

Examination of health literacy and healthy life awareness levels of university students

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ABSTRACT

This study was organized to aim to define the university students' healthier level of life at the sharing basement of health literacy that balanced the workload of partners/stakeholders by influencing the relations between the patients and physicians/doctors positively to ensure to be more successful in/during the diagnosis and treatment services carried out on health area in the last years. In the first chapter of this study, some operational and conceptual information were given and studied related to literature and some research. In the second chapter, the importance, necessity of this study, research problem, sub-problems, data collecting instrument/tool, the evaluating form of data, research World and research sample were defined. In the last chapter of the study, the data were analyzed by using correct/suitable statistical methods, evaluated and answered the problem and sub-problem questions by comparing, and then some suggestions were presented and discussed. As a result of this study, it may be said that the patients and their close relatives have a high level of health literacy and awareness and a high level of satisfaction with the health services, which affects the process positively depending on satisfaction level and ensures economical and time savings/advantages. At the same time, it was understood that there were very important personal and social problems. In the study, the health literacy levels of the participants were found to be "Moderate". In addition, it was determined that health literacy differed according to gender, age, marital status and number of siblings variables in the study; it was also observed that health literacy did not differ according to educational status, income level and family type variables.

Keywords: Health literacy, awareness, healthy living, preventive health services, orthopedical accidents.

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INTRODUCTION

Rapidly developing technologies in the field of health and health services, original and scientific concepts related to these technologies, can cause problems in communication activities between the patient - patient relatives and the healthcare team, especially in terms of intelligibility and self-expression. At this point, it should be stated that the lack of knowledge, at least at the conceptual level, is at the root of the problems experienced. As it is known, one of the most basic factors that disrupt healthy and understandable communication

is the correct understanding of the message sent in communication by the receiver and giving the right response. Otherwise, the expected feedback will not appear and the process will remain only as a one-way message. Today, there are paradigmatic changes and transformations in the field of health, as in every field. In this context, the expectations of health care providers from their target groups have increased and being aware of the responsibilities of the health care team and patient-patient relatives in order to achieve more effective

diagnosis and treatment results, as the level of knowledge and awareness about the health services provided.

The need for adequate equipment has emerged on the basis of awareness, entry behaviors, and readiness levels. None of the parties-stakeholders can realistically meet their expectations by assigning their own duties and responsibilities to others. In order for the results that people expect from health services to emerge, they need to make the right health decisions. Behind such sound decisions, it is expected to understand health information and services, to have performance at the point of access to information and to have the capacity to develop objective predictions by processing all this information. Health literacy can be mentioned as the degree of capacity related to all these competence areas (Sönmez, 2013). Health literacy can also increase the quality of life within the framework of preventive health services, and accordingly, life expectancy. A health-literate person with such a high level of awareness can at least eliminate the inequalities that may be experienced in health services related to him/her (Sönmez, 2013).

In general, health workers with a high level of health literacy should note that performance-based attitudes and behaviors on professional satisfaction, accurate and

healthy communication with stakeholders at an institutional and personal level, and more effective clinical services, are very important in meeting expectations. On the other hand, it is necessary for those who benefit from health services to be equipped with health literacy in the same way; it can be thought that they will have more accurate communication skills that can positively affect the process and the result. Results that can be positive and effective for service users can be explained as being able to explain their own situation with correct expressions, in other words, intelligibility, the capacity to understand what is explained with scientific and technological concepts, more participation in decision processes and more effective use of the health services provided. In the process that works in this way, it would also be meaningful to talk about a culture created with the protection of health, a higher level of awareness and sustainability in preventive health services. Sönmez defined health literacy in 2013 as shown in Figure 1.

As stated in Figure 1, the need for health literacy, awareness and consciousness about health has given birth to individual and even institutional skills that emerge with the supply of health services and the expectations of those who benefit from these services and those who serve them.

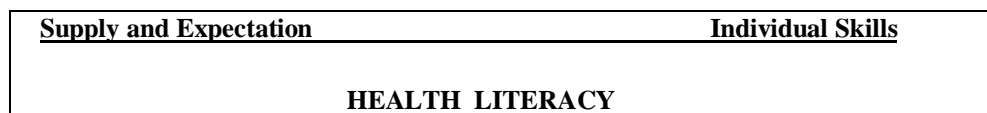


Figure 1. Health literacy (Sönmez, 2013).

Why is health literacy necessary?

Although health literacy is indispensable for those who receive health services, their relatives, and the health teams who plan and carry out these services, it can be said that it is a very important competence that must be possessed by everyone. Because it is unthinkable to have someone who will not benefit from health services. All of the individuals that make up society go through all of these processes, either as a patient or as a patient's relative. Health literacy improves the ability of individuals to reach the right information and service about health, the ability to use this service, and the capacity to read and understand the instructions on health services correctly. It enables and even strengthens the more accurate use of resources, the determination of quality conditions in health services, and the effect of an individual on his own and public health. Therefore, it can be said that the basic independent variables/skills of health literacy are: reading, listening, analyzing, participating in decision-making, and adapting to life. A

person who is a good health literate person can understand the warnings and information given on the medicine boxes, evaluate the directives of health teams and members for treatment and diagnosis, and take necessary actions on the approval forms, and this understanding includes more than just the ability to read, which is known as the ability to approach holistic health services. Factors such as age, income level, job position, education level, professional field, using the acquired information and seeking more up-to-date information, perception ability and selectivity level, weakness of learning capacity, capacity to express oneself, ability to research and question, curiosity, interest and knowledge. directly affects this skill.

The rights and expectations of those who need health services within the framework of the health system, and even those who will in the future, be informed about health issues, health problems and the services to be provided on these issues and when needed, to be informed, to be aware of their own responsibilities and rights, and to be able to make decisions about health,

have responsibilities and roles (Centre for Disease Control and Prevention, 2009). The most vital part of the job is; It is assumed that those who apply for health services and their relatives have sufficient entry behaviors and prerequisite learning. Because diagnosis and treatment services are legally based on this assumption. There are communication problems between the patient and their relatives, the institution providing the health service and the health teams on the basis of the legal responsibility processes, irreversible errors and negativities that occur in the planning and execution of health services. Either the patient or the patient's relative could not explain the situation more clearly, or the healthcare team could not provide satisfactory explanations for the patient and relatives about the processes to be carried out. In short, someone has made a transaction without the full knowledge of the other, or such a perception has arisen.

The patient-physician relationship resembles teacher-student relationships in some respects. One of the main variables of the process is the dimension of guidance and psychological counseling on the part of the physician. Because, whatever the field of service is, it is very important to recognize and direct the addressee. For this, healthy communication processes are necessary and the carriers of this necessity are the information technologies that must be possessed. In this case, being able to explain, explain, understand and ultimately reach a common consensus is a very critical situation, and there will be critical behaviors that will develop depending on this critical situation, and within the framework of these behaviors, healthy decision processes will undoubtedly come into play. At that time, the legal situations that were experienced may not have happened. Today, there is a greater need for health literacy and health-related information sharing. Because it is known that the change of the individual in the name of evolution corresponds to development. The complexity of diagnosis processes, constantly renewed and increasing research findings, very limited general health literacy level, social and cultural differences, age-related physical and cognitive differences, individual, psychological and emotional states related to learning, insufficient time allocated for physician-patient relationship and interaction, fear network are effective factors (Sönmez, 2013).

Examples of the work performed

Health literacy states that it is related to general literacy, it aims to increase the quality of life throughout life, in this sense, it is necessary to take and implement daily decisions, make judgments, access health information, and inform people about understanding, evaluating and applying all these (Sorensen et al., 2012; cited in Tanrıöver et al., 2014). There are three levels of health

literacy. Basic-functional health literacy (sufficient general reading and writing skills), interactive health literacy (cognitive and social skills, taking part in daily life, acquiring information, making sense of different types of communication) and critical health literacy (will be able to critically analyze health-related information and more advanced skills that will enable it to be used in health decisions). As can be seen, health literacy also expresses the individual's effort and motivation to reach health information; it also includes cognitive and social skills (Nutbeam, 1998). As the Turkish Health Literacy research team stated in 2014, "To put it very broadly, the education system, cultural and societal factors, and the health system that individuals deal with potentially influence and shape health literacy, and these factors ultimately affect health outcomes and costs. In other words, health literacy is shaped by the interaction of individuals' skills with their healthy environment, health system, education system and social and cultural factors in family, work and society (Nielsen-Bohlman et al., 2004). Conceptual model and scales of health literacy.

The concept of health literacy created an area in which awareness increased at the end of the 1990s, many scales were developed to be used in assessment, and many studies were conducted on it (American Medical Association, 1999). Scales developed over the conceptual models created can generally evaluate certain dimensions of health literacy in addition to the general literacy knowledge and skills of individuals. Some of them are scales developed for use in clinical practice, and some of them are developed to evaluate wider populations. For example, the test of functional health literacy in adults/TOFHFLA (Parker et al, 1995). The short test of functional health literacy in adults/STOFHFLA, which is the shortened version of this scale, is a rapid estimate of adult literacy in medicine/ REALM (Davis et al., 1993). They are health literacy scales that have proven validity in many societies. However, the limitations of these scales are that TOFHFLA and STOFHFLA in particular contain questions specific to the American healthcare system and only English and Spanish versions have been validated. National assessment of adult literacy survey/NAAL (Kutner et al., 2006), critical health competence test/CHC (Steckelberg et al, 2009), health literacy management scale/HeLMS (Jordan et al., 2013) and the health literacy questionnaire/HLQ (Osborne et al., 2013) aims to evaluate the health literacy of larger populations in a more multidimensional way.

However, none of these scales can be applied to all societies, they are not scales that can measure all dimensions of health literacy, and their relations with conceptual frameworks are not precisely defined. (Sorensen et al., 2013). Considering the above-mentioned points, Sorensen and his colleagues determined the conceptual dimensions of health literacy and drew a model framework. The Health Literacy Survey

-European Union (HLS-EU), a health literacy questionnaire developed by associating this conceptual framework with questions assessing the degree of ease, was used and validated as the scale of the most comprehensive health literacy study in Europe (Sorensen et al, 2013). have conducted the study. In a study conducted in two city hospitals, health literacy was measured with the "Adult Functional Health Literacy Test". Patients' awareness of their disease was assessed using 21 hypertension and 10 diabetes questions based on key elements of educational materials in clinics. Among patients with hypertension, 92% of those with adequate health literacy knew that a blood pressure level of 160/100 mmHg was a high value, while only 55% of those with insufficient health literacy could answer this question correctly. It was observed that 94% of diabetic patients with adequate health literacy knew the symptoms of hypoglycemia, while this rate remained at 50% in those with insufficient health literacy. According to the results of the study, inadequate functional health literacy was found to be a serious obstacle to the education of patients on chronic diseases (Williams et al., 1995). In another study, health literacy is a competency that must be acquired not only for patients but also for healthy individuals to benefit from basic health services. In a study conducted among people receiving primary health care services, the relationship between health literacy and socio-demographic variables, health perception and the presence of chronic conditions was investigated (Jovic-Vranes et al., 2009).

METHOD

This study is descriptive. The data were tried to be obtained by scanning the model. The analyzes of the obtained data are in the form of difference tests with percentages, which is one of the appropriate statistical data analysis methods.

Purpose of research

The purpose of this research is to make recommendations based on research results regarding a situation assessment and measures to be taken in order to raise awareness and consciousness levels in individual and societal health literacy, preventive health services, diagnosis and treatment practices. Thus, it is to make more healthy, persuasive and persuasive communication skills work between the patient, their relatives and the healthcare team. Thus, it is believed that more economical, process and result-oriented health services will be achieved. In addition, in this study, the health literacy levels of the participants were affected by various variables; It is also aimed to determine the differentiation

status according to gender, age, education level, marital status, income level, family type and the number of siblings.

Research problem

What are the university students' health literacy and health life awareness levels?

Sub-problem

Are there any differences according to defined variables such as sex, education status, family type, income level, age, marital status and the number of siblings of participants' point of views about health care and healthy life?

Research population and sample

The universe of this research is higher education students. The sample is Atatürk University Faculty of Education in 2020-2021; it consists of PDR, Preschool, Turkish Language Teaching, Science Teaching and Social Studies Teaching senior students.

Hypothesis and limitations

The research is limited to the sample group believed to represent the universe and their objective evaluations. Evaluations were made based on life, experience and experiences and with the use of free will.

Data collection tool

This is a descriptive study and the data was obtained using the scanning model. The data collection tool is the "Health Literacy" questionnaire, which was used in previous studies on this subject. This questionnaire has multiple-choice and rated options. The harmony between them was examined by translating from the original English, which was used in the "Turkey Health Literacy in 2014" research, into Turkish, and then again from Turkish to English. The European Health Literacy Survey (HLS-EU) This questionnaire, developed by the HLS-EU commission within the scope of the European Health Literacy Project 2009-2012, has 47 questions/items. It is a questionnaire that measures the level of health literacy over three areas related to health processes (protection from disease, health improvement, health service delivery) and four (access, understanding, evaluation, application) in information processing processes. It has been used in studies conducted in many European

countries. It was stated that the intelligibility of the prepared survey questions, their suitability to the cultural structure, and whether the terms gave correct expressions were discussed by the experts in line with the conceptual matrix. In addition, another data collection tool used in the research is the "Personal Information Form". In the Personal Information Form, the participants' information such as gender, age, educational status, marital status, income level, family type, and the number of siblings were obtained. The reliability of the data collection tool was calculated with the Cronbach Alpha internal consistency coefficient and two-half tests.

As seen in Table 1, the Cronbach Alpha internal consistency coefficient values were determined as .65 for Healthcare Access to Information, .66 for Understanding Information, .70 for Evaluating Information and .75 for

Applying Information; Disease Prevention was determined as .62 for Accessing Information, .68 for Understanding Information, .83 for Evaluating Knowledge and .75 for Applying Knowledge. Finally, Health Improvement was determined as .68 for Accessing Information, .72 for Understanding Knowledge, .80 for Evaluating Knowledge, and .81 for Applying Knowledge. The Cronbach Alpha internal consistency coefficient was found to be .92 for the overall scale. These values show that the scale is quite reliable according to Özdamar (1997). In order to re-check the reliability of the Health Literacy Scale, two quasi-test techniques were also used. The results obtained are given in Table 2.

According to the results shown in Table 2, .90 for Part 1 and .84 for Part 2 show that the data collection tool used in the study is highly reliable.

Table 1. Cronbach alpha internal consistency coefficients of health literacy scale.

Dimensions	Cronbach alpha values
Healthcare access to information	.65
Understanding healthcare information	.66
Evaluating healthcare information	.70
Applying healthcare knowledge	.75
Disease prevention access to information	.62
Disease prevention understanding information	.68
Evaluation of disease prevention information	.83
Applying disease prevention knowledge	.75
Health promotion access to information	.68
Improving health understanding information	.72
Evaluating health promotion information	.80
Applying health promotion knowledge	.81
Scale overall	.92

Table 2. Health literacy scale two-half test results.

Health literacy student sections	Cronbach alpha
Part 1	.90
Part 2	.84

Analysis of data

The prepared data collection tool was applied to the study group and the data obtained were made within the framework of the determined variables and using appropriate statistical data analysis methods. In the statistical analysis, the data were not normally distributed, therefore it was deemed appropriate to use nonparametric techniques. The data were primarily evaluated as percentages and then difference tests were

applied to determine the differences between the variables related to the health literacy levels of the participants (gender, age, education level, marital status, income level, family type and the number of siblings). At this stage, Mann Whitney U and Kruskal Wallis tests were used. The collected data were compared with the results of previous research on this subject and various generalizations were reached. The research findings were handled within the scope of research questions and the obtained findings were analyzed respectively. The

data handed were evaluated with the SPSS 21 Package Program by using eligible statistical methods such as ranking average and sum of rank.

FINDINGS

When the data in Table 3 is examined, "What is the Health Literacy and Healthy Life Awareness Level of University Students? the sub-dimensions of the Health Literacy Scale, which are the sub-dimensions of understanding the knowledge of prevention from the disease (= 2.51, sd = .50) and the sub-dimension of applying the knowledge of prevention from the disease (= 2.26, sd = .54), are in the "low level" range. while taking part; disease prevention information sub-dimension (= 3.78, sd = .82) and health improvement sub-dimension of accessing information (= 3.90, sd = .78). In addition, the sub-dimension of accessing health service information (= 3.09, sd = .56), the sub-dimension of understanding health service information (= 2.92, sd = .58), the sub-dimension of evaluating health care information (= 2.99, sd = .67), health service application to information sub-dimension (= 3.29, sd = .50), disease prevention information access sub-dimension (= 3.16, sd = .69), health promotion information understanding sub-dimension (= 3.08, sd = .67), health promotion knowledge evaluation sub-dimension (= 3.29, sd = .64), health improvement knowledge application sub-dimension (= 3.28, sd = .65), and the whole scale (= 3.14, sd = .45) to "Intermediate Level".

According to Table 4, the gender of the participants and the access to health care information (health care access to information = 723,500 $z = -1.867$, $p = .042$) and health promotion information evaluation (health improvement information assessment = 719,500, $z = -1.906$, $p = .047$) sub-dimensions of health literacy levels were found to differ. In the analyzes made, it was determined that there was a significant difference in favor of female participants between the health literacy levels of female participants (mean rank = 51.86) and male participants' health literacy levels (mean rank = 40.34) in the sub-dimension of accessing health care information. However, it was determined that there was a significant difference in favor of male participants between the health literacy levels of female participants (mean rank = 45.08) and male participants' health literacy levels (mean rank = 56.80) in the sub-dimension of improving health and evaluating information. In addition, no significant difference was found between the other sub-dimensions and the whole scale and by gender.

According to Table 5, the ages of the participants and their understanding of health care knowledge (comprehension of health care knowledge = 392,000, $z = -1.945$, $p = .032$) and assessment of health care knowledge (evaluation of health care knowledge =

333,000 $z = -2.478$, $p = .013$) sub-dimensions of health literacy levels were found to differ. In the analyzes performed, in the sub-dimension of understanding health service information, the health literacy levels of the participants in the 20 to 25 age range (mean rank = 44.09) and the health literacy levels of the participants in the 26 to 30 age range (mean rank = 62.07) were between 26 and 30 years old. It was determined that there was a significant difference in favor of the participants. In the sub-dimension of evaluating health service knowledge, the health literacy levels of the participants in the 20 to 25 age range (mean rank = 45.11) and the health literacy levels of the participants in the 26 to 30 age range (mean rank = 64.71) were between 26 and 30. It was determined that there was a significant difference in favor of the participants in the age range. However, no significant difference was found in the other sub-dimensions of the health literacy scale according to the age of the participants.

According to the Kruskal Wallis test results shown in Table 6 which was performed to determine the difference between the health literacy levels of the participants and their educational status, it was determined that there was no significant difference [(x2(3)health care information access = 1.287, $p > .05$); (x2(3) health care knowledge understanding = 1.938, $p > .05$); (x2(3) health care information evaluation = 3.043, $p > .05$); (x2(3) health care knowledge application = 2.163, $p > .05$); (x2(3) access to disease prevention information = 3.568, $p > .05$); (x2(3) understanding knowledge of prevention = 2.521, $p > .05$); (x2(3) evaluation of prevention knowledge = 4.223, $p > .05$); (x2(3) applying disease prevention knowledge = 4.074, $p > .05$); (x2(3) health improvement access to information = .988, $p > .05$); (x2(3) health improvement understanding knowledge = 2.619, $p > .05$); (x2(3) evaluation of health improvement knowledge = 2.731, $p > .05$); (x2(3) health promotion knowledge application = 5.837, $p > .05$); (x2(3) total scale = 2.759, $p > .05$)]. These data show that the educational status and health literacy levels of the participants do not differ significantly.

According to Table 7, it was determined that the participant's marital status and health literacy levels differed in the sub-dimension of improving health and evaluating information (improving health, evaluating information = 86,500, $z = -1.818$, $p = .049$). In the analyzes made, it was determined that there was a significant difference in favor of married participants between the health literacy levels of married participants (mean rank = 47.44) and the health literacy levels of single participants (mean rank = 40.34) in the sub-dimension of improving health and evaluating information. However, no significant difference was found between the other sub-dimensions and the whole of the health literacy scale and the marital status variable.

When the Kruskal Wallis test results shown in Table 8,

Table 3. Health literacy scale averages.

Sub dimensions	n	\bar{X}	ss	Value
Healthcare access to information	96	3.09	.56	Medium Level
Understanding healthcare information	96	2.92	.58	Medium Level
Evaluating healthcare information	96	2.99	.67	Medium Level
Applying healthcare knowledge	96	3.29	.50	Medium Level
Disease prevention access to information	96	3.16	.69	Medium Level
Disease prevention understanding information	96	2.51	.50	Low Level
Evaluation of disease prevention information	96	3.78	.82	High Level
Applying disease prevention knowledge	96	2.26	.54	Low Level
Health promotion access to information	96	3.90	.78	High Level
Improving health understanding information	96	3.08	.67	Medium Level
Evaluating health promotion information	96	3.29	.64	Medium Level
Applying health promotion knowledge	96	3.28	.65	Medium Level
Scale overall	96	3.14	.45	Medium Level

Table 4. Comparison of gender variable and health literacy level.

Sub dimensions	Sex	n	Ranking average	Sum of rank	U	z	p
Healthcare access to information	Male	28	40.34	1129,50	723,500	-1.867	.042*
	Female	68	51.86	3526,50			
Understanding healthcare information	Male	28	49.38	1382,50	927,500	-.200	.842
	Female	68	48.14	3273,50			
Evaluating healthcare information	Male	28	46.66	1306,50	900,500	-.419	.675
	Female	68	49.26	3349,50			
Applying healthcare knowledge	Male	28	43.89	1229,00	823,000	-1.053	.292
	Female	68	50.40	3427,00			
Disease prevention access to information	Male	28	42.38	1186,50	780,500	-1.393	.164
	Female	68	51.02	3469,50			
Disease prevention understanding information	Male	28	50.48	1413,50	896,500	-.456	.648
	Female	68	47.68	3242,50			
Evaluation of disease prevention information	Male	28	43.96	1231,00	825,000	-1.029	.304
	Female	68	50.37	3425,00			
Applying disease prevention knowledge	Male	28	43.80	1226,50	820,500	-1.070	.285
	Female	68	50.43	3429,50			
Health promotion access to information	Male	28	45.57	1276,00	870,000	-.665	.506
	Female	68	49.71	3380,00			
Improving health understanding information	Male	28	51.11	1431,00	879,000	-.593	.553
	Female	68	47.43	3225,00			
Evaluating health promotion information	Male	28	56.80	1590,50	719,500	-1.906	.047*
	Female	68	45.08	3065,50			

Table 4. Continues.

Applying health promotion knowledge	Male	28	53.71	1504,00	806,000	-1.186	.235
	Female	68	46.35	3152,00			
Scale overall	Male	28	47.30	1324,50	918,500	-.270	.787
	Female	68	48.99	3331,50			

Table 5. Comparison of age variable and health literacy level.

Sub dimensions	Age	n	Ranking average	Sum of rank	U	z	p
Healthcare access to information	20-25	81	48.31	3913.00	542,000	-.266	.790
	26-30	15	46.21	647.00			
Understanding healthcare information	20-25	81	44.09	3833.00	392,000	-1.945	.032*
	26-30	15	62.07	827.00			
Evaluating healthcare information	20-25	81	45.11	3654.00	333,000	-2.478	.013*
	26-30	15	64.71	906.00			
Applying healthcare knowledge	20-25	81	46.35	3754.50	433,500	-1.419	.156
	26-30	15	57.54	805.50			
Disease prevention access to information	20-25	81	47.35	3835.00	514,000	-.561	.575
	26-30	15	51.79	725.00			
Disease prevention understanding information	20-25	81	46.65	3779.00	458,000	-1.167	.243
	26-30	15	55.79	781.00			
Evaluation of disease prevention information	20-25	81	46.30	3750.50	429,500	-1.450	.147
	26-30	15	57.82	809.50			
Applying disease prevention knowledge	20-25	81	46.52	3768.50	447,500	-1.266	.206
	26-30	15	56.54	791.50			
Health promotion access to information	20-25	81	46.98	3805.00	484,000	-.876	.381
	26-30	15	53.93	755.00			
Improving health understanding information	20-25	81	46.54	3770.00	449,000	-1.249	.212
	26-30	15	56.43	790.00			
Evaluating health promotion information	20-25	81	46.65	3779.00	458,000	-1.164	.244
	26-30	15	55.79	781.00			
Applying health promotion knowledge	20-25	81	47.35	3835.00	514,000	-.561	.575
	26-30	15	51.79	725.00			
Scale overall	20-25	81	46.30	3750.50	429,500	-1.444	.149
	26-30	15	57.82	809.50			

Table 6. Comparison of educational status variable and health literacy level.

Sub dimensions	Education status	n	S.d.	X²	p	Difference
Healthcare access to information	Primary school	15				
	Secondary school	10	3	1.287	.732	-
	University	71				
Understanding healthcare information	Primary school	15				
	Secondary school	10	3	1.938	.585	-
	University	71				
Evaluating healthcare information	Primary school	15				
	Secondary school	10	3	3.043	.385	-
	University	71				
Applying healthcare knowledge	Primary school	15				
	Secondary school	10	3	2.163	.539	-
	University	71				
Disease prevention access to information	Primary school	15				
	Secondary school	10	3	3.568	.312	-
	University	71				
Disease prevention understanding information	Primary school	15				
	Secondary school	10	3	2.521	.471	-
	University	71				
Evaluation of disease prevention information	Primary school	15				
	Secondary school	10	3	4.223	.238	-
	University	71				
Applying disease prevention knowledge	Primary school	15				
	Secondary school	10	3	4.074	.254	-
	University	71				
Health promotion access to information	Primary school	15				
	Secondary school	10	3	.988	.804	-
	University	71				
Improving health understanding information	Primary school	15				
	Secondary school	10	3	2.619	.454	-
	University	71				
Evaluating health promotion information	Primary school	15				
	Secondary school	10	3	2.731	.435	-
	University	71				
Applying health promotion knowledge	Primary school	15				
	Secondary school	10	3	5.837	.120	-
	University	71				
Scale overall	Primary school	15				
	Secondary school	10	3	2.759	.430	-
	University	71				

Table 7. Comparison of marital status variable and health literacy level.

Sub dimensions	Marital status	n	Ranking average	Sum of rank	U	z	p																																																																																																																																												
Healthcare access to information	Married	4	49.25	197.00	181,000	-.056	.956																																																																																																																																												
	Single	92	48.47	4459.00				Understanding healthcare information	Married	4	39.38	157.50	147,500	-.676	.499	Single	92	48.90	4498.50	Evaluating healthcare information	Married	4	38.75	155.00	145,000	-.721	.471	Single	92	48.92	4501.00	Applying healthcare knowledge	Married	4	49.88	199.50	178,500	-.102	.919	Single	92	48.44	4456.50	Disease prevention access to information	Married	4	47.63	190.50	180,500	-.065	.948	Single	92	48.54	4465.50	Disease prevention understanding information	Married	4	54.38	217.50	160,500	-.439	.660	Single	92	48.24	4438.50	Evaluation of disease prevention information	Married	4	53.75	215.00	163,000	-.387	.699	Single	92	48.27	4441.00	Applying disease prevention knowledge	Married	4	58.38	233.50	144,500	-.731	.465	Single	92	48.07	4422.50	Health promotion access to information	Married	4	56.88	227.50	150,500	-.618	.537	Single	92	48.14	4428.50	Improving health understanding information	Married	4	53.88	215.50	162,500	-.397	.691	Single	92	48.27	4440.50	Evaluating health promotion information	Married	4	74.88	291.50	86,500	-1.818	.049*	Single	92	47.44	4364.50	Applying health promotion knowledge	Married	4	57.13	228.50	149,500	-.638	.524	Single	92	48.13	4427.50	Scale overall	Married	4	50.88	203.50	174,500	-.174	.862
Understanding healthcare information	Married	4	39.38	157.50	147,500	-.676	.499																																																																																																																																												
	Single	92	48.90	4498.50				Evaluating healthcare information	Married	4	38.75	155.00	145,000	-.721	.471	Single	92	48.92	4501.00	Applying healthcare knowledge	Married	4	49.88	199.50	178,500	-.102	.919	Single	92	48.44	4456.50	Disease prevention access to information	Married	4	47.63	190.50	180,500	-.065	.948	Single	92	48.54	4465.50	Disease prevention understanding information	Married	4	54.38	217.50	160,500	-.439	.660	Single	92	48.24	4438.50	Evaluation of disease prevention information	Married	4	53.75	215.00	163,000	-.387	.699	Single	92	48.27	4441.00	Applying disease prevention knowledge	Married	4	58.38	233.50	144,500	-.731	.465	Single	92	48.07	4422.50	Health promotion access to information	Married	4	56.88	227.50	150,500	-.618	.537	Single	92	48.14	4428.50	Improving health understanding information	Married	4	53.88	215.50	162,500	-.397	.691	Single	92	48.27	4440.50	Evaluating health promotion information	Married	4	74.88	291.50	86,500	-1.818	.049*	Single	92	47.44	4364.50	Applying health promotion knowledge	Married	4	57.13	228.50	149,500	-.638	.524	Single	92	48.13	4427.50	Scale overall	Married	4	50.88	203.50	174,500	-.174	.862	Single	92	48.40	4452.50								
Evaluating healthcare information	Married	4	38.75	155.00	145,000	-.721	.471																																																																																																																																												
	Single	92	48.92	4501.00				Applying healthcare knowledge	Married	4	49.88	199.50	178,500	-.102	.919	Single	92	48.44	4456.50	Disease prevention access to information	Married	4	47.63	190.50	180,500	-.065	.948	Single	92	48.54	4465.50	Disease prevention understanding information	Married	4	54.38	217.50	160,500	-.439	.660	Single	92	48.24	4438.50	Evaluation of disease prevention information	Married	4	53.75	215.00	163,000	-.387	.699	Single	92	48.27	4441.00	Applying disease prevention knowledge	Married	4	58.38	233.50	144,500	-.731	.465	Single	92	48.07	4422.50	Health promotion access to information	Married	4	56.88	227.50	150,500	-.618	.537	Single	92	48.14	4428.50	Improving health understanding information	Married	4	53.88	215.50	162,500	-.397	.691	Single	92	48.27	4440.50	Evaluating health promotion information	Married	4	74.88	291.50	86,500	-1.818	.049*	Single	92	47.44	4364.50	Applying health promotion knowledge	Married	4	57.13	228.50	149,500	-.638	.524	Single	92	48.13	4427.50	Scale overall	Married	4	50.88	203.50	174,500	-.174	.862	Single	92	48.40	4452.50																				
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	Single	92	48.44	4456.50				Disease prevention access to information	Married	4	47.63	190.50	180,500	-.065	.948	Single	92	48.54	4465.50	Disease prevention understanding information	Married	4	54.38	217.50	160,500	-.439	.660	Single	92	48.24	4438.50	Evaluation of disease prevention information	Married	4	53.75	215.00	163,000	-.387	.699	Single	92	48.27	4441.00	Applying disease prevention knowledge	Married	4	58.38	233.50	144,500	-.731	.465	Single	92	48.07	4422.50	Health promotion access to information	Married	4	56.88	227.50	150,500	-.618	.537	Single	92	48.14	4428.50	Improving health understanding information	Married	4	53.88	215.50	162,500	-.397	.691	Single	92	48.27	4440.50	Evaluating health promotion information	Married	4	74.88	291.50	86,500	-1.818	.049*	Single	92	47.44	4364.50	Applying health promotion knowledge	Married	4	57.13	228.50	149,500	-.638	.524	Single	92	48.13	4427.50	Scale overall	Married	4	50.88	203.50	174,500	-.174	.862	Single	92	48.40	4452.50																																
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Evaluating health promotion information	Married	4	74.88	291.50	86,500	-1.818	.049*																																																																																																																																												
	Single	92	47.44	4364.50				Applying health promotion knowledge	Married	4	57.13	228.50	149,500	-.638	.524	Single	92	48.13	4427.50	Scale overall	Married	4	50.88	203.50	174,500	-.174	.862	Single	92	48.40	4452.50																																																																																																																				
Applying health promotion knowledge	Married	4	57.13	228.50	149,500	-.638	.524																																																																																																																																												
	Single	92	48.13	4427.50				Scale overall	Married	4	50.88	203.50	174,500	-.174	.862	Single	92	48.40	4452.50																																																																																																																																
Scale overall	Married	4	50.88	203.50	174,500	-.174	.862																																																																																																																																												
	Single	92	48.40	4452.50																																																																																																																																															

which was performed to determine the difference between the health literacy levels and income levels of the participants, were evaluated; It was determined that there was no significant difference between the relevant variables [(X2(3) Health Service Access to Information = 4.182, $p > .05$); (X2(3) Healthcare Information Understanding = 2.736, $p > .05$); (X2(3) Health Service Information Evaluation = .070, $p > .05$); (X2(3) Healthcare Information Application=2.233, $p > .05$); (X2(3) Disease Prevention Access to Information = .068, $p > .05$); (X2(3)

Disease Prevention Understanding Information = 1.656, $p > .05$); (X2(3) Evaluation of Disease Prevention Information = .100, $p > .05$); (X2(3) Applying Disease Prevention Knowledge = .828, $p > .05$); (X2(3) Access to Health Promotion Information = 3.885, $p > .05$); (X2(3) Health Promotion Understanding Knowledge = .271, $p > .05$); (X2(3) Evaluating Health Promotion Knowledge = .001, $p > .05$); (X2(3) Applying Health Promotion Knowledge = .381, $p > .05$); (X2(3) Whole Scale = .951, $p > .05$)]. These data show that the income levels and health

Table 8. Comparison of income level variable and health literacy level.

Sub dimensions	Income level	n	S.d.	X ²	p	Difference
Healthcare access to information	Low	7				
	Medium	79	2	4.182	.124	-
	High	10				
Understanding healthcare information	Low	7				
	Medium	79	2	2.736	.255	-
	High	10				
Evaluating healthcare information	Low	7				
	Medium	79	2	.070	.966	-
	High	10				
Applying healthcare knowledge	Low	7				
	Medium	79	2	2.233	.327	-
	High	10				
Disease prevention access to information	Low	7				
	Medium	79	2	.068	.967	-
	High	10				
Disease prevention understanding information	Low	7				
	Medium	79	2	1.656	.437	-
	High	10				
Evaluation of disease prevention information	Low	7				
	Medium	79	2	.100	.951	-
	High	10				
Applying disease prevention knowledge	Low	7				
	Medium	79	2	.828	.661	-
	High	10				
Health promotion access to information	Low	7				
	Medium	79	2	3.885	.143	-
	High	10				
Improving health understanding information	Low	7				
	Medium	79	2	.271	.873	-
	High	10				
Evaluating health promotion information	Low	7				
	Medium	79	2	.001	1.000	-
	High	10				
Applying health promotion knowledge	Low	7				
	Medium	79	2	.381	.827	-
	High	10				
Scale overall	Low	7				
	Medium	79	2	.951	.622	-
	High	10				

literacy levels of the participants do not differ significantly.

When Table 9 is examined, no statistical difference was found between the family types of the participants and their health literacy levels [(US Health Care Access to Information = 645,500, $z = -.538$, $p = .591$), (US Health Care Information Understanding = 637,500, $z = -.612$, $p = .541$), (US Health Service Evaluating Information = 631,000, $z = -.672$, $p = .501$), (US Health Service Applying Information = 669,500, $z = -.309$, $p = .757$), (UG Access to Prevention Information = 647,500, $z = -.515$, $p = .606$), (US Comprehension of Prevention Information = 695,000, $z = -.067$, $p = .947$), (US Evaluation of Prevention Information = 651,000, $z = -.481$, $p = .631$),

(UApplication of Disease Prevention Information = 662,500, $z = -.374$, $p = .708$), (US Health Improvement Access to Information = 695,500, $z = -.061$, $p = .951$), (US Health Improvement Improving Understanding Knowledge = 615,500, $z = -.818$, $p = .413$), (US Evaluating Health Improving Knowledge = 693,500, $z = -.081$, $p = .935$), (US Application of Health Improving Knowledge = 681,000, $z = -.199$, $p = .842$) and (Whole Scale = 680,500, $z = -.202$, $p = .840$)]. These values reveal that the health literacy levels of the participants do not differ according to the extended family or nuclear/core family variables and are at a similar level.

Table 9. Comparison of family type variable and health literacy level.

Sub dimensions	Family type	n	Ranking average	Sum of rank	U	z	p
Healthcare access to information	Core family	78	49.22	3839.50	645,500	-.538	.591
	Large family	18	45.36	816.50			
Understanding healthcare information	Core family	78	49.33	3847.50	637,500	-.612	.541
	Large family	18	44.92	808.50			
Evaluating healthcare information	Core family	78	49.41	3854.00	631,000	-.672	.501
	Large family	18	44.56	802.00			
Applying healthcare knowledge	Core family	78	48.08	3750.50	669,500	-.309	.757
	Large family	18	50.31	905.50			
Disease prevention access to information	Core family	78	47.80	3728.50	647,500	-.515	.606
	Large family	18	51.53	927.50			
Disease prevention understanding information	Core family	78	48.41	3776.00	695,000	-.067	.947
	Large family	18	48.89	880.00			
Evaluation of disease prevention information	Core family	78	47.85	3732.00	651,000	-.481	.631
	Large family	18	51.33	924.00			
Applying disease prevention knowledge	Core family	78	49.01	3822.50	662,500	-.374	.708
	Large family	18	46.31	833.50			
Health promotion access to information	Core family	78	48.58	3789.50	695,500	-.061	.951
	Large family	18	48.14	866.50			
Improving health understanding information	Core family	78	47.39	3696.50	615,500	-.818	.413
	Large family	18	53.31	959.50			
Evaluating health promotion information	Core family	78	48.61	3791.50	693,500	-.081	.935
	Large family	18	48.03	864.50			
Applying health promotion knowledge	Core family	78	48.77	3804.00	681,000	-.199	.842
	Large family	18	47.33	852.00			
Scale overall	Core family	78	48.22	3761.50	680,500	-.202	.840
	Large family	18	49.69	894.50			

According to Table 10, it was determined that the number of siblings of the participants and the health literacy scale differed significantly in the health improvement information comprehension sub-dimension (X²(4) Health Improvement Understanding Information = 9.270, $p < .05$). The Mann Whitney U test was applied one by one between the groups in order to determine between which groups this difference was obtained by the Kruskal Wallis test. Bonferroni correction was made during the Mann Whitney U test and the significance level of .05 was divided by the number of Mann Whitney U tests performed (.05/6), and the new significance level was determined as .0083. As a result of the Mann-Whitney U test, which was finally performed, the health literacy levels of the participants with three siblings in the Health Improvement Understanding Knowledge sub-dimension (Rank Mean = 35.74) and the health literacy levels of the participants with four or more siblings (56.33) were

between four or more siblings. A significant difference was found in favor of However, no statistically significant difference was found in the other sub-dimensions of the Health Literacy Scale and the whole scale [(X²(3) Health Service Access to Information = 1.883, $p > .05$); (X²(3) Healthcare Information Understanding = 2.222, $p > .05$); (X²(3)Health Service Information Evaluation = 1.433, $p > .05$); (X²(3)Health Service Applying Knowledge = 5.387, $p > .05$); (X²(3) Disease Prevention Access to Information = 1.701, $p > .05$); (X²(3) Disease Prevention Understanding Information = 3.393, $p > .05$); (X²(3) Evaluation of Disease Prevention Information = .042, $p > .05$); (X²(3) Applying Disease Prevention Knowledge = 5.889, $p > .05$); (X²(3) Access to Health Promotion Information = 3.791, $p > .05$); (X²(3) Evaluating Health Improvement Knowledge = 4.038, $p > .05$); (X²(3) Applying Health Promotion Knowledge = 2.291, $p > .05$); (X²(3) Whole Scale = 2.338, $p > .05$)].

Table 10. Comparison of the variable of the number of siblings and the level of health literacy.

Sub dimensions	Number of siblings	n	S. d.	X ²	p	Difference
Healthcare access to information	1	9	3	1.883	.597	-
	2	15				
	3	25				
	4+	47				
Understanding healthcare information	1	9	3	2.222	.528	-
	2	15				
	3	25				
	4+	47				
Evaluating healthcare information	1	9	3	1.433	.698	-
	2	15				
	3	25				
	4+	47				
Applying healthcare knowledge	1	9	3	5.387	.146	-
	2	15				
	3	25				
	4+	47				
Disease prevention access to information	1	9	3	1.701	.637	-
	2	15				
	3	25				
	4+	47				
Disease prevention understanding information	1	9	3	3.393	.335	-
	2	15				
	3	25				
	4+	47				

Table 10. Continues.

Evaluation of disease prevention information	1	9	3	.042	.998	-
	2	15				
	3	25				
	4+	47				
Applying disease prevention knowledge	1	9	3	5.889	.117	-
	2	15				
	3	25				
	4+	47				
Health promotion access to information	1	9	3	3.791	.285	-
	2	15				
	3	25				
	4+	47				
Improving health understanding information	1	9	3	9.270	.026*	4>3
	2	15				
	3	25				
	4+	47				
Evaluating health promotion information	1	9	3	4.038	.257	-
	2	15				
	3	25				
	4+	47				
Applying health promotion knowledge	1	9	3	2.291	.514	-
	2	15				
	3	25				
	4+	47				
Scale overall	1	9	3	2.338	.505	-
	2	15				
	3	25				
	4+	47				

CONCLUSION

According to World Health Organisation, it is known that a definite health system consists of nearly all organisations, people and also vivid or unvivid actions whose primary intent is to promote, restore or maintain health. A health system is more than the pyramid of publicly owned facilities that deliver personal health services but include the institutions, people and resource involved in delivering health care to individuals for example:

- “A mother caring for a sick child at home;
- A child receiving rehabilitation services within the school

setting;

- An individual access vocational rehabilitation services within the workplace;
- Private providers, behaviour change programmes, such as vector-control campaigns.
- Health insurance organisations, occupational health and safety legislation which includes inter-sectoral action by health staff, for example, encouraging the ministry of education to promote female education, a well-known determinant of better health (World Health Organization, 2011).”

By making a situation assessment in order to raise awareness and awareness in individual and social level

health literacy, preventive health services, diagnosis and treatment practices, and making recommendations based on the results of the research about the measures to be taken, the health literacy levels of the participants can be affected by various variables (gender, age, education), status, marital status, income level, family type and number of siblings) in this study, which also aimed to determine the differentiation status of the participants, 39.2% of whom data were obtained were male, 70.8% were female; 84.4% are between the ages of 20 and 25, 15.6% are between the ages of 26 and 30; 15.6% primary school, 10.5% secondary school, 73.9% university graduate; 4.2% are married, 95.8% are single; 7.3% have low income, 82.3% medium income, 10.4% high income; 81.2% have nuclear families and 18.8% have extended families; 9.4% have one sibling, 15.6% have two siblings, 26% have three siblings and 49% have four or more siblings.

As a result of the analyses made in order to analyze the research question of the study, "What are the Health Literacy and Healthy Life Awareness Levels of University Students?", the health literacy levels of the participants were: Disease Prevention Information Understanding sub-dimension (= 2.51, sd = .50) and Application of Disease Prevention Information sub-dimension (= 2.26, sd = .54) and "Low Level"; Disease Prevention Information Evaluation sub-dimension (= 3.78, sd = .82) and Health Improvement Access to Information sub-dimension (= 3.90, sd = .78) are in the range. In addition, Health Service Access to Information sub-dimension (= 3.09, sd = .56), Health Service Information Comprehension sub-dimension (= 2.92, sd = .58), Health Service Information Evaluation sub-dimension (= 2.99, sd = .67), Health Care Application to Information sub-dimension (= 3.29, sd = .50), Disease Prevention Access to Information sub-dimension (= 3.16, sd = .69), Health Improvement Information Understanding sub-dimension (= 3.08, sd = .67), Health Improvement Knowledge Evaluation sub-dimension (= 3.29, sd = .64), Health Improvement Knowledge Application sub-dimension (= 3.28, sd = .65), and the entire scale (= 3.14, sd = .45) to "Intermediate Level". In other words, the health literacy of the participants is generally at the intermediate level.

As a result of these data, it may be thought that the participants' health literacy level is not very high. It means there are many problems with health literacy between beneficiaries of health services and health workers. The understanding is that the people needing health services do not have enough and more information about their health problems. Because of this, it is very urgent to develop all individuals' health literacy levels. In the development of health literacy, there must be many precautions. Such as:

- Individual effort alone is not enough.
- As well as the duties of the patient, health care

developing health literacy for providers' task in the matter.

- Health care providers have to be more understanding with patients' communication.
- Health care providers.
- Oral language in the service delivery of health care providers' skills are of paramount importance.
- Ask appropriate questions in communication with the patient, give advice or explain the treatment required.
- To make sure that the individual can read and understand, simple, using clear phrases like "please show me" or "repeat."
- Make sure that the information arrives correctly by using sentences like to be sure, to ask for answers to questions, to be close with the patient, communicate warmly, focus on key messages, and to repeat, to make brief explanations, to avoid side effects.
- Known and everyday language may be used to be understood well enough.

In order to analyze the research question in more detail, seven sub-research questions related to the research question were determined. As a result of the analysis of the first of the research sub-questions; "Do university students' health literacy and healthy life awareness levels make a significant difference in terms of gender?" only in the Health Service Access to Information sub-dimension and in the Health Improvement and Evaluation of Information sub-dimension, there was a gender differentiation, and this differentiation was in favor of female participants in the Health Service Access to Information sub-dimension; On the other hand, it was determined that it was in favor of male participants in the Health Improvement Evaluation of Knowledge subscale. Considering the other sub-dimensions and the whole scale, there was no difference between health literacy and gender.

As a result of the analyzes made to answer the second research sub-question "Do university students' health literacy and healthy life awareness levels make a significant difference in terms of age factor?"; A difference was determined according to the age variable in the Health Service Information Understanding sub-dimension and the Health Service Information Evaluation sub-dimension of the Health Literacy Scale, and it was understood that this difference was in favor of 26-30 years old in both dimensions. Considering the other sub-dimensions and the whole scale, there was no difference between health literacy and age. As a result of the analyzes made to answer the fourth research sub-question "Do university students' health literacy and healthy life awareness levels make a significant difference in terms of marital status factor?", a difference was determined in favor of married participants in the Health Improvement Information Evaluation sub-dimension of the Health Literacy Scale. no difference was found in sub-dimensions and the whole scale in terms of

marital status factor.

The seventh research sub-question "Do university students' health literacy and healthy life awareness levels make a significant difference in terms of the number of siblings?" also answered and as a result; A difference was found between the participants with three to four or more siblings in the Health Improvement Knowledge Understanding sub-dimension of the Health Literacy Scale, in favor of the participants with four or more siblings. Considering the other sub-dimensions and the whole scale, no difference was found between health literacy and the number of siblings.

According to the data handed from the answers of third (Do university students' health literacy and healthy life awareness levels make a significant difference in terms of educational status factor?), fifth (Do university students' health literacy and healthy life awareness levels make a significant difference in terms of income level?) and sixth (University students' health literacy and healthy life awareness levels?) make a significant difference in terms of family type factor and the family types they have (Sixth research sub-question) no significant difference was found. When viewed around the world, health services are very complex and in some cases, there are problems with the acceptability of the facts within the framework of reality, so it becomes difficult to take a psychological, biological, social and cultural attitude appropriate to the situation. The low and high levels of satisfaction with the health services provided by the patients and their relatives before and after diagnosis and treatment depend on the communication processes established between the parties. Here, conceptual level intelligibility, awareness of the situation, appropriate attitude and attitude to the situation alleviate the workload of the stakeholders. Here is health literacy; to be able to understand and explain on the basis of it; it will make more efficient use of time in the process and result-oriented health services, making use of opportunities and opportunities in the process more objective and result-oriented, more applicable, sustainable and acceptable.

Especially in the cold winter months when education and training services are intense, there are important deficiencies in the precautions that should be taken by the relatives of the person and even by himself orthopedic geese, which the students spend more frequently. It is understood that these deficiencies are the source of irreversible and permanent problems in the future. The need for health literacy is clearly evident here as well. As it is known, when parents who never think of having a disadvantaged child face such a situation, the most basic problem experienced is they know that the situation is unacceptable. In other words, some attitudes and behaviors make the situation worse, such as escaping from the facts of not being able to read and write well about the situation and covering up the problem. However, what needs to be done in order to

prevent the negative effects of the problem from increasing further and to create suitable conditions, is to raise the level of awareness about the situation and benefit more efficiently from the opportunities and opportunities available. In a very general sense, it is witnessed that individuals with low health literacy levels enter a chaotic state called delusion when they experience health problems, and then they experience a lack of self-confidence, which can be called an inferiority complex. As it is known, the way to get rid of these and similar complexes is, undoubtedly, the consciousness of knowing, that is, a high level of health literacy and awareness.

RECOMMENDATIONS

The results obtained within the scope of the study were evaluated and some suggestions were developed:

- Considering that the health literacy levels of the participants are moderate, it can be recommended to carry out activities to increase the health literacy levels of individuals.
- Since it is seen that the health literacy levels of the participants do not differ according to the variables of education, income and family type, it can be suggested to develop programs to support health literacy through formal and non-formal education institutions, regardless of family type and individuals with education and income levels at all levels.
- Although it was determined that health literacy differed according to variables such as gender, age, marital status and the number of siblings, it was observed that this differentiation was only in one or two sub-dimensions, not for the whole research scale. For this reason, it can be suggested that health literacy training should be given to the widest possible segments of society, regardless of gender, age, marital status and the number of siblings.
- This study was conducted with a certain sample size. It may be recommended to conduct similar studies with larger samples.
- This study was carried out with the screening model, which is one of the quantitative research methods. It may be suggested to carry out more detailed studies with different methods (qualitative, mixed).

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