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INVESTIGATING THE PRACTICAL HEALTH LITERACY OF CARDIOVASCULAR PATIENTS, AND ITS RELATIONSHIP WITH SELF-CARE BEHAVIORS IN PATIENTS OF SOCIAL SECURITY CLINIC OF KOHGILUYE VA BOYER AHMAD CITY IN 2016

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ABSTRACT

Introduction: Patients with chronic heart failure, due to the consequences of illness, and treatment, will face with changes in their self-care needs, therefore illness problems requires awareness from self-care behaviors. The subject of self-care behaviors is very important in these patients, and patients, by acquiring self-care skills, can effect on own comfort, functional abilities, and disease processes. The aim of this study was Investigating the Health Applied Literacy of Cardiovascular Patients, and its Relationship with Self-Care Behaviors, in patients of Social Security Clinic of Kohgiluye Va Boyer Ahmad. **Method:** This study in terms of target was functional and in terms of data collecting was an analytical-descriptive study. Information was collected by standard questionnaires of health literacy and self-care and for testing the hypothesis, Spearman correlation test, and single-variable regression was used. Data were analyzed by SPSS software. **Findings:** In this study, 354 cardiovascular patients were examined. Based on the results of this study ,there was no meaningful relationship between Access and self-care, reading and self-care, as well as understanding and self-care but positive and meaningful relationship exist between evaluation and decision making and application of health information with self-care. In general, there was a positive and significant relationship between applied literacy and self-care behaviors in cardiovascular patients. **Conclusion:** The role of factors such as knowledge and health literacy cannot be ignored in promoting self-care behaviors of cardiovascular patients. Therefore, the application of health information, and health literacy assessment were known as better predictors of self-care domains.

KEYWORDS: Health Literacy, Self-care, Cardiovascular.

INTRODUCTION

Man has realized the importance of heart as a vital organ from a long time ago and has found that if a disorder occurs in the manner of working of heart and it activity, his life will be endangered. Cardiovascular diseases, besides being known as the first factor of mortality in Iran, impose a great health, social and economic load on the society.[1] In United States, annually about 1.2 million cases of heart failure or killing heart events occur. It is anticipated that by 2020, the number of mortality cases due to cardiovascular diseases precedes the number of deaths of infectious diseases and assigns the most important reason of mortality to itself. This disease causes more mortality and costs than other diseases.[2] so that cardiovascular disease is the main reason of mortality in United States and is the factor of 600,000 deaths in a year. By adding 5.1 million heart failures annually, the estimated cost in the United States is 60 billion dollars. 40% of total deaths are attributed to this disease. Yearly, in United States 50 milliard dollars is spent on treating cardiovascular diseases (Dania et.al., 2006) and 50 million dollars is spent on purchasing medical equipment of these patients.[3]

In our country, cardiovascular disease is considered a major social and health problem whose dimensions are rapidly increasing and the ratio of cardiovascular diseases is 25% to 45%. Based on the report of World Health Organization, annually cardiovascular diseases cause death of 12 million people all over the world. Men mortality is 5.2 times more than women. But in women cardiovascular diseases are enumerated the most prevalent reason of death and paralysis.[1] Among those who stay alive after heart failure, about 10% die in the first year and in the next years, 5% die each year.[4]

Based on the statistics declared by Vice-Chancellor for Health, Ministry of Health, in 2003 the number of daily deaths due to cardiovascular diseases in Iran was 369 cases and the lost years of life has been 3136 years.[1] New medical and surgical treatments have increased the longevity of cardiovascular patients and have increased the prevalence of patients with heart failure.

Patients with chronic heart failure will encounter change in their needs due to illness and treatment consequences, so encountering illness problems requires awareness of self-care behaviors. The issue of adherence to self-care behaviors in these patients is considerably important and by acquiring self-care skills, patients could be effective on their comfort, functional abilities and their disease processes.[5] On the other hand, many reasons leading to non-adherence to treatment and intensification of heart failure are preventable using nursing training interventions and learning to handle chronic status forms the main pillar of self-care. Self-care is a very significant concept in chronic diseases especially cardiovascular diseases whose assessment shows real evaluation of performance and self-care ability of these patients. On the other hand, one of major complaints which is repeatedly mentioned by patients with heart failure, is shortage of awareness about self-care behaviors. Chronic diseases create a training opportunity to encourage patients for doing more activity in their self-care.[6] In most cases, lack of awareness and inappropriateness of self-care behaviors result in rehospitalization of patients. Increasing of patients' awareness through training helps improvement of patients' self-care behaviors.[7] We could attain success in managing chronic diseases when the patient could participate in self-care activities and behaviors such as regular consumption of drugs and regular pursuing of the illness.[8] In recent years, focus on supportive and training treatments of patients with heart failure have been increasingly considered and treatment focus is more on accepting self-care treatment. Studies show that by performing preventive actions and self-care behaviors, this disease progress could be somewhat prevented.[4] Self-care is the most important part of life of patients with heart failure and includes cares which are performed by the patients for life preservation and being good.[9] Awareness and health literacy is one of requirements of self-care so that one of factors effective on controlling heart failure is to enjoy enough knowledge of the disease, factors effective on its accession and method of preventing from this disease, yet health literacy is considered one of very effective factors on awareness level and as a result more effective control and prevention of the disease.[10]

An individual capacity (including inherent potential and individual skills) is the main part of health literacy which is modified by training and its adequacy is influenced by culture, language and specifications of situations relating to health.[4] Such literacy is a necessary skill for ordinary citizens and is associated to health economy since consequences of lack of health literacy could have important economic impacts.[11] World Health Organization has introduced health literacy as one of the biggest determinants of health issue and has recommended the world countries to create a council for monitoring and coordinating strategic activities about promoting health literacy level.[10]

Since health literacy is both information relating to health and the ability to understand and apply this information, there is a bilateral and close relation between promoting health literacy and life quality. People with little health literacy could less comprehend written and verbal information provided by health experts and apply it, they incur more medical costs, have weaker health status, they have more hospitalization and using emergency services and less preventive care.[4] Low level of health literacy mainly causes repeated and unnecessary references to physician and lengthening of patients stay in the hospital that in turn, causes increasing of costs and wasting of a part of health sector budget. Therefore, health literacy is a vital indicator in results and healthcare costs that its non-recovery causes longer use of treatment services. Patients with little health information face more problems relating to drug consumption. Therefore, access to better and more health literacy is in fact opposing with inequalities of health domain.

As yet many studies have been performed in the field of self-care of cardiovascular diseases by various researchers but the number of studies which investigate applied health literacy of cardiovascular patients and its relation with self-care are very little. So, this study has investigated applied health literacy of cardiovascular patients and its relation with self-care behaviors in those who refer to Kohgiloyeh City social security clinic.

RESEARCH METHOD

The present study is applied in respect of objective and in regard of data collecting is descriptive – analytical. The sample content was 4600 persons and according to Cochran formula, the sample content, 354 cardiovascular patients referring to social security clinic of Kohgilooyeh City were selected using simple random method. The information was collected through distributing standard questionnaires of health literacy and self-care. First, the questionnaire started with demographic information which was revised by the researcher studying the research background and includes 5 questions including variables of age, gender, education level, job and this question that how you acquire the issues relating to health and illness?. Then, the questionnaire of performance health literacy in adults (TOFHLA) was used which was addressed by in a study under the title designing and psychometry of this tool for assessing health literacy of 18 to 65 years old Iranian population. The questionnaire had acceptable reliability and desirable validity. This questionnaire had 33 questions in 5 dimensions whose dimensions include: reading, access, comprehension, evaluation and decision making and

utilization of health information. All items of the questionnaire were scored directly, answers range is from 1 (very low) to 5 (very high). Cronbach alpha coefficient in the self-care questionnaire above 0.7 and in the health literacy, the rate of Cronbach alpha of the considered tool dimensions was in the distance of 0.72 to 0.89 that confirmed the validity of the questionnaire. For testing the research hypotheses, Spearman correlation test and for proving main hypothesis of the study single variable regression were used. Data analysis was performed using SPSS software.

Table 1: Distribution of responses based on the content related to how the issues relating to health and illness are acquired?

How you acquire the issues relating to health and illness?.	Frequency	Percentage
Asking from the doctor and healthcare staff	123	34 / 7
Internet	114	32 / 2
Interactive Voice Response	10	2 / 8
Radio and TV	46	13 / 0
Newspapers, journals and magazines	10	2 / 8
Asking from relatives and acquaintances	42	11 / 9
Booklets, notes, educational and advertisement brochures	5	1 / 4
I don't know where to get the required information from	4	1 / 1
Total	354	100

Table 2: Result from the test of accessibility variable.

Variable	Significance level	Correlation	Number
Accessibility	0 / 074	0 / 095	354

Table 3: Results from the test of reading variable.

Variable	Significance level	Correlation	Number
Reading	0 / 200	0 / 068	354

Table 4: Results from the test of comprehension variable.

Variable	Significance level	Correlation	Number
Comprehension	0 / 093	0 / 089	354

Table 5: Results from the test of evaluation variable.

Variable	Significance level	Correlation	Number
Evaluation	0 / 038	0 / 111	354

Table 6: Results from the test of decision making and health information utilization.

Variable	Significance level	Correlation	Number
Decision Making and Health Information Utilization	0 / 001	0 / 170	354

Table 7: Regression analysis of the relationship between applied literacy with self-care behaviors in cardiovascular patients.

	Mean of Squares	Degree of Freedom	Squares Sum	*p*-value	Observed F value
Regression	2 / 997	1	2 / 997	0 / 027	4 / 962
Remaining	0 / 604	352	212 / 607		
Total		353	215 / 604		

Table 8: Variance of the self-care behaviors in cardiovascular patients variable.

	Unstandardized coefficient		Standardized coefficient	T value	*p*-value	R	R²
	Standard Deviation	B	Beta				
self-care behaviors in cardiovascular patients variable	0 /183 0 /049	2 /679 0 /109	----- 0 /118	14 / 604 2 / 228	0/000 0 /027	0 /118	0 /014

Findings

In this research, 51.1 % of respondents were constituted of women and 48.9% men. 64% of respondents were between 20 to 40 years old, education level of 78% of respondents has been between elementary to associate diploma. 27.1% of respondents were unemployed, 24.3% housekeeper, 3.1% were retired, about 15% of respondents were student and about 30.5% of them had other jobs. Respondents answered the question posed in the questionnaire: which way you acquire the issues relating to health and illness? as table 1. Most responses were tended to two choices. 34.7% of people answered the option of asking physicians and healthcare personnel and 32.2 % to Internet option. (table 1).

In this study, we investigate the relation between information access and self-care. According to the obtained results, the Spearman correlation coefficient calculated between access and self-care is not significant, so there hasn't been any significant relation between access and self-care (table 2).

The second hypothesis has examined the significant relation between reading and self-care, the Spearman correlation coefficient calculated between reading and self-care (+0.068) hasn't been significant and there is no relation between reading and self-care (table 3).

The third hypothesis has investigated the relation between comprehension and self-care in cardiovascular patients that the Spearman correlation coefficient between comprehension and self-care (+0.089) hasn't been significant (in the significant level greater than 0.05), so existence of significant relation between two variables was rejected (table 4).

But the fourth hypothesis which investigated the significant relation between evaluation and self-care in cardiovascular patients was confirmed with Spearman correlation coefficient calculated in significance level smaller than 0.05. Therefore, it is inferred that by increasing the scores relating to evaluation, scores relating to self-care increase (table 5).

Another hypothesis addresses the relation between decision making and utilization of health information and self-care in cardiovascular patients. Regarding the correlation coefficient in significance level smaller than 0.05, there is a significant and positive (direct) relation between decision making and health information utilization and self-care and this means that by increasing scores relating to decision making and health information utilization, the scores relating to self-care also increased (table 6).

Therefore, there is a significant relation between applied literacy and self-care behaviors in cardiovascular patients regarding single variable regression analysis with observed F rate equal to 4.962 and R² calculated rate of 0.014 according to tables 7 & 8.

DISCUSSIONS AND CONCLUSION

Findings of this study indicate that there is a significant and positive (direct) relationship between applied literacy with self-care behaviors in cardiovascular patients. But three dimensions of health literacy dimensions have no relation with self-care which includes access, comprehension and reading skill. Also, 66.9% of people in responding which way you acquire issues relating to health and illness answered the option of asking physician and healthcare personnel and Internet, that regarding that 68.3% of respondents were below 40 years old has been predictable. The findings of the study showed that health literacy has reverse relation with age, so that people with low age has higher literacy level. This finding is consistent with findings of.[12,13,14] But it is not consistent with the results of (Fang, 2006). Younger people face fewer problems in comprehending medical and health information comparing elders and as it was said, they have more attention to elders. Also, the results indicate direct relation between evaluation and self-care in cardiovascular patients and decision making and utilizing health and self-care information in cardiovascular patients. This indicates that people have the ability to use their acquired information in decision makings. In fact, the higher the health literacy of cardiovascular patients goes, the self-care rate of them increases and they better understand accuracy and wrongness of information existing in virtual space, journals, radio and television and also recommendations which are provided by friends and relatives and apply them. so shortage of health literacy prevents from correct comprehension of people about their illness and ways of opposing with it. Then, health literacy is a vital indicator in results and healthcare costs that its non-improvement causes longer usage of treatment services. Patients with

low health information face more problems relating to drug consumption. Therefore, achieving better and more health literacy is in fact opposing with inequalities of health domain Findings of this study is associated with the results of Ghanbari et al research with title of investigating health literacy of pregnant women under coverage of healthcare centers of Shahid Beheshti University of Medical Sciences that showed that limited health literacy is a prevalent problem in pregnant women and could prevent from accurate comprehension of massages and health recommendations. Also, the results of the present study are consistent with the results of Mangolian Shahrbabaki et.al. in a study with title of the impact of a self-care training program on awareness and performance of cardiovascular patients. They concluded that using designed self-care training programs has been effective on awareness and performance of cardiovascular patients in studied samples and training is one of suitable methods and is necessary for promoting self-care in cardiovascular patients.

Finally, the respective organizations including social security, Medical Sciences Universities and policy maker and health programmers could help improving the society's health status considering health literacy and self-care as a means for improving and making quality and type of training effective and provide newer dimensions of self-care significance in chronic diseases such as cardiovascular patients for the society and training these two concepts and including them in lesson resources, virtual spaces, journals and radio and television could result in improvement of cardiovascular patients health status in the society.

REFERENCES

1. Azizi F, Hatami H, Janghorbani M. Epidemiology and control of common diseases in Iran. Tehran Eshtiagh Publ, 2000; 602–16.
2. Ezati N. The Effect of Knowledge about Self-Care Behaviors on the Rate of Courage and Anxiety in Cardiovascular Patients (Women and Men), 2011; 5.
3. Yazdandust R, Rezvan-taleb E. Evaluation of unhealthy attitudes of depression and severity of heart disease in patients admitted to CCU. Thoughts Behav Q., 2011; 6(4): 38–44.
4. Tehrani H, Majlessi F, Shojaeizadeh D, Sadeghi R, Kabootarkhani MH. Applying Socioecological Model to Improve Women's Physical Activity: A Randomized Control Trial. Iran Red Crescent Med J., 2016; 18(3).
5. Mazloomy Mahmoodabad SS, Tehrani H, Gholian-aval M, Gholami H, Nematy M. The effect of social class on the amount of salt intake in patients with hypertension. Blood Press, 2016; 25(6): 360–363.
6. Bastable SB. Essentials of patient education. Jones & Bartlett Publishers, 2016.
7. Forbes A, While A. The nursing contribution to chronic disease management: A discussion paper. Int J Nurs Stud, 2009; 46(1): 120–131.
8. González B, Lupón J, Herreros J, Urrutia A, Altimir S, Coll R, et al. Patient's education by nurse: what we really do achieve? Eur J Cardiovasc Nurs, 2005; 4(2): 107–111.
9. Cameron J, Worrall-Carter L, Page K, Stewart S. Self-care behaviours and heart failure: Does experience with symptoms really make a difference? Eur J Cardiovasc Nurs, 2010; 9(2): 92–100.
10. Reisi M, Javadzade SH, Mostafavi F, Sharifirad G, Radjati F, Hasanzade A. Relationship between health literacy, health status, and healthy behaviors among older adults in Isfahan, Iran. J Educ Health Promot, 2012; 1(1): 31.
11. Kickbusch I. Health literacy: an essential skill for the twenty-first century. Health Educ, 2008; 108(2): 101–104.
12. Tol A, Pourreza A, Tavasoli E, Rahimi Foroshani A. Determination of knowledge and health literacy among women with type 2 diabetes in teaching hospitals of TUMS. J Hosp, 2012; 11(3): 45–52.
13. Lee S-YD, Tsai T-I, Tsai Y-W, Kuo KN. Health literacy, health status, and healthcare utilization of Taiwanese adults: results from a national survey BMC Public Health, 2010; 10(1): 614.
14. Sun X, Shi Y, Zeng Q, Wang Y, Du W, Wei N, et al. Determinants of health literacy and health behavior regarding infectious respiratory diseases: a pathway model. BMC Public Health, 2013; 13(1): 261.