



The Relationship Between Social Support and Self-care in Patients With Heart Failure: The Role of Illness Related Worries as a Mediator

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Abstract

Objectives: Heart failure (HF), as a chronic disease, is a progressive and debilitating problem in communities. In previous studies, the role of self-care in HF has been emphasized. Illness-related worries and social support are associated with self-care. The aim of this study is to explore the role of illness-related worries as a mediator in the relationship between social support and self-care in patients with HF.

Materials and Methods: This descriptive and correlational study was conducted on 149 HF patients based on inclusion and exclusion criteria, in 2016. Patients were selected using availability sampling. For data collection, a demographic information questionnaire, self-care behavior scale, illness-related worries questionnaire, and social support scale were used. In addition, the Pearson correlation coefficient and Sobel test were also conducted.

Results: Sobel test results was used for understanding the mediating role of illness related-worries ($P < 0.01$, Sobel test result = -5.16). The correlation between social support and self-care was -0.518, $P < 0.01$, and the correlation between illness-related worries and self-care was -0.71, $P < 0.01$.

Conclusions: This study showed that illness related worries can serve as a mediator in the relationship between social support and self-care. There was a significant correlation between the research variables.

Keywords: Illness-related worries, Social support, Self-care, Heart failure

Introduction

Heart failure (HF) is an important disease that affects not only the patient but also his/her family and social network. Good self-care investigated by recent guidelines for HF and self-care behavior is the key to success in order to improve the outcome of HF patients (1,2). Self-care behavior can usually decrease hospitalization (3) and mortality (4) and improve quality of life in HF patients. However, the care required for HF patients is so complex that should be learned and used by the individuals. It can be observed that many HF patients have trouble. Self-care requires the social support of others such as a spouse who plays an important role in one's life (5,6).

Social support is one of the most investigated parameters, which is defined as the degree of passion, care, and help from family members, friends, and others. Social support is a multidimensional concept that involves a variety of actual or perceived resources. These supportive resources can be emotional (e.g. nurturance), tangible (e.g. financial assistance), informational (e.g. advice), or companionship (e.g. sense of belonging) and intangible (e.g. personal

advice), which can be available to an individual through his/her relationship with others (7). Social support has a positive impact on health outcomes in chronic diseases (5) and sometimes negative relationship was reported (8).

Worry is the individual's negative emotions regarding his/her physical, cognitive and behavioral attitudes and his ability to anticipate possible incidents and future inconveniences of the disease (9). Worries of the patients with HF are similar to those of other patients with chronic disease. Life with HF is a boring life, with disability, weakness, worry, and depression (10). In patients with HF, there are various symptoms such as dyspnea, dizziness, angina pectoris, edema, and ascites. These symptoms can result in disability in performing activities, make problems in sexual performance, job duties, family, social life and cause social isolation, depression, and make changes in patient's lifestyle (11). Psychological symptoms such as feelings of guilt, hopelessness, low self-esteem, low energy, and depression are observed in HF patients (12). In this regard, patients are worried about unwanted changes in their future lives due to HF conditions (13). Considering

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patient's needs and illness-related worries is one of the self-care strategies (14,15).

However, because of the importance of illness-related worries and social support, two important variables are involved in self-care. The question in this study is whether illness-related worries can be used as a mediator in the relationship between social support and self-care in HF patients. In previous studies, self-care after HF has been affected by social support, but so far, the relationship between social support and self-care with illness-related worries as a mediator has not been investigated.

Materials and Methods

This cross-sectional study was conducted on 149 HF patients attending Tabriz Research Treatment Centre of Heart, Iran, during 2016. They were selected using availability sampling. The criteria for participating in the study included understanding Persian, willingness to participate in the study, reporting HF based on positive echocardiography, at least one-year experience of HF, and certification by a cardiologist. Data were analyzed by SPSS software version 20.0 using Pearson correlation coefficient and Sobel test.

Measurement questionnaire included 4 parts:

Part 1: Demographic Data

The variables assessed in this study included age (years), sex (men or women), and marital status (single, married, divorced, or widower).

Part 2: Self-care Behavior Scale

The 15-item European HF self-care behavior scale was the criterion for examining self-care. Cronbach α of 0.8 for the self-care behavior scale was determined, which shows excellent internal consistency. Each of them was scored on a five-point Likert scale with responses ranging from 1 (I completely agree) to 5 (I do not agree at all). The range of self-care behavior questionnaire scores was 15 to 75. An example of such items is: I weigh myself every day (16).

Part 3: Illness-Related Worries Questionnaire

Illness-Related Worries Questionnaire (IRWQ) is a 23-item questionnaire including 2 dimensions: independence (cognitive and functional) and patient's worries (physical-mental complications and worries about the future of the disease). All the phrases have negative scoring and vary from 1 score for strongly agree to 6 score for strongly disagree. Mean score of phrases is considered as the total score of the questionnaire, and the higher score indicates less illness-related worries. Reliability of IRWQ was calculated to be 0.90 using Cronbach α coefficient and 0.89 using split-half method (17).

Part 4: Social Support Scale

The 12-item standard scale was used to evaluate the social support and each item was measured on an ordinal

seven-point Likert-type scaling (1 = strongly disagree to 7 = strongly agree). The multidimensional scale of perceived social support included 3 scopes (family, friend, and significant other). An example of the items is: There is a special person who is around when I am in need. Cronbach α of 0.85 to 0.91 was obtained for the social support scale, as reported by Canty-Mitchell and Zimet, and demonstrated excellent internal consistency; in addition, the range of social support questionnaire scores was 12 to 84 (18).

Results

Considering all 149 subjects under study, 68% (101 subjects) were men and 32% (47 subjects) were women. Moreover, the mean and standard deviation of the samples' ages were (64.40 \pm 10.32); they belonged to the age range of 37 to 88 years. The majority of the subjects were married (82% or 122 subjects).

Additionally, mean and standard deviation (SD) of the patients' self-care were (40.66 \pm 13.16). The mean and standard deviation of the patients' illness-related worries were (50.79 \pm 27.546). The mean and standard deviation of the patients' social support were (49.09 \pm 6.74) (see Table 1).

The results showed that there was a significantly negative relationship between lack of self-care and social support ($P < 0.001$, $r = -0.518$), and between self-care and illness-related worries, there was a significantly negative relationship as well ($P < 0.001$, $r = -0.71$) (see Table 2).

In order to determine the mediating role of illness-related worries in the relationship between social support and self-care, Sobel test was conducted (-5.16) (see Table 3).

Discussion

The present experimental study aimed to explore the role of illness-related worries as a mediator in the relationship

Table 1. The Descriptive Indexes of Self-care, Illness Related Worries, and Social Support

	Mean	SD	N
Self-care	40.66	13.160	149
Illness related worries	50.79	27.546	149
Social support	49.0940	6.74571	149

Table 2. Pearson's Correlation Matrix Between Illness Related Worries, Social Support and Self-care

Component	1	2	3
1 Self-care	1		
2 Illness related worries	-0.71 0.000	1	
3 Social support	-0.518 0.000	0.447 0.000	1

Table 3. The Results of Sobel Test to Determine the Role of Illness Related Worries as Mediator in the Relationship Between Social Support and Self-care

A Path Coefficient (Social Support, Illness Related Worries)	The SE of a Path Coefficient	B Path Coefficient (Illness Related Worries, Self-care)	The SE of B Path Coefficient	Sobel Test Result	P Value
1.824	0.301	-0.287	0.029	-5.16	<0.01

Abbreviation: SE, standard error.

between social support and self-care in patients with HF in Tabriz, Iran, in 2016. The mean score of self-care among HF patients was 40.66; the standard deviation was 13.60, which represents the average self-care among patients. In this study, people who obtained higher scores in the self-care scale exhibited better self-care behavior.

In the current study, illness-related worries negatively correlated with self-care. These results were similar to the results found by Müller-Tasch et al and Bellg et al (19,20). The mean score of illness-related worries among HF was 50.79. All this negative correlation between illness-related worries and self-care in patients with HF indicated how one responds to the challenges and setbacks and what one expects will occur when a behavior change is affected by illness-related worries. In the current study, the average score of social support among HF patients was 49.9 and social support was negatively correlated with lack of self-care. In this study, the mean scores in social support are above the average in the perceived social support questionnaire. Higher scores in social support indicate good social support from family, friends, and important individuals. In this study, the patients had good perceived social support. Social support leads to health behavior and increases self-care behavior. Social support is a major source of compatibility and plays a very effective and important role in the outcome of the function and psychological adjustment of patients with chronic diseases. Supportive relationships with others may be through development, promotion and increase in healthy behaviors to help maintain a person's health (7). Social support is associated with many aspects of self-care in HF, such as daily weighing (8,21). The results of the analysis showed a positive correlation between social support and illness-related worries. The high score in the illness-related worries questionnaire is less worrying. Therefore, when perceived social support increases, it becomes less worrying. Low social support is a predictor of adverse outcomes and lack of self-care in patients with HF, which is consistent with previous studies showing that social isolation and lack of social ties or support are related to the illness-related worries. These results are similar to the results found by Dimatteo et al and Tsuchihashi-Makaya et al (22, 23) and are in conflict with the findings reported by Friedmann et al (24). There are only a few studies that have determined the impact of illness-related worries and social support in patients with HF.

In the results obtained in this study, the role of illness-related worries as a mediator in the relationship between perceived social support and self-care was confirmed.

The result obtained in Sobel tests was -5.16 . When this ratio is greater than ± 1.96 , the mediating role of illness-related worries is confirmed. No studies have been carried out on the mediating role of the illness-related worries. In explaining the findings, the following can be concluded: The role of social support and illness-related worries in HF patients has already been researched. Failure to perform previous activities, feelings of depression and anxiety, sexual dysfunction and lifestyle changes in patients with HF lead to social isolation (11,12). Disruptions in physical and functional ability can cause limitations in HF patients and this limitation leads to the loss of social relationships, support (25) and illness-related worries (13).

There is a main mechanism linking illness-related worries and social support with self-care in HF patient. The decrease in physical, mental, cognitive worries and a decrease in worry about future of disease improve self-care. Worry can affect adherence to medications and lifestyle modifications. Therefore, Social support directly improves self-care and indirectly improves self-care by the mediator role of illness-related worries. According to the results, health psychologists, nurses, and doctors stated that in order to prevent a decline in the care of people who receive little social support or those with high worry, social skills and life skills training can be added to the training programme and attention should be paid to psychological factors. This will decrease worry and reduce social isolation among the patients. Even if there is low perceived social support in patients with HF, they can still improve self-care, given the role of concerns or worries. If social support among patients was high enough, self-care can be boosted through mediation by relying on the mediator role of illness-related worries. These are very important research findings since the increased mortality and readmission are associated with poor self-care. Thus, illness-related worries play a key role in self-care in HF patients.

Conclusions

In this study, illness-related worry is a mediator in the relationship between social support and self-care in HF patients. Educational administrators, doctors, nurses, and health psychologists recommended identifying the factors and variables involved in the self-care programme. They call for strategic plans and training to decrease worry to control the disease and eventually self-care among HF patients. This is to increase mortality rates, reduce readmission, and lighten the burden of disease on these patients.

Limitations

In the current study, data were collected using a self-reporting method, which may affect the accuracy of the results. Furthermore, personal differences of participants may affect the generalization of our findings. Also, owing to the existing restrictions, it is suggested that a broader population, which includes other universities, be used to enhance the generalizability of the findings.

Conflicts of Interests

Authors declare that they have no conflict of interests.

Ethical Issues

All patients signed the consent form and voluntarily agreed to participate in the study, which has been approved by the Institutional Review Board at Tabriz University of Medical Sciences (Approval No. 60920709941011).

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