J Cardiovasc Disease Res., 2019; 10(1):16-19
A Multifaceted Peer Reviewed Journal in the field of Cardiology
www.jcdronline.org | www.journalonweb.com/jcdr

Original Article

Quality of Life and its Predictors in Hospitalized Patients with Heart Failure at Hospitals Affiliated to Kermanshah-Iran University of Medical Sciences

Sara Poorshadan[1], Masoud Fallahi[2,*], Alireza Abdi[3], Somayeh Mahdavikian[4], Javad Miri[5], Hiva Azami[6]

[1]M.sc in critical care Nursing, Imam Reza hospital, Kermanshah University of Medical Sciences, Kermanshah, IRAN.
[2]M.sc in Medical Surgical nursing, Imam Reza hospital, Kermanshah University of Medical Sciences, Kermanshah, IRAN.
[3]Assistance Professor, Nursing Department, Nursing and Midwifery School, Kermanshah University of Medical Sciences, Kermanshah, IRAN.
[4]M.sc in Medical Surgical nursing, Nursing Department, Nursing and Midwifery School, Kermanshah University of Medical Sciences, Kermanshah, IRAN.
[5]M.sc in critical care Nursing, Ghasre-shirin Hospital, Kermanshah University of Medical Sciences, Kermanshah, IRAN.
[6]M.sc in critical care Nursing, Imam Reza hospital, Kermanshah University of Medical Sciences, Kermanshah, IRAN.

Correspondence
Masood Fallahi
Department of Nursing, Imam Reza Hospital, Kermanshah University of Medical Sciences, Kermanshah, IRAN.
Ph.no: +98 9214831828
E-mail address: Masoodf_63@yahoo.co.uk

Submission Date: 20-03-2017;
Revision Date: 07-09-2017;
Accepted Date: 22-11-2017.
DOI : 10.5530/jcdr.2019.1.3

ABSTRACT

Background: Protecting the quality of life is an important factor in patients with chronic disease because of increasing their survival rate. This study aims to investigate the quality of life (QOL) of Heart Failure patients and specify the most important related factors to it. **Materials and Methods**: In a cross-sectional study a sample of 80 patients in Kermanshah's hospitals was selected non-randomly. The QOL was measured by WHOQOL-BREF- WHO questionnaire- and the data were finally analyzed in the light of study objectives with SPSS -16. **Results:** The average age of the patients was 65.5±14.3 years. Female and male constituted 48.8 (39 patients) and 51.2 (41 patients) percent, respectively. The patients obtained average high score in social relationship domain and low score in physical health domain. There is a significant relationship between habitat place (P=0.05), number of hospitalization) P=0.001) and disease stage (p<0.001) with their quality of life. **Conclusion:** The Heart Failure patients have an undesirable conditions in domain of physical health. Patients in advanced stage of disease have a lowest level of quality of life and need more cares.
Key words: Quality of life, Heart Failure, Patients, Hospitals.

INTRODUCTION

According to the World Health Organization, quality of life refers to a set of physical, mental and social welfares that are perceived by an individual or a group of individuals and it can be evaluated by measuring one's mental feeling of satisfaction or dissatisfaction about different aspects of life.[1] General welfare, with respect to one's quality of life includes functional capacity, psychological mood, social functions and perceptions of health.[2] Results of clinical trials showed that quality of life can be taken as a measure of quality of health services and part of treatment program so that a clearer picture of health condition of chronic disease patients can be achieved by examining their quality of life. In addition, the patient's quality of life can be considered as a reliable approach to improvement of quality of health services.[3] Quality of life is a mental matter and not merely a function of physiological factors. It is of great importance so that it can improve survival rate of many chronic and progressive diseases patients.[4] The way the nurse provides health services is effective in quality of life of the patient. Having an accurate measure of quality of life of patients enables us to develop better health programs and improve quality of life the patients consequently.

Quality of life of chronic patients undergoes undesirable changes; so that most of these patients experience problems with some aspects of quality of life due to special condition of their disease. One reason for increase of interest in measuring quality of life of chronic disease patients is increase in prevalence of these diseases.[5] One of the most prevalent of these diseases is heart disease, which is a main cause of mortality rate among the adults. Aging population and new medical treatments/surgery have increased life expectancy of cardiovascular disease and number of congestive heart failure disorders.[6] Heart failure is one of the main health problems with high prevalence in the world. Five million health failure patients live in the USA and 550000 new patients are added to this group every year. In addition, US$33.2 billion is spent on providing health care services to these patients.[7]

Quality of life among heart failure patients undergoes many ups and downs comparing with that of healthy adults and other chronic disease patients (e.g. obstructive pulmonary disease, arthritis, unstable angina and stroke). This is due to serious disabling side-effects of the disease which impose serious negative effects on quality of life.[8-12] Heart failure to pump blood is featured with many symptoms such as dyspnea, dizziness, fatigue, chest pain, edema and ascites. These symptoms highly restrict one's ability to carry out daily activities and cause serious changes in one's life style, which influence one's satisfaction with life and quality of life. The imposed limitations also influence one's professional, family and social lives and cause social seclusion and depression.[13]

There is not study no quality of life of the heart congestive failure patients in Kermanshah, a fact that convinced the author to carry out a study on quality of life and the effective factor in the patients in hospitals affiliated with Kermanshah University of Medical Science. The results can be used in the programs for improving quality of life of the patients and adopting better approaches.

MATERIALS AND METHODS

The study was carried out as a descriptive, analytical and cross-sectional study. Quality of life of heart failure patients hospitalized in the hospitals affiliated with Kermanshah University of Medical Science in 2014 was measured. It is notable that the heart failure patients were admitted in internal and special wards of three hospitals including Imam Ali, Imam Reza and Imam Khomeini; thus, study population included all the heart failure patients referred to the three mentioned hospitals in 2014. The participants (n=80) were selected through convenient sampling so that 40 patients from Imam Ali and 20 patients from Imam Reza and Imam Khomeini each were selected by the authors during their visit to the

hospitals. The patients who met the inclusion criteria and expressed their desire to participate in the study were selected. Inclusion criteria were being diagnosed with heart failure for six months at least, being under standard medications, no background diseases (e.g. cancer, MS, epilepsy and stroke) and being 18 years old at least.[2] and the incomplete questionnaires were excluded from the study. Standard quality of life questionnaire (WHOQOL-BREF) was used for data gathering. The questionnaire, with 26 questions, measures the patient's condition over the last two weeks based on four aspects of physical health, psychological health, social relationship and environmental health. According to WHO, final score of the questionnaire was obtained by calculating mean score in each aspect and multiplying the result by four. It is notable that reliability and validity of the Farsi version of the questionnaire have been supported by previous studies.[14] The questionnaires were filled out by the authors, given that most the participants were not able to fill out the questionnaire. In addition, the patients were ensured that they can leave the study at whatever stage they would like and that their data will be used anonymously. The data was analyzed in SPSS16 using independent *t*-test (to compare quantitative variables in two groups) and variance analyses (to compare the quantitative variables in three/more groups).

Findings

The demographics showed that average and standard deviation (SD) of age of the participants was 65.5±14.3; 51.2% were men, 71.3% were married; 68.8% lived in city and 77.5% were illiterate. In addition, the data showed that the participants had been diagnosed with the disease for 24.29 months on average and they had been hospitalized 3.4 times on average. Moreover, 75.5% were at 5th level of severity of the disease (the most advanced level) (Table 1).

In general, minimum and maximum levels of quality of life were observed in physical health (10.5) and social health (13.64) respectively and no significant difference was observed in the four aspects of quality of life. (Table 2).

Comparison between the residents of rural and urban areas indicated that the former had lower physical health, while they had significantly higher scores in the three aspects of psychological health, social relationships and environmental healthy comparing with the residents of urban areas (P = 0.05). With regard to number of hospitalization, the participant in their early turns of hospitalization and more than seven times of hospitalization had lower scores of quality of life comparing with the patients who were between the two extremes. For instance, patients with mean number of hospitalization, obtained 13.9 points in social health aspect, while the patients with more than seven times of hospitalization obtained 12.5 points. Regarding, severity of the disease, quality of the life in all the four aspects followed descending trend with increase on severity of disease. In general, there was a significant relationship between quality of life in different aspects and number of hospitalizations (P= 0.001) or severity of disease (p<0.001). (Table 3).

Table 1: Frequency distribution of the background variables of the participants.

Variables		N	frequency
Gender	**Female**	**39**	**48.8**
	Male	**41**	**51.2**
Marital status	Unmarried	1	**1.3**
	Married	57	**71.3**
	Divorced	1	**1.3**
	Widow	21	**26.3**
Education	Illiterate	62	**77.5**
	Junior High School	12	**15.0**
	Diploma	3	**3.8**
	High school	3	**3.8**
Domicile	City	55	**68.8**
	Village	25	**31.3**
Severity of disease	2	7	**8.8**
	3	13	**1.3**
	4	14	**17.5**
	5	46	**57.5**

Table 2: Mean and SD of the obtained scores in different aspects of quality of life.

Aspects	Environmental health	Social health	Psychological health	Physical health
General	12.63 (1.8)	13.64 (3.0)	11.78 (2.1)	10.5 (1.6)
Women	12.79 (1.9)	13.67 (3.1)	11.79 (2.0)	10.43 (2.7)
Men	12.48 (1.8)	13.60 (2.9)	11.77 (2.3)	10.56 (2.6)
P_{value}	0.46	0.92	0.96	0.82

DISCUSSION

The results showed that the heart failure patients had the lowest quality of life in physical health aspect and highest quality of life in social health aspect.

Molly *et al.* argued that quality of life of heart failure patients is not desirable and these patients suffer the lowest quality of life in physical health

Table 3: Mean and SD of the obtained scores in different aspects of quality of life.

		Environmental health	social health	Psychological health	Physical health		
Address	city	12.5(1.8)	13.5(3.3)	11/7(2/3)	10/8(2/6)		P=0.05
	village	(12/8(1/9)	13/7(2/3)	11/9(1/8)	9/6(2/5)		
Number of hospitalization		12/6(1/8)	13/7(3/0)	12/0(2/0)	10/8(2/6)	1-3	P<0.001
		12/9(1/6)	13/9(2/5)	12/1(1/7)	7/9(2/5)	4-6	
		12/0(2/2)	12/5(3/7)	9/5(2/1)	9/4(2/6)	≤ 7	
Illness severity		12/3(9/1)	11/8(2/7)	12/3(2/6)	13/0(2/7)	2	P<0.001
		13/0(1/9)	14/2(3/0)	12/1(2/9)	12/5(1/7)	3	
		13/1(1/7)	14/0(3/1)	12/2(1/8)	10/4(2/1)	4	
		12/4(1/8)	13/6(3/0)	11/4(1/9)	9/5(2/4)	5	

aspect.[15] Moreover, Hobbs *et al*. mentioned that the heart failure patients suffer more problems in every aspects of their lives comparing with other chronic disease patients.[16] A study by Rahnavard *et al*. on quality of life of heart failure patients showed that the patients suffered highest disorders in physical, psychological, economic and social fields.[17] In addition, the findings by Shojaie showed that the main areas of disorder were in health, function, social and economic areas.[18] Our results showed that the participants had better condition in the field of social health, which might be due to their cultural and living conditions so that sympathy and social relationships that people experience vary depending on the city they live.

According to our findings, there was no significant relationship between quality of life of the participants and the variables age, gender, marital status, education level and term of the disease. Inconsistently, Rahnavard argued that quality of life was significantly related to education level and term of the disease. One explanation of this inconsistency might be the average age of the participant in this study (65.5), which is higher than that of Rahnavard's study. In addition, must of our participants were illiterate, thus, education was no effective on their quality of life.

Our surveys showed that factors such as domicile, number of hospitalizations and severity of disease were effective on quality of life of the patient. With regard to the significant relationship between place of living and quality of life of the participant, it is notable that city dwellers had better access to health services comparing with villagers. In addition, the results showed that number of hospitalization was effective on psychological aspect of quality of life of the patients. Shojaie argued that increase of hospitalization turns had negative effect on quality of life of the patients.[18] In addition, Rahnavard *et al.* found a significant relationship between the two variables.[17] Johansson *et al*. maintained that patients with lower quality of life had more chance of frequent hospitalization, as their symptoms would grow stronger and the patients would refer to hospitals more often.[19]

The results found in this study showed a significant relationship between level of severity of disease and physical health aspect of quality of life of the participants. Juenger *et al*. found a significant relationship between severity of disease and quality of life.[20] Stewart and Blue argued that increase in severity of disease decreased quality of life of the patients.[21] Apparently, learning about one's disease causes more functional disorders and loss of quality of life followed by more referral to physicians.[17] Quality of life could be an indicator of quality of health services and a basis for monitoring improvement in the patients' condition. The indicator can be used to codify better programs to improve quality of health services. Having information about quality of life of the patient would be effective on improving support programs and rehabilitation measures along with improvement of quality of treatments.

Given the obtained results regarding quality of life of heart failure patients and its relationship with number of hospitalization and severity of the disease, the authorities can take more effective measures toward improvement of quality of life of the patients by screening high risk patients (with low quality of life) and introducing them to family consultant and education centers. In addition, by paying more attention to quality of life and the factors effective on it, the nurses can provide better health services and play more effective role in improving quality of life of the patients.

Limitations

The study was carried out as a cross-sectional work with limited number of participants. Therefore, generalization of the results to all cardiac disease patients does not seem reasonable. On the other hand, scientists have questioned quantitative approaches to quality of life measurement and recommended combining such results with the results of qualitative studies on the same study population.

Therefore, the present study can be considered as an early study to have better understanding of quality of life of cardiac diseases patients. Future studies can use qualitative methods and larger sample groups to obtain more reliable results.

CONCLUSION

The Heart Failure patients have the lowest quality of life and an undesirable conditions in domain of physical health. Patients in advanced stage of disease have a lowest level of quality of life and need more cares.

ACKNOWLEDGEMENT

The authors appreciate all the respected officials of Kermanshah University of Medical Sciences, the Clinical Research Development Center of Imam Reza Hospital, all the colleagues and the participants for their kind cooperation.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

ABBREVIATIONS

QOL: Quality Of Life; **USA:** United States of America; **WHO:** World Health Organization; **MS:** Multiple Sclerosis; **SD:** Standard Deviation.

SUMMARY

We investigated the Quality of Life and the Factors Effective on Heart Failure Patients Hospitalized in Kermanshah. We observed high score in social relationship domain and low score in physical health domain. There was a significant relationship between habitat place, number of hospitalization and disease stage with their quality of life. The Heart Failure patients have an undesirable conditions in domain of physical health. Patients in advanced stage of disease have a lowest level of quality of life and need more cares.

REFERENCES

1. WHOQOL Group. The World Health Organization quality of life assessment (WHOQOL). 1995. Soc Sci Med.
2. Debra KM, Laura Y, Jie LS, Ginger AC, Karen AH, Judith AG, et al. Improvement in Health-Related Quality of Life after Hospitalization Predicts Event-free Survival in Patients with Advanced Heart Failure. J Card Fail. 2009;15(9):763-9.
3. Daugherty CM, Dewhurst WP, Spertus JA. Health related quality of life outcomes in clinical research. American Journal of Emidemiology. 1998;51(7):569-75.
4. Seongkum H, Terry AL, Chizimuzo O, Debra KM. Quality of Life in Patients With Heart Failure: Ask the Patients. Heart Lung. 2009;38(2):100-8.
5. James SR, Ashwill J, Droske SC. Nursing care of children principle and practice. Philadelphia: W.B. Suanders Co. 2002:73.
6. Taylor PRE, Molassiotis A. An exploration of the relationship between uncertainly psychological distress and type of coping standing among Chinese men after cardiac catheterization. Journal of Advanced Nursing. 2001;33(1):77-88.
7. Rosamond W, Flegal K, Furie K, Go A, Greenlund K, Haase N, *et al.* American Heart Association heart disease and stroke statistics-2007 update. Circulation. 2008;115:69-171.
8. Johansson P, Dahlström U, Broström A. Factors and interventions influencing health-related quality of life in patients with heart failure: a review of the literature. Eur J Cardiovasc Nurs. 2006;5:5-15.
9. Calvert MJ, Freemantle N, Cleland JG. The impact of chronic heart failure on health- related quality of life data acquired in the baseline phase of the CARE-HF study. Eur J Heart Fail. 2005;7:243-51.
10. Juenger J, Schellberg D, Kraemer S, *et al.* Health related quality of life in patients with congestive heart failure: comparison with other chronic diseases and relation to functional variables. Heart. 2002;87:235-41.
11. American College of Cardiology; American Heart Association. Committee on the Evaluation and Management of Heart Failure. ACC/AHA Guidelines of the

Evaluation and management of chronic Heart Failure in the Adult. J Am Coll Cardiol. 2001;38:2101-13.

12. Calvert MJ, Freemantle N, Cleland JG. The impact of chronic heart failure on healthrelated quality of life data acquired in the baseline phase of the CARE-HF study. Eur J Heart Fail. 2005;7:243-51.
13. Dunderdale K, Thompson DR, Miles JN, Beer SF, Furze G. Quality-of-life measurement in chronic heart failure: do we take account of the patient perspective?. Eur J Heart Fail. 2005;7(4):572-82.
14. Nejat S, Montazeri A, Holakouei K, Mohammad K, Majdzadeh, R. Psychometric properties of the Iranian interview-administered version of the World Health Organization's Quality of Life Questionnaire (WHOQOL-BREEF) : a population-based study. BMC Health Serv Res. 2008;61;8.
15. Molly GY, Jhonston DW, Witham MD. Familly care giving and CHF. Eur J HF. 2005;7:592-603.
16. Hobbs FD, Kenkre JE, Roalfe AK, Davis RC, Hare R, Davies MK. Impact of heart failure and leftventricular systolic dysfunction on quality of life: a cross-sectional study comparing common chroniccardiac and medical disorders and a representative adult population. Eur Heart J. 2002;23(23):1867-76.
17. Rahnavard z, Zolfaghari m, Kazemnejad A, Hatamipour KH. Animvestigation of quality of life and factors affecting in the patients with congestive heart failure. Hayat Jurnal of Faculty of Nursing and Midwifery, Tehran University of Medical Sciences. 2006;1(12):77-86.
18. Shojaei F. Quality of Life in Patients with Heart Failure. Hayat. 2008;14(2):5-13.
19. Johansson P, Dahlström U, Broström A. Factors and interventions influencing health-related quality of life in patients with heart failure: a review of the literature. Eur J Cardiovasc Nurs. 2006;5(1):5-15.
20. Juenger J, Schellberg D, Kraemer S, Haunstetter A. Health related quality of life in patients with congestive heart failure: comparison with other chronic diseases and relation to functional variables. Heart. 2002;87(3):235-41.
21. Stewart S, Blue L. Improving outcomes in chronic heart failure. A practical guide to specialist nurse intervention. London: BMJ. 2001;11.

Cite this article : Poorshadan S, Fallahi M, Abdi A, Mahdavikian S, Miri J, Azami H. Quality of Life and its predictors in Hospitalized Patients with heart failure at hospitals affiliated to Kermanshah-Iran University of Medical Sciences. J Cardiovasc Disease Res. 2019;10(1):16-9.