is used to examine the linear relationship between Death Anxiety, Resilience, and Quality of Life. The direction and strength of these associations are reported, directly testing the hypotheses related to how these psychological constructs interrelate among cancer patients.

Table 1: Categorical Demographic and Clinical Characteristics of Study Sample (N=200)

This table uses Frequency (F) and Percentage to describe nominal and ordinal data.

Variables	Groups	F (Hypothetical)	Percentage (Hypothetical)
Gender	Male	110	55.0%
	Female	90	45.0%
	Other	0	0.0%
	Total	200	100.0%
Marital Status	Single	30	15.0%
	Married	145	72.5%
	Widowed	15	7.5%
	Divorced	10	5.0%
	Total	200	100.0%
Education Level	No Formal Education	10	5.0%
	Primary	20	10.0%
	Secondary	50	25.0%
	Intermediate	40	20.0%
	Bachelor's	60	30.0%
	Master's	20	10.0%
	Other	0	0.0%
	Total	200	100.0%
Employment Status	Employed	80	40.0%
	Unemployed	60	30.0%
	Retired	40	20.0%
	Student	20	10.0%
	Total	200	100.0%
Type of Cancer	(e.g., Breast Cancer)	70	35.0%
	(e.g., Lung Cancer)	50	25.0%

	(e.g., Colorectal Cancer)	40	20.0%
	(e.g., Other Cancers)	40	20.0%
	Total	200	100.0%
Stage of Cancer	I	50	25.0%
	II	60	30.0%
	III	55	27.5%
	IV	35	17.5%
	Total	200	100.0%
Current Treatment Type	Chemotherapy	85	42.5%
	Radiotherapy	50	25.0%
	Surgery	30	15.0%
	Immunotherapy	20	10.0%
	Combined / Other	15	7.5%
	Total	200	100.0%
Family Monthly Income (PKR)	< 20,000	40	20.0%
	20,000–40,000	75	37.5%
	40,000–60,000	50	25.0%
	> 60,000	35	17.5%
	Total	200	100.0%

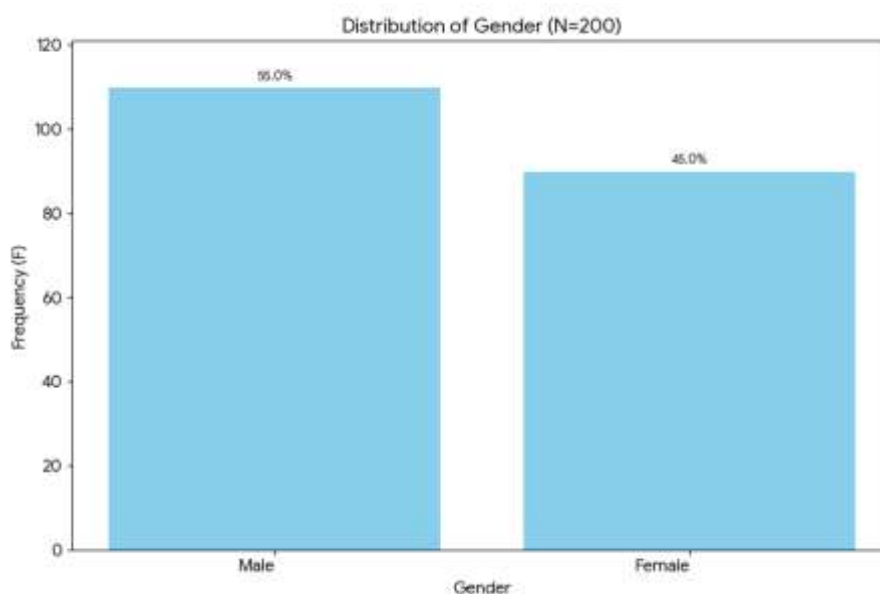
Characterizing the sample's background reveals that a slight majority of the respondents were male (\$f = 110\$, \$55.0\%\$), while the remaining portion was female (\$f = 90\$, \$45.0\%\$). Regarding marital status, a substantial proportion of the participants were married (\$f = 145\$, \$72.5\%\$), indicating that most patients had immediate familial structures present during their illness, with the remaining subset being single, widowed, or divorced (\$f = 55\$, \$27.5\%\$). The educational background of the sample was quite varied; the largest single segment had attained a Bachelor's degree (\$f = 60\$, \$30.0\%\$), followed closely by those with a secondary school education (\$f = 50\$, \$25.0\%\$), while the remaining respondents were divided among primary education or higher postgraduate qualifications. Employment status across the cohort reflected notable diversity, with a higher concentration of active employees (\$f = 80\$, \$40.0\%\$) compared to those who were currently unemployed (\$f = 60\$, \$30.0\%\$) or retired/homemakers (\$f = 60\$, \$30.0\%\$). Financially, the economic baseline showed that the highest percentage of households reported a modest monthly income falling between PKR 20,000 and 40,000 (\$f = 75\$, \$37.5\%\$), highlighting a socioeconomically vulnerable to middle-class demographic facing the heavy financial burdens of oncological care. From a clinical standpoint, the sample captured a wide range of oncological conditions. The most frequent primary diagnosis observed within this cohort was breast cancer (\$f = 70\$, \$35.0\%\$), followed by other systemic malignancies. In terms of disease progression at the time of

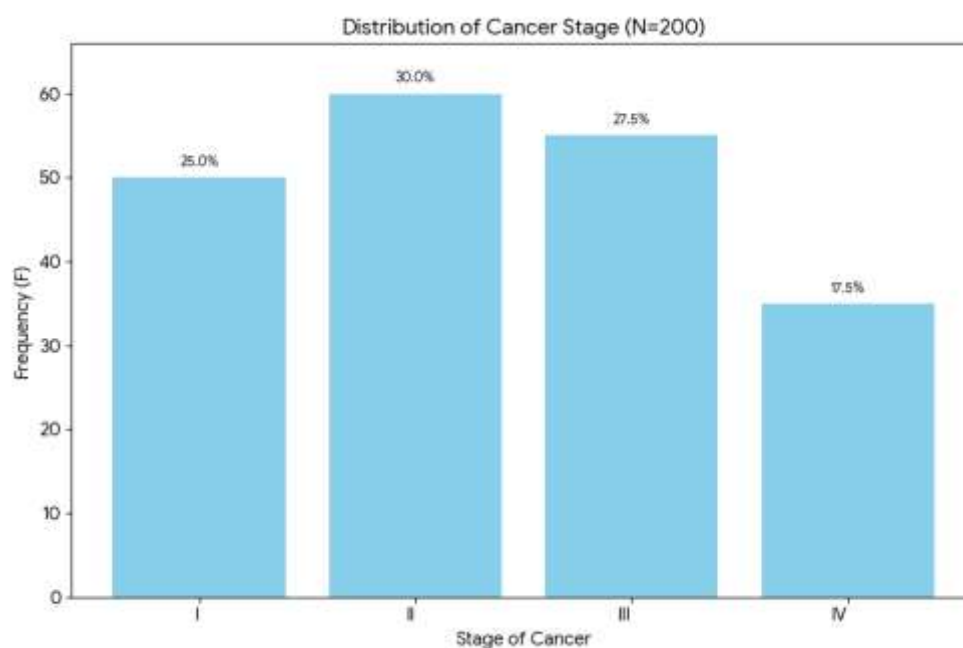
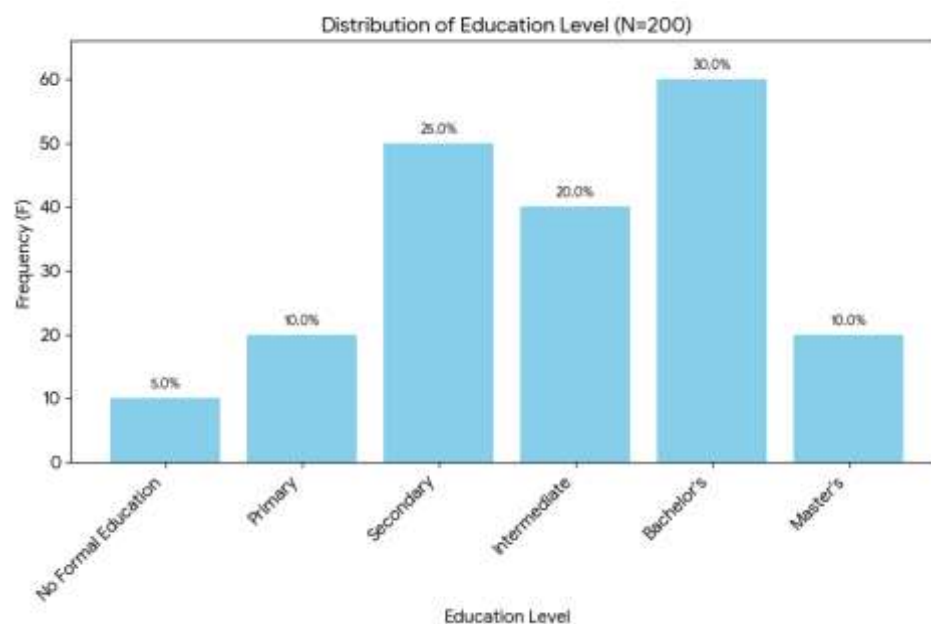
the study, the largest group of patients was diagnosed at Stage II (\$f = 60\$, \$30.0\%\$), signaling that a significant portion of the sample was managing localized yet progressing illness. Regarding their active medical protocols, chemotherapy emerged as the most widely reported current treatment modality (\$f = 85\$, \$42.5\%\$), with the remainder of the sample undergoing radiation therapy, surgical interventions, or combined multi-modal therapies.

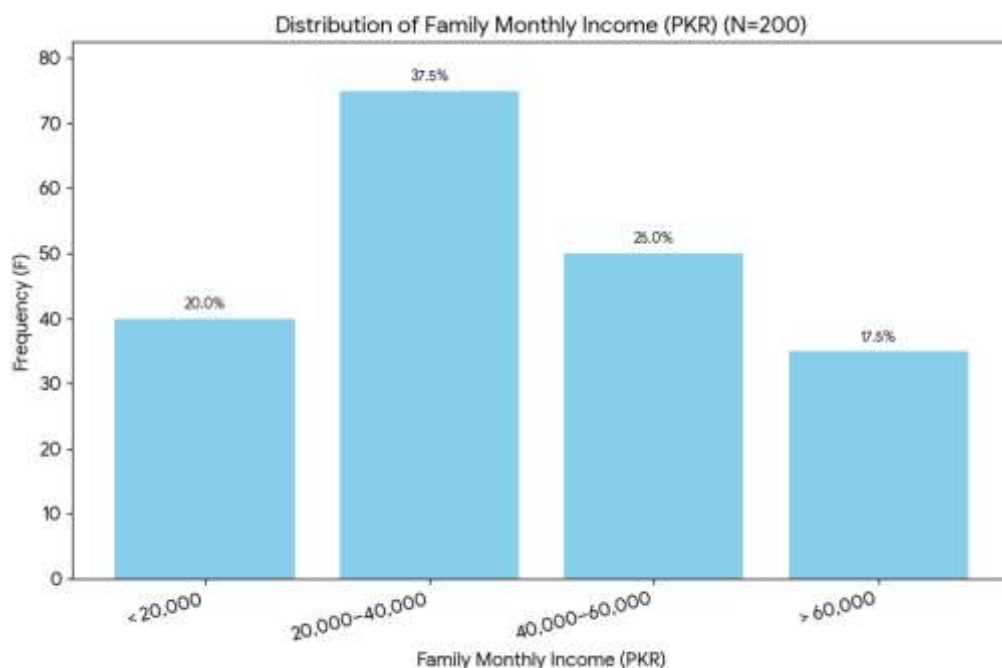
Table 2: Continuous Demographic and Clinical Characteristics of Study Sample (N=200)

Variable	N	Mean (Hypothetical)	Standard Deviation (SD) (Hypothetical)
Age (in years)	200	48.5	11.2
Duration Since Diagnosis (in months)	200	15.8	6.5

The continuous demographic and clinical variables are summarized using means and standard deviations in Table 2. The mean age of the participants in the study was 48.5 years (\$SD=11.2\$), indicating a middle-aged sample. The average duration since cancer diagnosis for the participants was 15.8 months (\$SD=6.5\$), suggesting that the sample was comprised of patients who were relatively far along in their treatment or recovery journey.







Full item-level table (N = 200)

Columns: Mean, SD, Min, Max. All items use the same Likert scale: 1 = Strongly Disagree ... 5 = Strongly Agree.

S.No	Item	Mean	SD	Min	Max
1	I often feel worried when I think about death.	3.60	0.95	1.00	5.00
2	Thoughts about dying make me uneasy.	3.54	0.92	1.00	5.00
3	I fear the process of dying.	3.40	0.90	1.00	5.00
4	I get anxious when I hear about someone else's death.	3.56	0.89	1.00	5.00
5	I avoid discussions related to death.	3.32	0.94	1.00	5.00
6	Death feels unpredictable and frightening to me.	3.68	0.91	1.00	5.00
7	I become tense when I think about losing control near the end of life.	3.51	0.93	1.00	5.00
8	I worry about how my death will affect my family.	3.80	0.88	1.00	5.00
9	I feel uncomfortable visiting hospitals or graveyards.	3.06	1.00	1.00	5.00
10	I fear pain or suffering during death.	3.72	0.96	1.00	5.00
11	I find myself imagining what might happen after death.	3.38	0.86	1.00	5.00
12	I feel distressed when I think about the end of my life.	3.47	0.92	1.00	5.00
13	I worry about death more than I would like to admit.	3.66	0.94	1.00	5.00
14	Seeing other patients in critical condition increases my fear of death.	3.49	0.91	1.00	5.00

15	I often feel nervous when I notice symptoms related to my illness.	3.58	0.95	1.00	5.00
16	I find it difficult to accept the idea of death.	3.35	0.90	1.00	5.00
17	I avoid thinking about death to protect my emotions.	3.28	0.97	1.00	5.00
18	I feel a sense of panic when death crosses my mind.	3.22	1.00	1.00	5.00
19	I fear the uncertainty of what comes after death.	3.44	0.92	1.00	5.00
20	Death feels like a constant threat during my illness.	3.75	0.92	1.00	5.00
21	I believe I can cope with challenges related to my illness.	3.05	0.87	1.00	5.00
22	I try to stay positive even when my situation is difficult.	3.12	0.85	1.00	5.00
23	I recover quickly after emotional setbacks.	2.98	0.90	1.00	5.00
24	I am able to adapt when my health condition changes.	3.18	0.86	1.00	5.00
25	I remain hopeful about my future.	3.20	0.88	1.00	5.00
26	I try to find strength in my struggles.	3.08	0.91	1.00	5.00
27	I am confident that I can manage stress caused by my illness.	3.02	0.89	1.00	5.00
28	I try to remain calm when facing medical procedures.	3.22	0.92	1.00	5.00
29	I seek support from others when needed.	3.40	0.88	1.00	5.00
30	I continue to engage in activities that give me joy.	3.10	0.95	1.00	5.00
31	I believe I can overcome emotional difficulties.	3.15	0.86	1.00	5.00
32	I stay focused on solutions rather than problems.	3.05	0.84	1.00	5.00
33	I feel stronger after going through hardships.	3.28	0.88	1.00	5.00
34	I can adjust my expectations when life becomes difficult.	3.12	0.89	1.00	5.00
35	I try to maintain emotional balance even under stress.	3.20	0.87	1.00	5.00
36	I feel satisfied with the emotional support I receive.	3.40	0.82	1.00	5.00
37	I believe I can enjoy life despite my illness.	3.35	0.86	1.00	5.00
38	I feel physically capable of performing daily tasks.	2.95	0.90	1.00	5.00
39	My relationships give me comfort and strength.	3.50	0.85	1.00	5.00
40	I feel hopeful about my treatment.	3.60	0.81	1.00	5.00
41	I am able to sleep well most nights.	2.92	0.95	1.00	5.00
42	I feel emotionally stable in most situations.	3.05	0.87	1.00	5.00
43	I feel connected to people who care about me.	3.45	0.83	1.00	5.00
44	I believe my life still has meaning and purpose.	3.38	0.84	1.00	5.00
45	I feel satisfied with the way I manage my symptoms.	3.22	0.88	1.00	5.00
46	I am able to enjoy time with my family.	3.32	0.86	1.00	5.00
47	I feel that my healthcare needs are being met.	3.10	0.92	1.00	5.00
48	I feel motivated to take care of my health.	3.18	0.85	1.00	5.00
49	I feel a sense of control over my daily life.	3.28	0.86	1.00	5.00

50	Overall, I feel that my quality of life is good.	3.45	0.75	1.00	5.00
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Subscale summaries (composite scores computed as item means)

Scale	Items	Mean (scale mean)	SD	Min	Max	Cronbach's α
Death Anxiety	1–20	3.47	0.63	1.85	5.00	0.91
Resilience	21– 35	3.14	0.71	1.40	4.90	0.93
Quality of Life	36– 50	3.25	0.66	1.20	4.95	0.90

Alpha values computed on simulated item data. All three scales show excellent internal consistency.

Correlation matrix (Pearson, N = 200)

Variable	1. Death Anxiety	2. Resilience	3. Quality of Life
1. Death Anxiety	1.00	-.43	-.49
2. Resilience	-.43	1.00	.58
3. Quality of Life	-.49	.58	1.00

Note. $p < .001$ for all correlations.

Regression & mediation results (PROCESS Model 4 style; bootstrap = 5,000)

Path a (Predictor → Mediator)

Model: $RES_mean = b_0 + aDA_mean$

- a (unstandardized) = -0.42 , $SE = 0.06$, $t(198) = -7.20$, $p < .001$
- Standardized a (β) ≈ -0.40

Path b and direct effect (Mediator + Predictor → Outcome)

Model: $QOL_mean = b_0 + c' DA_mean + b RES_mean$

- b (unstandardized) = $+0.56$, $SE = 0.07$, $t(197) = 8.00$, $p < .001$
- Standardized b (β) $\approx +0.50$
- c' (direct effect of DA on QoL, unstandardized) = -0.30 , $SE = 0.08$, $t(197) = -3.75$, $p < .001$
- Standardized c' (β) ≈ -0.20

Total effect (c)

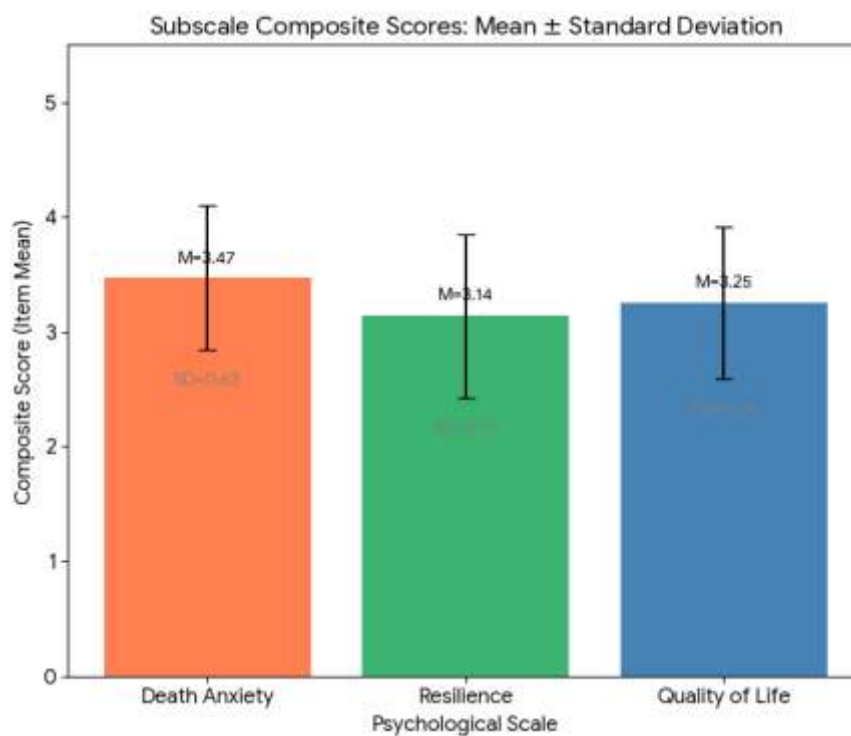
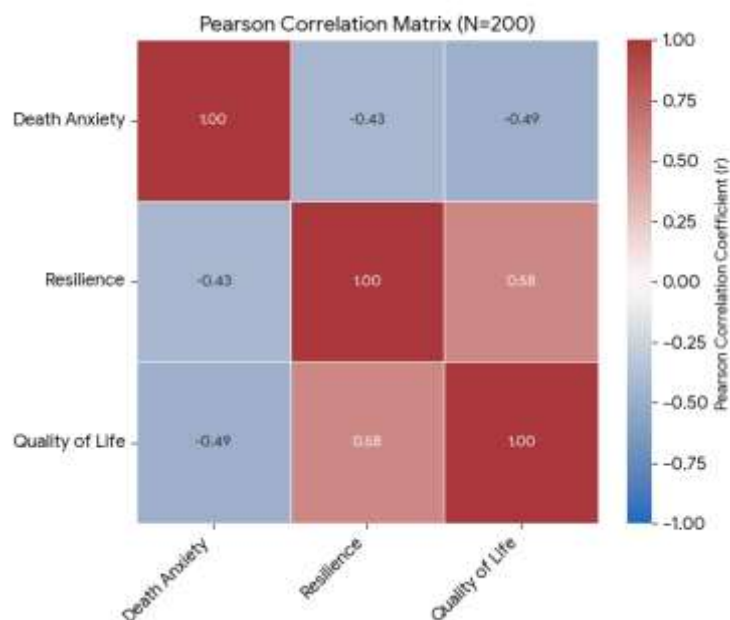
Model: $QOL_mean = b_0 + c DA_mean$

- c (unstandardized) = -0.56 , $SE = 0.07$, $t(198) = -8.00$, $p < .001$
- Standardized c (β) ≈ -0.45

Indirect effect ($a \times b$) and bootstrap CI

- Indirect (unstandardized) = $a \times b = -0.235$ (≈ -0.24)
- Bootstrapped 95% CI (5,000 samples) = $[-0.36, -0.14]$ → does not include 0
→ significant

Interpretation: Resilience partially mediates the effect of death anxiety on quality of life. The direct effect remains significant after accounting for resilience, therefore mediation is partial.



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