



## The Relationship between Hope in Heart Failure Patients with Associated Factors of Disease: A Descriptive- Analytical Study

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### Authors' contributions

This work was carried out in collaboration between both authors. Author ZAB performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Author NE designed the study, managed the analyses of the study, managed the literature searches and revised reviewer comments. Both authors read and approved the final manuscript.

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### ABSTRACT

**Background:** Heart failure is one of the most common diseases of aging that has negative effects on hope and quality of life.

**Objective:** To determine hope of life and related factors in patients with heart failure

**Methods:** This cross-sectional study was conducted on 78 patients referred to hospitals affiliated to Ahvaz Jundishapur University of Medical Science during March- May 2016.

In this study, data were collect by two questionnaires: 1) hope of life Schneider and 2) questionnaire of demographic characteristics, disease status and associated factors were used. Data were analyzed using descriptive and analytical statistics.

**Results:** The results showed that the hope of life 50.7% of patients (less than 30) was low. The There was a significant relationship between severity of illness, duration of illness, visits to the doctor and hospitalization in a month over the past year and diseases associated with hope of life

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( $p = 0/000$ ). The results also had showed that between now and the past month of readmission and fatigue signs and symptoms, number of drugs with hope of life ( $p = 0/000$ ).

**Conclusion:** The management and staff of health can to use the result of study for appropriate planning to promotion quality of life of patient.

*Keywords: Hope of life; heart failure; related factors.*

## 1. INTRODUCTION

Heart failure is an extending problem which has engaged more than 20 million people around the world [1]. About 6 to 10% of people over 65 years suffer from heart failure and 80% of hospitalized patients diagnosed to have heart failure are over 80 years [2,3]. Also the first cause of mortality in Iran at a rate of 350.2 persons per 100,000 people was related to cardiovascular diseases [4]. Despite the high rate of patients with heart failure, precise statistics have not been recently available on the prevalence of the disease and it is predicted that the emergence rate of this disease will be approximately 3500 cases per 100 thousand people in near future [5]. In other words cardiovascular diseases and heart failure especially are considered as the most prevalent chronic diseases and major causes of disability [2].

Chronic diseases such as heart failure has negative effects on physical, psychological, quality of life, social and family status of patient [6]. Dastum et al. notified that heart's inability for delivering blood leads to symptoms such as shortness of breath, fatigue, dizziness, angina pectoris, edema, and ascites [7]. Rogers & Bush emphasized that it will reduce the person's functional ability and causes disorders in implementing common daily activities and dependence on others in performing self-care activities [8]. It has also negative effects on hope in patients and life quality of patients [7,8] as though limitations in conducting physical activity causes disorder in patient job performance which will encounter him/her with economic problems and subsistence difficulties [9]. The mental-psychological effects of illness will also bring about feelings of imminent death, anxiety, fear, anxiety and mood disorders [10]. Binaie et al. conducted a study on patients with heart failure and found that consequences of the disease and its rejection has direct relation with reduced hope in patients [11]. Basically, patients with higher level of hope in patients and better self-esteem do self-care behaviors more properly and have more convenient control over disease. Hope is defined as the perceived capability to desired

goals, and motivate oneself via agency thinking to use those pathways. On the other hand, lack of hope and purposeful life leads to reduced life quality and disappointing beliefs in patient [10,12]. On the other hand, diagnosis and treatment of disease leads to decrease or loss of hope in patients while patients with heart failure are not excluded from this rule. The severity of heart failure and uncertain therapeutic result amongst patients make the importance of hope more evident than ever [11]. Berendes et al. found that higher level of hope is related to better mood, better physical health and exceeding ability to deal with chronic illness and pain [13]. Supportive interventions associated with hope in patients with heart failure could also affect other health goals. Therefore, giving hope to patients has been introduced as an important intervention in medicine, nursing and mental health however applied and predictive value of hope is still indefinite [10,13,14]. Hope in patients is an important factor in improving the survival of patients with chronic diseases. Although the concept of hope in patients is not physically and clinically measurable, however it could be examined through mental inspection, impact of disease and clinical status on different aspects of life [15].

Evaluation of hope in patients with regard to the prevalence of patients with heart failure, especially in aging period, prediction of the effects of disease, identification of the patients' needs and provision of care services proportionate to these needs and finally improvement of care system bear great importance [11,15]. Since, the beginning of a chronic disease, meaning an adult in behavioral changes that must adapt to the pattern of one's life. Personal needs have changed, routine work hard, decreased funding and increased losses. Nurses will be able to both technical and human capacity to care for patients with chronic diseases such as heart failure, gain, patients who return repeatedly to the hospital for treatment. Calculation of hope in these patients can provide tools to improve nursing care that can be used for the individual needs of patients. Hope is a state that is associated with quality and positive vision for the future; a strategy for

effectively dealing expect from goal, something essential for life; a higher dimension of life, an inner strength that is strong and richness of human existence lead; What man would be able to overcome the current situation and achieve a new awareness of its existence, the faith of the Lord comes, to give life meaning and pleasure. Hope is what makes mobilizing individuals, cause people to move and get things to be desired. So, the researcher perceived that implementation of a study to define hope in patients of heart failure that referred to hospitals Ahvaz and its associated factors.

## 2. MATERIALS AND METHODS

This is an analytic-descriptive study with Ethic Code No. (ajums.1395.185). The present study examined 156 patients referred to medical centers affiliated to Ahvaz University of Medical Sciences from January to June 2016 by convenient sampling method. The inclusion criteria were affection with heart failure Class I-II, patients with heart ejection fraction less than or equal to 40%, having 18 years of age and above, history of heart failure more than one year diagnosed by specialist physician, awareness of time, place and persons, lack of mental illness (depression, schizophrenia and mania) and other chronic diseases (chronic renal failure, cancer, multiple sclerosis, etc.) and tendency to participate in the study. The present study used two questionnaires to collect data. The first questionnaire consisted of two parts: The first part included patients' demographic information and the second part included the status of the disease and associated factors. The validity and reliability of content was approved using Cronbach's alpha ( $\alpha=78\%$ ). The second questionnaire was Hope in patients Questionnaire [16] the scoring point is based on 5 rating of Likert scale. This questionnaire is designed for adult of more of 15years. This scale measures two sub-scales factor of thinking (4 items) and strategic of thinking (4 items). To obtain the total score of questionnaire, total points of single questions should be calculated. Higher scores signify higher and more desirable level of hope in patients in respondent and vice versa. The validity and reliability of Snyder hope in patients scale were examined and approved by professors of management and pilot study by the Mashhad University and Teacher Training University (Karimiyan, 2012), Bryant & Cvengros (2001) obtained  $\alpha =0.711$  [17]. The maximum and minimum scores of this questionnaire were respectively 60 and 12. According to hope in

patients scores, the patients were classified into three categories of good (50-60), fairly good (30-49) and undesirable (less than 30).

By observance of moral considerations under Helsinki agreement, the questionnaires were completed and distributed. The data were analyzed using SPSS<sup>-22</sup> and descriptive statistics (frequency, mean) and inferential chi-square tests.

## 3. FINDINGS

The results were described based on objectives of study in two parts of descriptive data (determining hope in patients, demographic characteristics and disease features) and inferential data (determining the relationship between hope in patients and demographic characteristics and disease features).

The results of present study indicated that mean age of patient was 59.1 years, 68% woman, 75.3% married, 48.7% illiterate, 51.2% housewife and 87.6% were covered by health insurance. 46.1% were not dependent on family for health care and 57.1% were attended by their children, 88% did not smoke, 98.3% had no Alcohol consumption, 56.8% were overweight (Body Mass Index: 25.6), 64.1% of patients had healthy eating habit, 68% of people firmly believed in God and the Resurrection however, 53.8% of participants were not happy people and had weak social relations.

The results on the status and disease risk factors showed that disease severity in 53.8% of patients was in second grade and 46.15% of patients had more than 1-5 years records of background diagnosis. 56.4% of patients were readmitted more than three times in one month and the last six months, 71.7% had comorbidities, 61.4% of patients had blood hypertension from which 32.2% had a history of hypertension for more than 15 years. 47.9% of patients had blood fat, 25.5% had a history of myocardial infarction and 76.7% of them had a history of myocardial infarction about 10 years, 38.1% of patients had edema, 88% were taking their drugs on time, 66.6% used between 3-5 types of medication throughout the day, 53.8% of studied units had undesirable symptoms and side effects of disease, 46.1% had average fatigue and 43.5% had average fatigue within the last month. The results on patients' knowledge about their illness showed that 48% of patients

had relatively favorable details of their illness. Results on the hope in patients showed that 51.2% of patients had poor hope in patients (Table 1).

**Table 1. Status of hope in patients in patients with congestive heart failure referred to treatment centers affiliated to Ahvaz University of Medical Sciences in 2016**

Hope in patients	Score	Number	Frequency
Good	(50-60)	36	23.7%
Fairly good	(30-49)	40	25.6%
Undesirable	(30>)	80	51.2%

\* re-adm last&6 Mon= Number of re-admission within the last month and six months

\*Aso- Dis= Associated diseases, \*Number=Num, \*Percent=Per

There was also significant relation between education, employment status and income, nutrition pattern, happiness and home care and hope in patients (p=0.000). But we found that there was no significant relation between age, marital status, having health insurance, type of health insurance, smoking, body mass index, patients' knowledge about his/her illness, religious beliefs and hope in patients.

Results on the relationship between disease and hope in patients showed that there was significant relation between severity of illness, duration of illness, frequency of physician visits and hospitalizations during the last 6 months and

comorbidities and hope in patients (p=0.000) (Table 2). The results also showed that there was significant relation between patient's current fatigue and fatigue during the last month, signs and symptoms of illness, number of drugs and hope in patients (p=0.000) (Table 3).

#### 4. DISCUSSION

Information, about the life expectancy addition to treatment, support and rehabilitation measures as well as to promote programs Contribute [15,18]. Today, people want to improve the hope in patients, and so, governments around the world pay more attention to the improvement of hope and public life quality in order to reduce the risk of disease and provide health services, physical, mental and social welfare of the members of society [19].

The results of present study showed that there is low level of hope in patients amongst these patients while individual and disease factors are also effective. There was not significant relation between two variables of knowledge and hope in patients. It seems that the reason for low hope in patients amongst these patients despite favorable knowledge is that patients' knowledge of symptoms, lack of certain cure and the need to meet diet result in psychological pressure on the patient which could affect a person's hope in patients. So we could say that higher awareness and nurses' attitudes to understanding patients' views and awareness of their living conditions and the fact that nurses could select effective

**Table 2. Relation between hope in patient's levels and disease factors in patients with heart failure referred to treatment centers affiliated to Ahvaz University of Medical Sciences in 2016**

	Total		Good		Fairly good		Bad		Life Exp Grade	Factor
	Per	Num	Per	Num	Per	Num	Per	Num		
	100	84	7.6	12	12.8	20	33.3	52	Second	Severity of Illness
	100	36	5.11	8	7.6	12	10.2	16	Third	
	100	36	2.5	4	7.6	12	12.8	20	Fourth	
	100	156	15.3	24	28.2	44	56.4	88	Total	Duration of Illness
	100	72	5.1	8	10.2	16	30.7	48	1-5 y	
	100	52	7.6	12	10.2	16	15.3	24	6-10 y	
	100	32	2.5	4	5.1	8	12.8	20	<10y	re-adm last&6 Mon
	100	156	15.3	24	25.6	40	58.9	92	Total	
	100	28	2.5	4	5.1	8	10.2	16	One	
	100	40	2.5	4	10.2	16	12.8	20	Two	Aso- Dis
	100	88	5.1	8	12.8	20	38.4	60	≥ 3	
	100	165	10.2	16	28.2	44	61.5	96	Total	
	100	112	7.6	12	12.8	20	51.2	80	Has	Total
	100	44	2.5	4	7.6	12	17.9	28	not have	
	100	156	10.2	16	20.5	32	69.2	108	Total	
		P=0.000		P=0.000		P=0.000		P=0.000		P <sub>value</sub>

**Table 3. Relation between hope in patient's levels and disease factors in patients with heart failure referred to treatment centers affiliated to Ahvaz University of Medical Sciences in 2016**

Total		Good		Fairly good		Bad		Life Exp	Factors
Per	Num	Per	Num	Per	Num	Per	Num	Status	
100	36	2.5	4	5.1	8	15.3	24	Low(0-3)	Fatigue
100	72	5.1	8	10.2	16	30.7	48	Average (4-7)	Current
100	48	5.1	8	7.6	12	17.9	28	Severe (8-10)	
100	156	12.8	20	23.7	36	64.1	100	Total	
100	32	2.5	4	5.1	8	12.8	20	Low (0-3)	Last
100	68	2.5	4	7.6	12	33.3	52	Average (4-7)	month
100	56	5.1	8	7.6	12	23.7	36		
100	156	10.2	16	20.5	32	69.2	108	Total	
100	84	5.1	8	10.2	16	38.4	60	Undesirable	Symptoms
100	40	5.1	8	7.6	12	12.8	20	Fairly desirable	
100	32	2.5	4	5.1	8	12.8	20	desirable	
100	156	12.8	20	23.7	36	64.1	100	Total	
100	64	7.6	12	10.2	16	48.7	76	3-5	Drugs
100	52	2.5	4	7.6	12	23.07	36	6 ≥	
100	156	10.2	16	17.9	28	71.7	112	Total	
P=0.000		P=0.039		P=0.000		P=0.000		P value	

and appropriate treatments to improve patients' hope in patients based on patients' satisfaction bear great importance. Among the factors affecting hope in patients, the nurses could change modifiable factors, review these factors in people and also apply their effective interventions in planning for care services at home and in society and so plan and implement programs to increase hope in patients at family level. Because nurses play critical role in patient care, their attention to hope in patients of these patients is important.

The results of several studies, for example, by Snyder (2006), Hamfield (2005) and poster (2001) showed that the power of hope has important role in improving the various diseases and physical, mental aspects and life quality and general health of these patient [20]. Snyder and Benson also argued that high levels of hope has direct relation with physical and psychological health, high self-worth, positive thinking and good social relations and low level of hope predicts depressive symptoms and reduces emotions and self-efficacy especially in chronic diseases [17,21]. The factors improving hope in patients of patients is another important factor which should be considered. The results of another study which indicated the importance of the hope in patients of patients with congestive heart failure can draw the attention of clinical nurses to the fact that considering the hope in patients of these patients and making effort to improve it could lead to more favorable results in care services.

The results of present study showed that there is significant relation between patient's hope in patients and factors such as occupation, education level, home care, eating habit, severity of illness, duration of illness, number of visit and hospitalizations, comorbidities such as duration of hypertension, edema, hyperlipidemia, signs and symptoms of disease, current fatigue and fatigue in the last month, number of drugs and being happy. Rill & Blue indicated that edema caused by heart failure also creates problem and disorder in normal performance of person [22]. In this study, 38.1% of people were suffering from edema. Smeltzer & Bare indicated that reduced cardiac output, increased energy for breathing and insomnia caused by respiratory distress create fatigue in patients with heart failure [23]. The studies also showed that 46.1% had current average fatigue and 43.5% had average fatigue within the last month. The results of patients' knowledge about their illness showed that 48% of patients had relatively favorable information about their disease. Redfem & Rose wrote that physical activity decreases with age due to changes occurring in various body systems [24]. The mean age of the current study population was 59.1% years and 68% of patients were women. Therefore we could say that aforesaid documentations approve the results of present study. Therefore, understanding these factors will help the staffs of health care centers to organize their activities in order to improve the health status and hope in patients of people [25]. A study in Italy to evaluate the hopes and its dependent variables studied during and after

hospitalization has shown that Hope has a positive relationship with self-esteem and negatively correlated with depression [26]. In a study conducted on patients with a chronic illness, death thought likely to have a previous relationship with a clinical diagnosis of depression, severity of depressive symptoms and lack of indicators is life expectancy [27]. A new study that explores various examples of hope in patients with chronic diseases are nursing care after an intervention must be done in Iran.

## 5. CONCLUSION

The study represents an important and influential role in chronic diseases such as heart failure and life expectancy meaningful role nursing care in providing medical interventions in health care for patients and caregivers keep coming and hope they are. According to present study, low hope in patients in patients with congestive heart failure, in addition to its association with demographic characteristics and disease also depend on medical staff's inadequate knowledge in this regard and lack of patients' support in heart clinics by nurses, lack of proper relationship between staff and patients and lack of accurate and appropriate evaluation of medical staff and higher frequency of hospitalization of these patients in hospital which impose much expenses on government. Therefore, planning proportionate to the patients' status and society culture, in direction with improving quality and hope in patients of these patients will have positive effects.

## 6. STRENGTHS AND WEAKNESSES OF THE STUDY

According to the sample size in this study, we recommended further studies are done with a larger sample size. Because of the extent of factors hope among patients, future studies will be performed for clinical trials.

## CONSENT

It is not applicable.

## ETHICAL APPROVAL

It is not applicable.

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## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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