

## Examining The Relationship Between E-Health Literacy and Rational Drug Use: A Study on University Students

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<b>ABSTRACT</b>	
<p><b>Corresponding Author</b> Ali GÖDE</p> <p><b>DOI</b> <a href="https://10.48121/jihsam.1293638">https://10.48121/jihsam.1293638</a></p> <p><b>Received</b> 07.05.2023</p> <p><b>Accepted</b> 07.06.2023</p> <p><b>Published Online</b> 23.10.2023</p> <p><b>Key Words</b> Rational Drug Use, E-Health Literacy, University Students</p>	<p><i>It is desired to provide rapid access to health information on the Internet and to determine the relationship between rational drug use that affects people's quality of life. In this study, it is aimed to examine the relationship between e-health literacy and rational drug use in university students.</i></p> <p><i>In line with the purpose of the research; The sample of the study consisted of 541 people determined by simple random sampling method among the students continuing their education at the university, and the data were collected by applying a face-to-face questionnaire.</i></p> <p><i>In the study, "Personal Information Form", "E-Health Literacy Scale" and "Rational Drug Use Scale" were used. The data were analyzed with the SPSS program. In addition, as an analysis method, it was determined that the data were normally distributed; t test, ANOVA and pearson correlation analyzes were applied in independent groups. 541 students participated in the research.</i></p> <p><i>As a result of the research, it was determined that there is a positive and significant relationship between the level of e-health literacy and rational drug use. It is predicted that as the level of e-health literacy increases, the level of rational drug use will increase.</i></p>

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## 1. INTRODUCTION

Health literacy is an important and positive concept that we encounter not only to apply for the service needed, but also to protect from disease and improve the level of health. Since we are in the age of technology, e-health literacy, which means that this is done through electronic devices, is a method we use quite often today. Thanks to e-health literacy, which means the ability to read, understand, and use health-related information with the help of technological tools, individuals can be ensured to correctly understand the physician's instructions, the current health mechanism, and the time to apply for support to the institution (Taş & Akış, 2016).

Medicines, which are chemical components applied to patients or patients who are worried about being sick for protection purposes, have an important role in the health system. It has a life-saving function when applied in the right dose, at the right time, to the right patient. At the same time, it is one of the most important resources that health workers use to perform their duties. However, in the wrong setting, sometimes there can be consequences that lead to irreversible problems, even the death of the patient. That's why the "rational" of the chemicals mentioned is one of the most important details in order to achieve the goal (Şantaş & Demirgil, 2017).

The relationship between e-health literacy and rational drug use is an important research topic in today's digital age. University students often need more awareness and access to information on health-related issues, as they lead a young and active lifestyle. E-health literacy refers to the ability to access, evaluate and correctly use health-related information through the internet and other digital resources. Rational drug use, on the other hand, means that individuals have accurate information about drugs, use drugs correctly, and monitor their side effects and possible interactions. Therefore, examining the relationship between e-health literacy and rational drug use is an important step to ensure that university students make the most of health services and to prevent potential problems in drug use.

This research was planned to examine the relationship between university students' e-health literacy and rational drug use. In the research, firstly, the concepts between e-health literacy and rational drug use are explained. The data obtained within the scope of the research were analyzed, discussed, and interpreted.

### 1.1. E-health literacy

The rapid technological changes and transformations in the developing world have made mobile technology an intense part of our lives. The health sector has also been seriously affected by these transformations, and new formations have been experienced in the sector. The internet is now a very powerful platform for us to access not only important and rare health information but also health information on the other side of the

world instantly (Orhan et al., 2020). In this context, e-health has become a part of our lives in both language and practice since the 2000s. We only need to have heard or seen it to access all the published information about a concept. In order to reach it, it is just at our fingertips to be curious and to search the internet search page with a few letters or words to access a lot of true or false information (Toygar, 2018).

The World Health Organization (WHO) defines e-health as "the use of information and communication technology for health." E-health is seen as a way of increasing quality, capacity, efficiency, and access to health services and information for all parties receiving and providing health services. Therefore, it has the potential to improve health (Camerini & Schulz, 2012; Neter & Brainin, 2012; Norgaard et al., 2015). The common point of scientific definitions of this concept is "e-health," or the transmission of health information on health-related issues through information and communication technologies, including prevention, monitoring, diagnosis and treatment of diseases, and management of health. These technologies add a new dimension to patient-physician communication and increase patient cooperation. This good and advanced doctor-patient relationship is important in terms of reaching the optimum level of health under current conditions. The patient, who feels that he is a part of the treatment and that his responsibilities and cooperation are important, is motivated towards recovery and contributes to this process in a very important and positive way (Eysenbach, 2001; Kılıç, 2017; Mackert et al., 2014).

E-health literacy is expressed as the ability to benefit from the information obtained by searching, reaching, comprehending, and interpreting information about health from technological tools in order to examine or solve any health problem. E-health literacy; It is a whole consisting of six components: health, information, computer, scientific, traditional and media literacy (Norman & Skinner, 2006). Computer literacy covers a variety of abilities, ranging from the basic knowledge and skills of using computers to being able to use social media. Information literacy is the ability to identify information needs, access, evaluate, and use information. Media literacy is the ability to distinguish, interpret, evaluate, classify, and make sense of visual and auditory information. Scientific literacy is the ability to understand, evaluate, and interpret health-related research findings within the context of logic. Personal literacy skills are needed to make personal decisions. Individuals should be able to have scientific literacy in order to be able to think and make decisions in a healthy and reasonable way when they are alone with the treatment of diseases and problems related to their own health and to use the right of informed consent (Yılmaz et al., 2020).

The primary goal of e-health literacy is to increase the level of health by making use of information tools on issues within the scope of health. The advantages of e-

health applications are: to increase the level of accessibility to health services; to provide new perspectives in the provision of these services; to provide complete, accurate, and fast collection of patient information; to help people with chronic diseases fight these diseases; to make appointments and be treated without any time or place limit; and to reduce the costs to be incurred (Özer et al., 2020).

Thanks to e-health literacy, individuals can get information about drug doses in general, possible indications and contraindications of the drug, delivery methods, information about the interventions made in the hospital or the health results, what the ideal numbers are for vital signs, what the extreme values can mean, the closest access to a health care provider, and information about the possible consequences of certain habits (Deniz, 2020). Health literacy, which is not practiced in sufficient quantity, also has some important negative consequences. Not having sufficient health information, not giving sufficient importance to preventive health services, lack of access and use of health services, application errors in managing the disease and taking medication, the patient's inability to comply with the treatment as required, and even the increase in mortality and morbidity are some of the important health problems (Coşkun & Bebiş, 2015).

## 1.2. Rational drug use

They are products made of biological, chemical, and herbal ingredients used for the purpose of protection, treatment, and health promotion from drug diseases. In order for these products to provide the expected benefit, they must be used at the right dose, in the right amount, and at the right time. Rational drug use is a planning, implementation, and follow-up cycle that allows drug treatment to be carried out effectively, safely, and economically. In other words, it is the process of providing the reasons for use by ensuring that it is taken in the required dose, at the required time and in the required amount so that individuals can reach the benefit they expect from the drug (Özçelikay, 2001).

This process is a systematic and holistic one that includes determining the patient's complaint, defining the treatment goals, choosing the one that has proven to be effective and reliable among the alternatives, prescribing it according to the patient's characteristics, and starting use with clear and clear recommendations, closely monitoring and controlling the processes and results (Akıcı et al., 2002). WHO has made various recommendations for the dissemination of this process. Establishment of a national multi-disciplinary organization for simultaneous drug administration and use policies, preparation of essential drugs list, preparation of clinical guidelines, establishment of drug committees in regions, pharmacotherapy training for the problems experienced in medical school before graduation, obtaining objective information about drugs, supervision, administration Some of the recommendations are to establish feedback and

feedback mechanisms, to make the necessary expenditures by the government to ensure that personnel and drugs are always available, to regularly train individuals on drugs, to prevent inappropriate financial incentives, and to implement an appropriate legal regulation (Ayдын & Gelal, 2012).

When this process is not followed, irrational drug use, which is an extremely wasteful and harmful process, occurs. When drugs are consumed irrationally, they do not provide the benefit that the patient expects or needs, and they become a burden for the country's economy by causing unnecessary consumption of drugs produced in limited quantities. Some examples of unreasonable use of a drug are: taking drugs more than necessary; not paying attention to the time and dose of the drug; acting against the doctor's recommendations; acting according to the patient's own preference for the time of use; being impatient for the expected benefit; taking the drug with other drugs; and inappropriate and unnecessary antibiotic use (Ekenler & Koçoğlu, 2016). Reasons for irrational use include lack of knowledge or skills, unlimited availability of drugs, overworked healthcare personnel, and the incentive to profit from improper promotion and sale of drugs. Rational use of drugs can encourage inappropriate and excessive patient demand. In addition, due to the lack of drug stocks and the loss of the patient's trust in the health system, it may lead to a decrease in supply and attendance rates and the formation of drug use habits that are difficult to correct (World Health Organization, 2002).

Rational drug use has a great role to play in improving individual and public health. Use of a qualified rational drug requires suitable conditions, adequate infrastructure support, and a well-equipped workforce. In this context, important duties fall on the patient to whom the treatment is administered, the physician who prescribes the drug, the nurse who administers the drug, and the pharmacist who ensures the preservation and distribution of the drug under appropriate conditions. Effective communication between those concerned can ensure a healthier use of the drug as well as prevent many possible problems from occurring. It can also help everyone gain sensitivity and understand the importance of rational drug use (Ulupınar & Akıcı, 2015).

## 2. MATERIALS AND METHODS

### 2.1. Purpose of the research

In this study, it was planned to examine the relationship between e-health literacy and rational drug use in university students.

### 2.2. Population and sample

The research consists of students who are continuing their educational activities at Hatay Mustafa Kemal University Vocational School of Health Services. In all departments, the scale questions were applied to the patients face-to-face and through volunteers, using the

simple sample method without selection. The research data showed that 1300 students registered in vocational schools continued their educational activities during the research conducted between November 15, 2012 and January 12, 2013. In our research, where we accept the universe as 1300, it was found that it was sufficient to reach 384 students when the sample calculation was made in the 95 percent confidence interval (Yazıcıoğlu & Erdoğan, 2004). It is assumed that this number exceeds the minimum number of 384 samples, which is the minimum number to be reached, and that it is more representative of the population as it approaches the population with the number of 542 reached. 542 students were reached between the dates given. It was concluded that this number was sufficient as a sample.

**2.3. Data Collection Tools**

In order to collect data for the study, the "Personal Information Form," "E-Health Literacy Scale," and "Rational Drug Use Scale" were used.

The Personal Information Form; it consists of expressions aimed at determining the age, gender, chronic illness status, constantly used medication status, and time spent on the internet of university students.

E-Health Literacy Scale; "E-Health Literacy Scale" adapted into Turkish by Coşkun and Bebiş (Coşkun & Bebiş, 2015) was used to measure e-health literacy level. The scale consists of 8 items measuring internet attitude and 2 items related to internet use. Expressions related to 8 items measuring internet attitude are rated on a 5-point Likert scale as "1-I strongly disagree, 2-I do not agree, 3-I am undecided, 4-I agree, 5-I strongly agree." The lowest 8 points and the highest 40 points are taken from the scale, and 2 items involving internet use are not included in the scoring. The statements about the scale of these 2 items, which are not included in the scoring, are graded in a 5-point Likert type as "1-Not important, 2-Not important, 3-I am undecided, 4-Important, 5-Very important." A high score on the scale indicates a high level of e-health literacy. In the adaptation of the scale, the Cronbach Alpha reliability value was observed to be 0.780 (Coşkun & Bebiş, 2015). In this study, the cronbach alpha value of the scale was found to be 0.777. This reliability value

shows that the E-Health Literacy Scale is quite reliable (Kalaycı, 2017; Munro, 2005).

Rational Drug Use Scale; The "Rational Drug Use Scale" developed by Aktaş and Selvi (Aktaş & Selvi, 2019) was used to measure the level of rational drug use. The scale consists of 15 items. Statements related to the scale are graded in a 5-point Likert type as "1-I strongly disagree, 2-I do not agree, 3-I am undecided, 4-I agree, 5-I strongly agree." The Cronbach Alpha reliability value of the scale was observed to be 0.830 (Aktaş & Selvi, 2019). In this study, the cronbach alpha value of the scale was found to be 0.840. This reliability value shows that the Rational Drug Use Scale is quite reliable (Kalaycı, 2017; Munro, 2005).

**2.4. Data collection and analysis**

After obtaining the necessary permissions from the scale owners and the ethics committee, the scale questions were carried out on a voluntary basis by face-to-face survey technique in all departments in the vocational school. The data obtained as a result of the applied scales were analyzed through the SPSS program. Frequency and percentage calculations were made in order to determine the demographic and descriptive data of the participants (age, gender, chronic illness status, constantly used drug status, and time spent on the internet).

In order to determine whether there is a significant difference in terms of the e-health literacy and rational drug use of the students participating in the research and the variables of age, gender, department they study, what grade they are in, chronic illness status, constantly used drug status, and time spent on the internet, we determined that the data did not deviate from the normal distribution. t test, ANOVA, and Pearson correlation parametric analyses were applied to independent groups.

**3. RESULTS**

In the findings part of the research, firstly, the socio-demographic characteristics of the participants from whom data were obtained are included (Table 1).

**Table 1. Socio-demographical characteristics of the participants**

Demographic features	Options	Number of people (N)	%
Gender	Woman	377	69.6
	Male	165	30.4
Age	18-19 years old	259	47.8
	20-21 years old	229	42.3
	22 years and older	54	10.0
The program you are studying (section)	Anesthesia	49	9.0
	First and Emergency Aid	133	24.5
	Occupational Therapy	39	18.4
	Medical Documentation and Secretarial	99	19.0
	Medical Imaging Techniques	103	10.1

	Medical Laboratory Techniques	55	11.8
	Elderly Care	64	7.2
Class	1st Class	294	54.2
	2nd Class	248	45.8
Chronic illness	Yes	31	5.7
	No	511	94.3
Regular drug use	Yes	37	6.8
	No	505	93.2
Time spent on the internet	0-3 hours	200	36.9
	4-6 hours	267	49.3
	7 hours or more	75	13.8
<b>TOPLAM</b>		<b>542</b>	<b>100.00</b>

541 students participated in the research, and 69.6% of the people who agreed to participate were female and 30.4% were male. It has been determined that 47.8% of the participants are between the ages of 18-19, 42.3% are between the ages of 20-21, and 10% are between the ages of 22 and over. 9% of the students were Anesthesia, 24.5% First and Emergency Aid, 18.4% Occupational Therapy, 19% Medical Documentation and Secretarial, 10.1% Medical Imaging Techniques, 11.8% Medical Laboratory Techniques and 8.2% are trained in Elderly Care programs. In addition, 54.2% of the students are in the 1st grade and 45.8% are in the 2nd grade. 94.3% of the students stated that they did not

have a chronic illness, and 5.7% of them stated that they had a chronic illness. In addition, 93.2% of them did not use a regular drug, while 6.8% of them stated that they used a regular drug. It was determined that 36.9% of the students spent 0-3 hours, 49.3% spent 4-6 hours, and 13.8% spent 7 hours or more on the internet.

According to Tabachnick & Fidell (Tabachnick & Fidell, 2013) the distribution of Skewness and Kurtosis data between "-1.5 and +1.5" indicates that the data do not deviate from the normal distribution. The results of the normality test examination for the scale and its dimensions used in the study are presented in Table 2.

**Table 2. Normality test analysis data**

	Mean	Standard deviation	Skewness	Kurtosis
E-health literacy	3.56	0.69	-0.328	0.511
Internet usage	3.41	0.81	-0.494	-0.061
Rational drug use	3.16	0.51	0.584	1.101

Considering the data obtained from the participants in Table 2, it was determined that the Skewness and Kurtosis values of the data were distributed between "-1.5 and +1.5," and it was concluded that the data did not deviate from the normal distribution. As a result of this result, it was decided to apply parametric analysis in further analyses.

In order to determine whether there is a statistically significant difference between the socio-demographic characteristics of the participants and the mean scores of e-health literacy and rational drug use, t-test and ANOVA test analysis were performed in groups independent of parametric analysis methods, and the results are presented in Table 3 and Table 4.

**Table 3. Results of t-test and anova test analysis in independent groups between demographic characteristics of participants and e-health literacy**

Demographic features	Options	N	Mean	Standard deviation	t or F value	P
Gender	Woman	377	3.54	0.66	-1.004	0.316
	Male	165	3.60	0.76		
Age	18-19 years old	259	3.52	0.66	1.251	0.287
	20-21 years old	229	3.69	0.72		
	22 years and older	54	3.56	0.74		
The program you are studying (section)	Anesthesia	49	3.50	0.74	1.942	0.072
	First and Emergency Aid	133	3.56	0.68		
	Occupational Therapy	39	3.44	0.85		
	Medical Documentation and Secretarial	99	3.60	0.64		

	Medical Imaging Techniques	103	3.62	0.76		
	Medical Laboratory Techniques	55	3.33	0.85		
	Elderly Care	64	3.70	0.69		
Class	1st Class	294	3.54	0.69	-1.425	0.116
	2nd Class	248	3.59	0.69		
Chronic illness	Yes	31	3.72	0.75	1.327	0.185
	No	511	3.55	0.69		
Regular drug use	Yes	37	3.70	0.71	1.311	0.190
	No	505	3.55	0.69		
Time spent on the internet	0-3 hours	200	3.56	0.66	0.138	0.871
	4-6 hours	267	3.55	0.73		
	7 hours or more	75	3.53	0.65		

When Table 3 is examined, no statistically significant difference is found between the e-health literacy level of the students participating in the research and the group mean scores of gender, age, the program you are

studying (section), class, chronic illness, constantly used drug status, and time spent on the internet (p>0.05).

**Table 4. Results of t-test and anova test analysis in independent groups between demographic characteristics of participants and rational drug use**

Demographic features	Options	N	Mean	Standard deviation	t or F value	p
Gender	Woman <sup>1</sup>	377	3.14	0.49	-1.535	0.125
	Male <sup>2</sup>	165	3.21	0.55		
Age	18-19 years old <sup>1</sup>	259	3.11	0.29	4.861	<b>0.008*</b> <b>1&lt;3</b> <b>2&lt;3</b>
	20-21 years old <sup>2</sup>	229	3.17	0.35		
	22 years and older <sup>3</sup>	54	3.35	0.82		
The program you are studying (section)	Anesthesia	49	3.08	0.49	1,604	0,144
	First and Emergency Aid	133	3.20	0.51		
	Occupational Therapy	39	3.02	0.34		
	Medical Documentation and Secretarial	99	3.20	0.49		
	Medical Imaging Techniques	103	3.16	0.50		
	Medical Laboratory Techniques	55	3.06	0.55		
	Elderly Care	64	3.25	0.61		
Class	1st Class	294	3,13	0,52	-1.558	0,120
	2nd Class	248	3,20	0,51		
Chronic illness	Yes <sup>1</sup>	31	3.09	0.45	-0.771	0.441
	No <sup>2</sup>	511	3.17	0.52		
Regular drug use	Yes <sup>1</sup>	37	3.15	0.38	-0.184	0.854
	No <sup>2</sup>	505	3.16	0.52		
Time spent on the internet	0-3 hours <sup>1</sup>	200	3.17	0.49	1.043	0.353
	4-6 hours <sup>2</sup>	267	3.13	0.59		
	7 hours or more <sup>3</sup>	75	3.16	0.51		

\*p<0.05

When Table 4 is examined, a statistically significant difference is determined between the rational drug use of the students participating in the study and their age (p<0.05), while there is no statistically significant difference between the group mean scores for gender, the program you are studying (section), class chronic illness status, constantly used drug status, and time spent on the internet (p>0.05).

**Table 5. Results of correlation analysis between e-health literacy and rational drug use**

	E-health literacy	Rational drug use
E-health literacy	r	1
	p	.349**
Rational drug use	r	.349**
	p	.000

\*\*p<0.001 N=542

As seen in Table 5, a Pearson correlation analysis was conducted between the e-health literacy level of the students participating in the study and rational drug use. According to the results of the analysis, it was determined that there is a positive and significant relationship between the level of e-health literacy and rational drug use ( $p < 0.001$ ). It is predicted that as the level of e-health literacy increases, the level of rational drug use will increase ( $p < 0.001$ ,  $r = 0.349$ ).

#### 4. DISCUSSION

In this study, it was planned to examine the relationship between e-health literacy and rational drug use among university students. 541 students participated in the research, and 69.6% of the people who agreed to participate were female and 30.4% were male. It has been determined that 47.8% of the participants are between the ages of 18-19, 42.3% are between the ages of 20-21, and 10% are between the ages of 22 and over. 9% of the students were Anesthesia, 24.5% First and Emergency Aid, 18.4% Occupational Therapy, 19% Medical Documentation and Secretarial, 10.1% Medical Imaging Techniques, 11.8% Medical Laboratory Techniques and 8.2% are trained in Elderly Care programs. In addition, 54.2% of the students are in the 1st grade and 45.8% are in the 2nd grade. 94.3% of the students stated that they did not have a chronic illness, and 5.7% of them stated that they had a chronic illness. In addition, 93.2% of them did not use a regular drug, while 6.8% of them stated that they used a regular drug. It was determined that 36.9% of the students spent 0-3 hours, 49.3% spent 4-6 hours, and 13.8% spent 7 hours or more on the internet.

There was no statistically significant difference between the e-health literacy level of the students participating in the study and the group mean scores of gender, age, the program you are studying (section), class chronic illness, constantly used medication, and time spent on the internet. In the study conducted by Dolu and Durmuş (2023), there was no difference between the variables of gender, age, department and class. In the study conducted by Ma et al. (2023) on students, no difference was found between the variables of gender and the department they studied. In the study conducted by Kasımoğlu, Karakurt, and President (2023), while a difference was found between the variables of the department and class they studied, no difference was found between the variables of age and gender. In the study conducted by Biçer and Altay (2022) on university students, no difference was found between the variables of gender, age, and chronic illness. In the study conducted by Ergün et al. (2019) on students, no difference was found between the variables of gender, age, and chronic illness. In the study conducted by Gül, Demir and Çoşkun (2022), no difference was found between the variables of gender, chronic illness and regular drug use. In the study conducted by Yılmaz et al. (2020) on university students, no difference was found between gender and

age variables. In the study conducted by Kaynak et al. (2022) on university students, no difference was found between gender and age variables.

While a statistically significant difference was determined between the rational drug use of the students participating in the study and their age, there was no statistically significant difference between the group mean scores for gender, the program you are studying (section), class chronic illness status, constantly used drug status, and time spent on the internet. Among the age variables, it is observed that the rational use of drugs increases as the age of the individuals increases. This can be explained by the experience they have gained from life and the increase in their level of health literacy. In the study conducted by Aslan et al. (2023), while a difference was found between the variables of the department they studied, no difference was found between the variables of age and class. In the study conducted by Kartal, Karakas and Kapıkıran (2023), a difference was found between the variables of education level, but no difference was found between the variables of age and gender. In the study conducted by Yeşildağ, Ağırbaş, and Yılmaz (2022), a difference was found between the variables of gender and the department they studied, while no difference was found between the variables of class regular drug use. In the study conducted by Arslan and Ergün (2022) on students, a difference was found between gender variables, but no difference was found between the variables of chronic illness status and drug use status. In the study conducted by Akkaya and Koçaşlı (2022) on university students, a difference was found between age and regular drug use, but no difference was found between the variables of gender and chronic illness. In the study conducted by Altun, Türk, and Korkmaz Öner (2022) on university students, no difference was found between the variables of gender and regular drug use. In the study conducted by Özkan and Aca (2020) on university students, while a difference was found between regular drug use status, no difference was found between the variables of age, gender and chronic disease status. In the study conducted by Soysal and Şahin (2020) on university students, no difference was found between age and gender variables.

Correlation analysis was conducted between the e-health literacy level of the students participating in the study and rational drug use. According to the results of the analysis, it was determined that there is a positive and significant relationship between the level of e-health literacy and rational drug use ( $p < 0.001$ ). It is predicted that as the level of e-health literacy among students increases, the level of rational drug use will increase ( $p < 0.001$ ,  $r = 0.349$ ). In the study conducted by Tosun and Hoşgör (2021), it was determined that there is a positive and significant relationship between the level of e-health literacy and rational drug use. In the study conducted by İşler et al. (2022), individuals' health literacy levels were found to be low. However,

irrational drug use behaviors were also common. Eser and Çelik (2022) showed in their study on pregnant women that health literacy affects the knowledge of rational drug use and that as the level of health literacy increases, the level of rational medicine also increases. In another study, it was concluded that individuals with insufficient health literacy could not understand the information given about their diseases and misused asthma medications (Sequeira et al., 2013; Tosun & Hoşgör, 2021). The limited number of studies in the literature on the relationship between the level of e-health literacy and rational drug use can make it difficult to compare the findings of this study in a healthy way. Therefore, it is possible to state that more research is needed on this subject.

## 5. CONCLUSIONS AND RECOMMENDATIONS

Our research aimed to examine the relationship between e-health literacy and rational drug use among university students. As a result of the research, a direct relationship was determined between e-health literacy and rational drug use. E-health literacy includes people's ability to access, understand, and apply information about health information and services. Rational drug use, on the other hand, involves people using the right drugs in the right doses at the right time and in the right way in accordance with their health status.

As e-health literacy increases, people's ability to access and understand information about health information and services also increases. This makes it easier for people to use the right drugs in the right doses at the right time and in the right way in accordance with their health status and encourages the rational use of drugs. Therefore, there is a positive relationship between e-health literacy and rational drug use.

In order to increase e-health literacy, health literacy and e-health literacy training programs should be expanded to increase people's ability to access and understand information about health information and services. Information about health information and services

should be made accessible so that people can easily access information about health information and services.

In order to encourage rational drug use, people should be informed about the use of drugs in order to use the right drugs in the right doses, at the right time and in the right way, in accordance with their health status. It is necessary to increase the ability to access and understand information about health information and services by improving communication between health professionals and pharmaceutical companies.

The use of e-health platforms should be expanded. It is recommended to expand the use of e-health platforms in order to enable people to access and use information and tools about health information and services more easily. These platforms allow people to monitor their health status, remind medication, communicate with doctors, and archive health information. With the implementation of the recommendations as a result of the research, increasing e-health literacy and encouraging rational drug use can be achieved. In this way, people will be able to access, understand and apply information about health information and services more easily. This will contribute to better management of health conditions and a healthy life.

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## Conflict of Interest

No

## Ethical Approval

Before applying the data collection form in the study, ethics committee approval was obtained with the Hatay Mustafa Kemal University Social and Human Sciences Scientific Research and Publication Ethics Committee's decision dated November 2, 2022 and numbered 6.

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