

The relationship between hope in heart failure patients with associated factors of disease: a descriptive - analytical study

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.

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 ($p = 0/000$). 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.

Key Words: Hope of Life; heart failure; related factors.

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

24 and 80% of hospitalized patients diagnosed to have heart failure are over 80 years (2, 3).Also
25 the first cause of mortality in Iran at a rate of 350.2 persons per 100,000 people was related to
26 cardiovascular diseases (4). Despite the high rate of patients with heart failure, precise
27 statistics have not been recently available on the prevalence of the disease and it is predicted
28 that the emergence rate of this disease will be approximately 3500 cases per 100 thousand
29 people in near future (5). In other words cardiovascular diseases and heart failure especially
30 are considered as the most prevalent chronic diseases and major causes of disability (2).
31 Chronic diseases such as heart failure has negative effects on physical, psychological, quality
32 of life, social and family status of patient (6). Dastum et al. notified that heart's inability for
33 delivering blood leads to symptoms such as shortness of breath, fatigue, dizziness, angina
34 pectoris, edema, and ascites (7). Rogers & Bush emphasized that it will reduce the person's
35 functional ability and causes disorders in implementing common daily activities and
36 dependence on others in performing self-care activities (8). It has also negative effects on
37 hope in patients and life quality of patients (7, 8) as though limitations in conducting physical
38 activity causes disorder in patient job performance which will encounter him/her with
39 economic problems and subsistence difficulties (9). The mental-psychological effects of
40 illness will also bring about feelings of imminent death, anxiety, fear, anxiety and mood
41 disorders (10). Binaie et al. conducted a study on patients with heart failure and found that
42 consequences of the disease and its rejection has direct relation with reduced hope in patients
43 (11). Basically, patients with higher level of hope in patients and better self-esteem do self-
44 care behaviors more properly and have more convenient control over disease. Hope is defined
45 as the perceived capability to desired goals, and motivate oneself via agency thinking to use
46 those pathways. On the other hand, lack of hope and purposeful life leads to reduced life
47 quality and disappointing beliefs in patient (10, 12). On the other hand, diagnosis and
48 treatment of disease leads to decrease or loss of hope in patients while patients with heart

Comment [NPR1]: quality

Comment [NPR2]: It is used in APA
reference system

49 failure are not excluded from this rule. The severity of heart failure and uncertain therapeutic
50 result amongst patients make the importance of hope more evident than ever (11). Berendes
51 et al. found that higher level of hope is related to better mood, better physical health and
52 exceeding ability to deal with chronic illness and pain (13). Supportive interventions
53 associated with hope in patients with heart failure could also affect other health goals.
54 Therefore, giving hope to patients has been introduced as an important intervention in
55 medicine, nursing and mental health however applied and predictive value of hope is still
56 indefinite (10, 13, 14). Hope in patients is an important factor in improving the survival of
57 patients with chronic diseases. Although the concept of hope in patients is not physically and
58 clinically measurable, however it could be examined through mental inspection, impact of
59 disease and clinical status on different aspects of life (15).

60 Evaluation of hope in patients with regard to the prevalence of patients with heart failure,
61 especially in aging period, prediction of the effects of disease, identification of the patients'
62 needs and provision of care services proportionate to these needs and finally improvement of
63 care system bear great importance (11, 15). Since, the beginning of a chronic disease,
64 meaning an adult in behavioral changes that must adapt to the pattern of one's life. Personal
65 needs have changed, routine work hard, decreased funding and increased losses .Nurses will
66 be able to both technical and human capacity to care for patients with chronic diseases such
67 as heart failure, gain, patients who return repeatedly to the hospital for treatment. Calculation
68 of hope in these patients can provide tools to improve nursing care that can be used for the
69 individual needs of patients. Hope is a state that is associated with quality and positive vision
70 for the future; a strategy for effectively dealing expect from goal, something essential for life;
71 a higher dimension of life, an inner strength that is strong and richness of human existence
72 lead; What man would be able to overcome the current situation and achieve a new
73 awareness of its existence, the faith of the Lord comes, to give life meaning and pleasure.

74 Hope is what makes mobilizing individuals, cause people to move and get things to be
75 desired. So, the researcher perceived that implementation of a study to define hope in patients
76 of heart failure that referred to hospitals Ahvaz and its associated factors.

77 ***Materials and Methods***

78 This is an analytic-descriptive study with Ethic Code No. (1395.185). The present study
79 examined 156 patients referred to medical centers affiliated to Ahvaz University of Medical
80 Sciences from January to June 2016 by convenient sampling method. The inclusion criteria
81 were affection with heart failure Class I-II, patients with heart ejection fraction less than or
82 equal to 40%, having 18 years of age and above, history of heart failure more than one year
83 diagnosed by specialist physician, awareness of time, place and persons, lack of mental
84 illness (depression, schizophrenia and mania) and other chronic diseases (chronic renal
85 failure, cancer, multiple sclerosis, etc.) and tendency to participate in the study. The present
86 study used two questionnaires to collect data. The first questionnaire consisted of two parts:
87 The first part included patients' demographic information and the second part included the
88 status of the disease and associated factors. The validity and reliability of content was
89 approved using Cronbach's alpha ($\alpha=78\%$). The second questionnaire was Hope in patients
90 Questionnaire (16) the scoring point is based on 5 rating of Likert scale. This questionnaire is
91 designed for adult of more of 15years. This scale measures two sub-scales factor of thinking
92 (4 items) and strategic of thinking (4 items). To obtain the total score of questionnaire, total
93 points of single questions should be calculated. Higher scores signify higher and more
94 desirable level of hope in patients in respondent and vice versa. The validity and reliability of
95 Snyder hope in patients scale were examined and approved by professors of management and
96 pilot study by the Mashhad University and Teacher Training University (Karimiyan, 2012),
97 Bryant & Cvengros (2001) obtained $\alpha =0.711$ (17). The maximum and minimum scores of
98 this questionnaire were respectively 60 and 12. According to hope in patients scores, the

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

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

104 **Findings:**

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

109 The results of present study indicated that mean age of patient was 59.1 years, 68% woman,
110 75.3% married, 48.7% illiterate, 51.2% housewife and 87.6% were covered by health
111 insurance. 46.1% were not dependent on family for health care and 57.1% were attended by
112 their children, 88% did not smoke, 98.3% had no Alcohol consumption, 56.8% were
113 overweight (Body Mass Index: 25.6), 64.1% of patients had healthy eating habit, 68% of
114 people firmly believed in God and the Resurrection however, 53.8% of participants were not
115 happy people and had weak social relations.

116 The results on the status and disease risk factors showed that disease severity in 53.8% of
117 patients was in second grade and 46.15% of patients had more than 1-5 years records of
118 background diagnosis. 56.4% of patients were readmitted more than three times in one month
119 and the last six months, 71.7% had comorbidities, 61.4% of patients had blood hypertension
120 from which 32.2% had a history of hypertension for more than 15 years. 47.9% of patients
121 had blood fat, 25.5% had a history of myocardial infarction and 76.7% of them had a history
122 of myocardial infarction about 10 years, 38.1% of patients had edema, 88% were taking their
123 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).

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)

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%

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

P value	Total	Good	Fairly Good	Bad	Life Exp gra	factore
---------	-------	------	-------------	-----	-----------------	---------

	Per	Num	Per	Num	Per	Num	Per	Num		
P=0.000	100	84	7.6	12	12.8	20	33.3	52	Second	Severity of Illness
	100	36	5.1	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	
P=0.000	100	72	5.1	8	10.2	16	30.7	48	1-5 y	Duration of Illness
	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	
	100	156	15.3	24	25.6	40	58.9	92	Total	
P=0.000	100	28	2.5	4	5.1	8	10.2	16	One	re-adm last&6 Mon
	100	40	2.5	4	10.2	16	12.8	20	Two	
	100	88	5.1	8	12.8	20	38.4	60	≥ 3	
	100	165	10.2	16	28.2	44	61.5	96	Total	
p=0/000	100	112	7.6	12	12.8	20	51.2	80	Has	Aso- Dis
	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	

151

152

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

154 *Aso- Dis= Associated diseases

155

156

157 **Table 3:** Relation between hope in patients levels and disease factors in patients with heart failure referred to
 158 treatment centers affiliated to Ahvaz University of Medical Sciences in 2016
 159

Result	Total		Good		Fairly Good		Bad		Life Exp status	factors
	Per	Num	Per	Num	Per	Num	Pe	Num		
P=0.000	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	
P=0.000	100	32	2.5	4	5.1	8	12.8	20	Low(0-3)	last month
	100	68	2.5	4	7.6	12	33.3	52	Average(4-7)	
	100	56	5.1	8	7.6	12	23.7	36		
	100	156	10.2	16	20.5	32	69.2	108	Total	
P=0.039	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	
P=0.000	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	

160

161 *Number=Num

162 *Percent=Per

163

164 **Discussion**

165 Information, about the life expectancy addition to treatment, support and rehabilitation

166 measures as well as to promote programs Contribute (15, 18). Today, people want to improve

167 the hope in patients, and so, governments around the world pay more attention to the

168 improvement of hope and public life quality in order to reduce the risk of disease and provide

169 health services, physical, mental and social welfare of the members of society (19).

170 The results of present study showed that there is low level of hope in patients amongst these

171 patients while individual and disease factors are also effective. There was not significant

172 relation between two variables of knowledge and hope in patients. It seems that the reason for

173 low hope in patients amongst these patients despite favorable knowledge is that patients'

174 knowledge of symptoms, lack of certain cure and the need to meet diet result in psychological

175 pressure on the patient which could affect a person's hope in patients. So we could say that

176 higher awareness and nurses' attitudes to understanding patients' views and awareness of

177 their living conditions and the fact that nurses could select effective and appropriate

178 treatments to improve patients' hope in patients based on patients' satisfaction bear great

179 importance. Among the factors affecting hope in patients, the nurses could change modifiable

180 factors, review these factors in people and also apply their effective interventions in planning

181 for care services at home and in society and so plan and implement programs to increase hope

182 in patients at family level. Because nurses play critical role in patient care, their attention to

183 hope in patients of these patients is important.

184 The results of several studies, for example, by Snyder (2006), Hamfield (2005) and poster

185 (2001) showed that the power of hope has important role in improving the various diseases

186 and physical, mental aspects and life quality and general health of these patient (20). Snyder

187 and Benson also argued that high levels of hope has direct relation with physical and

188 psychological health, high self-worth, positive thinking and good social relations and low
189 level of hope predicts depressive symptoms and reduces emotions and self-efficacy especially
190 in chronic diseases (17,21). The factors improving hope in patients of patients is another
191 important factor which should be considered. The results of another study which indicated the
192 importance of the hope in patients of patients with congestive heart failure can draw the
193 attention of clinical nurses to the fact that considering the hope in patients of these patients
194 and making effort to improve it could lead to more favorable results in care services.

195 The results of present study showed that there is significant relation between patient's hope in
196 patients and factors such as occupation, education level, home care, eating habit, severity of
197 illness, duration of illness, number of visit and hospitalizations, comorbidities such as
198 duration of hypertension, edema, hyperlipidemia, signs and symptoms of disease, current
199 fatigue and fatigue in the last month, number of drugs and being happy. Rill & Blue indicated
200 that edema caused by heart failure also creates problem and disorder in normal performance
201 of person (22). In this study, 38.1% of people were suffering from edema. Smeltzer & Bare
202 indicated that reduced cardiac output, increased energy for breathing and insomnia caused by
203 respiratory distress create fatigue in patients with heart failure (23). The studies also showed
204 that 46.1% had current average fatigue and 43.5% had average fatigue within the last month.

205 The results of patients' knowledge about their illness showed that 48% of patients had
206 relatively favorable information about their disease. Redfem & Rose wrote that physical
207 activity decreases with age due to changes occurring in various body systems (24). The mean
208 age of the current study population was 59.1% years and 68% of patients were women.

209 Therefore we could say that aforesaid documentations approve the results of present study.

210 Therefore, understanding these factors will help the staffs of health care centers to organize
211 their activities in order to improve the health status and hope in patients of people (25). A
212 study in Italy to evaluate the hopes and its dependent variables studied during and after

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

219

220 **Conclusion**

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

232 **Strengths and weaknesses of the study**

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

236 **References**

2371) Chrysohoou. C., Tsitsinakis, G., Vogiatzis, I., Cherouveim, E., Antoniou, C., Tsiantilas, A.,
 238 Stefandis, C., High intensity interval exercise improves quality of life of patients with chronic
 239 heart failure: A randomized controlled trial. Q J Med 2014; 107:25–32.
 240 doi:10.1093/qjmed/hct194.

2412) Vahedian-azimi, A., Alhani, F., Goharimogaddam, K., Madani, S.J., Naderi, A., Hajiesmaeili,
 242 M., Effect of family - centered empowerment model on the quality of life in patients with
 243 myocardial infarction: A clinical trial study 2015. Journal of nursing education 2015; 4 (11):
 244 3812-2322.

2453) Luongo, d., Kasper, D., Jemson, L., Foosi, A., Hoser, E., Loskalso, J., " Harrison's principles
 246 of internal medical book, 18th; 2012". P: 210.

2474) World Health Organization. Cardiovascular diseases. Available from: <http://www.who.int/>;
 248 2016

2495) Etemadifar, S.A., Bahrami, M., Shahriari, M., Khosravi Farsani A.R., The effectiveness of a
 250 supportive educative group intervention on family caregiver burden of patients with heart
 251 failure. Iran J Nurs Midwifery Res 2014 May-Jun; 19(3): 217–223. PMCID: PMC4061619

2526) SHahriari, M., Ahmadi, M., Babaei, S., Mehrabi, M., Effects of a family support program on
 253 self-care behaviors in patients with congestive heart failure. Iranian Journal of Nursing and
 254 Midwifery Research | March-April 2013; | Vol. 18 | Issue 2.

2557) Dastum, M., Elahi, N., Baraz, S.H., Latifi, S.M., The Effects of Group Education with Teach-
 256 Back Method on Hospital Re-admission rate of Heart Failure Patients, Jundishapure J
 257 Chronic Dis Care. 2016; 5(1):e3077. doi:10.17795/jjcdc-3077

2588) Rogers, C., & Bush, N., Heart Failure: Pathophysiology, Diagnosis, Medical Treatment
 259 Guidelines, and Nursing Management. Nurs Clin North Am. 2015; 50(4), 787-799.
 260 doi:10.1016/j.cnur.2015.07.012.

2619) Feltner, C., Christine, D., Crystal, W., Zheng, Z.J., Carla, A., Emmanuel, J.L., Schwimmer,
262 C., Arvanitis, M., Kathleen, N., Jennifer, C., Middleton and Daniel E., Transitional Care
263 Interventions to Prevent Readmissions for Persons With Heart Failure. Journal of Transitional
264 Care for Persons with Heart Failure. 2014; Volume. 160, Number. 11: 774-784.

26510) Zeighami ,Mohamadi S.H., Sahparian, M., Fahidi, F., Depression in male patient with
266 systolic heart failure and its related factors. Journal North Khorasan University of medical
267 sciences, 2012; 4(2): 209-18.

26811) Binaei, M., Moeini, M., Sadeghi, M., Najafi, M., Mohagheghian, Z., Effects of hope
269 promoting interventions based on religious beliefs on quality of life of patients with
270 congestive heart failure and their families. Jnmr journal. 2016; IP: 2.145.6.91.

27112) Bandura, A., Adams, N.E., Analysis of self-efficacy theory in behavior change. Cognitive
272 theory and therapy research. 2008; 23(1): 287-310.

273 13) Berendes, D., Keefe, F.J., Somers, T.J., Kothadia, S.M., Porter, L.S., Cheavens, J.S.,
274 Hope in the Context of lung cancer: Relationships of hope to symptoms and psychological
275 distress. J Pain Symptom Manage 2010; 40:174-82.

276 14) Baljani, E., Kazemi, M., Amanpour, E., Tizfahm, T. A, Survey on relationship between
277 religion, spiritual wellbeing, hope and Quality of life in patients with cancer. J Mashhad
278 nurs midwifery. 2011; 1(1):567-82

279 15) Sartore Balsanelli AC, Aurora Alves Grossi S, Herth K. Assessment of hope in patients
280 with chronic illness and their family or caregivers, 2011; 24(3): 1237-45. ISSN 0103-2100

281 16) Snyder,C.R.,Harries,C.,Anderson,J.R.,Hollerans,S.A.,Irving,L.M.,Sigmon,S.T.,etal.The
282 will and the ways: Development and validation of an individual- differences measure of
283 hope. Journal of Personality and Social Psychology.1999; 60,570-585.

284 17) Snider M. The discursive proportion of hope: a qualitative analysis of cancer patients speech, qualitative health research 2006; 12(2).

285 18) Trica A, Miller M, Dimatteo R. Importance of family/social support and impact on adherence to diabetic therapy. Diabets, metabolic syn

- 286 19) Nowotny ML. Assessment of hope in patients with cancer: development of an instrument. *Oncol Nurs Forum*. 1989; 16(1): 57-61.
- 287 20) Hosseinian E, Soodani M, Mehrabi Honarmand M. Efficacy of group logotherapy on cancer patients' life expectation. *Journal of Behavior*
- 288 21) Banson W. The role of hope and study skills in predicting test anxiety level of university
- 289 students highschool and psychological health, self-esteem, positive thinking and social
- 290 communication. These is for degree of master of science in the department of educational
- 291 sciences middle east technical university 2006.
- 292 22) Rilli J, Blue L. Assessing and managing chronic heart failure. *Professional Nurse*. 2001; 16(5): 1112-1115.
- 293 23) Smeltzer SC, Bare BG. Textbook of medical surgical nursing. Philadelphia: Lippincott Williams & Wilkins; 2004. P. 664.
- 294 24) Redferns J, Ross FM. Nursing older people. Edinburogh: Churchill Livingstone; 1999. P. 59.
- 295 25) Omrani S, Mirzaeian B, Aghabagheri H, Hassanzadeh R, Abedini M. Effectuality of Cognitive-Behavioral Therapy on the Life Expectation
- 296 26) Vellone E, Rega ML, Galletti C, Cohen MZ. Hope and related variables in Italian cancer
- 297 patients. *Cancer Nurs*. 2006;29(5):356-66.
- 298 27) Breitbart W, Rosenfeld B, Pessin H, Kaim M, Funesti-Esch J, Galietta M, et al.
- 299 Depression, hopelessness and desire for hastened death in terminally ill patients with cancer.
- 300 *JAMA*. 2000;284(22):2907-11
- 301