

# Examining Quality of Life and its Related Factors in Patients With Chronic Heart Failure Admitted to Hospitals in Ahvaz in 2015

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## Abstract

**Background:** Currently, examining the quality of life is considered an important aspect of the study of chronic diseases. Heart failure affects the quality of life of patients in different degrees.

**Objectives:** This study aimed to evaluate the quality of life in heart failure patients.

**Patients and Methods:** This descriptive-analytical research was conducted in 2015, using 126 patients with heart failure at the general hospitals in the city of Ahvaz, Iran. Sampling was performed using a simple method. Data was collected through interviews and a demographic information and quality of life indicator questionnaire, known as the Minnesota living with heart failure questionnaire (MLHFQ). Data were analyzed using the SPSS software, version 21, with a significance level of 0.05, and the descriptive statistics used were the Pearson correlation coefficient and the Chi-square test.

**Results:** The results showed that 77.7 percent of patients had a low quality of life, 18.2 percent had a moderate quality of life, and only 3.2 percent had a high quality of life. A significant correlation was found between quality of life and the demographic characteristics of age, sex, education level, marital status ( $P = 0.01$ ) and frequency of admission to the hospital ( $P = 0.01$ ).

**Conclusions:** The results showed that heart failure had a negative impact on the quality of life for patients. Therefore, evaluation and improvement of quality of life for these patients should be considered one of the duties of nurses.

**Keywords:** Quality of Life, Heart Failure, Factors Associated With Quality of Life

## 1. Background

Heart disease is the most common chronic disease and a major cause of mortality worldwide. Heart failure is the final common pathway of all heart disease (1). The prevalence of this disease in the adult population is 1-2 percent, in people over 65 years it is 6 percent, and in people over 75 years it is 10 percent. In total, it has been estimated that about 15 million people are affected by heart failure worldwide (2).

According to the reports, this is one of the most expensive diseases in regards to national health spending. For example, in the United States estimated the direct and indirect costs of the disease were 33.2 million dollars in 2007, and most of the expenditures were related to hospital costs (3).

Despite recent advances in the treatment of heart failure, the prognosis of the disease has remained weak, so that today, improving the quality of life of these patients is the most important challenge of the health care system and considered the primary objective of care and treatment in this population (4).

The physical symptoms of the disease, including physical activity intolerance, lead to social isolation, as well as sexual disorders. As a result, the role of patients in their family and social life changes and ultimately decreases their satisfaction with life. In addition, the use of some medicines, such as diuretics, impairs the social relationships of patients, which affects their quality of life in social terms (5). In a 2010 study by Heo et al. it was shown that patients with heart failure who had a better economic situation also had a higher quality of life (6). Further, the results of a study in 2009 by Chan et al. showed that the quality of life of patients with heart failure can predict their treatment costs, so that patients with a lower quality of life had higher health care costs (7). In addition, the results of a study by Pena et al. (2011) showed that of 103 patients with the disease, 67 percent had depression (8). Cheraghi et al. (2012), in his study, showed that a large percentage (61.7) of patients with heart failure had low levels of perceived social support (9). Abbasi (2010) showed that high functional performance in patients with heart failure is associated with a better quality of life. Thus, improv-

ing the functional performance, through cardiac rehabilitation programs and control of some modifiable variables, can increase the health of these patients (10).

The improvement of health status and of normal life, as well as prevention of disability and advancement of performance are the goals of the world health organization. Considering the importance of the nursing role to preserve, maintain and improve the health of patients, and given that nurses spend more time with patients than other health team members, nurses can contribute to these treatment goals. In addition, nurses, as a part of health care team, can use research on heart failure to achieve positive results and help alleviate the problems mentioned such as increase life expectancy and improve quality of life.

## 2. Objectives

The researchers in this study intended to take a step, however small, to clarify the factors affecting the quality of life and to determine how health care costs and hospital admissions can be reduced for patients with heart failure. Therefore, this study aimed to determine the quality of life and related factors in patients with heart failure in Ahvaz, Iran.

## 3. Patients and Methods

This study was a descriptive-analytical research study. The study population consisted of patients with chronic heart failure admitted to general hospitals in Ahvaz, Iran in the critical care unit (CCU), internal medicine and cardiology departments in 2015.

The inclusion criteria for the study included: age range of 40 to 75 years with a diagnosis of heart failure II, III or IV that was approved by the physician, and being at least six months from the onset of the disease, without a history of depression, etc.). Based on the inclusion criteria, 126 samples were selected and data were collected through interviews. In this study, data collection tools included the Minnesota living with heart failure questionnaire (MLHFQ), which is a demographic and disease information form, and readmission. The questionnaire is designed to obtain information about the quality of life in patients with heart failure (11). This specific questionnaire was designed in 1984 by Rector et al. to determine the impact of treatment on the quality of life of patients with heart failure. The MLHFQ is the most common tool used in research studies to assess the quality of life in these patients. The questionnaire has a 0.94 reliability. Content validity was used to determine the scientific validity of the questionnaire,

and trust (reliability) was determined by Cronbach's alpha (0.89). The questionnaire shows the patient's understanding of the effects of heart failure on the physical, economic, social and psychological aspects of life. The questions are about symptoms, such as shortness of breath, fatigue, peripheral edema and sleep disorders, and psychiatric symptoms such as depression and anxiety, social relations, physical and sexual activities, work and emotions. The questionnaire includes 21 items using a 6-point Likert scale (0 - 5). A score of 0 represents the best, and 5 represents the worst condition. The maximum score is 105. A higher score indicates a worse quality of life. The questions are designed in such a way to cover three aspects of quality of life: the physical, psychological and economic aspects. There are 13 questions about the physical aspect, 4 questions related to the psychological aspect, 4 questions related to the mental aspect, and 4 questions about the economic aspect. In the questionnaire, scores lower than 24 represent a good quality of life, scores between 24 and 45 indicate an average quality of life, and scores higher than 45 show a poor quality of life (12). The questionnaire includes demographic and disease characteristics such as age, sex, weight, height, marital status, education level, occupation, sports, type of exercise, number of admissions to the hospital in the last six months due to heart disease, type of drugs, smoking and the number of cigarettes smoked per day.

Ethical considerations were observed in the research. Permission was obtained from the hospital authorities to carry out the research, and an explanation of the objectives was given to each patient before participating in the study. To analyze the data, SPSS statistical software version 21 was used. The data were described using frequency distribution tables and standard deviation. Pearson's correlation coefficient, the t-test for independent groups and one-way analysis were used in data analysis. A P value of 0.05 was considered significant in this study.

## 4. Results

The patients studied in this research had a mean age of 68 years, 55 percent were female, 80 percent were married, 63 percent were illiterate and 46 percent had more than one admission to the hospital due to heart disease.

Regarding quality of life, 2.3 percent of the patients had a good quality of life, 2.18 percent of the patients had a moderate quality of life, and 7.77 percent of the patients had a poor quality of life (Table 1).

There was a significant correlation between the levels of quality of life and the variables of age, sex, marital status, level of education, duration of illness and number of admissions to the hospital ( $P=0.00$ ). In other words, younger patients, men, married and single patients (in comparison

**Table 1.** The Frequency of Quality of Life Levels and Aspects in Patients With Heart Failure Admitted to Public Hospitals in Ahvaz (2014 - 2015)<sup>a</sup>

Quality of Life	The Level of Quality of Life			Total
	Favorable	Relatively favorable	Unfavorable	
The level of overall quality of life	3 (2.3)	23 (18.2)	98 (77.7)	126 (100)

<sup>a</sup>Values are expressed as No. (%).

with widowed and divorced patients), patients with a high-school diploma and higher education and patients with lower numbers of admissions had a better quality of life compared to the other groups (Table 2).

## 5. Discussion

The study results show the impact of the disease on the quality of life. According to the findings, the highest number of problems was observed in the area of health performance and the physical aspect of quality of life. Based on research about the quality of life of patients with heart failure, Shojaei et al. stated that the disease had a negative effect on quality of life, and most cases had adverse conditions in the physical aspects, activity, mental, and socioeconomic aspects (13), which is consistent with the findings of our research.

It is probable that the chronic nature of the disease costs of frequent admission in hospitals, drug treatment of heart failure. Impairment of daily activities, dependence on others and loss of independence for self-care measures, sexual problems and impairment in social and occupational functions have negative effects on the quality life of patients with heart failure and reduce their quality of life.

In the present study, the psychological/mental aspects of patients with heart failure had poor quality. In a study conducted by Erceg et al. it was also found that patients with lower incomes, a longer history of chronic diseases, a longer duration of hospitalization, and patients taking digoxin and aldosterone antagonists, according to New York heart association, have higher risks of failure and show symptoms of depression and mental disorders (14).

In this study, the social and economic performance of patients with heart failure also declined. These findings are consistent with the results by Zeighami Mohamadi et al. (2010) (15). In Heo et al. study of 2010, it was found that patients with heart failure who had a better economic situation also had a more favorable quality of life (6). Financial and economic limitations may have a negative impact on access to health resources and health care, which may in turn have adverse effects on disease control and the treatment of heart failure, and thus, reduce the quality of life.

In this study, repeated hospital admissions caused a worse quality of life in patients with heart failure, which is consistent with the study by Shojaei (13). Yaghoubi et al. Their study of 2012 showed that the most important factors affecting the quality of life were sex, age, education level, marital status, employment status, duration of disease and the number of admissions to the hospital (16).

In general, the results suggested that the quality of life in most patients with heart failure was poor, and variables such as age, sex, marital status, education level, duration of disease and the number of admissions to the hospital affected the quality of life of these patients. Identifying the quality of life of patients with heart failure and the factors influenced by nurses can be helpful in the diagnosis, intervention, evaluation and discharge planning stages. Since the quality of life of these patients in the socioeconomic aspect was low, it is essential that health insurance provide health care facilities and social support services for these patients. Based on the findings of this study, it is recommended that research be conducted with the aim of improving the quality of life of these patients. In addition, since many patients in this study were willing to describe their quality of life with their own words, it is recommended that a qualitative study be performed aimed at developing a novel tool to determine the quality of life of these patients.

In this study, unlike many other studies which were limited to a particular hospital or clinic, all public hospitals in Ahvaz were investigated. However, unfortunately due to the fact the doctor we were not able to obtain ejection fraction data for the patients in this study.

**Table 2.** Distribution of Levels of Quality of Life Depending on Demographic Factors of the Patients With Heart Failure Admitted to Public Hospitals in Ahvaz (2014 - 2015)<sup>a</sup>

Variable	The Level of Quality of Life			Total
	Favorable	Relatively favorable	Unfavorable	
<b>Age</b>				
Under 60 years	1 (2.5)	8 (20)	31 (77.5)	40 (100)
Over 60 years	2 (2.3)	16 (19)	65 (77.3)	84 (100)
<b>Gender</b>				
Male	2 (3.7)	8 (14.8)	44 (81.4)	54 (100)
Female	2 (2.8)	16 (22.8)	52 (74.2)	70 (100)
<b>Level of education</b>				
Unlettered	1 (1.2)	16 (20.2)	62 (78.4)	79 (100)
Less than Diploma	2 (5.2)	4 (10.5)	32 (84.2)	38 (100)
Diploma	0	2 (50)	2 (50)	4 (100)
Collegiate	1 (33.3)	2 (66.6)	0	3 (100)
<b>Qualified</b>				
Single	0	0	4 (100)	4 (100)
Married	3 (3.03)	22 (22.2)	74 (74.7)	99 (100)
Lose	0	3 (14.2)	18 (85.7)	21 (100)
<b>Hospitalization</b>				
1	0	18 (28.1)	46 (71.8)	64 (100)
2	2 (6.9)	2 (6.9)	25 (86.2)	29 (100)
3	1 (6.25)	1 (6.25)	14 (87.5)	16 (100)
3+	1 (6.6)	4 (26.6)	11 (73.3)	15 (100)

<sup>a</sup>Values are expressed as No. (%).

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## Footnotes

**Authors' Contribution:** Esmat Payandeh Pour performed the literature search and wrote the first draft. Sedighe Fayazee provided expert opinion and reviewed the paper. Analysis and interpretation of data was conducted by Eamat Payandeh Pour and Mahmood Latifi.

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