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Research Paper

Association between Resilience, Cognitive Emotion Regulation, and Death Anxiety among Patients with Cardiovascular Diseases

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ABSTRACT

The prevalence of cardiovascular diseases (CVD) is increasing in India, causing significant problems for the healthcare system. Death anxiety is a psychological phenomenon that can be stressful for CVD patients and their families. To combat death anxiety with effective strategies, it is crucial to understand the role of resilience and cognitive emotion regulation of CVD patients. So, the aim of the current study was to investigate the association between resilience, cognitive emotion regulation, and death anxiety in patients with CVD. 168 CVD patients were selected from the Salem district of Tamil Nadu, India through stratified random sampling. Data was collected with the help of Resilience Scale by Wagnild and Young (1993), Cognitive Emotional Regulation Questionnaire (CERQ) by Garnefski et al., (2002), and Death Anxiety Scale by Templer (1970). Results revealed that resilience had a significant negative relationship with death anxiety. Lower self-blame and rumination, as well as greater acceptance, refocus on planning, positive refocusing, and positive appraisal were related to fewer symptoms of death anxiety. The findings suggested that death anxiety could be reduced by improving resilience, increasing acceptance and positive refocusing, and lowering self-blame and rumination.

Keywords: *Death anxiety, resilience, cognitive emotion regulation, cardiovascular Diseases*

Non-communicable diseases are the primary factors causing death worldwide, contributing to a high rate of early mortality, a decline in quality of life, and restrictions on work and leisure activities. These diseases also have an economic impact on families, communities, and society at large, exacerbating inequality and poverty. According to the World Health Organization (WHO), non-communicable diseases account for 61% of all deaths in India, with cardiovascular disease (CVD), diabetes, cancer, and respiratory diseases being the leading causes. Individuals with CVDs face physical, psychological, and social discomfort related to their treatment, which affects their ability to adapt to a new lifestyle (Buck et al., 2015). Additionally, this burden may potentially impact family dynamics due to the patient's increased care demands.

Death anxiety is a common phenomenon experienced by individuals facing life-threatening illnesses, including cardiovascular disease (CVD). Research has shown that patients with

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CVD often experience a significant amount of death anxiety. This anxiety can manifest as fear of death, fear of pain, fear of losing control, fear of the unknown, or fear of leaving loved ones behind. The ability of patients to take responsibility for their own treatment is influenced by interrelated personal characteristics such as motivation, resilience, and cognitive emotion regulation (CER). Identifying effective ways to foster the development of these characteristics in this population can enhance patients' coping strategies and better prepare them for managing a chronic disease (Leppin et al., 2014), which in turn can reduce their death anxiety.

Resilience is defined as a process of negotiation, management, and adaptation to significant sources of stress or trauma (Windle et al., 2011); it is an individual's ability to adjust to adversities, maintain balance, and continue with life in a positive manner (Wagnild & Young, 1993). Resilient patients are less susceptible to diseases (Bergh et al., 2015) and possess a greater ability to manage the pressure resulting from the negative impacts of diseases (Ma et al., 2013). A study conducted in Sweden reports that low levels of resilience during adolescence were associated with an increased risk of heart disease in adult life (Bergh et al., 2015). Less resilient individuals may be more vulnerable to stress and exhibit inadequate coping mechanisms when confronted with difficulties, which can lead to anxiety, depression, aggression, impulsivity, and low self-esteem.

Cognitive emotion regulation (CER) refers to the strategies individuals use to manage and cope with their emotions. In heart patients, CER can play a crucial role in managing stress and promoting overall well-being. Research has shown that CER strategies, such as reappraisal and distraction, can be effective in reducing negative emotions and improving mood in heart patients. Reappraisal involves reframing the way a situation is perceived to lessen negative emotions, while distraction involves focusing attention on something else to reduce emotional intensity. Other CER strategies that may be beneficial for heart patients include mindfulness, which involves being aware of and accepting present moment experiences, and problem-solving, which involves actively working to find solutions to problems. By employing CER strategies, CVD patients can improve their ability to manage stress and negative emotions, which can reduce their death anxiety.

Therefore, the objectives of the current study were: 1) examine potential associations between resilience, CER, and death anxiety; 2) investigate the impact of resilience and CER on death anxiety; 3) find out difference in death anxiety among individuals with cardiovascular diseases based on their demographic characteristics.

REVIEW OF LITERATURE

Extensive research has been conducted on death anxiety among patients with CVD over the years. Death anxiety is characterized by a vague, unsettling sense of worry or dread stemming from awareness of an actual or imagined threat to one’s existence (Lehto & Stein, 2009). The term is often used to describe the apprehension, fear, or discomfort that arises when individuals confront the reality of their own mortality (MacLeod et al., 2016). Consequently, death anxiety can manifest when individuals face life-threatening situations or intense psychological stress (Soleimani et al., 2016c). Typically, people experience negative emotions such as fear of self-loss, helplessness, and a sense of losing control when anticipating death (Doğan et al., 2015; Soleimani et al., 2016b). It is one of the most common psychiatric repercussions of chronic health conditions (Soleimani et al., 2017;

Soleimani et al., 2016b). Indeed, Valikhani and Yarmohammadi-Vasel (2014) found that 70% of CVD patients experience moderate to severe levels of death anxiety.

Research on resilience has consistently shown that this coping mechanism serves as an independent mediator of post-traumatic recovery, underscoring the central role of believing in one's ability to control traumatic adversity (Almedom, 2005; Harvey, 1996; Kobasa, 1979; Rutter, 1985; Stumpfer, 1995; Tedeschi & Calhoun, 1996). Additionally, resilience aids in managing death anxiety and mitigating its impact on PTSD (Purer & Walker, 2008). While traumatic experiences can lead to death anxiety, resilience enables individuals to cope and transcend their trauma. Some studies suggest that death anxiety may be a manifestation of unresolved past trauma (Chung et al., 2000). Consequently, Hoelterhoff (2010) found that highly resilient individuals often exhibit lower levels of death anxiety and reduced psychiatric comorbidity. However, recent research on terror management theory has focused primarily on cultural defense mechanisms and the death-denying aspects of cultural worldviews, often neglecting personal resilience factors except for self-esteem, which helps diminish anxiety related to mortality reminders (Pyszczynski et al., 2004). Stress-buffering personality traits or resilience factors have been shown to promote positive adaptation in the face of adversity, anxiety, trauma, and threats (Bonanno, 2004; Dolcos et al., 2016; Herrman et al., 2011) and to mitigate the impact of mortality reminders (Greenberg et al., 1993; Iverach et al., 2014).

CER (Cognitive Emotion Regulation) is a psychological issue that can lead to death anxiety (Askarizadeh & Fazilatpoor, 2017). CER strategies encompass a range of both conscious and unconscious cognitive and behavioral techniques that can either reduce, sustain, or exacerbate specific emotions (Askarizadeh & Fazilatpoor, 2017). Individuals employ various emotional strategies to manage their emotional experiences (Gross, 2013). According to Domaradzka and Fajkowska (2018), adaptive CER strategies are inversely related to anxiety and depression, whereas maladaptive CER strategies show a direct correlation with these conditions. Additionally, research on diabetic patients found that positive CER strategies had a diverse and significant relationship with anxiety, while negative CER strategies were inversely related to anxiety (Ramesh et al., 2018). Another study highlighted that mindfulness and CER strategies play crucial roles in reducing stress among individuals with hypertension, emphasizing the importance of focusing on these factors in treatment (Farahani et al., 2019). Besharat et al. (2014) demonstrated that individuals with greater cognitive flexibility are better equipped to cope with illness and manage pain. For instance, Safari Mousavi et al. (2016) found significant correlations between cognitive flexibility, adaptive and maladaptive CER strategies, and levels of depression, anxiety, and stress. In essence, individuals who exhibit higher cognitive flexibility and employ effective emotion regulation strategies tend to approach their problems with optimism, accept challenges, respond adaptively to their environment, and align their actions with their values (Mousavi et al., 2016).

Need for the Study

Patients with CVD often grapple with the psychological issue of death anxiety, which can be intensified by the uncertainty surrounding their condition and the risk of sudden complications. This anxiety may manifest through a spectrum of symptoms, including fear, worry, sadness, and depression, as well as physical symptoms such as chest pain, palpitations, and shortness of breath, which can exacerbate their anxiety. The impact of death anxiety on a patient's quality of life can be profound, affecting their ability to engage

in social activities, carry out daily tasks, and adhere to their treatment regimen. Providing emotional support and education to address this anxiety can help patients manage their condition more effectively and enhance their overall quality of life.

Resilience and CER may play a pivotal role in alleviating death anxiety among patients with CVD. Resilience, defined as the ability to adapt to and manage adversity and stress, can significantly influence how cardiovascular patients cope with death anxiety. It enables individuals to confront challenges and recover from setbacks, fostering a sense of control and optimism amid adversity. For CVD patients, resilience can be instrumental in navigating the uncertainties of their condition and the accompanying fear of mortality. Those with high resilience are generally better equipped to handle the emotional and physical stress linked to their condition and are more likely to adhere to their treatment regimens.

CER involves managing one's thoughts and beliefs to influence emotional responses, which is crucial in addressing death anxiety in CVD patients. Negative thoughts and beliefs can exacerbate anxiety and depression, making CER an essential tool for managing these emotions. This process includes recognizing and challenging negative thoughts, reframing situations positively, and focusing on problem-solving and coping strategies. Within the context of CVD, CER can aid patients in managing their fear of mortality and the uncertainties related to their condition. By reworking negative beliefs and fostering a more optimistic perspective on their prognosis, patients can reduce anxiety and cultivate a more positive outlook. Additionally, CER supports the development of effective coping strategies for managing both the emotional and physical stress associated with CVD.

Promoting resilience and CER can help healthcare providers support CVD patients in managing death anxiety, potentially improving their overall quality of life. By building supportive networks and effective coping mechanisms, patients can better address CVD challenges, leading to improved health outcomes and enhanced quality of life. Thus, it is crucial to explore the interplay between resilience, CER, and death anxiety in CVD patients.

METHODOLOGY

Participants and procedure

The sample of the current study consisted of patients with CVDs taking treatment in different hospitals in Salem city of Tamil Nadu, India. A stratified sampling method was utilized to select the participants. Six major hospitals were approached by the researcher and permission was obtained from the hospital authorities. The researcher approached the participants and their consent was obtained. The nature of the study was briefed to each participant. 200 data were collected and some of them were found to be skewed and hence only 168 data were considered for analysis.

Tools Used

- **Death Anxiety Scale:** The 15-item Death Anxiety Scale was developed by Templer (1970) and used to measure death anxiety. Items were scored on a five-point Likert scale, where 1=completely agree, and 5=completely disagree. The scores were ranging from 15 to 75, where lower scores indicate lower levels of death anxiety.
- **Resilience Scale:** The Resilience Scale developed by Wagnild and Young (1993) was used to measure resilience with 25 items using 7 point Likert scale.
- **Cognitive Emotion Regulation Questionnaire (CERQ):** The CERQ was developed by Garnefski et al. (2001). It is a 36-item scale designed to evaluate the

cognitive aspects of emotion regulation. The items are rated on a 5-point Likert scale ranging from 1 (almost never) to 5 (almost always).

Statistical Analysis

Data were processed and analyzed using SPSS 25.0 statistical software. Karl Pearson correlation test was used to find out the association between resilience, CER, and death anxiety; a t-test was utilized to analyze the differences in death anxiety by demographic categories, and regression analysis for the amount of variance in death anxiety explained by the resilience and CER.

Ethics

The study procedures were carried out in accordance with the Declaration of Helsinki. The study was approved by the local ethical committee. Written informed consent was obtained from all participants.

RESULTS

Table 1 demonstrates the correlation matrix for resilience, CER, and death anxiety. It was noticed that resilience was negatively correlated with death anxiety of CVD patients. Self-blame and catastrophizing dimensions of CER were positively correlated with death anxiety whereas acceptance, positive refocusing, refocus on planning, and positive appraisal were negatively correlated. Rumination, putting into perspective, and other blame did not have any significant correlation with death anxiety of CVD patients.

Table 1: Correlation matrix for study variables

	M	SD	1	2	3	4	5	6	7	8	9	10
1. Resilience	109.74	8.92	-									
2. Self-blame	11.45	3.63	-.11	-								
3. Acceptance	10.25	4.01	-.06	-.07	-							
4. Rumination	12.49	2.76	.18**	-.11	-.22**	-						
5. Positive refocusing	11.67	3.30	.01	-.05	.30**	-.23**	-					
6. Refocus on planning	9.30	4.09	-.04	-.19**	.37**	-.11	.37**	-				
7. Positive reappraisal	11.29	4.02	-.07	.02	.41**	-.14	.24**	.12	-			
8. Putting into perspective	13.87	3.20	-.22**	.02	.17*	-.11	.23**	.20**	.21**	-		
9.Catastrophizing	10.82	3.50	-.25**	.13	.09	-.35**	-.04	.08	.03	.23**	-	
10. Other Blame	11.43	3.71	-.05	.12	.05	-.16*	.02	.11	-.02	.04	.53**	-
11. Death anxiety	50.24	8.95	-.23**	.43**	-.34**	.09	-.33**	-.34**	-.27**	-.02	.17*	.03

Note: ***p<.01; *p<.05*

Table 2 represents the impact of resilience and CER on death anxiety among CVD patients. It was observed that death anxiety of CVD patients was significantly predicted by resilience. Furthermore, Self-blame and catastrophizing of CER positively and acceptance, refocus on planning, and positive reappraisal negatively predicted death anxiety of CVD patients.

Table 2: Impact of resilience and cognitive emotion regulation on death anxiety

Independent Variables	Un-standardized coefficient		Beta	't' value	Model Summary
	B	Std. Error			
Resilience	-.193	.064	-.192	-3.011	F=12.266 R=0.662 R^2=0.439
Self-blame	.894	.154	.363	5.804	
Acceptance	-.323	.160	-.145	-2.020	
Rumination	.379	.220	.117	1.723	
Positive refocusing	-.363	.189	-.134	-1.915	
Refocus on Planning	-.343	.153	-.157	-2.247	
Positive Reappraisal	-.400	.151	-.180	-2.660	
Putting into Perspective	.075	.185	.027	.406	
Catastrophizing	.444	.204	.174	2.178	
Other Blame	-.159	.174	-.066	-.913	

Note: *p<.05

Table 3 presents the difference in death anxiety of CVD patients based on their demographic characteristics such as gender, illness duration, treatment duration, and locality. It was noticed that male patients had a higher level of death anxiety compared to female patients. Patients who had undergone treatment for more than 5 years and patients with more than 5 years of disease had a higher level of death anxiety. Furthermore, patients from rural areas had a higher level of death anxiety than patients from urban areas.

Table 3: Difference in death anxiety based on demographic characteristics

Variables	Category	N	Mean	SD	t value
Gender	Male	74	53.55	8.926	4.496*
	Female	94	47.63	8.116	
Illness duration	Below 5 year	71	46.80	8.738	4.491*
	Above 5 year	97	52.75	8.292	
Treatment duration	Below 5 year	82	48.27	9.665	2.842*
	Above 5 year	86	52.12	7.828	
Locality	Rural	86	51.60	9.275	2.044*
	Urban	82	48.80	8.429	

***Note:** * - Significant*

DISCUSSION

The main purpose of this study was to assess the relationship between resilience, CER, and death anxiety among patients with CVD. Death anxiety is a normative response to reminders of, or threats to, mortality (Sherman et al., 2010). Furthermore, death anxiety can occur as a result of difficult everyday experiences, when there is a perceived danger that interferes with the quality of a person's life (Furer & Walker, 2008).

Resilience and CER were significantly associated with death anxiety of CVD patients [Table 1]. There was a significant inverse relationship between resilience and death anxiety. Resilience is a personality trait that enables an individual to live through hard times and stay strong in the face of difficulties (Javalkar et al., 2017; Phillips et al., 2020). Thus, resilience can help reduce stress and feelings of incompetence during hard times, which improves life

satisfaction and mental health (Cafferkya et al., 2018) and reduces death anxiety. Hence, the inverse relationship between resilience and death anxiety is reasonable. The present finding is consistent with the previous studies by Mohammadi et al. (2023) who highlighted that individuals with greater resilience had a lower level of death anxiety whereas a low level of resilience was found to have a high level of death anxiety. Moreover, Self-blame and catastrophizing dimensions of CER had a positive association with death anxiety as well as acceptance, positive refocusing, refocus on planning, and positive appraisal had a negative association with death anxiety. It can be stated that persons who employ positive coping mechanisms are less anxious when faced with stressful circumstances. In other words, the ability of the patients to alter their perspective in the face of stressful events and pay attention to the positive and long-term outcomes can be attributed to the negative association between adaptive cognitive regulation strategies and death anxiety. This in turn lowers the level of death anxiety. In contrast, patients who apply negative strategies in stressful situations instead of adopting positive ones feel higher levels of anxiety. The present finding is consistent with the previous study by Ganjari et al. (2020) who found that CER strategies such as refocus on planning, acceptance, positive reappraisal, and putting into perspective had a significant negative relationship with death anxiety whereas catastrophizing, rumination, and self-blame had a significant positive correlation.

Resilience and CER had a significant impact on death anxiety among CVD patients [Table 2]. Resilience and CER of CVD patients predicted 43% of their death anxiety. Patients with higher resilience reported a decreased level of death anxiety. This may be because resilient patients have better coping mechanisms and are able to manage their emotions and thoughts more effectively. Additionally, resilience may provide a sense of control and empowerment in the face of death anxiety. Resilient patients may be more likely to seek out support, engage in self-care activities, and take positive steps to manage their anxiety which would reduce their levels of death anxiety. By building resilience, patients can better cope with death anxiety and improve their overall well-being. Hence, the negative influence of resilience on death anxiety is quite reasonable. Furthermore, patients with more adaptive CER strategies and less maladaptive CER strategies showed a decreased level of death anxiety. In general, patients with low levels of positive emotions and high levels of negative emotions apply many maladaptive CER strategies and a few adaptive CER strategies, which would result in high levels of death anxiety. Askarizadeh and Fazilatpoor (2017) found that CER strategies had a significant influence on death anxiety which is consistent with the present finding.

CVD patients significantly differed in their death anxiety based on their demographic characteristics [Table 3]. Male patients reported an increased level of death anxiety than female patients. Men are often expected to be strong and unemotional, which can make it difficult for them to express their emotions and seek support when dealing with death anxiety. This could the reason that male patients reported higher levels of death anxiety compared to their female counterparts. Strömberg and Mårtensson (2003) revealed that male patients had a higher incident of heart failure which would increase their level of death anxiety. In contrast, some studies have reported that death anxiety were more common among women (Adler et al., 2009; Feng et al., 2016). Furthermore, prolonged disease and treatment durations in chronic diseases lead to psychosocial problems such as anxiety and depression (Ye et al., 2013). It is believed that prolonged illness and treatment durations cause people to believe they would not recover, believe they're going to die, and begin to accept death, which causes death anxiety. Hence, it is obvious that as the duration of disease

and duration of treatment increases, the level of death anxiety also will be increased. This study finding is in line with the study by Yıldırım and Kocatepe (2023) who found that patients with prolonged disease and treatment durations had a higher level of death anxiety.

Furthermore, patients from rural areas reported a higher level of death anxiety compared to patients in urban areas. Rural areas often have fewer healthcare resources and limited access to medical facilities. This can lead to a lack of medical attention and resources when dealing with serious illnesses or injuries, which can increase anxiety about death. On the other hand, patients from urban areas have more healthcare resources, including hospitals, clinics, and specialist services. Hence, they may feel more confident in the quality of care they receive and may be reassured that they have access to medical attention if needed. This could the reason that patients from rural areas reported an increased level of death anxiety.

CONCLUSION

People have always been concerned about death, and just thinking about it makes them anxious and stressed—especially if they have a health condition like CVD, which has a psychological impact. Therefore, the findings of the current study could be utilized by therapists to treat CVD patients. The authors also suggest applying the aforementioned strategies to improve resilience and CER strategies in patients with CVD. Besides, such skills could be applied to patients through appropriate programs and workshops. It is important for healthcare providers to be aware of death anxiety in CVD patients and to provide them with appropriate support and resources such as counseling, support groups, and education about the disease process and treatment options. Additionally, interventions aimed at improving the overall quality of life for CVD patients, such as physical exercise and stress management programs, can help increase their resilience and CER which in turn alleviates their death anxiety.

REFERENCES

Almedon, A. (2005). Resilience, hardiness, sense of coherence, and posttraumatic growth: All paths leading to a light at the end of the tunnel? *Journal of Loss & Trauma, 10,* 253-265.

Askarizadeh, G., & Fazilatpoor, M. (2017). The role of cognitive regulation strategies of emotion, psychological hardiness and optimism in the prediction of death anxiety of women in their third trimester of pregnancy. *Iranian Journal of Psychiatric Nursing, 4(6),* 50-58.

Askarizadeh, G., & Fazilatpoor, M. (2017). The role of cognitive regulation strategies of emotion, psychological hardiness and optimism in the prediction of death anxiety of women in their third trimester of pregnancy. *Iranian Journal of Psychiatric Nursing, 4(6)*, 50-58.

Bergh, C., Udumyan, R., Fall, K., Almroth, H., & Montgomery, S. (2015). Stress resilience and physical fitness in adolescence and risk of coronary heart disease in middle age. *Heart, 101(8)*, 623-629.

Besharat, M. A., Granmaye Pour, S., Pour Naghdali, A., Ofoghi, Z., Habib Nezhad, M., & Aghaei Sabet, S. S. (2014). Relationship between alexithymia and interpersonal problems: Moderating effect of attachment styles. *Contemporary Psychology, Biannual Journal of the Iranian Psychological Association, 9(1)*, 3-16.

Bonanno, G. A. (2004). Loss, Trauma, and Human Resilience: Have We Underestimated the Human Capacity to Thrive After Extremely Aversive Events? *American Psychologist, 59(1),* 20–28. https://doi.org/10.1037/0003-066X.59.1.20

Buck, H. G., Dickson, V. V., Fida, R., Riegel, B., D'Agostino, F., Alvaro, R., & Vellone, E. (2015). Predictors of hospitalization and quality of life in heart failure: A model of comorbidity, self-efficacy and self-care. *International journal of nursing studies, 52(11),* 1714-1722.

Cafferkya, J., Banbury, S., and Athanasiadou-Lewis, C. (2018). Reflecting on parental terminal illness and death during adolescence: an interpretative phenomenological analysis. *Interpersona 12*, 180–196. doi: 10.5964/ijpr.v12i2.306

Cheung Chung, Catherine Chung, Yvette Easthope, M. (2000). Traumatic stress and death anxiety among community residents exposed to an aircraft crash. *Death Studies, 24(8)*, 689-704.

Doğan, R., Arslantas, D., & Ünsal, A. (2015). Assessment of depression and death anxiety level in diabetic patients in Eskisehir, Turkey. *International Journal of Diabetes in Developing Countries, 35(3)*, 242–249.

Dolcos, S., Hu, Y., Iordan, A. D., Moore, M., & Dolcos, F. (2016). Optimism and the brain: Trait optimism mediates the protective role of the orbitofrontal cortex gray matter volume against anxiety. *Social Cognitive and Affective Neuroscience, 11(2),* 263–271. https://doi.org/10.1093/scan/nsv106

Domaradzka, E., & Fajkowska, M. (2018). Cognitive emotion regulation strategies in anxiety and depression understood as types of personality. *Frontiers in psychology, 9*, 856.

Dursun, P., Alyagut, P., & Yılmaz, I. (2022). Meaning in life, psychological hardiness and death anxiety: individuals with or without generalized anxiety disorder (GAD). *Current psychology, 41(6)*, 3299-3317.

Farahani, S., Rafiepoor, A., & Jafari, T. (2019). The Role of Mediator of Cognitive Emotion Regulation Strategies in the Relationship between Mindfulness and Perceived Stress in People with High Blood Pressure. *International journal of applied behavioral sciences, 6(2)*, 52-9.

Furer, P., & Walker, J. R. (2008). Death anxiety: A cognitive-behavioral approach. *Journal of Cognitive Psychotherapy, 22(2)*, 167.

Ganjari, M. G., Khanmohammadzadeh, Z., Nobakht, H., & Kenarsari, H. E. (2020). The role of cognitive emotion regulation strategies, cognitive flexibility, and distress tolerance in death anxiety among women with hypertension: A descriptive correlation study. *Jundishapur Journal of Chronic Disease Care, 9(4).*

Gross, J. J. (Ed.). (2013). Handbook of emotion regulation. Guilford publications.

Harvey, M. (1996). An ecological view of psychological trauma and recovery. *Journal of Traumatic Stress, 9*, 3-23.

Herrman, H., Stewart, D. E., Diaz-Granados, N., Berger, E. L., Jackson, B., & Yuen, T. (2011). What is resilience? *The Canadian Journal of Psychiatry, 56(5),* 258–265. https://doi.org/10.1177/070674371105600504

Hoelterhoff, M. (2010). Resilience against death anxiety in relationship to post-traumatic stress disorder and psychiatric co-morbidity (Doctoral dissertation, University of Plymouth).

Javalkar, K., Rak, E., Phillips, A., Haberman, C., Ferris, M., and van Tilburg, M. (2017). Predictors of caregiver burden among mothers of children with chronic conditions. *Children 4:39.* doi: 10.3390/children4050039

Kobasa, S. (1979). Stressful life events, personality, and health: An inquiry into hardiness. *Journal of Personality & Social Psychology, 37*, 1-11.

Lehto, R., & Stein, K. (2009). Death anxiety: An analysis of an evolving concept. Research and Theory for Nursing Practice: *An International Journal, 23(1)*, 23–41.

Leppin, A. L., Gionfriddo, M. R., Sood, A., Montori, V. M., Erwin, P. J., Zeballos-Palacios, C., ... & Tilburt, J. C. (2014). The efficacy of resilience training programs: a systematic review protocol. *Systematic reviews, 3*, 1-5.

Ma, L. C., Chang, H. J., Liu, Y. M., Hsieh, H. L., Lo, L., Lin, M. Y., & Lu, K. C. (2013). The relationship between health-promoting behaviors and resilience in patients with chronic kidney disease. *The Scientific World Journal*, 2013.

MacLeod, R., Crandall, J., Wilson, D., & Austin, P. (2016). Death anxiety among New Zealanders: The predictive role of gender and marital status. *Mental Health, Religion & Culture, 19(4),* 339–349

Mohammadi, F., Masoumi, S. Z., Oshvandi, K., Bijani, M., & Nikrouz, L. (2023). Death anxiety, resilience, and family cohesion in parents of children and adolescents in the end stages of life. *Frontiers in Psychology, 14.*

Mousavi, S. S. S., Nadri, M., Amiri, M., Radffar, F., & Farokhcheh, M. (2016). The predictive role of psychological flexibility and cognitive emotion regulation strategies on depression, anxiety and stress in type 2 diabetic patients.

Phillips, B. E., Theeke, L. A., & Sarosi, K. M. (2021). Relationship between negative emotions and perceived support among parents of hospitalized, critically ill children. *International journal of nursing sciences, 8(1)*, 15-21.

Pyszczynski, T., Greenberg, J., Solomon, S., Arndt, J., & Schimel, J. (2004). Why Do People Need Self-Esteem? A Theoretical and Empirical Review. *Psychological Bulletin, 130(3),* 435–468. https://doi.org/10.1037/0033-2909.130.3.435

Ramesh, S., Ghazian, M., Rafiepoor, A., & Safari, A. R. (2018). The mediator role of depression and anxiety in the relationship between cognitive emotional regulation and self-care in type 2 diabetes. *Pajouhan Scientific Journal, 16(4),* 37-45.

Rutter, M. (1985). Resilience in the face of adversity: Protective factors and resistance to psychiatric disorder. *British Journal of Psychiatry, 147,* 598-611.

Sherman, D. W., Norman, R., & McSherry, C. B. (2010). A comparison of death anxiety and quality of life of patients with advanced cancer or AIDS and their family caregivers. *The Journal of the Association of Nurses in Aids Care: Janac, 21(2)*, 99–112.

Soleimani, M. A., Lehto, R. H., Negarandeh, R., Bahrami, N., & Chan, Y. H. (2017). Death anxiety and quality of life in Iranian caregivers of patients with cancer. *Cancer Nursing, 40(1),* E1–E10.

Soleimani, M. A., Lehto, R. H., Negarandeh, R., Bahrami, N., & Nia, H. S. (2016b). Relationships between death anxiety and quality of life in Iranian patients with cancer. *Asia-Pacific Journal of Oncology Nursing, 3(2)*, 183–191.

Soleimani, M. A., Yaghoobzadeh, A., Bahrami, N., Sharif, S. P., & Sharif Nia, H. (2016c). Psychometric evaluation of the Persian version of the Templer's Death Anxiety Scale in cancer patients. *Death Studies, 40(9)*, 547–557.

Strömberg, A., & Mårtensson, J. (2003). Gender differences in patients with heart failure. *European Journal of Cardiovascular Nursing, 2(1)*, 7-18.

Tedeshi, R., & Calhoun, L. (1996). The Posttraumatic Growth Inventory: Measuring the positive legacy of trauma. *Journal of Traumatic Stress, 9*, 455-471.

Valikhani, A., & Yarmohammadi-Vasel, M. (2014). The relationship between attachment styles and death anxiety among cardiovascular patients. *Journal of Kerman University of Medical Sciences, 21(4)*, 355–367.

Wagnild, G. M., & Young, H. M. (1993). Development and psychometric. *Journal of nursing measurement, 1(2)*, 165-17847.

Windle, G., Bennett, K. M., & Noyes, J. (2011). A methodological review of resilience measurement scales. *Health and quality of life outcomes, 9(1)*, 1-18.

Ye, C., Zhuang, Y., Zhang, Y., Lin, Y., Ji, J., & Chen, H. (2013). Anxiety, depression, and associated factors among inpatients waiting for heart transplantation. *Shanghai Archives of Psychiatry, 25(3)*, 165–173.

Yıldırım, D., & Kocatepe, V. (2023). Evaluating death anxiety and death depression levels among patients with acute myocardial infarction. *OMEGA-Journal of Death and Dying, 86(4)*, 1402-1414.

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Conflict of Interest

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