



## DEATH ANXIETY IN CANCER PATIENTS IN PAKISTAN: THE MEDIATING ROLE OF RELIGION ORIENTATION AND THE MODERATING ROLE OF MEANING IN LIFE

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### Abstract

The objective of this study was to examine the factors associated with death anxiety among cancer patients, namely self-esteem, social support, medical coping, and resilience, considering the mediating role of religious orientation and the moderating role of meaning in life. In the current study, 386 cancer patients voluntarily participated, of which 66% were male and 34% were female. The results of the regression analysis suggest that self-esteem, social support, medical coping mechanisms, and resilience exert a negative influence on death anxiety. Furthermore, a negative meaning in life moderates the relationship between self-esteem, social support, and medical coping, and death anxiety. However, in terms of the resilience scale, meaning in life does not demonstrate a statistically significant correlation with death anxiety. An external religious orientation significantly mediates the relationship between self-esteem and death anxiety, and between social support and death anxiety. Conversely, an internal religious orientation mediates negatively between self-esteem, social support, medical coping, resilience, and death anxiety.

**Keywords:** social support, self-esteem, resilience, medical coping, cancer

### Introduction

Cancer, the second leading cause of death worldwide, exerts a significant impact on health systems, communities, and families, particularly in low-income developing countries (Brant & Silbermann, 2021). In 2020, an estimated 10.0 million people succumbed to cancer globally, with 8.2% of those deaths occurring in Pakistan, amounting to 117,149 individuals (Sung et al., 2021). Additionally, 178,388 new cancer cases were diagnosed in 2020, and a projected 329,547 cases are anticipated within the next five years (World Health Organization, 2020). The profound fear of death combined with an indomitable desire to cling to life creates a tremendously frightening experience for cancer patients. These individuals face numerous challenges and are acutely aware of their vulnerability to mortality, with 32% of them expressing apprehension about their own demise (Neel et al., 2013).

This anxiety surrounding death or afterlife events is commonly referred to as death anxiety (Chang et al., 2021).

Self-esteem emerges as a critical psychological factor that plays a role in mitigating death anxiety. Research indicates that individuals with higher self-esteem experience reduced fear of dying, as evidenced by self-report and physiological studies (Hiyoshi et al., 2017). Notably, mortality fear tends to increase when one's self-esteem is under attack, while it diminishes when one's self-esteem is upheld. Moreover, viewers with strong self-esteem exhibited less fear and anxiety when exposed to video death scenarios (Sarfraz et al., 2022). Conversely, fear of dying has been linked to low self-esteem in other studies (Missler et al., 2012).

Terror management theory (TMT) offers a comprehensive framework to explain death anxiety, suggesting that worldviews and self-esteem serve as protective mechanisms. According to this theory, cultural values provide defense against anxiety, while self-esteem plays a role in reducing fear associated with death (Zhang et al., 2019). Becker's terror management theory proposes that individuals employ a dual-process system to shield themselves from vulnerability and mortality, where cultural worldviews and self-esteem play significant roles (Maxfield et al., 2016).

Religion emerges as a significant factor in alleviating the psychological pain experienced by cancer patients (Sharif et al., 2018). However, the influence of religious rituals, structures, and attitudes varies across different cultures and social statuses (Saleem & Saleem, 2019). Notably, Muslims in Pakistan who had unanswered questions about the afterlife reported a greater fear of death, whereas no such link was found in a Turkish religious sample (Gonen et al., 2012). Religion encompasses multiple facets, encompassing beliefs, emotions, and behaviors (Masror Roudsary et al., 2022). In Pakistan, a predominantly Muslim country, religion holds immense significance. Muslims view death as a necessary step towards eternal life, and they consider life in this realm as a fleeting opportunity to serve God (Allah) and engage in religious practices. Thus, powerful religious beliefs provide protection against physical death while imparting meaning and purpose to life (Zamanian et al., 2015; Mushtaque et al., 2022). To comprehend the psychological impact of religion, researchers have examined both intrinsic and extrinsic religiosity. Intrinsic religiosity pertains to individuals who devoutly adhere to the doctrines of their faith, while extrinsic religiosity refers to the use of religion for social status, security, and general well-being (Darvyri et al., 2014).

Meaning in life, primarily derived from social support, plays a crucial role in coping with the dread of death. Emotional support, support from family and friends, and assistance in managing challenging life situations contribute to individuals' ability to cope with their fear of death (Zhang et al., 2019). Close interpersonal relationships have been found to alleviate the fear of death, as they enhance individuals' sense of belonging, confidence, and stress-management skills (Tjew-A-Sin et al., 2015; Tjew-A-Sin & Koole, 2018). Social support, through interpersonal interactions, acts as a buffer against stress, promoting a sense of belonging and overall well-being, ultimately minimizing psychological distress (Guo et al., 2021). Healthcare professionals who recognize the significance of social support and self-esteem can better assist cancer patients grappling with death anxiety (Soleimani et al., 2020).

Coping, conceptualized as an active process involving cognitive and behavioral strategies to manage stress-induced demands, plays a crucial role in confronting adversity (Ahmadi & Ahmadi, 2013). Resilience, the ability to maintain or rapidly regain mental health despite adversity, has been associated with increased mental health and social support among cancer patients (Fernández-Martínez et al., 2021). Thus, investigating the relationship between coping style, resilience, and death anxiety is vital.

Given Pakistan's recent expansion of cancer facilities and the focus on cancer patient treatment, death anxiety is gaining increasing attention. However, limited research has been conducted on death anxiety among Pakistani cancer patients. Thus, this quantitative study aims to describe the status of death anxiety among Pakistani cancer patients in stages I, II, III, and IV and explore the

characteristics associated with death anxiety. Furthermore, the study examines the mediating role of religion and the moderating role of life meaning in this context.

### **Methodology**

This cross-sectional study was conducted at a tertiary cancer hospital located in Lahore, Rawalpindi, Multan, and Bahawalpur, Pakistan, spanning from March 2022 to March 2023. The study utilized a convenience sampling method to select participants. A total of 500 cancer patients were approached to participate in the data collection survey. However, after applying the eligibility criteria and excluding incomplete or invalid responses, a final sample of 386 participants was included in the analysis.

The sample size for this study was determined using G Power software, considering factors such as the expected effect size, alpha level, and power. The inclusion criteria for participants were as follows: being under the age of 18, having a confirmed pathology diagnosis of stage I, II, III, or IV cancer, possessing the ability to communicate verbally and understand the nature of the research, and voluntary willingness to participate. To ensure the homogeneity of the sample and minimize potential confounding factors, individuals who were using antipsychotic medications or had other serious, life-threatening conditions were excluded from the study. By employing a convenience sample from multiple locations, this study aims to capture a diverse range of cancer patients in various stages of the disease, thereby enhancing the generalizability of the findings. The study adheres to ethical guidelines, and informed consent was obtained from each participant prior to their inclusion in the research.

### **Instruments used in study**

1. **Socio-Demographic Information:** In the demographic sheet participants gender, age, qualification and disease related questions were asked by the participants.
2. **Self-Esteem Scale:** The total self-esteem, self worth, and acceptability of patients were evaluated using Rosenberg's Self-esteem Scale (Rosenberg, 1965). The Scale has 10 questions and evaluation of the items was done on a 1-to-4 Likert scale (very true). A higher overall score indicated more self-esteem. The reliability of the scale was 0.84.
3. **Social Support Scale:** The ten items on the survey has three categories: usage of help, objective support, and subjective support. Greater social support is indicated by evaluations that are higher across all three variables. Overall scale reliability was 0.76 (Aumack, 1962).
4. **Medical Coping Mode:** Coping mode is measured by the Medical Coping Modes Questionnaire. There scale has 20 items. MCMQ scores ranged from 1-4. Reversed eight questions. Three patient strategies—"confrontance," "avoidance," and "resignation"—were examined. The reliability of the scales was 0.81.
5. **Resilience:** The Connor-Davidson Resilience Scale (CD-RISC) was used in the current study (Connor & Davidson, 2003). This is a 25-item test that measures resilience of the patient. Each question is scored on a 5-point scale, with 0 being the least true and 4 being the most true (true nearly all the time). The overall score is a number between 0 and 100. The reliability of the scale was 0.95.
6. **Death Anxiety Scale:** In the current study Templer death anxiety scale was used to measure the patients death anxiety (Templer, 1970). The scale has 15-items and it is a five-point likert scale. The reliability of the scale was 0.92.
7. **Meaning in Life Scale:** To examine an individual's impression of life's purpose, the meaning in life scale (Liu et al., 2020), a 28-item self-report questionnaire with a five-point rating scale for each topic, was utilized. To categorize everything, the six criteria of purpose and satisfaction in life, life control, the will to pursue meaning, pain tolerance, existential frustration, and acceptance of death were employed. The meaning in life scale had a Cronbach's alpha of 0.772.

**8. Religious Orientation Scale:** The Religious Orientation Scale (ROS) was used to gauge each person's level of religiosity. In our investigation, the original 20-item version was employed. The 20-item measure is evaluated using the Likert scale, where 1 represents "strongly disagree" and 5 represents "strongly agreement." The scale has into two subscales: external religious orientation is represented by 11 items, while internal religious orientation is assessed by 9 items (Allport & Ross, 1967).

### Ethical Consideration

The institutional research committee approved the research topic after reviewing the study aim and procedure. Informed consent was obtained from the participants.

### Statistical Analysis

The collected data was analyzed using SPSS v.26. The descriptive statistic was applied to the participant's socio-demographic information. One-way ANOVA and Hierarchical Regression, Moderation analysis and Mediation analysis were used to examine the factors associated with death anxiety.

## 4. Results

### 4.1 Demographics

A total of 386 individuals participated in the data collection survey, out of which 255 (66.06%) were male, and 131 (33.94%) were female. In terms of age distribution, 245 (63.47%) participants belonged to the age group of 18-30 years, 90 (23.32%) participants were in the age group of 31-40 years, 30 (7.77%) participants fell within the age range of 41-50 years, and 21 (5.44%) participants belonged to the age group of 51-60 years. Regarding educational background, 231 (59.84%) participants had attained a bachelor's degree or below, while 155 (40.16%) participants had completed a master's degree or higher. The majority of the participants in our study were married (46.3%), and their spouses and children served as their primary caregivers during their hospital stay. Given that Pakistan is a Muslim-majority country, the majority of the participants identified as Muslims (82.9%), while the remaining participants belonged to other religious groups such as Hindu (4.4%), Christian (8.0%), and Sikh (4.7%). Furthermore, an overwhelming majority of the participants (66.1%) expressed that the cost of cancer treatment imposed a significant economic burden on their families.

**Table 01:** Demographics characteristics of the participants (N= 386)

Variables	F (%)
<b>Gender</b>	
Male	255(66.06)
Female	131 (33.94)
<b>Age of the patients in years</b>	
18-30	245 (63.47)
31-40	90 (23.32)
41-50	30 (7.77)
51-60	21 (5.44)
<b>Educational level of the Participants</b>	
Bachelor and below	231 (59.84)
Masters and above	155 (40.16)
<b>Marital Status of patients</b>	
Married	179 (46.3)
Un-married	97 (25.1)
Widow	43 (11.1)

Divorced	67 (17.5)
<b>Caretaker at hospital</b>	
Spouse	145 (37.5)
Parents	101 (26.1)
Siblings	49 (12.7)
Children	91 (23.7)
<b>Religion follower</b>	
Muslim	320 (82.9)
Hindu	17 (4.4)
Christian	31 (8.0)
Sikh	18 (4.7)
<b>Perceived economic burden due to the cancer treatment</b>	
Extremely	255 (66.1)
Moderate	86 (22.2)
Not at all	45 (11.7)

#### 4.2 One-way ANOVA

To test the influence of demographics with all study variables. One-way analysis of variance test performed and *F-statistic* values reported in **Table 02**. According to the values shown in the **Table 02** influence of gender was significant with SE ( $F = 5.61^*$ ,  $p < .05$ ), with SS ( $F = 9.38^{**}$ ,  $p < .01$ ), and with DA ( $F = 13.66^{***}$ ,  $p < .001$ ) and there was insignificant influence of gender on MCM ( $F = 1.85$ , *n.s.*), and on RE ( $F = 1.29$ , *n.s.*). The second demographic age was also found significant with SE ( $F = 9.39^{***}$ ,  $p < .001$ ), with SS ( $F = 6.41^{***}$ ,  $p < .0010$ ), with MCM ( $F = 4.18^{**}$ ,  $p < .01$ ), with RE ( $F = 4.09^{**}$ ,  $p < .01$ ) and was insignificant with DA ( $F = 1.19$ , *n.s.*). Influence of education was also found significant with SE ( $F = 35.85^{***}$ ,  $p < .001$ ), with RE ( $F = 4.39^*$ ,  $p < .05$ ), and with DA ( $F = 16.18^{***}$ ,  $p < .001$ ), and found insignificant with SS ( $F = 1.74$ , *n.s.*), and with MCM ( $F = .13$ , *n.s.*).

**Table 02: ANOVA**

	SE	SS	MCM	RE	DA
Gender	5.61*	9.38**	1.85	1.29	13.66***
Age	9.39***	6.41***	4.18**	4.09**	1.19
Education	35.85***	1.74	.13	4.39*	16.18***

*Note:*  $N=386$ , SE; self-efficacy, SS; social support, MCM; medical coping modes, RE; resilience, DA; death anxiety, \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$

#### 4.3 Descriptive Statistics, Validity, and Reliability

**Table 03** shows the values of descriptive statistics, validity, and reliability, where the validity of the constructs is represented by the CR (composite reliability) and AVE (average variance extracted). Composite reliability (CR) (Hair et al., 2019) values of all constructs meet the minimum threshold limit of .500, and values of all constructs for average variance extracted (AVE) also meet the minimum threshold limit of .700. The reliability of all constructs is calculated by following the method suggested by Cronbach (1951), and the reliability values of all constructs are above .70, which are considered good as suggested by earlier researchers. Moreover, **Table 03** also represent the correlation values of all study variables which are significant; where SE positively significantly correlated with SS ( $r = .39^{**}$ ,  $p < .01$ ), with MCM ( $r = .12^*$ ,  $p < .05$ ), with RE ( $r = .25^{**}$ ,  $p < .01$ ), and negatively significantly correlated with DA ( $r = -.35^{**}$ ,  $p < .01$ ); SS positively significantly correlated with MCM ( $r = .11^*$ ,  $p < .05$ ), with RE ( $r = .39^{**}$ ,  $p < .01$ ), and significantly negatively correlated with DA ( $r = -.41^{**}$ ,  $p < .01$ ); MCM significantly positively correlated with RE ( $r = .11^*$ ,

$p < .05$ ), and negatively significantly correlated with DA ( $r = -.14^*$ ,  $p < .05$ ); RE significantly negatively correlated with DA ( $r = -.49^{**}$ ,  $p < .01$ ).

**Table 03:** Descriptive Statistics, Validity, and Reliability

Variables	Mean	SD	CR	AVE	1	2	3	4	5	6	7	8
1 Gender	1.34	.474				-.10**	-.09	.12*	.15*	.07	.06	.19**
2 Age	1.55	.855					.16**	-.19**	-.13**	.17**	-.14**	-.08
3 Education	1.40	.491						-.29**	-.07	-.02	-.11*	-.21**
4 SE	5.27	1.191	.95	.64				<b>(.93)</b>	.39**	.12*	.25**	-.35**
5 SS	5.49	1.115	.95	.64					<b>(.94)</b>	.11*	.39**	-.41**
6 MCM	3.89	1.497	.94	.63						<b>(.92)</b>	.11*	-.14*
7 RE	5.43	1.107	.96	.71							<b>(.95)</b>	-.49**
8 DA	5.54	.899	.95	.55								<b>(.93)</b>

**Note:**  $N=386$ , SE; self-efficacy, SS; social support, MCM; medical coping modes, RE; resilience, DA; death anxiety, \*\* $p < .01$ , \* $p < .05$

#### 4.4 Hierarchical Regression

Table-04 depicts the direct effect of predictor variables on criterion variables. We control gender, age, and education as the control variable by following the ANOVA results. Results of Table 04 indicate that SE negatively influence the DA where ( $b = -.23^{***}$ ,  $SE = .04$ ,  $p < .001$ ,  $t$ -value =  $-5.96$ ,  $VIF = 1.13$ ), SS negatively influence the DA where ( $b = -.31^{***}$ ,  $SE = .04$ ,  $p < .001$ ,  $t$ -value =  $-8.31$ ,  $VIF = 1.04$ ), MCM negatively influence the DA where ( $b = -.12^{**}$ ,  $SE = .03$ ,  $p < .01$ ,  $t$ -value =  $-3.61$ ,  $VIF = 1.04$ ) and RE negative positively influences the DA where ( $b = -.038^{***}$ ,  $SE = .04$ ,  $p < .001$ ,  $t$ -value =  $-10.76$ ,  $VIF = 1.03$ ); thus, these results support H1, H2, H3 and H4 of this study.

**Table 04: Direct Effects**

Variable	Death Anxiety															
	Model-1 (Self-Efficacy)				Model-2 (Social Support)				Model-3 (Medical Coping)				Model-4 (Resilience)			
	B	S E	t-value	VI F	B	S E	t-value	VI F	b	S E	t-value	VI F	B	S E	t-value	VI F
Gender	.27***	.09	2.96	1.02	.21**	.09	2.43	1.04	.31***	.09	3.28	1.02	.28***	.08	3.39	1.02
Age	.01	.05	.14	1.06	.01	.05	.15	1.05	-.04	.05	-.81	1.07	.02	.05	.46	1.05
Education	.19*	.09	2.07	1.11	.31***	.09	3.61	1.03	.33***	.09	3.59	1.03	.26***	.08	3.21	1.04
SE	-.23***	.04	-5.96	1.13												
SS					-.31***	.04	-8.31	1.04								
MCM									-.12**	.03	-3.61	1.04				
RE													-.38***	.04	-10.76	1.03
R2	.15				.21				.12				.29			
Adjusted R2	.14				.20				.16				.28			
F	16.74**				25.73**				17.29**				38.30**			
	*				*				*				*			

**Note:**  $N=386$ , SE; self-efficacy, SS; social support, MCM; medical coping modes, RE; resilience, DA; death anxiety, \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$

#### 4.5 Moderation Analysis

**Table 05** Moderating effect of Life Meaning

Variable Relationship	Beta	t	p
Self-esteem *Life Meaning → Death Anxiety	-.320	4.57	.017
Social Support *Life Meaning → Death Anxiety	-.734	3.51	.000
Medical Coping *Life Meaning → Death Anxiety	-.529	4.99	.001
Resilience *Life Meaning → Death Anxiety	-.104	1.63	.522

In table-05, moderation analysis was used to examine the effects of life meaning among cancer patients. Meaning in life moderates the relationship between self-esteem and death anxiety ( $\beta = -.320$ ,  $p = .017$ ) in a statistically significant manner. The result indicates that cancer patients with a sense of purpose have less fear of death. On the scales of social support and death anxiety, the

moderating effect of meaning in life is also significantly negative ( $\beta = -0.734, p = .000$ ). According to a regression analysis, cancer patients who receive social support experience less death anxiety. Cancer patients with a sense of meaning in life have less fear of death. One of the most influential factors that increase or decrease mortality anxiety is medical coping. Meaning in life moderated the relationship between medical coping and death anxiety substantially negatively ( $\beta = -0.529, p = .001$ ). Lastly, on the resilience scale, the relationship between meaning in life and death anxiety is not statistically significant ( $\beta = -.104, p = .522$ ).

#### 4.6 Mediation Analysis

**Table 06** Mediation effects of internal and external religious orientation

Variable Relationship	Beta	t	p
Self-esteem *External religious orientation → Death Anxiety	-.031	1.69	.012
Social Support *External religious orientation → Death Anxiety	-.463	3.22	.001
Medical Coping *External religious orientation → Death Anxiety	.092	1.32	.126
Resilience * External religious orientation → Death Anxiety	.005	2.02	.433
Self-esteem * internal religious orientation → Death Anxiety	-.021	5.61	.020
Social Support * internal religious orientation → Death Anxiety	-.657	4.47	.000
Medical Coping * internal religious orientation → Death Anxiety	-.345	5.51	.000
Resilience * internal religious orientation → Death Anxiety	-.362	6.32	.001

Table 06 in which we examine the mediating effects of internal and external religious orientation on the predictor variables and outcome variable. The results indicate that external religious orientation significantly negative mediates the relationship between self-esteem and death anxiety ( $\beta = -.031, p = .012$ ) and between social support and death anxiety ( $\beta = -.463, p = .001$ ). On the scale of medical coping and resilience, the statistically insignificant relationship is mediated by external religious orientation. Furthermore, internal religious orientation significantly negative mediates the relationship between self-esteem and death anxiety ( $\beta = -.021, p = .020$ ), between social support and death anxiety ( $\beta = -.657, p = .000$ ), between medical coping and death anxiety ( $\beta = -.345, p = .000$ ) and between resilience and death anxiety ( $\beta = -.362, p = .001$ ).

#### Discussion

According to the findings of this study, it was observed that all cancer patients in stages I, II, III, and IV exhibited varying degrees of death anxiety. These results are consistent with previous studies that have described the presence of death anxiety among cancer patients (Vehling et al., 2019). To mitigate death anxiety, it is crucial for advanced cancer patients to maintain an optimistic outlook (Fischer et al., 2018). In Pakistan, individuals often progress to an advanced stage of cancer after receiving a diagnosis, and patients and their families are faced with the reality of an impending demise. The journey of cancer, its treatments, and the associated adverse effects inflict significant suffering upon individuals (Kyota & Kanda, 2019). Healthcare professionals, particularly nurses, have a responsibility to comprehend the pain experienced by their patients and its profound influence on their lives.

Furthermore, the research conducted in this study indicated a significant negative correlation between self-esteem and death anxiety among cancer patients. Self-esteem serves as a mechanism for alleviating anxiety (Missler et al., 2012). Previous studies have shown that self-esteem reduces death anxiety in healthy individuals and is negatively associated with it (Missler et al., 2012). Neel et al. (2013) demonstrated that self-esteem acted as a protective barrier against death dread among a sample of sixty cancer patients. Therefore, it is beneficial for patients with advanced cancer to reflect on their life journey and the satisfaction it has brought to their loved ones by recalling their past accomplishments. Encouraging individuals to share their experiences and emotions related to cancer can also be instrumental in boosting self-confidence and fostering a sense of self-respect.

In this study, the moderating effects of life meaning among cancer patients were also examined. Higher levels of life meaning were found to be strongly associated with reduced levels of death anxiety, providing further evidence in support of our findings. These results can provide valuable

insights for the development of psychologically supportive therapies for individuals with cancer. An important takeaway from this research is that cancer patients who perceive a greater sense of purpose in life tend to experience less anxiety about their own mortality. Previous studies have indicated that individuals of certain age groups may benefit more from having a deeper sense of purpose (Liu et al., 2020). Enhancing a patient's sense of purpose in life can potentially lead to decreased psychological distress (Park et al., 2019), improved physical health (Czekierda et al., 2017), and increased self-esteem. Since self-esteem is an assessment of an individual's overall worth, it is directly linked to the aforementioned aspects of life meaning. The perception that one's life holds value and the persistent pursuit of personal goals can contribute to an individual's self-esteem (Martela & Steger, 2022). The Terror Management Theory (TMT) operates under the assumption that cultural institutions can act as a protective factor in alleviating the effects of death anxiety. According to the TMT theory, self-esteem can be understood as the feeling that "I am an intrinsic part of this meaningful cosmos." Engaging in the process of self-regulation, intimately connected to high levels of self-esteem, creates a buffer zone that helps mitigate anxiety (Boring et al., 2022).

For cancer patients, support from family, friends, and healthcare professionals plays a crucial role in providing comfort. Particularly, support from family members or a spouse aids in the adjustment to physical illness (Uslu-Sahan et al., 2019). Our study revealed a significant negative association between fear of death and social support. Other studies have also demonstrated that cancer patients benefit from adequate social support (Uslu-Sahan et al., 2019). Additionally, our results indicated that life meaning significantly moderates the relationship between social support and death anxiety. Previous research has shown that terminally ill individuals who receive strong social support possess a greater sense that their lives have purpose despite their illness (Dobříková et al., 2014). Social support is offered to cancer patients with the aim of improving their prospects of survival. In Pakistani culture, the significance of family is highly regarded. Despite their fears regarding their own mortality, cancer patients who are cared for at home by their families can find spiritual solace, love, strength, and mental tranquility. It is conceivable that the home environment provides a greater degree of autonomy and independence, contributing to the importance of social support in reducing death anxiety (Nawaz et al., 2021). These benefits can also extend to the overall quality of life of the patient.

The results of our study revealed a significant negative association between medical coping and death anxiety among cancer patients. Additionally, we examined the hypothesis that a negative relationship exists between medical coping and concern towards death anxiety, with life meaning moderating this relationship. Coping represents a complex process of behavior and attitude, involving the use of various tactics. Cancer patients experiencing disease-related disabilities employ diverse coping mechanisms, such as engaging in discussions about their illness, seeking information, and actively participating in the healing process. Although coping strategies vary among individuals, passive coping mechanisms such as resignation or consternation are often observed in relation to death anxiety. Patients who adopt a resignation coping style tend to passively avoid acknowledging the physical and emotional aspects of their current situation. Previous research has revealed that the fear of dying can lead to unhelpful coping mechanisms (Menzies & Menzies, 2020). Hoelterhoff and Chung (2016) found that coping strategies helped individuals develop resilience to the effects of death anxiety and mitigated its negative impact on their mental health. The results of our study also demonstrated a negative correlation between resilience and death anxiety, suggesting that patients with higher levels of resilience experience less death anxiety. Building resilience is a demanding task that requires considerable fortitude. Patients with cancer should have access to programs that cultivate resilience in order to assist them in coping with their impending death.

In our study, we also examined the mediating role of religious orientation between predictor variables (self-esteem, social support, medical coping, and resilience) and the outcome variable (death anxiety) among cancer patients. The findings confirmed that internal religious coping



mediates the relationship between these variables. Our results contribute to the growing body of literature on the potential therapeutic benefits of religion in addressing anxiety related to morbid thoughts (Lagman et al., 2012; Masror Roudsary et al., 2022). As a result, cancer patients in our study exhibited lower levels of death anxiety. Given that a significant proportion of Pakistan's population practices Islam, religion plays a prominent role in the daily lives of Pakistanis. Religious individuals often derive internalized perspectives and beliefs that provide them with a sense of meaning, in addition to the external benefits such as community respect and social ties (Abbas et al., 2021). Individuals with deeply ingrained intrinsic religiosity are more likely to find solace in their religion and maintain a belief that everything happens according to a divine plan, even in the face of illness. This is because individuals with highly developed intrinsic religiosity tend to attribute all occurrences to a higher purpose. Religious practices lose their profundity when they lack this internalized cognitive resource that gives them meaning, making it more challenging to find solace in those rituals (Krok et al., 2021). Patients who engage in internal religious thought experience reduced anxiety about death and increased confidence in their ability to cope with their illness. This, in turn, leads to increased adherence to the prescribed treatment plan and a sense of empowerment. Additionally, it is widely acknowledged that an optimistic outlook reduces anxiety towards one's own mortality and enhances mood, ultimately leading to increased psychological resilience (Abbas et al., 2021).

Several limitations apply to this investigation. Firstly, since this study utilized a cross-sectional design, it was unable to establish causal relationships between death anxiety, self-esteem, and life meaning. Additionally, this study did not account for whether individuals were newly diagnosed with cancer or experiencing a recurrence. Secondly, self-report measures were employed in this research to assess participants' levels of death anxiety, which may have been influenced by considerations of social desirability. Future studies employing more advanced research methodologies can replicate this approach and yield more intriguing findings. Lastly, a cancer patient's level of self-esteem may mitigate the impact of the disease on their perception of life's significance. The dynamic nature of death anxiety leaves room for other moderating factors to influence the relationship between life meaning and the fear of dying. It is possible that future research will uncover how dispositional optimism and different attribution styles can help reduce death anxiety.

### **Clinical Implication**

In our study involving cancer patients, we identified characteristics associated with death anxiety. Our findings suggest that physicians should consider the potentiality of mortality. The analysis of key factors revealed a need for improved pain management to alleviate patient suffering during the challenging process of dying. For a more comprehensive understanding of the projected impact of death anxiety on the meaning of life, coping mechanisms, and quality of life, we recommend further correlational and regression research. The Relaxation Response Resiliency Program, a mindfulness-based intervention, serves as an example of cognitive and behavioral stimulation exercises that should be included in interventional studies on this subject. It is also essential to provide spiritual support to patients to assist them in coping with impending death, finding meaning in their lives, and enhancing their self-esteem.

The diagnosis of cancer is a terrifying event. It often leads to some level of anxiety related to one's own mortality, as well as mental disorders characterized by a lack of motivation and feelings of hopelessness. Certain mental illnesses could potentially have a detrimental effect on a person's physical health. One of the most significant takeaways from the research is that caregivers should provide sufficient support to cancer patients, enabling them to continue participating in their religious observances. This support could take the form of a religious expert guiding the individual toward rituals, such as prayers, that foster optimism and protect the individual from despair. Another insight from the study is that counseling and psycho-educational programs should be tailored to the religious traditions practiced by cancer patients, aiming to raise awareness about how

these patients confront the obstacles they face. By involving patients in religious activities during their treatment, one can help them improve their functioning and cultivate a more hopeful outlook.

### Conclusion

In cancer patients, we observed low levels of anxiety related to death. Factors such as resilience, social support, and self-esteem are found to reduce death anxiety. Patients exhibiting low medical coping mechanisms reported acute death anxiety. A strong mediating effect has been identified in the association between religious practice and a reduction in death anxiety. Furthermore, it is significantly beneficial that patients' fear of passing away decreases when they find meaning in their lives.

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