Investigating Death Anxiety and its Relationship with Some Demographic Variables in Patients with Heart Failure in Zanjan 2018

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Abstract

Background: One of the psychological complications of heart failure is anxiety, especially death anxiety, which leads to poor quality of life in patients and impaired prognosis of the disease.

Objectives: The purpose of this study was to Investigating Death Anxiety and its Relationship with Some Demographic Variables in Patients with Heart Failure investigate death anxiety level and its association with some demographic variables in patients with heart failure.

Methods: It was a descriptive-analytical study conducted on 80 patients with heart failure referring to Valiasr Hospital and Ayatollah Mousavi Zanjan between March 2018 and August 2018. A three-prat questionnaire was used to collect data: 1. Demographic characteristics, 2. Templer death anxiety scale 3. Beck anxiety scale (to determine patients' baseline anxiety). For analyzing the data, descriptive statistics and ANCOVA were used in SPSS v.22 software.

Results: The age range of the patients was between 27 and 98 years, with the highest age group (65 years) with 83.8%. Fifty-two point five percent of the sample were female (n=42) and 47.5% were male (n=38). Seventy two point five percent were married, 61% were illiterate, 40% were unemployed and 55% reported poor financial status. The mean score of death anxiety in heart failure patients was 47.95. The highest score of death anxiety in these patients was 61 (1.3%) and the lowest score was 30 (1.3%). More than 90% of patients had moderate (82.5%) and severe (11.25%) death anxiety. The results of ANCOVA showed that the relationship between death anxiety level and employment status variable (P<0.04) was significant.

Conclusion: The results of this study indicated a high death anxiety among the majority of studied population which can be due to lack of adequate training in coping with death anxiety in patients with heart failure. Accordingly, it is suggested that more attention should be paid to mental health authorities in order to improve the mental health of these populations in this area.

Keywords: death, anxiety, heart failure

Introduction

Congestive heart failure is a chronic, growing, disabling disease necessitating advanced treatment and interventions. It not only affects patients but their families as well as the community, reduces patients' functional capabilities and causes impairment and problems in the social life of individuals [1]. More than 23 million people worldwide are estimated to suffer from heart failure with an increasing incidence and prevalence [2,3].

Chronic and debilitating diseases have many psychiatric consequences as a result of which psychiatric disorder development is common [4].

Chronic illnesses, such as heart failure, which severely affect one's functional abilities, are associated with physical, psycho-social and lifestyle changes and often leads to increased psychological problems [5]. Forty percent of heart failure patients may have experienced anxiety disorder and their overall level of anxiety is estimated to be 60% higher than healthy people [6]. One of the most common problems in patients with heart failure is frequent hospitalizations due to exacerbation of symptoms [7] and the main cause of these hospitalizations is the lack of self-care behaviors such as adherence to treatment regimens [8]. Various studies have been conducted on the acceptance of treatment regimens in patients with heart failure [9,10]. Van der Wal et al. showed that factors associated with treatment acceptance were correlated with demographic factors such as age, sex, marital status, education level, and severity of illness [11]. Alosco et al. demonstrated that rejection of treatment regimens was associated with factors such as sensory disorder, depression and anxiety, cognitive disorder, and getting old [10]. Therefore, controlling psychological disorders can partially increase acceptance and adherence to treatment in heart failure patients.

Death anxiety is one of the most common types of anxiety. Exposure to death and its related anxiety is one of the most important components of mental health [12]. Death anxiety is a multidimensional concept difficult to define and is often described as fear of death of oneself and others. In other words, death anxiety involves predicting one's own death and fear of the process of dying of oneself and other important people in life [13]. It is defined as an abnormal and overwhelming fear of death, with feeling of terror while thinking about the process of dying or the things that happen after death [14].

Given the importance of the concept of death anxiety in the delivery of health care to patients, this concept has been incorporated as a nursing diagnosis in the North American Nursing Diagnosis Association [15]. Bell et al. suggested that nurses who had higher death anxiety may not be willing to talk about the issue of dying with patients and their families. Moreover, nurses who receive death-related training will discuss easier about death with the patient and their families [16].

This suggested the importance of awareness of death anxiety in nursing education curricula. It can be argued that today, death anxiety is one of the most important issues in human societies. Given the growing trend of heart failure patients and mental and physical disorders caused by the disease, the study of death anxiety among these patients and its related factors is of particular importance. As a result, due to lack of research on death anxiety in patients with heart failure and since there is no study in Iran in this regard according to the researcher investigation of available resources, the present study aimed at studying the death anxiety and its related factors in patients with heart failure in Zanjan.

Methods
It was a descriptive-analytical study conducted between March 2017 and August 2018. Based on the study of Khoshab et al., "The Effect of Participatory Care Model on Depression and Anxiety in Patients with Heart Failure" [17], the sample included 90 patients according to their characteristics and 10 individuals were excluded due to failure in completing the questionnaires. Finally, 80 patients with heart failure admitted to Valiasr and Ayatollah Mousavi hospitals in Zanjan formed the study population using available sampling method. Inclusion criteria consisted of Class III-IV heart failure classification based on the American Heart Association classification, physician-approved heart failure diagnosis, heart ejection fraction rate of 40% and lower based on echocardiographic findings, not being in acute phase of the disease, patients willingness to participate in research, having communication skills necessary for effective communication, lack of identified mental illness, and cognitive disorders (identified using the SCL-25 questionnaire, and chronic renal failure). Moreover, a physician should approve that the participants are in a good clinical condition and gathering information do not endanger their lives. Therefore, prior to obtaining the information and filling out the questionnaires, the researcher asked the physician about the patient's clinical condition so that asking questions about death anxiety may not be a threat to patients health. All questionnaires were completed by the researcher through interviews. For examining patients' mental illness and

cognitive disorders status, the symptom checklist-25 (SCL-25) which is a reliable and valid scale for assessing general psychological trauma was used. The questionnaire consisted of 25 items of Likert-scale with 9 subscales. Najarian et al. (2001) reported cronbach's alpha coefficient for this questionnaire on 801 students (0.97) [18]. Four patients did not meet the inclusion criteria due to the high depression score. Data were collected using a three-part questionnaire.

1) Demographic characteristics 2) Templar death anxiety scale (DAS-Death Anxiety Scale) 3) Beck Anxiety Inventory (BAI). Demographic characteristics included age, sex, marital status, place of residence, employment status, education level, economic status, history of mental illness, social support, presence in social activity, underlying illness, and death experience. This was completed for all study participants using medical records and direct patient inquiries.

Templar 15-item death anxiety questionnaire is a standard questionnaire used in various research worldwide. This scale was first constructed by Templar in 1970. A five-point Likert scale is used from strongly disagree (1), disagree (2), no idea (3), agree (4), and strongly agree (5). Items 2, 3, 6, 7 and 15 are reversed. The minimum score is 15 and the maximum is 75. Score of 15 to 35 show low death anxiety, 36 to 55 moderate death anxiety, and 56 to 75 severe anxiety [19,20]. This questionnaire has also been translated and validated into Persian. Masuudzadeh et al. reported a correlation coefficient of 95% in their research [20]. Beck Anxiety Inventory was used to determine the level of patients' baseline anxiety which can affect the level of death anxiety. The Beck Test, developed in 1988 by Beck et al. is a 21-item self-report questionnaire that measures the overall severity of anxiety. A four-point Likert scale from (not at all) to (can't stand) is used to assess the severity of symptoms. Scoring is done with a total of 21 items. In 1988, Beck et al demonstrated the reliability of this questionnaire on 83 patients using a test-retest method with a week interval (0.75). An alpha coefficient of 0.92 was obtained on 160 patients [21].

Resources and articles related to the topic of death anxiety of individuals with chronic diseases were used to construct demographic content. The validity of the questionnaire was evaluated by 10 faculty members of Zanjan School of Nursing and Midwifery and their comments were applied. In this study, a pilot study was performed on 20 patients with heart failure. Cronbach's alpha coefficient was calculated and confirmed as 0.83. After being endorsed by the Ethics Committee with the Code of Ethics (IR.ZUMS.REC.1396.236) and submitting an official letter from the Research Deputy of Zanjan University of Medical Sciences Nursing and Midwifery to the CCU and Cardiac Center officials and obtaining their consent, and after providing necessary explanations to patients and assuring confidentiality of their personal information and obtaining written informed consent, the questionnaires were completed. The collected data were analyzed using SPSS [22] software. The normality of data was tested using Kolmogorov-Smirnov and Cox-Box test (P≥0.05). To investigate the predictors of death anxiety, covariance analysis of variance was used by adjusting the patients' confounding anxiety variable (determined by Beck Anxiety Inventory). Significance level of analytical tests was considered less than 0.05.

Results

The sample included 80 individuals aged 27 to 98 years old. The highest number of samples was in the old age group (65 years and over) with 83.8%. Other demographic and clinical information is listed in Table 1.

Table 1: Distribution of Demographic Characteristics of Heart Failure Patients in Zanjan, 2017

Underlying and disease variables	Nominal/quality variables variables	Number (Percent)	M and SD of death anxiety
age	youngster (18-34)	1(1.3)	-
	middle-aged (35-64)	12(15)	7.97±48.50
	elderly (65 and higher)	67(83.8)	6.81±47.89
gender	female	42(52.5)	7.34±47.35
	male	38(47.5)	63.4±48.60
marital status	single	4(5)	42.75±4.57
	married	58(72.5)	48.89±7.01
	widow	18(22.5)	4605±6.31
Education status	illiterate	61(76.3)	6.74±47.42
	associate degree	15(18.8)	7.73±48.86
	diploma	3(3.8)	3.00±55.00
	University educated	1(1.3)	-
Job	unemployed	32(40)	50.00±3.95
	retired	13(16.3)	47.23±6.86
	employed	12(15)	46.25±7.62
	housewife	23(28.8)	46.39±9.16
Place of residence	City	42(52.5)	6.97±47.78
	village	38(47.5)	6.92±48.13
Economic status	weak	55(68.8)	47.45±6.91
	average	23(28.8)	48.78±7.09
	good	2(2.5)	52.00±4.24
CPR history	Yes	4(5)	5.25±49.50
	No	76(95)	7.00±47.86
Psychological illness history	Yes	4(5)	43.75±10.37
	No	76(95)	48.17±6.70
Social support	No	2(2.5)	47.50±6.36
	Low	8(10)	47.37±9.07
	Average	16(20)	47.43±8.27
	Good	35(43.8)	47.74±6.48
	Very good	19(23.8)	49.05±6.10
Social activity	low	28(35)	6.98±46.32
	average	47(58.8)	6.89±48.82
	high	5(6.3)	6.26±48.80
Underlying illness history	yes	49(61.3)	47.55±7.16
	No	31(38.8)	48.58±6.55

Findings of the study showed that the mean score of death anxiety in heart failure patients was 47.95. The highest death anxiety score was 61 (11.25%) and the lowest was 30 (6.25%). Mean score of death anxiety in men was 48.60 and mean score of death anxiety in women was 47.35. The highest score of death anxiety was 61 for women and 58 for men. 6.3% of patients (n=5) had low death anxiety, 82.5% (n=66) had moderate death anxiety and 11.3% (n=9) had high anxiety (Table 2). Table 3 shows the results of the covariance analysis. As can be seen, job is the only variable that predicts death anxiety.

Table 2: Death anxiety in heart failure patients

death anxiety	Frequency	M	SD	Percent
Low	5	32.80	1.92	6.25
Average	66	47.80	5.23	82.5
High	9	57.44	1.50	11.25
Total	80	47.95	6.91	100

Table 3: Covariance analysis findings

variables	F	Mean of sum of squares	df	Sum of squares	P value
age	0.110	0.073	1	0.073	0.741
gender	0.032	0.021	1	0.021	0.859
marital status	1.760	1.175	2	1.175	0.182
Education status	0.353	0.236	2	0.236	0.704
Job	2.967	1.981	3	1.981	0.040
Place of residence	0.817	0.546	1	0.546	0.370
Economic status	0.084	0.056	2	0.056	0.920
CPR history	0.537	0.358	1	0.358	0.467
Psychological illness history	0.295	0.197	1	0.197	0.589
Social support	1.715	1.145	4	1.145	0.160
Social activity	2.184	1.458	3	1.458	0.100
Underlying illness history	0.192	0.128	1	0.128	0.663

a. R Squared = .535 (Adjusted R Squared = .332)

Discussion

This study aimed at investigating the relationship between death anxiety and some demographic variables among heart failure patients in Zanjan, 2018. The results showed that death anxiety was high among people with heart failure. So far, no research has been done on death anxiety among these patients, but it is highly prevalent in patients with severe heart disease. For example, Vilkhani et al. (2013) showed high prevalence of death anxiety among people with heart disease [22]. Sadeghi et al. (2014) showed that the death anxiety of hemodialysis patients was above average [23]. The findings of the present study were not unexpected given that patients with heart failure are mentally concerned about their illness most of the time, so that, at any time, they may develop heart disease and subsequently die. According to the results of this study, there was no significant relationship between death anxiety and age. Some previous studies have also shown no significant relationship between age and death anxiety [22,24]. However, Fathi et al. (2012) study showed an inverse relationship between age and death anxiety in patients with hemodialysis, so that patients with lower age had higher levels of death anxiety than older patients [4]. The difference in the results can be related to the type of research participants. Moreover, a wide age range of the participants in the study can be considered as an effective factor in death anxiety. Therefore, it could be argued that the most important reason for not having a significant difference between the level of anxiety was the high age of the participants, with more than 50% of patients being 65 years old or older. No significant relationship was found between gender and level of death anxiety in the present study. In some studies, there was no relationship between death anxiety and gender, for example, there was no significant difference in the mean death anxiety score between men and women who were responsible for performing the funeral [25]. However, Fathi et al. (2012) showed that the level of death anxiety in hemodialysis women was higher than men [4]. Studies have shown that women are more likely to have higher anxiety than men [26]. Therefore, it could be argued that the most important reason for the difference in the rate of death anxiety in men and women in the

present study was the control of patients' anxiety based on Beck Anxiety Inventory. In this study, there was a significant relationship between death anxiety in heart failure patients and their employment status so that unemployed people had higher death anxiety than employed people. This finding is likely to be due to the fact that most of the patients were elderly and not employed. Fathi et al. showed a significant relationship between the death anxiety of hemodialysis patients and their employment status [4]. Although Aghajani et al. (2010) and Masoudzadeh et al. (2007) did not find a significant relationship between the employment status of the participants with death anxiety, their study samples were healthy and employed individuals [19,20].

In the present study, there was no significant relationship between education level, economic status and social activity with death anxiety. Bahrami et al. (2013) found no significant relationship between educational levels and death anxiety [12]. Salehi et al. (2014) showed that illiterate patients and patients with poor economic status had higher death anxiety [27]. The reason for the differences in research may be the different population and the different nature of the diseases. In the present study, there was no statistically significant association between death anxiety and death experience due to the low number of patients experiencing death, but some studies have shown that among adolescents experiencing death of their parents, mourning was the only significant predictor of death [28]. Regarding other demographic variables in this study, there were no significant relationship between death anxiety and marital status, place of residence, and underlying disease history. Since most studies have been done on cancer patients, renal failure, nurses and nursing students, it is not possible to discuss all the findings and their relationship with demographic variables. Examining factors related to death anxiety in patients with heart failure confirmed that death anxiety was associated with patients' underlying anxiety, that is death anxiety cannot be considered a natural outcome of the disease but is due to unresolved physical and psychological stress.

Since heart failure affects many aspects of a patient's physical, mental and social conditions [17] and despite many supportive treatments for these patients, they are exposed to numerous physical and psychological indoor and outdoor stressors and depression and anxiety among these patients are largely due to physical problems and loss of quality of life [29]. Therefore, any effort to improve the quality of life of these patients can help reduce anxiety and depression, thereby reducing death anxiety and improving the prognosis of these patients. Due to the fact that there was a significant correlation between death anxiety and quality of life in different studies, it highlights the need for attention and formulation of a comprehensive care plan to reduce death anxiety [12]. Reducing death anxiety through methods such as counseling, enhancing hope, paying attention to patients' mental needs, and increasing social support are some of the strategies that can help improve the quality of life of patients with chronic diseases. In the present study, death anxiety was studied in patients with heart failure, and such studies can be conducted in other chronic diseases. Religious orientation and its association with death anxiety can also be studied in future research. limitations of this study include the disagreement of a number of fellows and patients to complete death anxiety questions because of the probability of negative effects of the questions and the short sampling time which reduced the number of samples.

Acknowledgments

Conflict of interest

The researchers emphasize that there was no conflict of interest in conducting, extracting, and reporting this study.

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