

Received: 01 March 2014 • Accepted: 23 March 2014



doi:10.15412/J.JBTW.01030403

Self-care in Cardiovascular Patients: a Cross-Sectional Study in Hamadan County, the west of Iran

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ABSTRACT

Cardiovascular disease is the highest rate of mortality in the world; Self-care behaviors in patients with chronic diseases, there is critical importance to improve patient quality of life. The aim of this study determined self-care behavior and associated it with social support and quality of life between the sample of cardiovascular patients in Ekbatan hospital in Hamadan County, the west of Iran. This cross-sectional study was conducted between 326 cardiovascular patients. Data collections based on interview and were analyzed by SPSS version 21 using bivariate correlations, t-test, and One-way ANOVA statistical tests at 95% significant level. Our result showed the main score of self-care behavior was 33.41 (*SD*: 8.57). We found the correlation between sex, education and cardiothoracic surgery with self-care behavior among the participants ($P < 0.05$). Take medication as prescribed and rest during the day were more self-care behavior adherence. Our findings indicated the self-care behavior among cardiovascular patients was low it is necessary to attention this issue in patient's education program.

Key words: Self-care, Cardiovascular Disease, Hamadan

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1. INTRODUCTION

Currently cardiovascular disease is the highest rate of mortality in the world and is expected to increase by 2020 and about 40 percent of deaths in the world are caused by these diseases (1, 2). According to a report by the world health organization every year about 1.7 million deaths occurs from coronary heart disease and predicting in about 11.1 million deaths by 2020 (3). Coronary artery disease is one of the main causes of mortality and morbidity in developed countries (4). Several studies conducted in different parts of

Iran, unfortunately, represents increased risk factors for these diseases; many factors are involved in causing cardiovascular disease, such as hypertension, high cholesterol, impaired glucose tolerance, smoking and inactivity (5). Heart disease is major threat for health and also effects on social relationships, occupation and income levels (6, 7). In addition, negatively affected on patient's quality of life hence nowadays clinical researches related to chronic diseases are more about surveying the quality of life (8). In another hand, Studies on cardiovascular patients indicates, which they compared with

other people have a less social support (9). Social support known as well as power strongest coping, in time of conflict with stressful situations and generally adaptation and coping with chronic illness in the people who have high level of social support are more appropriate (10). On the other hand, lack of health facilities, unavailability of the facilities and increases costs of health care, underling reason to attention to a concept of self-care (11). Adherence to self-care behavior in patients with chronic diseases is of critical importance and the patient should be learning self-care skills and also take an important step to cope with their disease and enhance the quality of life (12, 13). Self-care behavior can reduce severe symptoms improve clinical outcomes and reduce the rate of rehospitalization (14). The main aim of this study determined self-care behavior and associated with social support and quality of life among the sample of cardiovascular patients in Ekbatan hospital in Hamadan County, the west of Iran.

2. MATERIALS AND METHODS

This cross-sectional study was conducted on the sample of cardiovascular patients in Ekbatan hospital in Hamadan County, the west of Iran in 2012. The sample size was calculated at 95% significant level according to the results of a previous study and a sample of 326 patients was estimated (15). Of the population of 326, 287 (88%) signed the consent form and voluntarily agreed to participate in the study which has been approved by the Institutional Review Board at the Hamadan University of Medical Sciences. Questionnaire included four sections that comprised of 46 questions: ten questions for background factors; twelve questions for measured self-care behavior (15-17); twelve items for measured social support; and 12-item shorted from health surveys. Prior to conducting the main project, a pilot study was conducted to assess the content validity of the study questionnaires. The pilot study participants were 30 cardiovascular patients, similar to those who participated in the main a study. The pilot study was conducted to obtain feedback about the clarity, length, comprehensiveness, and required completion time of the study questionnaires, as well as collect data to estimate the internal consistency of the measures.

2.1. Demographics

The variables assessed in this study included: age (years), sex (men, women), education level (illiterate, primary school, secondary school, high school, and academic), marital status (single, married, divorce or dead wife), economic Status (independent, dependent), cardiothoracic surgery (yes, no).

2.2. Self-Care behavior Scale

Self-care behavior was evaluated by the 12-item European heart failure self-care behavior scale (15). Each rated by five response options ranging from 1 (I completely agree) to 5 (I don't agree at all). Examples of the items are: I weigh myself every day.

2.3. Social Support Scale

Social support was evaluated by 12-item standard scale (16). Each item was measured on an ordinal 5-point Likert-type scaling (1 = strongly disagree, 5 = strongly agree).

Multidimensional scale of perceived social support, including three scopes (family, friend and other significant). Examples of the items are: There is a special person who is around his/her when in need.

2.4. Short from Health Survey Scale

The 12 items in the SF-12 (17), are summarized as two scores: the physical component summary (PCS) and the mental component summary (MCS). In the calculation of the MCS and PCS scores, each item makes a contribution to each score according to a pre-specified weight. Most participants have a low education thus data collection was based on an interview with them. Data were analyzed by SPSS version 21 using bivariate correlations, t-test, and One-way ANOVA statistical tests at 95% significant level.

3. RESULTS AND DISCUSSION

The mean age of respondents was 58.08 years [95% CI: 56.74, 59.42], ranged from 30 to 79 years. Almost all of the participants were women and some of them were men. Regarding the educational status: 49.5% (142/287) were illiterate, 16.4% (47/287) went to primary school, 18.1% (52/287) went to secondary school, 11.8% (34/287) had a diploma and 4.2% (12/287) were in an academic education. In addition, 70.4% (202/287) of participants was women and

29.6% (85/287) of them men. Almost 80.1% (230/287) of participants was married, 4.9% (14/287) single and 15% (43/287) of them reported a divorce or his wife/husband is dead. About 46.7% (134/287) was reported is independent for economic. Furthermore, 12.2% (35/287) of participant was reported doing cardiothoracic surgery. In addition, the main score of self-care behavior was 33.41 (SD: 8.57). Based on result 33.1% (95/287) good, 55.7% (160/287) middle and

11.1% (32/287) had poor self-care behavior. We found the correlation between same of background variable (such as; sex, education, and cardiothoracic surgery) with self-care behavior among the participants (Table 1 and

Table 2).

Table 1. Association between sex, economic status, and cardiothoracic surgery with self-care behavior

Specialty	Variable	Mean	SD	T	P
Sex	Women	32.45	7.59	-2.988	0.003*
	Men	35.71	10.23		
Economic Status	Independent	32.48	7.40	-1.731	0.084
Cardiothoracic Surgery	yes	30.62	9.37	-2.066	0.040
	No	33.80	8.40		

Table 2. Association between education, and marital status with self-care behavior

Specialty	Variable	Mean	SD	95% Confidence Interval for Mean		F	P
				Lower	Upper		
Education	Illiterate	34.26	8.86	32.79	35.73	3.563	0.007*
	Primary School	34.55	8.35				
	Secondary School	33.73	6.94				
	Diploma	29.94	7.52				
	Academic Education	27.41	8.13				
Marital Status	Marital	32.27	8.58	32.16	34.39	1.925	0.148
	Single	37.71	9.06	32.47	42.94		
	Divorce or Dead	32.76	8.13	30.26	35.27		
	Wife						

In addition, bivariate associations between social support, quality of life and self-care behavior was showed in Table 3 shows. As can see in table 3, self-care behavior while it was

correlated with the social support ($r=0.139$), and quality of life ($r=0.128$).

Table 3. Correlation between social support, quality of life and self-care behavior

Variables	X1	X2
X1. Quality of Life	1	
X2. Social Support	0.308**	1
X3. Self-care Behavior	0.128*	0.139*

*P<0.05, **p<0.01

Finally. Our resut (as can see in

Table 4) showed, among the self care behavior: take medication as prescribed, and rest during the day were more adherence, and get a flu shot every year and exercise regularly lower adherence among the participants.

Table 4 . Assessment of the self care behavior items among the participants, n (%)

Self-care Behaviour	1 I completely Agree	2	3	4	5 I don't agree at all
I weigh my self every day.	48(16.7%)	17(5.9%)	82(28.6%)	79(27.5%)	61(21.3%)
If I get short of breath take it easy	155(54%)	35(12.2%)	34(11.8%)	30(10.5%)	33(11.5%)
If my shortness of breath increases, I Contact my doctor or nurse	124(43.2%)	37(12.9%)	30(10.5%)	41(14.3%)	55(19.2%)
If my feet legs become more swollen Than usual, I contact my doctor or nurse	101(35.2%)	30(10.5%)	65(22.6%)	39(13.6%)	52(18.1%)
If I gain 2 Kg in 1 week, I contact my Doctor or nurse.	170(59.2%)	28(9.8%)	38(13.2%)	14(4.9%)	37(12.9%)
I limit the amount of fluids I drink	55(19.2%)	28(9.8%)	58(20.2%)	46(16%)	100(34%)
I take a rest during the day.	189(65.9%)	19(6.6%)	15(5.2%)	18(6.3%)	46(16%)
If I experience increased fatigue, I Contact my doctor or nurse	151(52.6%)	21(7.3%)	56(19.5%)	43(15%)	16(5.6%)
I eat a low salt diet.	86(30%)	7(2.4%)	18(6.3%)	32(11.1%)	144(50.2%)
I take my medication as prescribed	210(73.2%)	14(4.9%)	19(6.6%)	27(9.4%)	17(5.9%)
I take my medication as prescribed.	210(73.2%)	14(4.9%)	19(6.6%)	27(9.4%)	17(5.9%)
I get a flu shot every year.	25(8.7%)	9(3.1%)	52(18.1%)	51(17.8%)	150(52.3%)
I Exercise regularly.	32(11.1%)	27(4.9%)	18(6.3%)	39(13.6%)	171(59.6%)

Self-care is one of the most important aspects of treatment in patients with heart failure and self-care training should be given as a day program in hospitals and health centers having cardio patients dept. (18); The main goal of present study was to determine a self-care behavior among the sample of Iranian cardiovascular patients and it's association with social support and quality of life. Our findings showed the 33.1% of a participants was good at self-care also the main score of self-care behaviors was 33.41; in this regard, Shojaei *et al* (15), reported only 26% of a patient with heart failure in Tehran had a good self-care behavior. In addition, González *et al* (19), in their study, reported the mean score of self-care behaviors among heart failure patients in Spain was a 24.2 (SD: 7.7). These results, indicates the self-care behaviors in Iranian patients with cardiovascular disease is weak and needs to implement a training program for them. Healthy lifestyle is more important for maintaining and promotion of health. Many of the patients with cardiovascular disease not positively belief toward impact of self-care behaviors on their health, on the another hand unfortunately these patients have a several problems such as, lack of information, physical limitations,

emotional problems and other chronic diseases (20). Our findings indicated, among the self-care behavior: take medication as prescribed, and rest during the day were more adherence, and get a flu shot every year and exercise regularly lower adherence among the participants. These findings are similar to the results reported by Shojaei and Ni (15, 21, 22). In addition, our results show that some of the self-care behaviors such as exercising regularly and low-salt diet compells the patients as a disadvantage, thus it is necessary in patients to pay more attention towards its education of his behavior . A finding of this study with correlation between self-care behavior and level of education. This finding is similar to the results reported by another study. In this context, Rockwell, reports higher education, had a power of judging and better decisions for their self-care behaviors. Our finding which theorises correlation between self-care behavior with social support and quality of life. In this regard, Jaarsma *et al* (23), reported training patients improving their self-care behavior can have a positive effect on lifestyle modification, on response to worsening symptoms, and on coping with chronic illness. Furthermore, improving quality of life is

commonly recognized as one of the major goals of treatment (24).

4. CONCLUSION

Overall, our findings showed the self-care behavior among cardiovascular patients was low and it is necessary to pay attention to this issue in patient's education program.

ACKNOWLEDGMENT

This article is a part of the research project supported by Hamadan University of Medical Sciences. We would like to thank Deputy of Research of Hamadan University of Medical Sciences for financial support of this study.

AUTHORS CONTRIBUTION

This work was carried out in collaboration between all authors.

CONFLICT OF INTEREST

Authors have declared that no conflict interests exist.

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