



The Impact of Spiritual Care Education on Anxiety in Family Caregivers of Patients with Heart Failure

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Abstract

Heart failure (HF) has been emerging as a general health problem over recent decades. Spiritual care is a type of support service provided to patients suffering from HF. Spiritual care intervention in nursing is a unique aspect of care, which cannot be replaced by psychosocial care. Considering the importance of anxiety for caregivers of patients with HF, the present study aimed to examine the effect of spiritual intervention on anxiety in caregivers of patients with HF in Ilam, Iran. This research is a semi-experimental study, 71 caregivers of patients with HF were randomly assigned to experimental group ($n = 34$) and control ($n = 37$) group. Beck Anxiety Inventory, which consisted of 21 items and scored based on a 4-point Likert scale ranging from zero to three, was employed to collect data. The scores range from zero to 63 with the higher scores indicating the higher level of anxiety. The experimental group received spiritual intervention over six 45-minute sessions in a period of 2 weeks (14 days; three times a week; every other day). Data were analyzed using descriptive and inferential statistics run in the SPSS software version 16. The result showed a difference between the level of anxiety in two groups after the intervention ($P = 0.001$). Anxiety level in the experimental group three weeks after intervention (27.88 ± 7.10) was significant in comparison with before intervention (45.06 ± 5.79) ($P = 0.001$). According to the results, the spiritual intervention reduced the anxiety level in the caregivers of patients with HF. Nurses are recommended to provide such necessary training to caregivers in order to provide the grounds for reducing their anxiety.

Keywords Heart failure · Spiritual intervention · Caregivers · Anxiety

Background

Heart failure (HF) is the end stage of heart diseases and occurs when the heart fails to pump blood and oxygen into the body (Hua et al. 2017). HF causes of mortality in patients (Pang et al. 2016; Tsai et al. 2017). It has been emerging as a major general health problem over the recent decades (Adusumalli and Mazurek 2017; Members et al. 2014) as chronic heart

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failure (CHF) has affected more than 23 million persons around the world (Celik et al. 2016). According to a large number of studies indicating the growing population of the elderly (Azami et al. 2016; Iranagh et al. 2016, 2017; Motalebi and Loke 2014; Aghababaei et al. 2017; Hejazi et al. 2017), HF is to be considered as a serious disease in the elderly (Zhang et al. 2017).

Heart patients have anxiety (Shohani et al. 2018). Anxiety in the patients with HF can be caused by the nature of the disease and its effects on the patients' lives. The HF symptoms include fatigue, weakness, edema, and insomnia. (Hua et al. 2017). On the other hand, the hospitalization of patients with HF also poses some problems (Smit et al. 2016), including restrictions on daily activities, reduced quality of life, decreased autonomy, increased social isolation, increased burden imposed on patients and society, and anxiety (Rodríguez-Gázquez et al. 2012; Cherian et al. 2017; Heidari et al. 2017). For chronic diseases such as HF, social and psychological factors play a vital role in managing and adapting to these diseases (Navidian et al. 2015). Anxiety is one of the most common psychological reactions in patients with HF (Magyar-Russell et al. 2011). The level of anxiety is high among patients with HF and increases the risk of cardiac events if not treated (Bayazi 2012; Frasure-Smith and Lespérance 2008). Anxiety is the one of the most common feelings experienced by all individuals. In this case, the person feels pressure, and consequently does not have calmness or balance (Ravari et al. 2017). Anxiety can affect the family members' potentials to receive information and understand it, maintain adequate family efficacy, use coping skills effectively, and provide positive support to patients (Trimm and Sanford 2010). Hence, providing strategies to prevent and reduce the level of anxiety in caregivers is of the essence (Guo et al. 2012; Shoushi et al. 2017).

Supportive interventions for patients can reduce their stress and pain and improve their health status (Rogers et al. 2017; Goodlin 2009). Considering the importance of spiritual health (Tavan et al. 2015) as one kind of supportive care for patients, the use of spiritual care should be of concern (Gillilan et al. 2017). Spirituality establishes a positive attitude toward oneself, one's surroundings, and future so that they do not perceive themselves as vulnerable and feel relaxed in their environment (Ravari et al. 2017). In counseling with the use of spirituality approach, the therapist examines an individual's cognitive, emotional, and behavioral aspects. Regarding the cognitive aspect, the therapist makes a person search for meaning, goals and the objective of, and objective of life as well as the ideas and values that matter to him (Miller and Thoresen 2003).

Spiritual care that is ethical, human-oriented, or sensitive to all parts of the patient's existence is a valuable part of a patient's overall care (Tajbakhsh et al. 2014). Spiritual care and religious teachings make the autonomic nervous system to respond through generating positive emotions (Salimi et al. 2017). Establishing a spiritual relationship with an omnipotent source ensures an individual that he is always under support by powerful sources. They rely on their beliefs, tackle the problems more easily, are less stressed out and anxious, and consequently are more hopeful and more optimistic toward the future (Asgari et al. 2009). In spite of the critical role of spiritual care in improving health status, professional caregivers in support and treatment programs have paid less attention to this issue (Earle 2006). Reducing stress for caregivers of patients can improve the health status of them. On the other hand, spiritual intervention is effective in being calm in many people. According to their religious and cultural background, Iranian people have rich spiritual resources. This research attempts to use the religious, national, and individual capacities of an Iranian man in the field of spirituality in order to reduce the anxiety of caregivers of patients with HF.

Objectives

Considering the importance of anxiety for patients with HF, this study was done to determine the effect of spiritual care training on reducing anxiety in family caregivers of patients with HF in Ilam, Iran.

Materials and Methods

This research was a semi-experimental study, in which 80 caregivers of patients with HF were randomly assigned to experimental group ($n = 34$) and control ($n = 37$) group. Because of the statistical significance, the minimum sample size for small groups was considered between 30 and 50 people, 40 people were considered for each group. The caregivers were the family members of patients with HF hospitalized in two parts (CCU 1, CCU 2) in Shahid Mostafa Hospital in Ilam city in Iran. The study inclusion criteria were as follows: diagnosis of HF by a cardiologist, being the formal caregiver of a patient with HF, patients and caregivers' informed consent to participate in the study, patients and their main caregivers' believing in Islam and Shi', not suffering from other psychological and physical illnesses, not consuming psychedelic drugs, and no hearing impairment based on the patient's self-reports and their caregivers'. Exclusion criteria included reluctance to participate in the study, the existence of any crisis for the patient or caregiver, and the death of the patient or their main caregivers. In order to randomly assign the patients into experimental and control groups and prevent the distribution of data between two groups, the patients referred to the ward of CCU 1 were placed in the control group and the patients referred to the hospital's CCU 2 ward were located in the experimental group.

During the intervention period, six caregivers in the experimental group (due to the death of the patient ($n = 4$) and due to non-participation in the programs ($n = 2$)) and three caregivers in the control group (due to the death of the patient ($n = 2$) and due to the death of the caregiver ($n = 1$)) were excluded from this study. With 34 caregivers in the experimental group and 37 caregivers in the control group, the collected data were analyzed using descriptive statistics and inferential statistics.

Beck Anxiety Inventory, which consisted of 21 items and scored based on a 4-point Likert scale ranging from zero to three, was employed to collect data. The scores ranged from zero to 63 with the higher scores indicating the higher level of anxiety. Accordingly, the score ranges of 0–7, 8–15, 16–25, and 26–63 were indicative of near-zero or minimum, slight, mild, and intense levels of anxiety, respectively. Cronbach's alpha coefficient for this questionnaire was 0.92, and its correlation coefficient by test–retest was 0.83 that showed the questionnaire was valid and reliable (Ravari et al. 2017; Beck et al. 1988). The experimental group received spiritual intervention over six 45-minute sessions during a period of 2 weeks (14 days; three times a week; every other day) (Reyhani et al. 2014). Spiritual care included topics such as trust, patience, friendship, forgiveness, recitation, and praying (Ravari et al. 2017; Reyhani et al. 2014). The control group only received the previous routine care. Three weeks after the intervention (Huang et al. 2003), the anxiety inventory was re-completed by the caregivers. Table 1 represents the spiritual intervention module that was provided for training the caregivers of patients with HF by the researchers. The participants were trained in face-to-face educational sessions based on this module content. Many discussions about spiritual issues mentioned in Table 1 took place at these sessions.

Results

The experimental and control groups do not have significant difference in demographic features; they were homogenous in age, gender, job, educational level, and relative to the patient. The mean age of the experimental group was 39.00 ± 10.91 years, and the mean age of the control group was 36.73 ± 12.7 years. Majority of the caregivers of patients with HF in experimental group were female (73.5%), unemployed (52.9%), wife of the patient (47.1%), and have high school diploma (50%). Most of the caregivers of patients with HF in control group were female (64.9%), unemployed (59.5%), wife of the patient (43.2%), and have high school diploma (43.2%)(Table 2).

Table 3 demonstrates the comparison of the mean scores of anxiety in family caregivers of patients with HF in the experimental and control groups before and after intervention. Anxiety of the experiment group reached from 45.06 ± 5.79 pre-intervention to 27.88 ± 7.10 three weeks post-intervention. Result of t-paired test showed that there was a significant relationship within experimental group ($P = 0.001$, $df = 33$). Anxiety of the control group reached from 46.16 ± 6.84 pre-intervention to 46.05 ± 5.99 three weeks post-intervention. No significant relationship was shown within control group by t-paired test. Also, the results of independent t-test indicated that there was not a significant relationship between experimental and control group before intervention; but there was a relationship between experimental and control group after intervention ($P = 0.001$, $df = 69$).

Discussion

The findings of this study revealed that the implementation of spiritual care education reduced the anxiety level in family caregivers of patients with HF. Similarly, Rarevi et al. found consistent results regarding the improved health status reduced level of anxiety in caregivers after performing five 45–60-min sessions of weekly spiritual interventions (Ravari et al. 2017). In Bormann et al.'s study, having aimed to examine the impact of spiritual intervention on reducing stress among caregivers of patients with dementia, the findings showed that 36 weeks of phone follow-up sessions reduced the caregivers' stress, anxiety, and depression and improved the quality of their lives (Bormann et al. 2009). Salamizadeh et al. found that spiritual care increases self-efficacy in caregivers of elderly

Table 1 Spiritual intervention module for training participants

Session	Training content
1	Discussing and conveying some concepts on the role of trust in personal calmness
2	Reviewing the previous session, discussing and conveying some concepts on the role of prayer in personal calmness
3	Reviewing the previous session, discussing and conveying some concepts on the role of patience in personal calmness
4	Reviewing the previous session, discussing and conveying some concepts on the role of altruism and forgiveness in personal calmness
5	Reviewing the previous session, discussing and conveying some concepts on the role of recitation and praying in personal calmness
6	Reviewing previous sessions

Table 2 Demographic characteristics of family caregivers of patients with HF

Variable	Group		P
	Experimental	Control	
Gender			
Male	9 (26.5)	13 (35.1)	0.43
Female	25 (73.5)	24 (64.9)	
Job			
Employed	16 (47.1)	15 (40.5)	0.58
Unemployed	18 (52.9)	22 (59.5)	
Education			
Illiterate	6 (17.6)	8 (21.6)	0.94
Diploma	17 (50)	16 (43.2)	
Academic	11 (32.4)	13 (35.1)	
Relative to the patient			
Child	7 (20.6)	5 (13.5)	0.39
Spouse	8 (23.5)	10 (27)	
Wife	16 (47.1)	16 (43.2)	
Son-in-law	2 (5.9)	4 (10.8)	
Grandson	1 (2.9)	2 (5.4)	
Age (mean \pm SD)	39.00 (10.91)	36.73(12.7)	

Table 3 Comparison of the mean scores of anxiety in two groups before and after intervention

Measured time	Experimental group Mean (SD)	Control group Mean (SD)	Between-groups statistics (independent t-test)
Before intervention	45.06 (5.79)	46.16 (6.84)	$P = 0/75$, $df = 69$
3 weeks after intervention	27.88 (7.10)	46.05 (5.99)	$P = 0/000$, $df = 69$
Within-group statistics (<i>t</i> -pair)	$P = 0/000$, $df = 33$	$P = 0/47$, $df = 36$	

patients with Alzheimer's disease (Salamizadeh 2017). In Reyhani et al.'s investigation, the findings highlighted that implementing six sessions of spiritual self-care training reduces mental stress in mothers with premature infants hospitalized in the NICU (Reyhani et al. 2014). Their finding is in line with the findings of this study, representing the positive effect of spiritual intervention on decreasing anxiety in patients with HF.

Other studies have also been conducted to determine the effect of spiritual interventions on improving the patients' health status. Carneiro et al. researched the effect of spiritual intervention on the levels of anxiety and depression in cardiovascular patients. They concluded that level of anxiety and depression significantly reduced in these patients after a 10-day spiritual intervention (Carneiro et al. 2017). Moeini et al.'s study on patients with cardiac ischemia revealed that the spiritual health of patients in the experimental group significantly increased after 3 days of spiritual care (Moeini et al. 2012). Warber et al. claimed that the implementation of four sessions of spiritual care reduces the stress of patients with acute coronary syndrome (Warber et al. 2011). Falahi et al. examined the effect of spiritual intervention on the mental health of patients with breast cancer and

concluded that the level of hope, life satisfaction, and happiness increased in the experimental group after eight 90-min intervention sessions (Fallah et al. 2011). Carneiro et al. (2014–2015) aimed to evaluate the influence of spiritual intervention on psychological parameters in hospitalized patients. The findings indicated that the intervention adopted for the patients in the experimental group increased muscle relaxation and decreased anxiety, depression, and muscle tension (Carneiro et al. 2016). The results of this study were in a similar vein with the findings of this study regarding the positive effect of spiritual intervention on health promotion. Among the limitations of this study, the influence of other factors on caregivers' anxiety can be noted. To overcome this limitation, the control group was formed. One of the strengths of this research is the type of adopted intervention as a variety of Islam-based interventions. Regarding the effect of spiritual intervention on reducing the anxiety level in caregivers of patients with HF, the nurses are recommended to provide such necessary training to caregivers in order to provide the grounds for reducing their anxiety.

It is suggested that spiritual care be applied for reducing anxiety in caregivers of other patients, such as patients with severe illness, patients with chronic illness (including diabetes, cancer, end-stage renal failure, thalassemia, hemophilia, and multiple sclerosis). Applying spiritual care in health care centers and hospitals can help the patients and their caregivers to be comfortable and have calm by reducing their anxiety.

Conclusions

Results of this study indicated that the spiritual intervention reduced the anxiety level in caregivers of patients with HF. Various studies have indicated the effect of spiritual interventions in different groups of people including caregivers of the patients. The nurses are recommended to provide such necessary spiritual training to caregivers in order to provide the grounds for reducing their anxiety.

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