RESEARCH ARTICLE

Model of spiritual nursing care in enhancing quality of life of patients with heart failure

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Abstract

Objective: To develop a spiritual nursing care model to improve the quality of life of heart failure patients.

Method: The cross-sectional study was conducted at two government hospitals in East Java, Indonesia, from August to November 2019, and comprised patients of either gender aged 30 years or above having classic heart failure symptoms of weariness, ankle swelling and dyspnoea. Standardised questionnaires were used to collect data regarding disease, psychosocial, spiritual, demographic and environmental factors as well as stressors, formation of meaning, coping strategy, spiritual wellbeing, and quality of life. Data was analysed using partial least squares structural equation modelling.

Results: Of the 222 patients, 124(55.9%) were males and 98(44.1%) were females. The overall mean age was 57.7±9.96 years. Overall, 33(14.9) patients were suffering from heart failure for >5 years, 36(16.2) had been hospitalised >5 times, and 8(3.6%) had no health insurance cover. Psychosocial (T=2.110), spiritual (T=1,998) and environmental (T=2,019) factors had an effect on the ability to assess stressors. Disease (T=5.497), spiritual (T=3.596) and environmental (T=3.172) factors had an effect on spiritual wellbeing. Disease (T=7.553), psychosocial (T=2.230) and environmental (T=2.625) factors affected the quality of life. The ability to assess stressors affected meaning formation (T=3.293), which had an effect on coping strategies (T=3.863), which, in turn, had an effect on spiritual wellbeing (T=9.776), and that affected the quality of life (T=2.669).

Conclusion: The spiritual nursing care model was found to be influenced by disease, psychosocial and environmental factors as well as by spiritual wellbeing.

Keywords: Adaptation, Psychological, Heart failure, Spirituality, Structural**.** (JPMA 73: S-100 [Suppl. 2]; 2023)

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Introduction

Heart failure (HF) is a global health problem with around 26 million patients worldwide.[1] About 17-45% of HF patients who have to undergo hospitalisation die within a year of being hospitalised and most die after 5 years.[2] In Asia, the prevalence of HF is thought to range from 1.26% to 6.7%.[3] In Indonesia, the prevalence is 0.13% based on doctor's diagnosis, and 0.3% based on symptoms.[4] The incidence of HF is predicted to increase as the population ages and lifestyle changes, although therapeutic advances have improved the prognosis.[2,5]

Poor quality of life (QOL) is frequently found in HF patients. A study in Greece showed that patients with HF had a low QOL with a mean score of 65.4±20.6.[6] The QOL of HF patients was also reported to be lower than individuals in the general population and patients with other chronic diseases.[7–9] Poor QOL in HF patients is due to the progression of symptoms towards an advanced stage of disease progression, disability, and the frequency of hospital admissions which is associated with increased morbidity and mortality.[5,10,11] Other factors related to the QOL of HF patients are psychological factors (emotional distress, anxiety and depression), spirituality (distress of spirituality and spiritual wellbeing), and demographics (age, gender, educational level, economic status and employment).[12–14]

Efforts to reduce the burden of symptoms and to improve QOL are the main goals of managing HF patients. Spirituality is important for enhancing QOL for HF patients. A systematic review of the relationship between religiosity/spirituality with the QOL of HF patients showed that spiritual wellbeing was positively related to the QOL globally.[15,16] The rise in mortality was predicted by negative religious coping, such as feeling punished by God.[17] Lower levels of spiritual wellbeing were associated with depression, anxiety and inferior QOL.[18] Additionally, a proportional hazard model revealed that only spirituality was substantially linked to a 20% lower death risk in congestive heart failure (CHF) patients.[19]

The pursuit of ultimate meaning purpose of life, transcendence as well as relationships with one's self, family, friends, community, society, nature, and the

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significance or sacredness of them are all aspects of spirituality, which is a dynamic and fundamental component of humankind. The expression of spirituality takes the form of ideas, values, customs and behaviours.[15] Since international consensus conferences have validated that spirituality is a vital domain requiring attention to improve individuals' care with progressive chronic diseases,[20] it is necessary to integrate spirituality in HF patients' care. However, reality shows that the spiritual needs of heart failure patients tend not to be fulfilled. Nearly half of the HF respondents in a study reported an unmet level of spiritual need and a strong desire to receive spiritual care services from doctors or other health professionals in order to meet their spiritual needs.[17]

The current study was planned to develop a spiritual nursing care model to improve the QOL for HF patients.

Patients and Methods

The cross-sectional study was conducted at two government hospitals in East Java, Indonesia, from August to November 2019, and comprised patients of either gender aged 30 years or above having classic HF symptoms, like weariness, ankle swelling and dyspnoea, indicating stages I-IV as per the New York Heart Association (NYHA) classification.[21] The sample was raised using consecutive sampling technique. After approval from the ethics review committee of Governmental General Hospital of Ibnu Sina, Gresik, Indonesia, the sample size was calculated using the rule of thumb, which was 5-10 times the estimated parameter.[22] Those included were able to verbally communicate in Javanese or Indonesian, and willing to sign the informed consent sheet. Those needing life-saving care in an intensive care setting, not willing to participate and those who dropped out before the end of study were excluded.

Data was collected using standardised tools. Disease factors (X1) included functional status (X1.1), measured using NYHA classification;[21] physical symptoms (X1.2), measured using the Heart Failure Somatic Perception Scale (HFSPS) v.3;[18] duration of disease (X1.3); frequency of hospitalisation (X1.4); and HF comorbidities (X1.5), assessed using the Charlson Comorbidity Index (CCI).[19]

Psychosocial factors (X2) included depression symptoms (X2.1), measured using the Patient Health Questionnaire-9 (PHQ-9);[23] anxiety (X2.2), measured using the Generalised Anxiety Disorder-7 (GAD-7);[24] and role disorder (X2.3), measured using the Role Disorder Questionnaire.[25]

Spiritual factors (X3) included personal faith (X3.1), spiritual contentment (X3.2) and religious practices (X3.3) that were measured using the Spiritual Wellbeing in Illness Questionnaire.[26]

Demographics factors (X4) included age (X4.1), gender (X4.2), monthly income (X4.3), job status (X4.4) and education (X4.5), and were noted on a demographics sheet.

Environmental factors (X5) included nursing care (X5.1), health insurance (X5.2), social support (X5.3), affordability of health services (X5.4) and healthcare facilities (X5.5), that were measured using the Environmental Factors Questionnaire.[27]

Stressor assessment (X6) included primary (X6.1) and secondary (X6.2) assessments that were done using the Stressor Assessment Questionnaire based on literature.[28]

Formation of meaning (X7) included spiritual (X7.1) and non-spiritual (X7.2) meanings that were measured using the Formation Meaning Questionnaire[26,28].

Coping strategies (X8) included problem-focussed coping (X8.1) and emotional-focussed coping (X8.2) that were measured using a questionnaire developed based on literature;[25,28] and spirituality-focussed coping (X8.3), measured using a Spiritual Coping Questionnaire based on Religious Coping (RCOPE) Brief[29] and adjusted to the characteristics of Islamic spirituality.

Spiritual wellbeing (X9) included inward (X9.1), outward (X9.2), temporal (X9.3), and transpersonal (X9.4) elements that were measured using a questionnaire based on the theory of self-transcendence[30] and adjusted to the characteristics of Islamic spirituality.

Quality of life (Y1) included physical domain (Y1.1), emotional domain (Y1.2), general domain (Y1.3) was assessed using the Minnesota Living with Heart Failure Questionnaire (MLHFQ).[31]

Data was analysed using descriptive statistics and was showed through frequencies and percentages or mean and standard deviation (SD), as appropriate. The inferential analysis used a structural equation model based on variations and components called partial least squares structural equation modelling (PLS-SEM). Such analysis was done using smartPLS software, which includes the structural model (inner model) and hypothesis testing.

Results

Of the 222 patients, 124(55.9%) were males and 98(44.1%) were females. The overall mean age was 57.7±9.96 years. Overall, 70(31.5) had studied up to elementary school level, 121(54.5) were unemployed, 167(75.2%) earned less than the local minimum wage per month, 33(14.9) were suffering from heart failure for >5 years, 104(46.8%) had NYHA class II, 36(16.2) had been hospitalised >5 times, and 8(3.6%) had no health insurance cover. The mean comorbidities found were 2.09±0.96 (Table 1).

Table- 1: Characteristics of the respondents (n=222).

Characteristic	Mean ± SD	n (%)
Mean Age (years)	57.7±9.96	
Gender		
Male		124 (55.9)
Female		98 (44.1)
Monthly income (IDR)		
< regional minimum wage		167 (75.2)
≥ regional minimum wage		55 (24.8)
Education		
Not educated		26 (11.7)
Elementary school		70 (31.5)
Junior high schoo		48 (21.6)I
Senior high school		56 (25.2)
Higher education		22 (9.9)
Job status		
Employed		101 (45.5)
Unemployed		121 (54.5)
NYHA class		
Class I		52 (23.4)
Class II		104 (46.8)
Class III		54 (24.3)
Class IV		12 (5.4)
Duration suffering from HF		
< 1 year		64 (28.8)
1 - < 2 years		61 (27.5)
2 - < 3 years		30 (13.5)
3 - < 4 years		19 (8.6)
4 - < 5 years		15 (6.8)
≥ 5 years		33 (14.9)
Frequency of hospitalization		
≤ 2 times		118 (53.2)
3 – 5 times		68 (30.6)
> 5 times		36 (16.2)
Health insurance		
Regional health insurance		183 (82.4)
National health insurance		31 (14.0)
Independent (not using health insurance)		8 (3.6)
Comorbid	2.09±0.96	

Table- 2: Coefficient of determination (R2).

Dependent Variables	R Square	1-R Square
(X6) Assessment of stressor	0.137	0.863
(X7) Formation of meaning	0.079	0.921
(X8) Coping strategies	0.05	0.950
(X9) Spiritual well-being	0.621	0.379
(Y1) Quality of life	0.596	0.404

Table- 3: Predictive relevance (Q2).

Dependent Variables	SSO	SSE	Q^2 (=1-SSE/SSO)
(X6) Assessment of stressor	444,000	412,721	0.070
(X7) Formation of meaning	444,000	422,336	0.049
(X8) Coping strategies	666,000	653,849	0.018
(X9) Spiritual well-being	888,000	545,685	0.385
(Y1) Quality of life	666,000	408,874	0.386

SSO: Sum Square observation, SSE: Sum Square Error

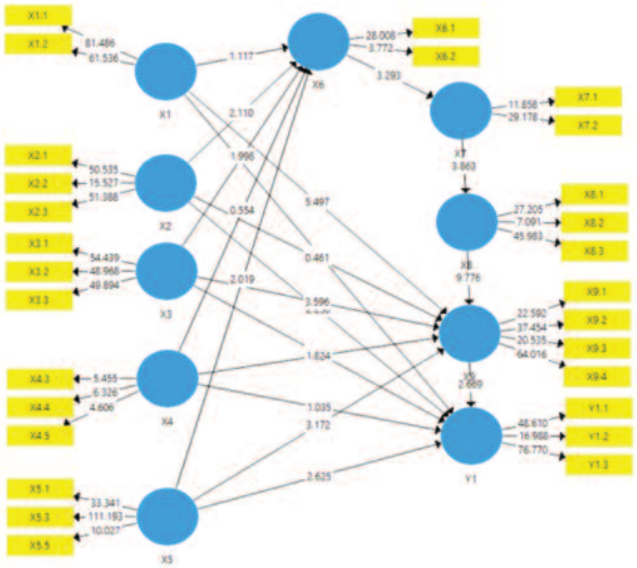

Figure: The inner model of Spiritual Nursing Care in Enhancing Quality of Life of Patients with Heart Failure.

The QOL values of 0.596 showed association with disease, psychosocial, spiritual, demographic and environmental factors as well as spiritual wellbeing (Table 2).

The predictive relevance value of all variables was >0, indicating that the model was good enough (Table 3).

Psychosocial (T=2.110), spiritual (T=1,998) and environmental (T=2,019) factors had an effect on the ability to assess stressors. Disease (T=5.497), spiritual (T=3.596) and environmental (T=3.172) factors had an effect on spiritual wellbeing. Disease (T=7.553), psychosocial (T=2.230) and environmental (T=2.625) factors affected the quality of life. The ability to assess stressors affected meaning formation (T=3.293), which had an effect on coping strategies (T=3.863), which, in turn, had an effect on spiritual wellbeing (T=9.776), and that affected the quality of life (T=2.669) (Figure).

Discussion

The study confirmed that QOL enhancement of HF patients was influenced by various factors, including disease factors, psychosocial factors, environmental factors and spiritual wellbeing, which had an impact both directly and indirectly.

Disease factors, including NYHA functional status and physical symptoms, significantly influenced the QOL of HF patients in the current study. A higher NYHA class has been linked to increased hospitalisation and death risk.[32,33] NYHA classes III and IV were related with low QOL in the current study.

Depression is a prevalent comorbidity among HF patients. Increased depression symptoms in HF patients were

associated with a considerably higher risk of death.[34] Patients with greater depression scores had higher mortality risk than those with lower levels after two years of follow-up in a study, while moderate to severe depression increased the probability of HF patients with intact systolic function returning to the hospital sooner.[35] Depressive symptoms were linked to patients' non-compliance with therapy, resulting in more frequent exacerbations.[36]

In HF patients, anxiety is a symptom that frequently develops with a prevalence rate ranging 11-70%, which is 4-5 times higher than the average for the general population.[37] Older adults with HF experienced 60% increase in anxiety compared to their healthy counterparts.[38] Another study noted that the prevalence of anxiety was greater in outpatients than in inpatients, (11-54% versus 14.8%).[34] The significance of diagnosing anxiety disorders in HF individuals is highlighted by a number of issues. First, anxiety has been linked to poor cardiovascular health and higher mortality rates in patients with coronary heart disease (CHD), which often co-occurs with HF. Anxiety disorders are also linked to a poor cardiac prognosis in people with or without heart disease, while the presence of comorbid anxiety in patients with increasing HF and depressive symptoms raises the probability of a poor cardiac outcome, including mortality and readmission to hospital.[39]

Spirituality in the context of wellbeing is not limited to the practice of worship or mindset, and is not intended to replace medical management with religious practice. In contrast, spiritual wellbeing includes spiritual visions, values, beliefs and behaviours that become integral elements in how individuals can cope with and recover from illness. A study showed that spiritual wellbeing was positively related to a sense of self, emotions of integrity, inner harmony, overall satisfaction, happiness, and a positive outlook, and provided a sense of personal purpose.[40,41]

Environmental factors had a significant role in enhancing QOL of HF patients through their direct effect on spiritual wellbeing in the current study. These factors have a role in shaping the behaviour of each individual.[42] HF patients showed a high spiritual need during their illness. A previous study showed that patients rated assessment of spiritual needs and the provision of spiritual care as important.[43] Other studies have also shown that patients strive to fulfil spiritual/existential needs in addition to dealing with the physical and emotional challenges of their illness, and, as the patient's condition worsens, the emphasis shifts from 'fighting' the disease to 'taking advantage of the remaining time'.[44] In Muslim patients, spiritual practice tends to be interpreted as a religious practice, because, in Islam, spirituality is a facet of religion rather than a separate entity.[45] Spiritual problems or issues stem from obstacles in performing religious rituals. These include difficulties in worshiping, confusion in determining prayer times, difficulties in cleaning (ablution) before prayer, and feeling dirty and impure, and, therefore, unable to offer prayers.[46] HF patients in an earlier study showed that their spiritual needs can be met when they have someone to talk to and share with, a supportive caregiver, and a health worker who shows sensitivity or cares with sincerity to foster hope.[44]

Conclusion

The spiritual nursing care model in enhancing the QOL of HF patients was found to be influenced by disease, psychosocial and environmental factors as well as spiritual wellbeing, which affects QOL both directly and indirectly.

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