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RESEARCH ARTICLE

INVESTIGATION OF HEALTH LIERACY LEVEL OF CARDIOVASCULAR PATIENTS HOSPITALIZED IN EDUCATIONAL HOSPITALS OF KERMAN CITY, IRAN

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ABSTRACT

Background & Aim: Literacy is as an active link between people and health literacy field. People with certain factors such as cognitive abilities, social skills, emotional state and physical condition are healthy tissue. The aim of this study was to Investigation of health lieracy level of cardiovascular patients hospitalized in educational hospitals of Kerman city in 2015.
Material & Methods: This study used survey methods, analytical and cross-sectional manner. Data was collected through questionnaires distributed functional health literacy among 100 patients of cardiovascular-hospitalization took place in the city of Kerman.
Results: Results showed that 10 percent of patients with adequate health literacy, 13% of patients in cross-border health literacy and 77% of patients with inadequate health literacy.
Conclusions: The results showed that most patients had inadequate health literacy. Therefore, these patients to understand and to use by physician and other health information they need additional medical staff and need more time to communicate with doctors and nurse and business information easier and understandable language, allocate.

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INTRODUCTION

Health literacy is a set of interpersonal skills, social cognition and has the ability and capacity of individuals to access, understand and use health information to strengthen and requires basic skills, including reading and writing skills, oral literacy, computing power to act in the position of health and the use of technology for health-related information. These skills help people to maintain their health in addition to being able, to effectively participate in treatment decisions (Khosravi *et al*., 2014). Health literacy is a relatively new concept in today's world, especially Iran and so far several attempts to better understand the concept and how to measure it in different segments of the international community done.

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It is the result of different tools developed and used in different countries. Some of these tools, original and translated some of the main tools in various languages spoken in the world. According to the survey, found less means that all aspects of health education (access, read, understand, evaluate, decide and act) to be considered (Tavousi *et al*., 2014). Limited or inadequate health literacy on a person's ability to find and understand information on health, chronic disease management and informed decision making influence. For health care providers and educators as well as health literacy is a key factor when different patients in different age, cultural, educational and socioeconomic status are concerned (Berkman *et al*., 2010). Enjoy both health service providers as well as all members of society should have adequate health literacy. Health literacy is an issue for 30 years in the scientific literature can be used (Nielsen-Bohlman *et al*., 2004). According to the Medical Association's committee on health literacy, health literacy is a public concern in terms of

individual health promotion and environmental issues, disease prevention and early screening, as well as the sustainability of health care policy is (Bennett *et al*., 1998). Various studies have shown that low levels of health literacy leads to delays in timely detection of disease (Schillinger *et al*., 2002), inability to self-care skills (Lee *et al*., 2010), increased use of emergency services, an increase in hospitalizations, increased incidence of disease different and will ultimately lead to an increase in mortality in patients (Reisi *et al*., 2011). In recent years the Iranian Ministry of Health developed several programs to promote a culture of health and even the law of the fourth development And in the review of the scientific community health plan in 2010 to promote health literacy were considered, but practical and serious steps in this regard is not removed (Khosravi *et al*., 2014). In the early twenty-first century, Cardiovascular diseases are the most serious health problems in the world (Shidfar *et al*., 2004), The first cause of death and the fifth leading cause of disability is (Imanipour *et al*., 2009). However, in the last two decades, much progress has occurred in the treatment of heart disease, but the incidence of heart disease is on the rise. So that nearly 15 million people worldwide are living with the disease (Salehi Tali *et al*., 2008). Thus, one of the factors affecting cardiovascular disease prevention and improve the knowledge and awareness of the disease, factors affecting it, how to control and prevention is effective. However, the importance of health literacy in the special role that can be associated with various diseases, Note researchers in recent years have attracted and studies on all aspects and factors affecting it to become an efficient tool in the area of health care (Baker, 2006). Among these research studies can be Afshari and colleagues (Afshari *et al*., 2014), Ahmad Zadeh and colleagues (Khosravi *et al*., 2013), Reisi and co-workers (Reisi *et al*., 2011), Tol and colleagues (Tol *et al*., 2012), Nekoei and colleagues (Nekoei-Moghadam *et al*., 2012), Tehrani BaniHashemi *et al*. in (Tehrani Banihashemi *et al*., 2007), Jovic-Veranes and colleagues (Jovic-Veranes *et al*., 2011), Lee and colleagues (Lee *et al*., 2010), Fang and colleagues (Fang *et al*., 2006) and the Williams and colleagues (Williams *et al*., 2002) noted. Much of the research on the relationship between health literacy and health status and the role of health literacy in patient participation in treatment decisions have studied.

MATERIALS AND METHODS

This cross-sectional study and the methodology applied in the survey. In the present study, which examines the health literacy of patients in educational hospitals in Kerman in 2015's first quarter. Of any of the private hospitals of Shafa and Afzali pour 50 patients admitted to the cardiology department, for example, were randomly selected. Inclusion criteria included patients admitted to the study, adult, willingness to cooperate, at least to read and write was and exclusion criteria included lack of willingness to cooperate and the unwillingness to respond to the severity of the disease or lack of literacy were considered. Researcher to complete the questionnaire referred to hospitals the collaboration with the hospital, training supervisor and the head of each section, The bedside of patients and after their introduction, and research and its purpose, with informed consent of the patient on cooperation in the study completed questionnaires to pay. In continuation of Functional Health Literacy in Adults questionnaire was used to collect data. This questionnaire is one of the most prestigious in the world of health literacy assessment, which has been translated into several languages Validation (Tehrani Banihashemi *et al*., 2007) and more by (Mollakhalili *et al*., 2014) used the reliability of which 89% was calculated, With a few minor changes that were made in the calculation and description, reliability using Cronbach's alpha was 91%. Validity of (formal) questionnaire used in this study using the heart-lung expert, professor of health education, medical library and information science, statistics and research methods were approved. Inventory consists of 3 parts. The first part of the questionnaire related to demographic questions with regard to the objectives set. The second section describes calculations that have 10 or the health recipes. These statements include prescribed medications, the doctor, the use of funds and an example of the result of a medical test that person's ability to understand and act on the advice of his doctors and educators to give health , hence the need for measures to be calculated. The third part of the study, including 3 text and the ability of the participants to read and understand the 3 text under instructions to prepare for pregnancy photos from the upper gastrointestinal tract, rights and responsibilities of patients in a hospital consent forms, insurance policies and standard form to be measured. The score of person in each of the two parts between zero and 50 were considered. The total score of the two parts, the total score that health literacy is a number between zero and 100, respectively. The performance of each individual's health literacy scores into three levels inadequate (0-59), marginal (border) (60-74) and adequate (75-100) was divided (18). To analyze the data, chi-square test and SPSS version 21 was used.

RESULTS

The results showed that cardiovascular patients hospitalized in educational hospitals in Kerman 2/2% of women and 16/4% men are afforded adequate health literacy and the difference is statistically significant and the level of health literacy is higher in men than in women (p-value=0/043). Among age groups, 10/6% t of people age 60 and older have had adequate health literacy and age groups under 40 years of a person with adequate health literacy was found that the observed difference was statistically significant (p-value=0/007). The results showed that 10.4% of married and 0% of single are afforded adequate health literacy that this difference was not statistically significant (p-value=0/655). The results showed that 50% of those with a bachelor's degree or higher had adequate health literacy levels and in those with less than high school education were only 2/9% of people with adequate literacy level that the observed difference was not statistically significant was found (p-value=0/0001). Among the various occupations, 33.3% of employees with adequate health literacy and health literate enough on the unemployed person was found that the observed difference was statistically significant (p-value=0/474). The results showed that 14.3% of those who had an income higher than 7 million dollar are afforded adequate health literacy and between 400- 500 and 500-700 million dollar income of those who had, A person with adequate health literacy was found that the observed difference was statistically significant (p-value=0/452).

Table 1. The relationship between health literacy and demographic variables

Variables		Inadequate	Border	Adequate	p-value
		Frequency(percent)	Frequency(percent)	Frequency(percent)	
sex	woman				0/043
	men	39 (86/7)	5(11/1)	1 (2/2)	
		38 (69/1)	8 (14/5)	9(16/4)	
	20 - 30	2 (66/7)	1 (33/3)	0 (0)	∗0/007
	30 - 40	0 (0)	4 (100)	0 (0)	
age	40 - 50	8 (80)	1 (10)	1 (10)	
	50 - 60	28 (77/8)	4 (11/1)	4 (11/1)	
	> 60	39 (83)	3 (6/4)	5 (10/6)	
marital status	yes	74 (77/1)	12 (12/5)	10 (10/4)	∗0/665
	no	3 (75)	1 (25)	0 (0)	
level of education	Less than high school diploma	62 (91/2)	4 (5/9)	2 (2/9)	∗0/0001
	diploma and associate Degree	14 (58/3)	6 (25)	4 (16/7)	
	BA and higher	1 (12/5)	3 (37/5)	4 (50)	
job	self-employed	20 (87)	2 (8/7)	1 (4/3)	∗0/474
	employees	6 (66/7)	0 (0)	3 (33/3)	
	working	6 (66/7)	2 (22/2)	1 (11/1)	
	retired	14 (70)	3 (15)	3 (15)	
	unemployed	6 (85/7)	1 (14/3)	0 (0)	
	housewives	25 (87/1)	5 (15/6)	2 (6/2)	
monthly income	<400	10 (90/9)	0 (0)	1 (9/1)	∗0/452
	400-500	8 (88/9)	1 (11/1)	0 (0)	
	500-700	15 (88/2)	2 (11/8)	0 (0)	
	≥700	44 (69/8)	10 (15/9)	9 (14/3)	
Location of living	kerman	35 (70)	8 (16)	7 (14)	∗0/638
	In subsidiary Kerman	22 (81/5)	3 (11/1)	2 (7/4)	
	other cities	20 (87)	2 (8/7)	1 (4/3)	
history of heart disease	yes	56 (76/7)	9 (12/3)	8 (11)	∗0/860
	no	21 (77/8)	4 (14/8)	2 (7/4)	
The number of visits to hospital	1	27 (69/2)	9 (23/1)	3 (7/7)	∗0/246
	2	18 (87/3)	2 (8/7)	3 (13)	
	3	12 (100)	0 (0)	0 (0)	
	4	20 (76/9)	2 (7/7)	4 (15/4)	

∗ Test, Fisher's Exact Test was used.

Also in this study, 14% of patients who were from Kerman adequate health literacy and only 4/3% of the patients were from other cities are afforded adequate health literacy that this difference was not statistically significant (p-value=0/638). The results showed that 11% of patients who had a history of heart disease and 4/7% of patients who had no history of heart disease are afforded adequate health literacy that this difference was not statistically significant (p-value=0/086). Among patients admitted to hospital, 15/4% of those admitted to the hospital four times adequate health literacy and in those with adequate health literacy individual hospital 3 times that there was no statistically significant difference observed was shown (p-value=0/246) (Table 1).

DISCUSSION

Health literacy is a global issue and the statement by the World Health Organization a pivotal role in determining health inequalities, both in rich countries and in poor countries, is (Ministry of Health and Medical Education, 2006). World Health Organization, health literacy as one of the biggest determinants of health and the World report has recommended that the Association for monitoring and coordinating strategic activities, the promotion of health literacy cause (Reisi *et al*., 2011). Since health literacy is all about health and ability to understand and to apply this information between health literacy and improve the quality of life and is close bilateral relationship (Jam-e-Jam, 2007). People with low health literacy are less able written and verbal information provided by health professionals to understand and to act, incur more medical costs, have poorer health, higher rates of hospitalization and use of emergency services preventive care less (Tehrani Banihashemi *et al*., 2007). Low level of health literacy, mainly caused frequent and unnecessary referrals to physician and hospital length of stay, which in turn increase costs and lead to loss of part of the health budget (Jam-e-Jam, 2007). Thus, health literacy is a vital index of health care costs the lack of improvement leads to longer use of health services provided. Patients with low health information, experience more problems related to their drug use. Therefore, to achieve better health and higher education in addressing inequalities in the health field (Iranian Health Center, 2009). The findings of the study showed that patients' health literacy of patients, most of these people with inadequate health literacy, and only a few of them, had adequate health literacy. These findings are consistent with findings of previous studies such as Afshari and colleagues (Afshari *et al*., 2014), Ahmad Zadeh and colleagues (Khosravi *et al*., 2013), Reisi and co-workers (Reisi *et al*., 2011), Tol and colleagues (Tol *et al*., 2012), Nekoei and colleagues (Nekoei-Moghadam *et al*., 2012), Tehrani Bani Hashemi and colleagues (Tehrani Banihashemi *et al*., 2007) in the interior and Jovic-Vranes and colleagues (Jovic-Veranes *et al*., 2011), Lee and colleagues (Lee *et al*., 2010), Fang and colleagues (Fang *et al*., 2006) and Williams *et al*. (Williams *et al*., 2002) is aligned abroad. It is sufficient if the participation of patient health literacy and health care systems, health decisions is essential, and has led to the empowerment of people in utilizing information and instructions related to

health. The findings also showed that the relationship between health literacy and educational level is significant. This finding is consistent with the findings of Bani Hashemi Tehrani and colleagues (2007), ToL *et al*. (2012), Lee and colleagues (2010), Fang and colleagues (2006), Sun and colleagues (2013) and the center line is the US health care strategies. The results showed that age is directly related to health literacy. So that people with more age, with higher education levels were. Among other findings obtained in this study, the relationship between health literacy and jobs is the case with findings of Tol and colleagues (2012) is aligned. Employees of people to adequate health literacy were more. There was no significant relationship between marital status and health literacy. Married people more than single people had the level of health literacy. In addition, the results showed that there is no significant relationship between health literacy and the location. Tehrani findings Bani Hashemi *et al*. (2007) showed that rural residents have low literacy Which means the place of residence. This is the case with health literacy research findings differ. This is because the purpose of the present study specifically urban or rural residence was not. But to classify people residing in one of the categories of Kerman, Subsidiaries cities of Kerman and other cities. As in previous studies, such as research Tehrani Bani Hashemi *et al*. (2007), the purpose of the residence, the difference between rural and urban centers and rural health literacy Homa Just as expected lower than those living in cities. The findings suggest that there was a significant relationship between gender and health literacy. In this study, adequate health literacy in women than men, and the results are inconsistent with the findings of Tehrani Bani Hashemi.

Conclusion

The results showed that most patients had inadequate and borde health literacy have been. Therefore, these patients to understand and apply the instructions of doctors and other health information requires additional medical staff and need more time to communicate with doctors and nurse and learn to understand more simple language, allocate. The officials and health care providers should be so, and given more time to understand medical instructions to allocate this patients. Thus, health literacy leading to empowerment of people applying information and instructions related to health. The results of this study emphasize the importance of health awareness among the people, especially patients is emphasized. In general, collaboration with other sectors such as media, health care system should not only comprehensive program for improving the health literacy of people have, but for people with low literacy, simple and understandable produce educational media. Since most measures of health literacy in Western countries have been designed and validated, thus making means Iranian compliance with organizational culture and structure and social care services to measure health literacy is recommended. However, in the long term due to improving literacy levels in society are expected to reduce the problems caused by inadequate health literacy.

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