

ORIGINAL ARTICLE

Medicine Science 2020;9(3):573-8

Comparison of adult health literacy of individuals related to two family health centers with high and low socio-economic level

 Suzan Havlioglu¹,  Fatma Ersin²

¹Harran University, Health Services Vocational School, Sanliurfa, Turkey

²Harran University Faculty of Health Sciences, Department of Public Health Nursing, Sanliurfa, Turkey

Received 10 February 2020; Accepted 10 April 2020

Available online 16.05.2020 with doi: 10.5455/medscience.2020.09.9230

Abstract

The aim of this study was to compare the adult health literacy status of individuals connected to two family health centers with high and low socio-economic status. This descriptive study was conducted between May and August 2019 in Sanliurfa. Four hundred people who applied to these family health centers were included in the study. A socio-demographic characteristics information form and the Adult Health Literacy Scale were used as data collection tools. The level of adult health literacy of the individuals in the family health center with low socio-economic status was significantly lower than those in the family health center with high socio-economic status ($p<.05$). While there was a positive correlation between adult health literacy score and gender, education, and occupational status ($p<.05$), there was a negative relationship between the score and having a child, number of children, income status, and social security ($p<.05$). The average health literacy scores of individuals with low socio-economic status are lower than those with high socio-economic status.

Keywords: Adult health literacy, low and high socio-economic status, nursing

Introduction

Even among individuals with similar levels of education, their reading, writing, understanding, and calculation skills may be different. For this reason, the health literacy level should be taken into consideration when evaluating an individual on health-related issues, not the educational status [1]. Health literacy, healthy behaviors, proper use of medicines, knowing how to access and benefit from health services, understanding and signing informed consent forms, making decisions about self-care and disease management, being able to use medical devices in the home, and understanding the role of caregivers and evaluation ability. [2,3]. The World Health Organization considers health literacy as the key to raising the level of health and defines it as the ability of an individual to access, understand, and use health information for the protection and maintenance of health [4]. The American Medical Association (AMA) defines the concept of health literacy as having the basic reading and numerical skills to use the health services in a particular environment [5]. In the Health Promotion

Dictionary of the Ministry of Health, General Directorate of Primary Health Care Services, health literacy is defined as having the knowledge, skills, and self-confidence necessary to change one's lifestyle and conditions in order to improve one's own health and thereby contribute to community health [6].

In considering the state of health literacy in the world, it is reported that 80 million adults in the developed countries of America have a limited degree of health literacy [7]. In a comprehensive study conducted in eight European Union member states (Greece, Austria, Ireland, Spain, the Netherlands, Germany, Bulgaria, and Poland), the countries were divided into four groups as inadequate, problematic, adequate, and very good. At least 1 in 10 (12%) of the respondents showed insufficient understanding of health literature, and almost 1 in 2 (47%) had limited (insufficient or problematic) health literacy. However, the distribution of health literacy levels differed substantially across the countries (29–62%) [8]. In a health literacy study carried out in 23 different provinces in Turkey in 2009–2012, which included 4,924 people, Turkey's general health literacy index was found to be 30.4. In the categorical evaluation, 64.6% of the population was found to be in "inadequate" (24.5%) or "problematic" (40.1%) health literacy categories [9]. In the Adult Health Literacy Scale measuring the validity and reliability of health literacy, the general overall index score of health literacy

*Corresponding Author: Suzan Havlioglu, Harran University, Health Services Vocational School, Sanliurfa, Turkey,
E-mail: suzanhavlioglu@hotmail.com

in the working groups was 29.5 (problematic – limited health literacy). While 30.6% of the study group had an adequate or excellent health literacy level, this was 37.3% in the treatment and service dimension and 30.3% in the disease prevention and health promotion dimension [10].

Research has shown that individuals with inadequate health literacy use preventive health services less and generally seek treatment in emergency services. In addition, individuals' inadequate health information causes problems in the management of their diseases and an increase in the incidence of drug use and chronic diseases. Moreover, it leads to the longer hospitalizations, unnecessary examinations, labor losses, and unnecessary health expenditures [11-13].

Health literacy is therefore an important public health issue because of its many effects on individuals' health outcomes [14]. For this reason, the attention given to health literacy in public health nursing practices is increasing, and the recognition is growing that individuals need to understand what they read and are told about their health and be able to transfer this understanding to their actual life practices [6]. Therefore, determining the health literacy status of individuals is very important, both to reveal their current situation and to plan interventional studies. This study was conducted to compare the adult health literacy status of individuals connected to two family health centers with high and low socio-economic status.

Materials and Methods

Study population and design

The descriptive study was conducted between May and August 2019 in Harran University city center with high and low socio-economic status individuals who applied to a family health center. At the stage of selection of the family health centers, the names of the family health centers with low and high socioeconomic status were gathered from the Directorate of Health and listed. Two family health centers with one low and one high socioeconomic status were randomly determined from the provincial center of Şanlıurfa. The study included 400 individuals over the age of 18 who visited these family health centers between 1 May 2019 and 1 August 2019 who were literate and agreed to participate in the study. The socio-demographic characteristics information form and the Adult Health Literacy Scale, which was prepared by the researchers, were used as the data collection tools. The researchers collected the data face-to-face with the participants. The socio-demographic characteristics form consisted of 13 questions, including age, educational status, marital status, income status, number of children, social security receipt, occupational status, health status, chronic disease status, and vision and hearing problems. The Adult Health Literacy Scale consisted of 23 questions.

Adult Health Literacy Scale

In the scale, 22 items are related to health information and drug use in order to determine adequate health literacy. There is also a diagram to test individuals' knowledge of the location of the organs in the body. Thirteen of the questions are the yes/no type, four require filling in spaces, four are multiple choice, and two are

matched. The questions were scored separately for each question type. The higher the score obtained from the scale, the higher the individual's health literacy level. The Cronbach's alpha coefficient of the scale was found to be .77. [6] In this study, the Cronbach-alpha value of the scale was found to be .78.

Before starting the study, permission was obtained from the Ethics Committee of Harran University Faculty of Medicine (decision no. 19.05.2019/5), the Provincial Health Directorate, and the participants.

Statistical analysis

The SPSS 20.0 package program was used to analyze the data. Descriptive statistics, t-test (independent sample) in independent groups and variance analysis (anova) in independent groups were used to investigate differences between groups. $p < .05$ was accepted as statistically significant.

Results

This study was carried out in two family health centers with high and low socio-economic status in Şanlıurfa city center. The socio-demographic characteristics of the participants are provided in Table 1.

Table 2 shows the distribution in the mean scores of adult health literacy of the participants. The mean Adult Health Literacy Scale score of the individuals in the family health center with a low socio-economic level was 9.04 ± 3.40 , and the mean Adult Health Literacy Scale score of the individuals in the family health center with a high socio-economic level was 13.91 ± 3.53 . A statistically significant difference was found between the mean scores of the individuals with low socio-economic status and the mean scores of individuals with high socio-economic status ($p < .05$).

The sociodemographic characteristics of the participants and the comparison of their mean adult health literacy scale scores are given in Table 3. The mean adult health literacy scores were significantly higher among the men, single participants, employed participants, those with social security, those who did not have hearing problems, youths, those with high education levels and those with low numbers of children ($p < .05$).

Discussion

The total mean Adult Health Literacy Scale score of the participants was found to be 11.47 ± 4.23 . The mean Adult Health Literacy Scale score of the individuals in the family health center with low socio-economic status were significantly lower than those in the family health center with high socio-economic status ($p < .05$). Dursun et al. (2019) found the mean Adult Health Literacy Scale score to be 15.78 ± 3.50 . This difference may be due to the fact that the sample groups and their cultural characteristics were different [15]. In addition, it is expected that the mean scores of Adult Health Literacy Scale in individuals with low socio-economic status would be low. At the same time, this result is thought to be due to the high-income sources, social facilities, and the use of existing communication tools of individuals in the family health center with a high socio-economic level.

Table 1. Distribution of Socio-Demographic Characteristics of Individuals (n = 400)

	low (n=200) number	%	High (n=200) number	%	Total (n=400) number	%
Gender						
Female	157	(78.5)	123	(61.5)	280	(70.0)
Male	43	(21.5)	77	(38.5)	120	(30.0)
Age						
18–30 years old	94	(47.0)	100	(50.0)	194	(48.5)
31–50 years old	98	(49.0)	74	(37.0)	172	(43.0)
51–75 years old	8	(4.0)	26	(13.0)	34	(8.5)
Education						
Literate	73	(36.5)	10	(5.0)	83	(20.8)
Primary education	73	(36.5)	36	(18.0)	109	(27.3)
Secondary	21	(10.5)	28	(14.0)	49	(12.3)
High school	19	(9.5)	48	(24.0)	67	(16.8)
University	14	(7.0)	78	(39.0)	92	(23.0)
Marital status						
Married	175	(87.5)	143	(71.5)	318	(79.5)
Single	25	(12.5)	57	(28.5)	82	(20.5)
Have a child						
Yes	172	(86.0)	121	(60.5)	293	(73.3)
No	28	(14.0)	79	(39.5)	107	(26.8)
Number of children						
1–3	95	(47.5)	82	(41.0)	177	(44.3)
4–5	36	(18.0)	29	(14.5)	65	(16.3)
6–11	41	(20.5)	12	(6.0)	53	(13.3)
Job						
Housewife	137	(68.5)	81	(40.5)	218	(54.5)
Worker	36	(18.0)	19	(9.5)	55	(13.8)
Officer	13	(6.5)	22	(11.0)	35	(8.8)
Other	14	(7.0)	78	(39.0)	92	(23.0)
Socio-Economic Status						
Income is more than expenses	8	(4.0)	40	(20.0)	48	(12.0)
Income is equal to expenses	110	(55.0)	89	(44.5)	199	(49.8)
Income is less than expenses	82	(41.0)	71	(35.5)	153	(38.3)
Social security						
Yes	145	(72.5)	163	(81.5)	308	(77.0)
No	55	(27.5)	37	(18.5)	92	(23.0)
Any disease						
Yes	37	(18.5)	47	(23.5)	84	(21.0)
No	163	(81.5)	153	(76.5)	316	(79.0)
Vision problems						
Yes	8	(4.0)	25	(12.5)	33	(8.3)
No	192	(96.0)	175	(87.5)	367	(91.8)
Hearing problems						
Yes	7	(3.5)	4	(2.0)	11	(2.8)
No	193	(96.5)	196	(98.0)	389	(97.3)

Table 2. Distribution of The Mean Scores of Adult Health Literacy in Individuals With Low and High Socio-Economic Status in ASM

Socio-Economic Status	$\bar{X} \pm SS$	Minimum	Maksimum	t	p
Low	9.04 $\pm$ 3.40	1	19	14.013	.001
High	13.91 $\pm$ 3.53	5	21		
Total	11.47 $\pm$ 4.23	1	21		

Table 3. Comparison of Between Adult Health Literacy and Variables

Socio-Demographic Characteristics of Individuals		$\bar{X}$	SS	t	p
Gender	Female	11.01	4.31	-3.35	.001
	Male	12.55	3.84		
Marital status	Married	11.03	4.28	-4.23	.001
	Single	13.20	3.58		
Job	working	12.94	3.92	-6.66	.001
	not working	10.25	4.10		
Social security	Yes	11.70	4.26	1.99	.047
	No	10.70	4.08		
Any disease	Yes	11.28	4.56	-0.46	.641
	No	11.52	4.15		
Vision problems	Yes	11.48	4.44	0.01	.992
	No	11.47	4.22		
Hearing problems	Yes	8.00	4.71	-2.78	.006
	No	11.57	4.18		
		X	SS	F	p
Age	18–30 years old	12.04	4.09	4.04	.018
	31–50 years old	10.79	4.36		
	51–75 years old	11.70	3.96		
Education	Literate	8.25	2.92	56.10	.001
	Primary-secondry education	10.76	3.93		
	Secondary	12.29	3.82		
	High school -University	15.01	3.19		
Number of children	1–3	11.33	4.23	6.23	.002
	4–5	10.72	4.44		
	6–11	9.03	3.53		
Socio-Economic Status	Income is more than expenses	12.83	3.95	2.85	.059
	Income is equal to expenses	11.34	4.10		
	Income is less than expenses	11.22	4.43		

Cultural and social factors, education systems, and health systems affect and shape health literacy and affect health outcomes and costs. Paasche-Orlow and Wolf's models of health literacy include social status and income, as well as demographics such as age, education, and ethnicity. In addition, physical and cognitive factors, such as memory and vision, affect health literacy [16,17].

In the study, Adult Health Literacy Scale score of the women was found to be lower. While Okyay's study did not reveal any gender differences, the average health literacy score of women was found to be lower in different studies [18,19]. The results obtained from this study may be related to the low educational level of girls due to the cultural characteristics of the Turkish society.

In the study, it was found that the level of Adult Health Literacy Scale score decreased as age increased. However, many studies have shown that the health literacy score is lower with increasing age [8,20-22]. In studies conducted using different health literacy scales, it was found that the health literacy level decreases as age increases [23]. The finding in the study on the lower health literacy levels as age increased was an expected result, and it may be an indicator that elderly individuals have insufficient health-related knowledge.

In the study, it was found that the level of Adult Health Literacy Scale score increased as education levels increased. The literature shows that the health literacy score increases as the educational level increases [10,18,24,25]. A study similar to this one found that the health literacy score was lower in the groups with a low educational level [8]. Considering that the concepts of education, literacy, and health literacy are related, the significant difference obtained from the study is an expected result.

In the study, it was determined that the single participants had higher Adult Health Literacy Scale score than the married participants. Özdemir (2018) found that the health literacy levels of the individuals did not show a significant difference according to their marital status [26]. In his study conducted in Isparta in 2016, Türkoğlu found that single people have higher health literacy than married people and that the health literacy of individuals varies according to their marital status [27]. Temel (2017) found that the mean score of married individuals was higher than that of single people [23]. In the study by Bakan and Yıldız (2019) using the Turkey Health Literacy-32 scale, the mean score of married participants was higher [28]. The higher Adult Health Literacy Scale score of the single individuals in this study may have been a result of the married individuals' lack of ability

to allocate sufficient time for health-related issues due to some responsibilities assigned to married individuals in the province where the study was carried out.

In the study, it was determined that the participants with lower income levels had also lower Adult Health Literacy Scale score levels, but the difference was not significant. Similarly, in many studies, the health literacy scores were found to be lower in patients with a low income [8,19,29]. Considering that income status is beneficial in accessing health services, it is expected that the health literacy scores of low-income individuals is low. Temel found that people who think that their income is higher than their expenses have higher health literacy levels and that people's health literacy levels show a statistically significant difference compared to their income [23]. A similar situation is shown in another study conducted in Isparta province [27]. This may be an indicator that the priorities of the individuals with lower income levels were different.

In the study, it was determined that the participants who were employed had higher Adult Health Literacy Scale score levels than the others. In the study conducted by Temel on the health literacy and health perceptions of elderly individuals with a chronic disease, a difference was found between the health literacy levels of individuals [23]. Özdemir's (2018) study found that the health literacy levels of individuals did not show a significant difference according to their working status [26]. This result indicates the increased level of awareness of employees as a result of their communication with different individuals in the course of their jobs.

Conclusion

The mean health literacy scores of the individuals in the regions connected to the family health center with a high socio-economic level were higher than those in the regions connected to the family health center with low socio-economic level.

Therefore, considering that health literacy is affected by both personal and social factors, it is not realistic to expect scientific developments to improve health outcomes without improving the level of health literacy. In particular, nurses working in family health centers with low socio-economic levels should use the "educational role" more actively to eliminate inequalities in health literacy.

This study suggests that it is important to consider the individual levels of health literacy, the health literacy levels of various regions in the health system, and the education system to determine the relationship between social and cultural systems. In addition, it is recommended that studies on interventional nursing practices be undertaken.

Conflict of interests

The authors declare that they have no conflict of interest and any financial disclosures.

Financial Disclosure

All authors declare no financial support.

Ethical approval

Permission was obtained from the Ethics Committee of Harran University Faculty

of Medicine (decision no. 19.05.2019/5)

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