

Research Article

Analysis of Life Quality in Patients with Heart Disorders

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ABSTRACT

Purpose: Heart failure is one of the most prevalent cardiovascular diseases, which is the ultimate stage of most heart disorders. This disease is a chronic and debilitates disorder. The aim of this study is evaluating the life quality of patients who have hospitalized for this heart disorder and evaluating the relation of life quality with the mentioned variables in Imam Reza and Imam Ali hospital of Kermanshah medical science in 2016.

Method: These is a cross-sectional study and have conducted with the aim of evaluating 250 patients life quality who have heart disorder and hospitalized in Imam Reza and Imam Ali hospitals in Kermanshah 2016. The data collections have done by using two questionnaires for evaluating demographic data and evaluating life quality with SF-36. For analyzing, the data the descriptive statistic have used and the assumption test have done by Man Vitny, Kroskal-Valis and Spearman correlational coefficient test. The data have analyzed by SPSS ver.16 software.

Results: The results have showed that there was a significant relation between total life quality and patient's gender, marital status, living condition, sport history and smoking history.

Conclusion: There was a significant relation between total life quality and gender, marital status, income, smoking, educational level, job, the number of hospitalization and other chronic disease variables. By considering these parameters, the patients with heart disorders life quality could have promote.

Key Word: Life Quality, Patients, Heart Disorders, Kermanshah

INTRODUCTION

Nowadays in most of the world the cardiovascular disease have consider as the most extensive chronic disease. It have predicted that if till 2020 some preventive action have not taken, the cardiovascular disease will have 25 million victims and have considered as the number one cause of mortality and disability (1). The heart failure is one of the prevalent cardiovascular disorder, which is the last stage of most cardiovascular disorders and have considered as a chronic, progressive and debilitate disorder. The

prevalence of cardiovascular disease have increased. The cause of this increase include the increase of the population age in industrial and developing societies, increased of obesity, diabetes and hypertension in most of the countries, the increase of the survivals after the heart attacks and successes in preventing sudden death (2-5). Based on the statistics of the Disease Control Management in Iran 2002, the number of heart failure sufferer in 18 countries' province have reported 3337 person in 100000 population.

During conducting this study in September of 1999, 55% of the hospitalized patients who were in heart ward have suffered from heart failure (6). It have estimated that in America 5.8 million person have suffered from cardiovascular diseases, which annually almost 550000 new cases have diagnosed. It have predicted that annually 1.5 million new cases have added to the disease cases until 2040 year. This disease have 15 million visit and 6.5 million hospitalized days annually. In recent decades, more than half of the patients who discharge by the diagnosis of heart failure disease have return to the hospital in the first six month because of the acute symptoms (7). Today, evaluation of patients mental condition from his/her health, means life quality of this patient in addition to preventing the development of disease was the important aim of disease treatment. Life quality is the index, which have used increasingly as the ultimate point of cardiovascular disease treatment. This index have indicate the health services quality and have used as a part of disease management plan. Cardiovascular disorder is one of the disease, which could have evaluate the patient's life quality properly, because many of the interventions, which have used for this disease, could improve the patient's life quality in comparison with survival increases. In chronic situations, the clinical consequences such as mortality and acute clinical syndrome, often needs long term patients following without significant results of health services quality (8). Therefore, the life quality is a predictable factor of heart disorders consequences. The studies have showed that life quality of heart failure patients is lower than public population (9-13). Due to the negative effect of this disease on performing usual activity of life, the patients have low life quality (14). Heart failure, by creating various stressful physical and mental factors such as pain, lack of health, job loosing, sensory deprivation, sense of death and different degree of psychological reactions such as hopeless, fatigue and horror cause the feeling o invaluable and decrease of self-confidence in the patients (15). This disease

caused the intolerance of activity and as the results; these patients lose their independency for doing the usual activity and depends on others for self-caring. The consequences of this disease is failure in performing abilities and creating limitation in job, family and social duties and ultimately caused the life quality reduction, social isolation and depression (16).Gott et al. study which have done on 542 British patients of higher than 60 years old with heart disorder have showed that the woman gender, depression, higher degree of the disease, having more than two disease in addition to heart disorder and low social and economic condition have related to low life quality. In addition, the body mass index and reduction of systolic blood pressure have effect the life quality (17). Other conducted studies have shown that factors such as ejection fraction of left ventricle, smoking, social support, self-care manner, anemia, sleep disorder have related with life quality (18-22). Identification of adjustable factors for promotion of patients with heart disorders life quality has a valuable role in development of patient's life quality. By evaluating the life quality, the people's requirements could have determined and by evaluating it some attention have paid to the patients in order to increase the life quality after the disease period. (9). In addition to. These researches have not conducted in Kermanshah yet. Therefore, the aim of this study is evaluating the hospitalized patients with heart disorders life quality and evaluating the relation of life quality with the mentioned variables in Imam Reza and Imam Ali hospital of Kermanshah medical science university in 2016.

MATERIALS AND METHODS

This is a cross-sectional study that have conducted with the aim of evaluating the heart disorder patients life quality which have hospitalized in CCU and heart wards of Imam Ali and Imam Reza hospital of Kermanshah in 2015. In this study, 250 hospitalized patients have studied. The data collections have done by using two questionnaires of demographic information

evaluation and life quality evaluation SF-36 (short form health surveying 36 items). The demographic data questionnaire include age, gender, marital status, educational level, living place and condition, economic condition, job, the smoking history, sport history, duration of disease, the number of hospitalization and other chronic disease. The SF-36 include public health field, physical performance, limitation of physical and emotional disability, social performance, physical pain, exhilaration, mental health and health condition of last year. Each of the mentioned questionnaires conception are adjusted with the questions and evaluated various choices which based on that questions requirements two choices of yes or no and 6 choices of all the time, most of the time, often, some time, rare time and never have used. The questions have filled out by patients or her/his family interview (if the patient cannot talk). For assurance of final recognition about heart disorder and knowing the duration of the disease, the number of hospitalization and other chronic disease referring to the patient's medical file is necessary. The validity and reliability of the original version and Persian version of the questionnaires have confirmed. In this study the Persian version tool have used this tool have designed and standardized for Iranian population by Dr. Montazeri et al. (22). If the score average have closed to zero it have showed the lower life quality and if the score average have closed to 100 it have present the higher life quality.

First the descriptive statistic, central index, dispersion for describing the data have used. For evaluating the relation between life quality and monthly income, the disease duration and the number of hospitalization the chi-square test and Pearson correlational test have used. For determining its relation with gender, marital status, educational level, sport history, smoking, living place and condition, job condition and other disease, data analysis and assumption test have done with Man Vitny test and KroskalValis and Spearman correlational coefficient. The

significant level in this study was 0.05. The data have analyzed by SPSS software ver.16.

The entrance condition of the test for patient are: recognition of heart disorder and recording it in medical file and documents, elapsing at least six month of the disease, the age of more than 18 and the samples have selected randomly.

RESULTS

This study has done on 50 person of heart disorder patients who have hospitalized in CCU and heart ward of Imam Ali and Imam Reza hospital of Kermanshah city. 10 persons (48%) were women and 130 person (52%) were men. The age average of the studied samples was 60.77 year with the standard deviation of 13.64 year. In this sample, the most and the least age was 90 and 25 respectively. In the studied samples 152 person (61%) were illiterate and 58 person (23%) have the educational level of lower than diploma. In addition, two person (1%) have associate degree, 10 person (4%) bachelor, three (1%) master and Ph.D. and higher degrees. In

This study, 25 person (10%) were unemployed, 110 person (44%) were housewives, 33 person (13%) retired, 70 person (28%) were self-employed, 7 person (3%) employee and five person (2%) were worker. In this research, 217 (87%) were married and 5 person (2%) were single, 28 person (11%) were widows. In this study, 220 person (88%) were live in town and 30 person (12%) live in village. In addition this study presented that 183 person (73%) have presented that they have own their house and 67 person (27%) were tenant. This study showed that 57 person (23%) announced that they have smoked and 193 person (77%) have not smoked.

In addition this study have presented that 65 person (26%) have declared that they have exercised before and 185 person (74%) have announced that they never have done any exercise. The study have showed that 18 person (7%) have chronic lung obstructive disease, 100 person (40%) have uncontrolled blood pressure, 57 person (23%) have uncontrolled diabetes, 15 person (6%) have neurology disease and 18

person (7%) have orthopedic disease and Skimiderdisease have not diagnosed in the patients. The average of the income variables in the studied samples was 8867000 Rial with the standard deviation of 5381338 Rial. In these samples, the highest income was 28 million Rial and the least income was million Rial. The systolic blood pressure average of studied samples was 125 with the standard deviation of 16.770. The highest systolic blood pressure was 190 and the least of it was 90. The diastolic blood pressure average was 75.9 with the standard deviation of

emotional problems, energy, feeling good, social performance, pain and public health.

For the assumption test of the study, according to the fact that the related data of the subcategory have not obeyed the normal distribution, the non-parametric test have used.

The results of the Spearman correlational coefficient test have showed that there was not a significant relation between age and life quality subcategory (table1).

Table1. The Spearman correlational coefficient test results.

		age	Physical activity	The role limitation of physical health	The role limitation of emotional problems	Energy/fatigue	Feeling good	Social performance	pain	Public health	Total life quality
age	The spearman coefficient P-value	1.00									
Physical activity	The spearman coefficient P-value	0.162 0.108	1.00								
The role limitation of physical health	The spearman coefficient P-value	0.145 0.149	0.456 0.001*	1.00							
The role limitation of emotional problems	The spearman coefficient P-value	0.158 0.117	0.452 0.001*	0.799 0.001*	1.00						
Energy/fatigue	The spearman coefficient P-value	0.177 0.079	0.074 0.464	0.101 0.317	0.218 0.029*	1.00					
Feeling good	The spearman coefficient P-value	-0.035 0.726	0.154 0.125	0.110 0.274	0.165 0.101	0.556 0.001*	1.00				
Social performance	The spearman coefficient P-value	-0.002 0.982	-0.162 0.108	0.291 0.003*	0.240 0.016*	-0.172 0.087	-0.150 0.138	1.00			
pain	The spearman coefficient P-value	-0.113 0.262	-0.528 0.001*	-0.526 0.001*	-0.392 0.001*	-0.121 0.232	-0.110 0.274	0.259 0.001*	1.00		
Public health	The spearman coefficient P-value	0.074 0.467	0.429 0.001*	0.374 0.001*	0.343 0.001*	0.346 0.001*	0.338 0.001*	-0.151 0.133	-0.500 0.001*	1.00	
Total life quality	The spearman coefficient P-value	0.159 0.115	0.874 0.0001*	0.694 0.023*	0.671 0.001*	0.285 0.001*	0.369 0.001*	-0.225 0.001*	-0.561 0.161	0.621 0.001*	1.00

12.32. The highest diastolic blood pressure was 90 and the least of it was 100. The average of the disease duration in the studied samples was 64.42 with the standard deviation of 79.34. The least time was 6 and the most time was 42. The depended study's variables was life quality which include: the subcategory of physical activity, role limitation of physical health, role limitation of

The results of the Man Vitny test have showed that there was a significant relation between total lie quality and patient's gender and all the sub-scales of the life quality except energy/fatigue, feeling good and social performance. The pain average in the woman was lower than this amount in man, but for other cases, the average in woman was higher than this amount in man (table2).

According to the P value of Kroskal-Valis results, it could have inferred that there was a significant relation between the averages of physical activity, pain and total life quality in various condition of married persons.in addition, in other cases there was no significant difference. The average of physical activity in single persons was lower than married one and widows. The average of pain in widows was lower and in total, the life quality in widows was the highest (table2). According to the P value of Kroskal-Valis test, it could have inferred that there was no significant relation between life quality and its subcategory with the patients living place (table2). Based on the Kroskal-valis test there was a significant relation between living condition and total life quality. The average of the total life quality among the tenant

patients was higher than the patients who own their house and there was no significant relation in other cases. The living condition only have a significant relation with physical activity subcategory and in other cases, there was no significant relation (table2). The Kroskal-valis showed a significant relation between sport histories and total life quality. In addition, there was a significant relation between all the subcategories of life quality except social performance and role limitation of physical health and emotional problems with sport history (table2). Roskal-valis test showed a significant relation between physical activity, public health and total life quality of patients in terms of smoking and there was no significant relation for other cases (table2).

Table2. Kroskal-valis test results

Life quality subcategory		Physical activity	The role limitation of physical health	The role limitation of emotional problems	Energy /fatigue	Feeling good	Social performance	pain	Public health	Total life quality
Sport history	Yes	298.08	253.58	200	209.23	255.38	112.5	127.12	280.77	1736.92
	no	469.59	300	232.43	232.43	291.35	112.16	93.92	342.65	2074.54
Statistic test P-value		5.96	2.331	1.46	6.514	5.493	0.004	15.380	9.948	6.624
		0.015*	0.127	0.227	0.011*	0.019*	0.949	0.00*	0.002*	0.010*
Living condition	Own	498.04	287.67	228.77	226.03	258.48	113.7	103.77	331.59	2066.04
	tenant	251.85	288.89	211.11	227.41	272.59	108.33	99.26	312.96	1772.41
Statistic test P-value		9.93	0.168	0.092	0.158	0.357	1.582	0.248	0.997	0.627
		0.002*	0.682	0.762	0.692	0.550	0.208	0.618	0.318	0.012*
smoking	Yes	267.39	234.78	195.65	231.30	273.91	113.04	114.13	291.30	1721.52
	No	472.08	303.90	232.47	224.94	284.42	112.01	99.09	337.09	2065.98
Statistic test P-value		6.97	2.744	1.05	1.111	0.593	0.003	3.446	4.737	5.878
		0.008*	0.098	0.305	0.292	0.441	0.957	0.063	0.030*	0.015*
gender	Men	339.42	255.77	194.23	255.38	277.69	109.13	116.15	304.23	1822.12
	women	517.71	322.92	256.25	227.50	286.67	115.63	87.81	350.65	2165.13
Statistic test P-value		-2.69	-1.979	-2.104	-0.213	-0.770	-1.520	-3.251	-2.589	-2.649
		0.007*	0.048*	0.035	0.831	0.441	0.128	0.001*	0.010*	0.007*
Living place	City	411.93	163.11	121.51	255.91	280.68	113.92	105.40	322.80	1954.96
	village	348.67	77.85	45.23	230	291.67	100	81.67	354.17	2220
Statistic test P-value		1.49	3.4	1.59	0.185	0.135	2.757	2.071	1.746	2.097
		0.222	0.065	0.208	0.667	0.713	0.097	0.150	0.186	0.148

Kruskal-valis test have showed that there was a significant difference between the average of physical activity, role limitation of physical health, role limitation of emotional problems and public health in various educational situation and there was no any significant difference in other cases (table3). The Kruskal-valis test have showed that there was a significant difference between the average of physical activity, pain, public health and total life quality in various job situation and there was no significant difference in other cases (table3).

Table3. Kruskal-valis test results

	Life quality subcategory	Physical activity	The role limitation of physical health	The role limitation of emotional problems	Energy/fatigue	Feeling good	Social performance	pain	Public health	Total life quality
Different job situation	Statistic test	17.07	9.14	7.78	5.13	2.52	6.30	17.68	11.23	14.77
	P-value	0.004*	0.104	0.168	0.400	0.774	0.278	*0.003	*0.039	*0.011
Educational level	Statistic test	12.05	21.08	18.29	3.44	2.193	2.693	2.693	12.322	6.905
	P-value	*0.034	*0.001	*0.003	0.633	0.822	0.822	0.747	*0.031	0.228

According to the P value of Kruskal-valis test it could have inferred that there was a significant relation between the income and role limitation of physical health and there was no significant relation in other cases. There was a significant relation between systolic blood pressure and public health. In addition, there was a significant relation between the disease and the number of hospitalization with all the subcategories of life quality except energy/fatigue, feeling good and social performance (table4).

Table4. Spearman correlational coefficient test results.

		Physical activity	The role limitation of physical health	The role limitation of emotional problems	Energy/fatigue	Feeling good	Social performance	pain	Public health	Total life quality
Income	Spearman coefficient	-0.087	-0.279	-0.181	-0.148	0.224	0.201	0.273	0.122	-0.145
	P-value	0.392	*0.005	0.071	0.142	0.025*	*0.045	*0.006	0.225	0.150
Systolic blood pressure	Spearman coefficient	0.113	0.027	0.078	0.029	0.067	0.036	-0.164	-0.204	0.106
	P-value	0.263	0.791	0.440	0.778	0.509	0.721	0.103	*0.042	0.292
Disease sufferer	Spearman coefficient	0.290	0.266	0.330	0.062	0.101	0.141	-0.361	0.299	0.399
	P-value	*0.003	*0.007	*0.001	0.540	0.316	0.160	*0.001	*0.003	*0.001
The number of hospitalization	Spearman coefficient	0.230	0.352	.0038	0.042	0.124	-0.099	-0.218	0.219	0.316
	P-value	*0.021	*0.001	*0.001	0.679	0.218	0.328	*0.030	*0.028	*0.001

DISCUSSION

The results of the Spearman correlational coefficient test have showed that there was no significant relation between the age and life quality subcategory. In contrary to the results of the present study the Timareh et al. (2012) study about the diabetes patients who referred to the

diabetes clinic of Kermanshah have showed that a major subcategory of life quality evaluation and physical health have a significant inverse correlation with the patients age (23). In addition, Abbasi et al. (2010) and Johansson et al. Nesbitt et al. (2014) study have showed a significant relation between the age and life quality of heart disorder patients (24-26), which were not consistent with

the results of the present study. For confirming, the present study, a conducted study by Rahnavard et al. have showed that there was no significant relation between the heart disorder patients life quality and age (27). Carson et al. in their study have shown that the heart disorder patients with less than 65 years age have better life quality than the older (28). This disease in low age could have negative effect on emotional and social condition of patients such as social condition and life expectancy. Therefore, the patient's life quality have affected by it. The results have showed that there was a significant relation between total life quality and the patient's gender. The pain average in woman was less than this amount in man, but in other cases, the average in woman was more than this amount in man.

Timareh et al. study (2012) have showed that the gender variable have a relation with the average score of life quality in all fields except social performance and the average obtained score in man group was more than the woman (23). In addition in Nesbitt et al. (2014) study, have showed that the life quality in man have significantly lower than this amount in woman (31). These results in several studies have confirmed too (29-31), and have not consistent with the results of the present study. In Abbasi et al (2010), Shojae (2008) study have showed that, the life quality of heart disorder patients in man have significantly higher than this amount in woman (25-32). In addition cline et al. And Riedinger et al. have found the effect of gender on patients with heart disorders life quality significant in a way that the man's life quality was more desirable than this amount in women (33-34). In addition, Gott et al. in a study about the British patients have showed that the woman gender have related with lower life quality (17). The results of the present study have a significant difference between the average of physical activity, pain and life quality in various marital situations. The physical activity average in single persons was lower than the married one and widows. The pain average in widows was lower and the total life quality in widows was higher.

The Timareh et al. (2012) study have showed that the married persons have better life quality in various fields (23). In Shojae study (2008), significant statistical relations have found between life qualities, the marital status of patients with heart disorders (32). Different studies have showed paradoxical results in this field (29, 31). It seems that in our society marriage have considered as a positive factor in various concept of life and the family as a supportive source could have positive effect in various field of life quality. The results have showed a significant difference between the average of physical activity, the role limitation of physical health, emotional problems and public health in various educational condition. Timareh et al. (2012) study have showed that there was no significant statistical relation between educational level and life quality (23). Shojae, Zeighami and Shah Parian (2010) and Rahnavard study results have found a statistical significant relation between life quality and the educational level of patients with heart disorder (32). The other studies have presented that the life quality become more desirable with the increase of educational level (27, 35).

These results have consisted with the present study's results. A significant different have observed between the average of physical activity, pain, public health and total life quality in various job condition. Timareh et al. (2012) study have showed a significant relation between job and life quality in all fields except social performance in a way that the military persons and workers in most of the life quality fields get more scores in comparison with unemployed and housewives (23). Rahnavard et al. have found a statistical significant relation between the job and life quality of patients with heart disorder (27). The results have showed no significant relation between the life quality and its subcategory with the patients living place (town or village). Nesbitt et al. (2014) study in relation with life quality of patients with heart disorder in a village of California, Kentucky, Nevada have showed that the geographical place of life have related with life quality (14). A significant difference have

observed between physical activity, public health and total life quality of patients in terms of smoking. The Abbasi et al. Zeighami, Shah Parian study's results have showed that there was a significant relation between life quality of patients with heart disorder and smokers (20, 25). According to the P value of Kroskal-valis test there was a significant relation between the income and role limitation of physical health and between systolic blood pressure and public health. Gott et al. have present that the low socio-economic condition have related with low life quality (17). In Zeighami and Shah Parian study (2010) in Karaj a significant difference for man's life quality based on the emotional level, economic condition and smoking have obtained (20) which have consisted with the results of this study. The disease and the number of hospitalization have a significant relation with all the life quality subcategory except energy/fatigue, feeling good and social performance.

CONCLUSION

The results have showed that there was a significant relation between life quality and gender, marital status, the income level, smoking and educational level, job, the number of hospitalization and other chronic disease.

The studies have showed that the life quality of patients with heart disorder was lower than the public population and other chronic patients (36). Recognition of the life quality condition of patients with heart disorder and its effective factors by the nurses could have be a guidance For the nurses diagnoses, measures, intervention, evaluation and regulation because the discharging plan for patients have done with considering these variables. Due to the fact that the life quality of these patients in social field is low, it is necessary for the treatment insurance to provide health facilities and in the concept of social provide some supportive and welfare services for these patients. Based on the results of this study it have suggested that some research have conducted in this field about presenting some solution for promotion of patient's life quality.

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