

Original Article

Determination of Health Literacy in Academicians in Turkey

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Abstract

Objective: This study was conducted in order to determine the health literacy of the academic staff working in a state university.

Methodology: This descriptive study was conducted with 200 academicians who accepted to participate in this study in a state university between May and November 2016. Data were collected through face-to-face interviews with the scale of adult health literacy. In the analysis of the data student t-test were used.

Results: The study reported a statistically significant difference among the mean scores of the academicians in health literacy in accordance with the variables of sex, education and whether they have chronic illness ($p < 0.05$). The mean score that the academicians obtained from the health literacy scale was found to be 14.69 ± 2.63 , and considering that the highest score that can be obtained from the scale is 23 and health literacy increases as the score increases, mean score of the academicians concerning the health literacy is above the average.

Conclusions: Considering that the academicians are the most educated individuals of the society, it is thought that their health literacy levels should be higher. For individuals to remain healthy, they need to understand and interpret the basic health information with the aim of protecting and improving their medical conditions and to develop behaviors in accordance with this. Only in this way, community health can be improved and healthcare services can be used correctly.

Key words: academicians, health literacy, university.

Introduction

Modern health system is rather complicated for those who benefit from healthcare services. The people who resort to this system for healthcare services need to get information about their health problems and services provided, know their responsibilities and rights and take decisions for their own health based on this information (Centre for Disease Control 2009).

In this process, it is assumed that those who resort to this system for healthcare services have knowledge and competence about the issues related to health, in other words, they have health literacy. Health literacy and communication of health information is now more important when compared to the past. On the other hand,

communicating the information about the health has become more difficult. The reasons of this situation include complexity of the diagnosis process, constantly renewed and increasing research findings, limited general literacy level, cultural differences, physical and cognitive differences depending on age, emotional situations affecting resting, learning and remembering.

Additionally, lack of ideal conditions for this communication (inadequacy of the time allocated to physician-patient relation, situation of the patient or the person who wants information, fear, pain etc.) further restricts the effectiveness of the communication (Institute of Medicine 2004).

Health literacy is associated with general literacy, as well. Having access to, understanding, assessing and implementing the health information are essential for maintaining a quality life, increasing life quality and preventing diseases. To this end, people are expected to be health literate by using their knowledge, motivation and competence (HLS-EU Consortium 2012; Sorensen et al 2012). When considered in this context, health literacy can be defined as the capacity of an individual to obtain, interpret and understand basic health information and services in a manner to protect, improve and enhance his/her health (IOM 2004; Peerson et al 2009; Çopurlar and Kartal 2016). When individuals with inadequate and limited health literacy are compared to those who have adequate health literacy levels, it is known that unnecessary hospital costs increase, hospitalization periods prolong and rates of having unnecessary examinations and using emergency service unnecessarily are higher in the former group (Baker 2006). These situations lead to unnecessary labor loss and increasing health expenses (Baker 2006).

According to the study conducted by Tanriover (2014) on 4979 people to measure the health literacy level in Turkey, the general health literacy level of Turkey is 30.4 %. The study reports that the 24 % of the society has poor health literacy while 40.1 % of the society has limited health literacy. This means that about 35 million individuals have inadequate and problematic health literacy levels (Tanriover 2014). The results of the study show that health literacy levels increase as the education levels of the individuals rise (Tanriover 2014). Low health literacy level prevents individuals from reading and understanding written materials and developing behaviors in accordance with them.

The results of the studies conducted so far indicate that health literacy levels differ by such socio-demographic features of the individuals as sex, age and education (Health Literacy, 2004). Thus, the present study was conducted with the aim of determining the health literacy levels of the academicians who have the highest education levels in the society.

Methods

The cross-sectional and descriptive design was used and the study conducted in a state

university in Burdur, Turkey. Convenience sampling methods were used. Fourteen academicians refused to participate (7 %). The study sample consisted of 200 academicians. The sample included those who volunteered to participate in the study.

Instruments

Demographic characteristics

This form is comprised of seven questions regarding academicians' socio-demographic characteristics: Age, sex, marital status, educational status, presence of a child, economic condition and presence of a chronic disease.

Adult health literacy scale

Adult Health Literacy Scale (AHLS) developed by Sezer and Kadioglu (2014) was used to measure the health literacy levels of the academicians. The scale aims at determining the competence of the adults about health literacy and contains 22 questions about health information and use of medication and one figure about locating the organs in the body. 13 questions are yes/no questions, 4 are fill-in the blank questions, 4 are multiple-choice questions and 2 are matching questions. Scoring of the questions is made separately for each question type. In yes/no questions, those marking the positive statements are given 1 while those marking the negative statements are given 0. In questions where participants are asked to fill in the blanks, correct answers receive 1 while wrong answers receive 0. In multiple-choice questions, those marking two or more correct answers are given 1 while those who have no correct answers or mark the correct answer together with the wrong answer are given 0. In matching questions, participants who have more than 2 correct matchings receive 1 while the others receive 0. The scores to be obtained from the scale range between 0 and 23. As the score received from the scale increases, health literacy level rises (Sezer and Kadioglu 2014). In this study, the reliability coefficient of the scale was determined as 0.77.

Data collection

The data was acquired by the researcher between May and November 2016 in a face-to-face interview method, explaining the aim of the research to the academicians who were part of the research sampling in the university where the

research was carried out. The inclusion criteria for academicians were a person who voluntarily accepted in the research, was literate in Turkish.

Data analysis

Analysis was conducted using descriptive statistics tests using the Statistical Package for the Social Services SPSS 17.0 (SPSS Inc., Chicago, IL). A test of hypothesis with p value of <0.05 was considered significant.

Ethical considerations

Written permission from Mehmet Akif Ersoy University Ethical Committee (GO 2016/28) was obtained. The objective of the research was explained to the participants and written permission was received from those agreeing to participate in the research.

Results

Age average of the academicians included in the study is 34.97 ± 7.20 . While 50.5 % of the participants are female, 56 % of them are married. Also, 54.5 % of them have master's degrees, 60.5 % of them do not have children and 61.5 % of them consider their incomes equal to their expenses. 83.5 % of the academicians participating in the research do not have any chronic illnesses (Table 1). In the present study, the mean score the academicians received from the health literacy scale is 14.69 ± 2.63 . Considering that the highest score to be received from the scale is 23 and the health literacy increases as the score increases, it is seen that the health literacy levels of the academicians are above the average (Table 2).

Table 1. Demographic Characteristics of the Academicians

Age ($\bar{X} \pm SD$)	34.97±7.20		
	n	%	Statistical Analysis
Gender			t=4.143
Female	101	50.5	p=.000*
Male	99	49.5	
Marital status			t=1.011
Married	112	56.0	p=.313
Single	88	44.0	
Educational level			F=3.675
Bachelor	62	31.0	p=.000*
Master	109	54.5	
Doctored	29	14.5	
Child			t=1.290
Have	79	39.5	p=.198
Have not	121	60.5	
Economic status			F=0.314
Income > expense	51	25.5	p=.731
Income=expense	123	61.5	
Income < expense	26	13.0	
Chronic disease			t=3.020
Have	33	16.5	p=.004*
Have not	167	83.5	
Total	200	100	

*p<0.05

Table 2. Scores of Adult Health Literacy Scale

	Min scores	Max scores	$\bar{X} \pm SD$
Adult Health Literacy Scale	7	20	14.69±2.63

A statistically significant difference was found among the mean scores of the academicians related to health literacy by the variables of sex, education and whether they have a chronic illness ($p < 0.05$) (Table 1). On the other hand, a statistically significant difference could not be detected among the mean scores of the academicians related to health literacy by the variables of marital status, income level and whether they have children ($p > 0.05$).

The present study reports that women (15.42 ± 2.43) have higher health literacy mean scores than men (13.93 ± 2.63) and this difference is of high statistical importance ($p = 0.000$). Considering the level of education, health literacy mean scores are highest among those having doctoral degrees (16.31 ± 2.25) who are followed by the master's degree holders (14.84 ± 2.43) and bachelor degree (13.66 ± 2.74). A highly significant difference exists among the health literacy mean scores of the participants by the variable of education ($p = 0.000$).

Discussion

Increasing prevalence of chronic illnesses in the society and increases in the complications emerging as a result of this have brought an additional burden on the health system. Furthermore, declines in the time allocated to the patient and service quality have resulted in the necessity for individuals in the society to be knowledgeable about their own health and illnesses, take part in the decision making and assume responsibility in the delivery of modern health services (Tanriover 2014; Kramer et al 2014). In order to evaluate the participation of individuals in the health system and their abilities and motivations to have a voice and assume responsibility about their own health, health literacy levels of the people and society should primarily be determined. It was reported that limited or inadequate health literacy is associated with wrong health decisions, riskier health behaviors, worse health parameters and

unnecessarily excessive use of the health system (HLS-EU Consortium 2012).

If it is considered that health literacy levels are generally lower than general literacy and mathematical skills, it can be understood how serious a problem it is for the societies and health systems. Turkey Health Literacy Survey shows that only one third of the society have adequate health literacy levels (Tanriover 2014). This result means that 35 million people out of the adult population in Turkey have inadequate health literacy levels. Along with age which is factor that cannot be changed, level of education and socio-economic level, which are factors that can be improved, stand out as the reasons of inadequate health literacy. Health literacy levels are higher in younger age groups while they decline with increasing age (Tanriover 2014). In the present study, a statistically significant difference exists among the health literacy mean scores of the academicians by the variables of sex, education and whether they have a chronic illness ($p < 0.05$) (Table 1). On the other hand, there is not a statistically significant difference among the health literacy mean scores of the academicians in terms of marital status, income level and whether they have children ($p > 0.05$).

The present study reports that women (15.42 ± 2.43) have higher health literacy mean scores than men (13.93 ± 2.63), and this difference is of high statistical importance ($p = 0.000$). In terms of the level of education, health literacy mean scores are highest among those having doctoral degrees (16.31 ± 2.25) who are followed by the master's degree holders (14.84 ± 2.43) and bachelor degree holders (13.66 ± 2.74). A highly significant difference exists among the health literacy mean scores of the participants by the variable of education ($p = 0.000$).

In the present study, it was concluded that 64.6 % of the Turkish society fall into the category of "problematic or inadequate" health literacy. Turkey whose mean score of general health

literacy index is 30.4 is far below the European average in health literacy. The rate of individuals falling into the health literacy category of “adequate or perfect” is 35.4 %, which means that only one third of the society have adequate or better health literacy levels. These findings show that health literacy is a problematic area in Turkey and point out to the necessity of actions aimed at increasing the health literacy levels throughout the society as a priority in a rapid manner in order to achieve success in all kinds of improvement and quality enhancement efforts within the health system. Another finding related to the general health literacy averages of the individuals is that the average increases in parallel to the rising level of education.

Although low level of education is a risk factor for health literacy, high level of education is not sufficient alone for health literacy (Tanriover 2014). In the study conducted by Ciccarelli et al., it was determined that 38 % of the American individuals who had received education in a higher education institution/university had limited health literacy (Ciccarelli et al 2010). In this study, the mean of health literacy levels of academicians who have at least bachelor’s degree and are accepted as the most educated individuals of the society is slightly over the average. In terms of the level of education, health literacy mean scores are highest among those having doctoral degrees (16.31 ± 2.25) who are followed by the master’s degree holders (14.84 ± 2.43) and bachelor degree holders (13.66 ± 2.74). This finding supports the fact that health literacy level increases in direct proportion to the level of education.

Advanced age is a known risk factor for limited health literacy. According to the studies conducted so far, the highest health literacy levels are reported in the youngest age groups while health literacy levels decrease as the age advances. Just like advanced age, adolescence is accepted as a risk factor for low health literacy (Tanriover 2014). Age average of the academicians participating in our study is 34.97 ± 7.20 . In this respect, it is thought that age average did not create a difference for the health literacy levels.

It has been reported that limited health literacy is associated with more frequent and worse health outcomes in some parts of the society (DeWalt et al 2004; Kondilis et al 2006). In a study on the

European Union, average health literacy was found to be higher in the young people who do not have financial problems, those with high social status perception and high levels of education and women (HLS-EU Consortium 2012; Sorensen et al 2012). There is a two-way relationship between socio-economic status and health literacy. As determined in the study carried out by Tanriover (2014), health literacy level decreased as the socio-economic status deteriorated. In our study, a vast majority of the academicians expressed that their income levels are equal to their expense levels and in this sense, since there is not a significant difference between income level and health literacy, they could not be associated. In parallel to the literature, this study determined that health literacy mean scores of women are higher than those of men. Women might have higher health literacy levels since they are more interested in health issues and they use health services more frequently due to the responsibility they assume for providing care to children and elderly at home.

Conclusion

American Institute of Medicine identifies three main development points for improvements in health literacy in the society as culture, health system and education system (IOM 2004). Efforts which ground on and target only the health system will be insufficient to rise the health literacy level of Turkey. Thus, all areas should be targeted and health literacy development strategies should be determined. In general sense, the available information points out to the importance of improving health literacy. For individuals to remain healthy, they need to understand and interpret the basic health information with the aim of protecting and improving their medical conditions and to develop behaviors in accordance with this. Only in this way, community health can be improved and healthcare services can be used correctly. At this point, raising awareness and increasing knowledge about this issue is considered as the first step. Low health literacy level should be evaluated at each stage of the health system and necessary steps should be taken. In this respect, media, other specialties and family physicians should be in communication with patients and patients’ relatives and provide training when needed (Dennis et al 2012; Mitchell et al 2012; Taggart et al 2012). Conducting the health

literacy studies on the individuals with low levels of education will contribute significantly to the literature by determining the impact of the level of education on health literacy. Studies on health literacy usually have been limited to a country, a patient group or service field. Thus, new studies on different populations for examining different parameters are highly recommended.

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