

Research Article

**Health literacy of cardiovascular patients admitted
to private hospitals in Kerman**

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ABSTRACT

Background and aim: As an active link between literacy 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 literacy of cardiovascular patients hospitalized in private 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 48% of patients with adequate health literacy, 31% of patients in cross-border health literacy and 21% of patients within adequate health literacy.

Conclusions: The results showed that about half of patients had adequate 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.

Key words: health literacy, cardiovascular patients, private hospitals, Kerman city

INTRODUCTION

Literacy is not only the ability to read and write, But the concept and goals above and beyond the basic skills to empower people in the development of reason, logic, systematic thinking and research (1). Basic literacy that requires the use of functional literacy and health

literacy, including, the ability to read and write and perform four acts (2). Health literacy is a set of interpersonal skills, cognitive and social 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 on health status and the use of information technology for health. These skills help people to maintain their health in addition to being able, to effectively participate in treatment decisions (3). The three main factors contributing to the improvement of education, culture and public health, health system and education system. The education system plays a key role. Education system can cause health skills from an early age in people. So that people strengthened in decisions affecting their health. The ability to conduct complex health system in the 21st century implicitly refers to the interaction of all three of the above (4). Health literacy is a relatively new concept in today's world, especially Iran And so far several attempts to better understand this concept and how to measure it indifferent segments of global society is the result of different tools developed and is being used in different countries of course some of these tools, original and translated some of the main tools in various languages spoken in the world. Search tool that has been developed around the world and has been used by various researchers, Shows that each dimension and aspects of health in mind and within the means, all aspects of health literacy (access, read, understand, evaluate, decide and act) covered (5). Limited or inadequate health literacy on a person's ability to find and understand information on health, chronic disease management and informed decision making in fluence. 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(6).Enjoy both health service providers as well as all members of society should have adequate health literacy. In the early twenty-first century, cardiovascular diseases are the most serious health problems in the world (7), The first cause of death and the fifth leading cause of disability is (8). However, in the last two

decades, much progress has occurring the treatment of heart disease, Statistics prevalence of heart disease is on the rise. So thatnearly15million people worldwide are living with the disease (9). 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. Studies show thatin18 provinces 46% of all deaths and 2/27% of years of life lost due to cardiovascular disease (10). The issue of health literacy for 30years in the scientific literature used (11). According to the Institute of Medicine 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 (12). Various studies have shown that low levels of health literacy leads to delays in timely detection of disease (13), Inability to self-care skills (14), increased use of emergency services, an increase in hospitalizations, increased incidence of various diseases and ultimately lead to an increase in the mortality rate (15). In recent years the Iranian Ministry of Health developed several programs to promote a culture of public health and fourth in terms of development and in the review of the scientific community health plan in 2010 to promote health literacy were considered, But the practical steps and in this regard has been taken(3). 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. Much of the research on the relationship between health literacy and health status and the role of health literacy inpatient participation in treatment decisions have examined (3). Afshariand colleagues (2014) in their study entitled "Study of Adult Health Literacy city Tuyserkan" it

concluded It's found that poor health literacy among more attention to health education and health promotion programs in the show (16). In a study survey that Ahmad Zadehet al. (2013) entitled "Evaluation of the readability of health literacy and educational resources available to diabetic patients referred to health centers in Shiraz city" has conducted a descriptive approach, It concluded that most diabetic patients referred to health centers in Shiraz do not have adequate health literacy and educational resources to be put at the disposal of these patients, is not well suited to understand the patients (17). The results Reisi and colleagues (2011) as "the status of health literacy of the Elderly in 2011" showed that the level of health literacy in the elderly is insufficient and that more attention to the issue of health literacy in health promotion programs established makes (15). The results Tol and colleagues (2011) as "state of awareness and health literacy in women with type 2 diabetes who were referred to hospitals affiliated to the Tehran University of Medical Sciences" showed that diabetic women in the study had an average health literacy that stresses the need to education based training to improve their health is a basic practical knowledge (18). The results of Nekoei and colleagues (2011) under the title "health literacy and use of health services in the city of Kerman, 2011" The results showed that about 60 people have low literacy level (inadequate border), respectively (19). Tehrani Bani Hashemiet al. (2007) study titled "Health Literacy in 5 provinces and factors affecting it," the general concluded that health literacy is low in Iran. Education level is the strongest correlation with the rise in the level of health literacy, health literacy, and education in those who had more than 8 years, respectively (20). The results Jovic-Veraneset al. (2011) as "population health literacy patients involved in primary health care Belgrade, Serbia" The results showed that the patients' health literacy skills

needed to function adequately in the health care environment not (21). Results Lee et al (2010) as "health literacy, health status and health care utilization among adults from Taiwan" showed that almost 30% of them had low health literacy (14). In a study of Fang and Wang (2006) as a "literacy and health-related outcomes among patients taking the anticoagulant warfarin blood" did, it concluded that the lack of knowledge related to health literacy but warfarin is associated with control patients reported warfarin or nothing about it (22). Results of the study, Williams and colleagues (2002) entitled "The role of physician and patient-related health literacy" showed that low health literacy, especially for the sick and elderly is common. Patients with low health literacy, complex communication problems that may affect health outcomes. Such patients worse health status and less understanding about their medical condition and treatment (23).

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 private hospitals in Kerman in 2015's first quarter. Of any of the private hospitals of Al Zahra and Razia Firuz 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, within formed 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 (20) and more by (24) 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 in to three levels in adequate (0-59), marginal (border) (60-74) and adequate (75-100) was divided (20). To analyze the data, chi-square test and SPSS version 21 was used.

RESULTS

The results showed that cardiovascular patients admitted to private hospitals in Kerman 34/8% of

women and 59/3% of men are afforded adequate health literacy the difference is statistically significant and the level of health literacy is higher in men than in women (p -value= 0/010). Among age groups, 66/7% of people age 20 to 30 years has had adequate health literacy and In the age group 50 to 60 years of 40/5% of those with adequate health literacy was the observed differences were not statistically significant and the level of health literacy in the age group 20-30 years is higher than the age group 50 to 60 years (p -value=0/904). The results showed that 100% single, 46.9% married and are afforded adequate health literacy that this difference was not statistically significant (p -value=699/0). The results revealed that 57/4% of those with less than high school education had adequate health literacy and in people who had a diploma and associate degree 28/1% only those with adequate literacy level that the observed difference was statistically significant (p -value=033/0). Among the various occupations, 75/9% were self-employed people who have had adequate health literacy and the individual unemployed without adequate health literacy was found that the observed difference was statistically significant (p -value=0/001). The results showed that 52.4% of those who had an income higher than 7 million Rials are afforded adequate health literacy and 20% of those who earn 5 to 7 million Rials had adequate health literacy that the observed difference was statistically significant (p -value=0/103). Also in this study, 59/5% of patients who were in Kerman subsidiary of adequate health literacy and only 20% of the patients were from other cities are afforded adequate health literacy that this difference was statistically significant (p -value=0/181). The results revealed that 61/4% of patients who had no history of heart disease and 37.5% of patients who had a history of heart disease are afforded adequate health literacy that this difference was not statistically significant (p -value=0/063). Among patients admitted to

hospital, 83/3% of those admitted to the hospital four times adequate health literacy and in those first times referred to the hospital only 35.6% of

people of adequate health literacy have shown statistically significant differences were observed(p-value=0/177)(table 1).

Table 1: The relationship between health literacy and demographic variables

variables		Inadequate	border	adequate	p-value
		Frequency (percent)	Frequency (percent)	Frequency (percent)	
sex	woman	9 (19/6)	21 (45/7)	16 (34/8)	0/010
	men	12 (22/2)	10 (18/5)	32 (59/3)	
age	20 - 30	0 (0)	1 (33/3)	2 (66/7)	* /904
	30 - 40	4(21/1)	7 (36/8)	8 (42/1)	
	40 - 50	3 (15/8)	4 (21/1)	12 (63/2)	
	50 - 60	9 (24/3)	13 (35/1)	15 (40/5)	
	>60	5 (22/7)	6 (27/3)	11 (50)	
marital status	yes	21 (21/4)	31 (31/6)	46 (46/9)	* /699
	no	0 (0)	0 (0)	2 (100)	
level of education	Less thanhigh school diploma	12 (22/2)	11 (20/4)	31 (57/4)	* 0/033
	diploma and associate Degree	8 (25)	15 (46/9)	9 (28/1)	
	BA and higher	1 (7/1)	5 (35/7)	8 (57/1)	
job	self-employed	6 (20/7)	1 (3/4)	22 (75/9)	* /001
	employees	1 (4/8)	9 (42/9)	11 (52/4)	
	working	3 (42/9)	3 (42/9)	1 (14/3)	
	retired	5 (35/7)	5 (35/7)	4 (28/6)	
	unemployed	0 (0)	1 (100)	0 (0)	
	housewives	6 (21/4)	12 (42/9)	10 (35/7)	
monthly income	<400	1 (33/3)	1 (33/3)	1 (33/3)	* /103
	400-500	1 (33/3)	1 (33/3)	1 (33/3)	
	500-700	1 (10)	7 (70)	2 (20)	
	≥700	18 (21/4)	22 (26/2)	44 (52/4)	
Location of living	kerman	12 (20/7)	21 (36/2)	25 (43/1)	* /181
	Insubsidiary Kerman	8 (21/6)	7 (18/9)	22 (59/5)	
	other cities	1 (20)	3 (60)	1 (20)	
history of heart disease	yes	14 (25)	21 (37/5)	21 (37/5)	0/063
	no	7 (15/9)	10 (22/7)	27 (61/4)	
The number of visits to hospital	1	13 (28/9)	16 (35/6)	16 (35/6)	* /177
	2	4 (11/8)	10 (29/4)	20 (58/8)	
	3	3 (20)	5 (33/3)	7 (46/7)	
	4	1 (16/7)	0 (0)	5 (83/3)	

*Test, Fisher's Exact Test was used.

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 (25). 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 (15). Since health literacy is all about health and the ability of understanding and applying this information, Promote bilateral relationship between health literacy and quality of life there (26). People with low health literacy are less able written and verbal information provided by health

professionals to understand and to act on it, Incur additional medical expenses, have poorer health, higher rates of hospitalization and use of emergency services and preventive care (20). Low level of health literacy, mainly caused frequent and unnecessary visits to the doctor also prolong the stay of patients in hospitals, which in turn increase costs and lead to loss of part of the health budget (26). Thus, health literacy as a vital index of health care costs that it would not improve the use of health services is longer. 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 (27). Results showed that 48 percent of patients with adequate health literacy, 31% of patients health literacy border and 21% of patients with inadequate health literacy. The results showed that there was a significant relationship between sex and health literacy ($p = 0/010$). As Table 1 shows, there is no significant relationship between age and health literacy ($p = 0/904$). There is no significant relationship between marital status and health literacy ($p = 0/699$). As Table 1 shows, there is a significant relationship between level of education and health literacy ($p = 0/033$). There was a significant relationship between job and health literacy ($p = 0/001$). 52.4% of those who had adequate health literacy had an income higher than and equal 7 million Rials, So the monthly income patients and health literacy was a significant relationship ($p = 0/103$). According to Table 1, the relationship between location and health literacy level ($p = 0/181$) and also a significant correlation between the number of visits to hospital and health literacy ($p = 0/177$), respectively. The link between heart disease and health literacy was not significant ($p = 0/063$). In this study a statistically significant relationship between the level of health literacy, job, sex, education, income, location and number of visits was observed, The prevalence of low levels of

health literacy in patients with less education and lower income is higher. Findings of this study in relation to the level of health literacy of patients with cardiovascular disease patients in two private hospitals in Kerman showed that Most of the people who have inadequate and border health literacy and only a few of them, had adequate health literacy. These findings are consistent with findings of previous studies, including the results of Tehrani Banihashemi and colleagues (20), Reisi and co-workers (15), the Kohan, Ghasemi and Dodangeh (28), Ghanbariet al (29), Nekoeimoghadam et al. (19), Chewa and colleagues (30), Williamset al (23), Jovic-Veranes and colleagues (21) and Lee et al (14) is aligned. The findings showed a significant relationship between health literacy and education there. This finding is consistent with the findings of Tehrani Banihashemi (20), Nekoeimoghadam and colleagues (19), Sun and colleagues (31), Fang and colleagues (22), Lee et al (14) and the results of the research center of the strategies of the US health care has done is consistent. In other words, people with higher education, better health literacy and health information and instructions and better understand and more correct to use. But those hospitals that had lower education, health literacy had enough. However, patients who have a lower educational level to understand and use health information, and how the use of drugs and understanding physician orders are in trouble. In order to requires special attention is education. Results showed that health literacy is inversely correlated with age. So that those with less age, had higher literacy levels. This finding is consistent with the findings of Tehrani Banihashemi and colleagues (20), Tolet al (18), Lee and colleagues (14), Fang and colleagues (22), Sun and colleagues (31) and the center line is the US health care strategies. Younger people in understanding health information to older people have fewer issues of and as mentioned earlier, have more attention than older ones. The relevant authorities should

take measures to provide appropriate health information in a way that is simple and understandable for the elderly, as they think. Possible result of these findings can be used to reduce the ability of elderly patients to achieve and keep track of updated content and information resources, see reduce their ability to timely care and attention to their disease and other problems associated with it and so on. It is notable that the level of education and income are somehow affecting each other. And the results of this research between education level and income there is a significant relationship with the level of health literacy. In addition, the results obtained have shown that the level of health literacy is associated with income patients. This finding is consistent with the findings of Nekoei moghadam(19) antithetic with the findings of Lee et al(14), Sun and colleagues(31) and the US Center for Health Care Strategies matches. The results of this study with the results of the Reisi and colleagues(15) does not match In the study, about 79 percent of elderly people within adequate health literacy were mentioned.

CONCLUSION

The results showed that almost half of patients with adequate health literacy the other half of the marginal health literacy(border) and have inadequate health literacy. Therefore, these patients to understand and apply the instructions of doctors 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. The officials and healthcare providers should be so, and given more time to understand medical instructions to allocate these patients. Thus, health literacy leading to empowerment of people applying information and instructions related to health. Since the academic record directly and significantly correlated with their health literacy, It is essential to education and literacy in the community,

especially in the field of health information, was significantly greater than before. Health plans, providing simple and understandable educational materials, spending more time and having conversations with physicians and medical staff and patients at slower speeds, Including ways to help patients with low health literacy and improve their health literacy is. The results of this study to emphasize the importance of health awareness among the people, especially inpatients. 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, educational media simple and understandable produce. 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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