YOBU Sağlık Bilimleri Fakültesi Dergisi
Yıl:2023 Cilt:4 Sayı:1: 1-10

YOBU Faculty of Health Sciences Journal
Year:2023 Volume:4 Issue:1 1-10

ISSN:2718-0972

Araştırma Makalesi/ Research Article

DETERMINATION OF THE RELATIONSHIP BETWEEN THE LEVEL OF HEALTH LITERACY AND QUALITY OF LIFE OF VOCATIONAL SCHOOL OF HEALTH SERVICES STUDENTS DURING THE COVID-19 PANDEMIC

COVID-19 PANDEMİSİ DÖNEMİNDE SAĞLIK HİZMETLERİ MESLEK YÜKSEKOKULU ÖĞRENCİLERİNİN SAĞLIK OKURYAZARLIĞI DÜZEYİ İLE YAŞAM KALİTESİ ARASINDAKİ İLİŞKİNİN BELİRLENMESİ

Elif ÜNER[1], Ayşe DOST[2]

[1] Dr., Lecturer, Muğla Sıtkı Koçman University, Fethiye Faculty of Health Sciences, Nursing Department, Muğla, TURKEY
[2]Assist Prof., Bezmialem Vakıf University, Faculty of Health Sciences, İstanbul, TURKEY

Abstract

Introduction: The COVID-19 pandemic has initiated a new process in Turkey and worldwide. University students need information and training about the coronavirus to make effective decisions about their health and the health of others.

Objective: This study was conducted to determine the relationship between students' quality of life and level of health literacy during the COVID-19 pandemic.

Materials and Methods: The correlational study was carried out with 451 students studying at a foundation university between February and April 2021. Data were collected using the "Descriptive Characteristics Form, COVID-19 Knowledge and Awareness Questionnaire, Turkey Health Literacy Scale (THLS-32) and the World Health Organization Quality of Life Scale-Short Form Turkish Version (WHOQOL-BREF-TR)."

Results: The study revealed that most students had adequate and excellent health literacy levels. The students' overall score on the WHOQOL-BREF-TR was 85.00±14.60 points, and their quality of life was high. There was a significant correlation between the "THLS-32 and WHOQOL-BREF-TR" (r=0.39; p=0.00). The THLS-32 scores of students whose income was higher than their expenses, whose mother was a university graduate, and who stated that wearing a mask and the COVID-19 vaccine were effective against COVID-19 were statistically significantly higher compared to the other students ($p<0.05$). The WHOQOL-BREF-TR scores of students whose income was higher than their expenses and whose mother was a university graduate were found to be statistically significantly level higher ($p<0.05$).

Conclusion: A positive and significant correlation was found between the students' health literacy and quality of life. As the health literacy level of students increases, their quality of life also increases.

Keywords: Pandemic, Health Literacy, Quality of LifeAbstract

Özet

Giriş: COVID-19 pandemisi Türkiye'de ve dünyada yeni bir süreci başlattı. Üniversite öğrencilerinin kendi sağlığı ve başkalarının sağlığı ile ilgili etkin kararlar alabilmesi için koronavirüs hakkında bilgi ve eğitim ihtiyacı bulunmaktadır.

Amaç: Bu araştırma, COVID-19 pandemisi sürecinde sağlık hizmetleri meslek yüksekokulu öğrencilerinin sağlık okuryazarlığı düzeyi ile yaşam kalitesi arasındaki ilişkiyi belirlemek amacıyla yapılmıştır.

Gereç ve Yöntem: Bu tanımlayıcı-ilişki arayıcı çalışma bir vakıf üniversitesinde öğrenim gören 451 öğrenci ile Şubat-Nisan 2021 tarihleri arasında gerçekleştirilmiştir. Veriler "Tanımlayıcı Özellikler Formu, COVID-19 Bilgi ve Farkındalık Anketi, Türkiye Sağlık Okuryazarlığı Ölçeği (TSOY-32) ve Dünya Sağlık Örgütü Yaşam Kalitesi Ölçeği-Kısa Form Türkçe Versiyonu (WHOQOL-BREF-TR)" kullanılarak toplanmıştır.

Bulgular: Araştırma öğrencilerin çoğunluğunun yeterli ve mükemmel sağlık okuryazarlığı düzeylerine sahip olduğunu ortaya koymuştur. Öğrencilerin WHOQOL-BREF-TR toplam puanı 85,00±14,60 puan ve yaşam kaliteleri yüksekti. "THLS-32 ile WHOQOL-BREF-TR" arasında anlamlı düzeyde korelasyon vardı (r=0.39; p=0.00). Geliri giderlerinden yüksek olan, annesi üniversite mezunu olan, maske takmanın ve COVID-19 aşısının COVID-19'a karşı etkili olduğunu belirten öğrencilerin TSOY-32 puanları diğer öğrencilere oranla istatistiksel olarak anlamlı derecede yüksekti ($p<0.05$). Geliri giderlerinden yüksek olan ve annesi üniversite mezunu olan öğrencilerin WHOQOL-BREF-TR puanları istatistiksel olarak anlamlı düzeyde yüksek bulundu ($p<0.05$).

Sonuç: Öğrencilerin sağlık okuryazarlığı ile yaşam kalitesi arasında pozitif ve anlamlı bir ilişki olduğu belirlendi. Öğrencilerin sağlık okuryazarlığı düzeyi yükseldikçe yaşam kalitesi düzeyi de yükselmektedir.

Anahtar Kelimeler: Pandemik, Sağlık Okuryazarlığı, Yaşam Kalitesi

ORCID ID: E.Ü: 0000-0003-2546-7048; A.D: 0000-0002-4651-7254
Sorumlu Yazar: Dr., Lecturer, Muğla Sıtkı Koçman University, Fethiye Faculty of Health Sciences, Nursing Department, Muğla/TURKEY
E-mail: elifuner@mu.edu.tr
Geliş tarihi/ Date of receipt:10.03.2022 ***Kabul tarihi / Date of acceptance: 26.12.2022***

INTRODUCTION

SARS-CoV-2, the virus causing COVID-19, continues to exist as a pandemic. Late in 2019, the incidence of COVID-19 among young adults was increasing in Turkey (1). Protective measures, such as the use of masks, social distancing, and hand hygiene, and the public's participation in these practices are very important for the protection during the pandemic announced by the decision of the World Health Organization on March 11, 2020, and overcoming this process successfully (2). However, studies show that young individuals are more likely to engage in risky behaviors than older people during the pandemic, such as meeting friends, which does not comply with social distancing, and not following hygiene rules (3,4).

The university period is a period that can cause changes in health-related attitudes and behaviors in addition to personal change and vocational training (5). Changes in the health attitudes and behaviors of young people during this period may affect their future life and thus their family and community health, positively or negatively. Moreover, the increase in the positive development of young people also reduces the rates of risky behaviors. Therefore, the public's need for information and education about coronavirus is increasing to take protective measures, take effective decisions about their health and the health of others, and prevent information pollution in society (6). It is essential to raise awareness of health literacy among young people at the early stages of life (7,8).

Health literacy enables individuals to access correct information, participate in their own health services, improve health, and establish individual and community resilience by addressing health inequalities (9). This concept has gained even more importance in the current period of COVID-19. Individuals with low health literacy cannot effectively distinguish between reality and fiction and may allow unreliable information to affect their behavior and quality of life. Unfortunately, this can harm not only the individual but society as a whole. Myths about the disease and unclear and incomprehensible health information spread by social media can worsen the current situation, and false information in society can adversely affect the quality of life and health of the public (6, 9, 10).

Studies demonstrate that individuals with a high level of health literacy are more conscious in this process, and their quality of life is higher (6, 10, 11). Based on this information, the present study was carried out to determine the level of health literacy and quality of life of the vocational school of health services students during the pandemic process and examine the relationship between these two variables.

Hypothesis

H1.1. There is a significant relationship between the health literacy level and the quality of life of health services vocational school students.

MATERIALS AND METHOD

Research Design and Samples

The research is a descriptive, correlational study conducted at a Vocational School of Health Services of a foundation university between February and April 2021. The study population consists of 1450 students. The sample size was calculated as at least 304 students, considering the sample size table, with 95% confidence and ± 0.05 margin of error. The research sample consisted of 450 students who were reached through Google Forms from the study population and volunteered to participate in the study.

Data Collection

Research data were collected via Google Forms. It took an average of 5 minutes to fill out the form. Each participant was asked to fill it out once.

Data Collection Tools

"Descriptive Characteristics Form": The form created by the researchers consists of 21 questions, including socio-demographic information (gender, grade, age, body mass index (BMI), the presence of chronic disease, smoking and alcohol consumption, income status, etc.).

"COVID-19 Knowledge and Awareness Questionnaire": It was prepared based on the literature to learn the "level of knowledge about the COVID-19 pandemic" (five questions) and "the effectiveness of measures" (eight questions) (12).

"Turkey Health Literacy Scale-32 (THLS-32)": This scale was developed by Okyay, Abacıgil, and Harlak in 2016 within the scope of the European Health Literacy Scale study (13). It consists of 32 Likert questions, and the answers to the questions are "very easy, easy,

difficult, very difficult, I have no idea. The lowest score that can be obtained from the scale is 0, and the highest score is 50." As the score increases, the health literacy level of individuals also increases. According to the points obtained, health literacy was addressed at four levels: "inadequate health literacy = 0-25 points, problematic – limited healthy literacy = >25-33 points, adequate health literacy = >33-42, and excellent health literacy= >42-50."

The conceptual framework includes "two health-related dimensions (treatment and service, disease prevention and health promotion)" and "four information-acquiring processes (access, understanding, assessment, and use/application) concerning health-related decision-making and practices." In this study, the overall internal consistency coefficient of the scale was determined as 0.957. Cronbach's alpha coefficient of the "Treatment and Service Sub-Dimension" was 0.915, and Cronbach's alpha coefficient of the "Disease Prevention and Health Promotion Sub-Dimension" was 0.950.

"World Health Organization Quality of Life Scale-Short Form Turkish Version (WHOQOL-BREF-TR)": Eser et al. Performed the validity and reliability study of the scale developed with the support of the World Health Organization (14). The scale used for adults consists of 26 questions and aims to "measure physical, mental, social, and environmental well-being." The domains represent themselves independently of each other and express the quality of life. The scores that can be obtained from the scale are calculated as 4-20 points. As the mean score increases, the quality of life also increases. In this study, the internal consistency coefficient of the scale was found to be 0.846.

Data Analysis

Statistical analyses were conducted using "IBM SPSS for Windows Version 22.0." Descriptive tests of "frequency, percentage, mean, and standard deviation analyses" were employed. The distribution of numeric variables was tested using the "Kolmogorov-Smirnov test," and it was identified that the data were not normally distributed (p=0.00). Therefore, the differences between individual characteristics variables and the questionnaire scores were analyzed using the "Mann-Whitney U" and "Kruskal-Wallis" tests. To determine the association between the scores of the "THLS-32" and the "WHOQOL-BREF-TR," "Spearman's rank correlation coefficient analysis" was performed. The statistical significance was considered as "p<0.05."

Ethical Considerations

The ethics committee approval was obtained from the ethics committee of a foundation university on 27.01.2021 (IRB No. E-53938333-050-955) to conduct the study. Written institutional permission was received from the university administration where the study was planned to be carried out. Informed consent was acquired from the vocational school of health services students participating in the study via Google Forms.

RESULTS

The mean age of the students participating in the study was 20.56±3.54 years, and 77.4% were female. It was detected that 7.5% of the students had a "chronic health problem," 41.9% had a "chronic disease in one of their parents," 60.8% reached "health-related information" through social media, and 15.1% were diagnosed with COVID-19. The THLS-32 scale score of the students whose income was higher than their expenses, whose mother was a university graduate, who stated that wearing a mask and the COVID-19 vaccine were effective against COVID-19 was found to be statistically significantly higher than the others (p<0.05).

Table 1. Comparison of the THLS-32 and WHOQOL-BREF-TR scores according to the students' descriptive variables (n=451)

Variables	N	%	THLS-32		WHOQOL-BREF-TR	
			Mean rank	Test and p-value	Mean rank	Test and p-value
Age (years) (20.56±3.54; 18-30)						
Gender						
Female	349	77.4	224.25	Z=-0.529	222.48	Z=-1.060
Male	102	22.6	232.60	p=0.597	238.03	p=0.289
Body Mass Index						
Underweight	69	15.3	249.87		231.50	
Normal	291	64.5	213.98	KW=4.850	220.57	
Overweight	75	16.6	225.05	p=0.303	233.20	KW=7.041
1st degree obese	9	2.0	255.78		165.67	p=0.134
2nd degree obese	7	1.6	205.29		121.29	

Table 1. Continuation

Variables	N	%	THLS-32		WHOQOL-BREF-TR	
			Mean rank	Test and p-value	Mean rank	Test and p-value
Income level						
Income more than expenses (a)	69	15.3	270.67	KW=12.97	307.41	KW=59.924
Income equals expenses (b)	284	63.0	224.35	p*=**0.002**	232.07	p*=**0.000**
Income less than expenses(c)	98	21.7	199.32	**a>b,c**	151.10	a>b,c
Presence of chronic disease						
Yes	34	7.5	182.46	Z=-2.029	184.34	Z=-1.939
No	417	92.5	229.55	p=0.549	229.40	p=0.053
Presence of the ongoing treatment						
Yes	41		214.39	Z=-0.599	184.50	Z=-2.139
No	410		227.16	p=0.549	218.15	p=0.061
Do you smoke?						
Yes	152	33.7	227.74	Z=-0.203	215.68	Z=-1.199
No	299	66.3	225.11	p=0.839	231.25	p=0.230
Do you drink alcohol?						
Yes	96	21.3	221.21	Z=-0.407	214.89	Z=-0.942
No	355	78.7	227.30	p=0.684	229.01	p=0.346
Where have you spent most of your life?						
Metropolis	120	26.6	237.16		233.95	
City	238	52.8	228.75	KW=3.630	221.68	KW=2.360
Small town	31	6.9	198.10	p=0.304	202.26	p=0.501
Village	62	13.7	207.78		239.06	
Mother's education status						
Literate (a)	37	8.2	170.23		185.51	
Primary school (b)	216	47.9	227.68	KW=14.308	215.13	KW=10.314
Middle School (c)	97	21.5	223.44	p=**0.006**	238.44	p=**0.035**
High school (d)	76	16.9	228.34	**e>a,b,c,d**	248.09	**e>a,b,c,d**
University (e)	25	5.5	296.86		264.40	
Father's education status						
Literate	3	0.7	87.17		211.67	
Primary school	165	36.6	225.65		230.12	
Middle School	123	27.3	219.93	KW=5.020	212.62	KW=3.901
High school	122	27.1	228.52	p=0.285	224.12	p=0.420
University	38	8.4	249.99		258.59	
Does anyone in the family have a chronic illness?						
Yes	189	41.9	225.98	Z=-0.003	222.39	Z=-0.449
No	262	58.1	226.02	p=0.907	228.60	p=0.617
Are there any health workers in the family?						
Yes	83	18.4	220.80	Z=-0.403	198.17	Z=-2.154
No	368	81.6	227.17	p=0.687	232.28	p=0.131
Where can you find health-related information?						
Social media	100	22.2	210.37		215.36	
TV, Radio	274	60.8	231.60	KW=3.954	224.53	KW=3.006
Printed book, journal, or article	49	10.9	210.51	p=0.266	235.96	p=0.391
Electronic book, journal, or article	28	6.2	254.13		260.98	
Have you been diagnosed with COVID-19?						
Yes	68	15.1	227.92	Z=0.132	239.74	Z=0.943
No	383	84.9	225.66	p=0.895	223.56	p=0.346
Wearing a mask				Z=-2.289		
Effective (a)	419	92.9	229.88	**p*=0.022**	231.23	Z=-3.087
Not effective (b)	32	7.1	175.25	**a>b**	217.47	p=0.541
Washing hands frequently						
Effective	443	98.2	227.43	Z=-1.735	226.34	Z=-0.412
Not effective	8	1.8	146.88	p=0.083	207.19	p=0.680

Table 1. Continuation

Variables	N	%	THLS-32		WHOQOL-BREF-TR	
			Mean rank	Test and p-value	Mean rank	Test and p-value
Using a disinfectant						
Effective	432	95.8	226.10	Z=-0.080	225.31	Z=-0.932
Not effective	19	4.2	223.66	p=0.936	241.58	p=0.594
Cleaning frequently used areas						
Effective	435	96.5	228.06	Z=-1.797	229.12	Z=-2.655
Not effective	16	3.5	169.88	p=0.079	192.06	p=0.078
Get vaccinated				Z=-3.008		
Effective (a)	326	72.3	237.41	p*=**0.003**	226.77	Z=-1.835
Not effective (b)	125	27.7	196.24	**a>b**	197.91	p=0.068
Maintaining social distance						
Effective	437	96.9	227.37	Z=-1.251	226.84	Z=-0.764
Not effective	14	3.1	183.18	p=0.211	199.82	p=0.445

**: p<0.05; p: Significance level; SD:Standard deviation; Z: Mann-Whitney U Test; KW: Kruskal-Wallis Test; %: Percentage*

Most students (>90%) stated that they knew the groups at risk for COVID-19 infection, the symptoms and the findings of the disease, what to do in case of suspicion and indicated that wearing a mask, social distancing, hand washing, and hygiene rules were effective, while 72.3% stated that the vaccine was effective against COVID-19. Table 2 contains data on the students' knowledge and awareness of COVID-19.

Table 2. Students' COVID-19 knowledge and awareness status (n=451)

Substances	n	%
Groups at risk for COVID-19 infection		
I know	8	1.8
I am undecided	29	6.4
I do not know	414	91.8
COVID-19 symptoms		
I know	4	.9
I am undecided	16	3.5
I do not know	431	95.6
Current developments in the world and our country regarding the COVID-19 pandemic		
I know	10	2.2
I am undecided	83	18.4
I do not know	358	79.4
Whether public spaces are safe during the COVID-19 pandemic		
I know	13	2.9
I am undecided	24	5.3
I do not know	414	91.8
What to do when COVID-19 infection is suspected		
I know	4	.9
I am undecided	14	3.1
I do not know	433	96.0
What do you think about the effectiveness of the following measures in the COVID-19 pandemic?		
Wearing a mask		
Effective	419	92.9
Not effective	32	7.1
Washing hands frequently		
Effective	443	98.2
Not effective	8	1.8
Using a disinfectant		
Effective	432	95.8
Not effective	19	4.2
Cleaning frequently used areas		
Effective	435	96.5
Not effective	16	3.5
Get vaccinated		
Effective	326	72.3
Not effective	125	27.7
Maintaining social distance		
Effective	437	96.9
Not effective	14	3.1

In the evaluation made with the THLS-32 scale, the general health literacy score was 34.81±17.79. The score on the "Understanding health-related information" dimension was the highest, whereas the score on the "Assessing health-related information" dimension was the lowest (Table 3).

Table 3. Means and min-max values for the THLS-32

THLS-32	Minimum	Maximum	Mean	Standard deviation
General	**16.00**	**50.00**	**34.81**	**14.79**
Treatment and Service	16.00	50.00	34.67	14.88
Access to Information	16.00	50.00	35.92	16.28
Understanding Information	16.00	50.00	35.98	16.14
Assessment of Information	16.00	50.00	29.37	18.58
Using/Application of Knowledge	16.00	50.00	37.41	15.52
Disease Prevention and Health Promotion	16.00	50.00	34.95	15.87
Access to Information	16.00	50.00	35.90	17.21
Understanding Information	16.00	50.00	36.74	16.03
Assessment of Information	16.00	50.00	33.45	17.60
Using/Application of Knowledge	16.00	50.00	33.71	17.23
Accessing Health-Related Information	16.00	50.00	35.91	15.57
Understanding Health-Related Information	16.00	50.00	36.63	15.02
Assessment of Health-Related Information	16.00	50.00	31.41	16.75
Applying Health-Related Knowledge	16.00	50.00	35.56	15.10

While 67% of the vocational school of health services students had “sufficient and excellent health literacy,” this rate was 68.4% for the "Treatment and Service" dimension and 70.8% for the "Disease Prevention and Health Promotion" dimension. For the same evaluation, the "Understanding Health-Related Information" dimension had the highest rate (75.4%), and the "Assessing Health-Related Information" (60.1%) dimension had the lowest rate.

The scores obtained from the “WHOQOL-BREF-TR” scale sub-groups were found as 28.26±5.06 for "physical health," 19.25±2.96 for "mental health," 10.20±2.85 for "social health," and 27.29±5.96 for "environmental health," respectively. The “WHOQOL-BREF-TR” total score average of the students was 85.00±14.60 (Table 4).

Table 4. Means and min-max values for the WHOQOL-BREF-TR (n=451)

WHOQOL-BREF-TR	n	Minimum	Maximum	Mean	Standard deviation
Physical Health	451	15.00	40.00	28.26	5.06
Mental Health	451	12.00	26.00	19.25	2.96
Social Health	451	3.00	15.00	10.20	2.85
Environmental Health	451	12.00	40.00	27.29	5.96
Total	451	47.00	117.00	85.00	14.60

A positive and significant correlation was found between the “THLS-32” and “WHOQOL-BREF-TR.” A significant positive correlation was detected between the THLS-32 total and sub-dimensions’ scores and the “WHOQOL-BREF-TR” total and sub-dimensions’ scores (p=0.000) (Table 5).

Table 5. The relationship between the students' THLS-32 and WHOQOL-BREF-TR scores (n=451)

Scales and Sub-dimensions		Treatment and Service	Protection from Diseases and Health Promotion	THLS-32 Total
WHOQOL-BREF-TR Total	**R**	0.402**	0.370**	0.393**
	P	0.000	0.000	0.000
Physical Health	**R**	0.342**	0.300**	0.327**
	P	0.000	0.000	0.000
Mental Health	**R**	0.301**	0.301**	0.302**
	P	0.000	0.000	0.000
Social Health	**R**	0.274**	0.305**	0.291**
	P	0.000	0.000	0.000
Environmental Health	**R**	0.409**	0.359**	0.394**
	P	0.000	0.000	0.000

**p< .01; p: Significance level; r: Correlation Coefficient*

DISCUSSION

As far as we know, this is the first cross-sectional study investigating health literacy and quality of life during the coronavirus/COVID-19 period among university students in Turkey. In the evaluation made using the THLS-32 scale to determine the health literacy level of students during the pandemic, the general health literacy score was 34.81±17.79, and it was found that they had an adequate level of health literacy. It was revealed that 66.7% of the participants had a "sufficient or excellent health literacy" level. A study conducted during the pandemic period in Turkey determined that students' health literacy was quite good. (15). In a study carried out with university students during the pandemic in the USA, only 49% of students had adequate health literacy levels (16). In the current study, it is thought that the fact that students receive education in health services departments affects the result.

In the study, most students (>90%) stated that they knew the groups at risk for COVID-19 infection and the symptoms and findings of the disease. The study carried out to evaluate the knowledge of COVID-19 among the vocational school of health services students determined that 43% of university students had a high level of health literacy and most had the basic knowledge of COVID-19 (17). A study from India revealed that participants' knowledge of COVID-19 infection and protection from this infection was moderate (18). In our study, the health literacy and quality of life of students with higher income and higher maternal education were higher. One of the models representing health literacy states that demographic, social, and cognitive factors affect health literacy (19). According to the Turkey Health Literacy and Associated Factors (TSOYA) 2017 study, the health literacy levels of individuals whose income was insufficient to meet their needs were quite low (20).

The students' total score on the WHOQOL-BREF-TR was 85.00±14.60, and their quality of life was at a high level. Similar to our study, a study examining the quality of life levels of university youth during the pandemic determined them to be high (21). Contrary to the present study findings, Bulguroğlu et al. (2021) and Abdullah et al. (2020) reported that the quality of life of students was adversely affected by the pandemic (22, 23). According to the findings of an online survey conducted among the general population in Italy, it was stated that the increased levels of anxiety and stress among young people who had to work outside

their place of residence adversely affected their quality of life (24). The high quality of life scores of students in our study are thought to originate from high levels of health literacy and receiving education in health-related departments. When the relationships between the WHOQOL-BREF TR total and sub-dimension scores and the THLS-32 total and sub-dimension scores were examined, there was a positive correlation between all sub-domains and health literacy levels. Our study revealed that the quality of life of students increased as their health literacy levels increased. Nguyen et al. (2020) found that health literacy helped improve the quality of life during the COVID-19 pandemic (10). Likewise, Riiser et al. (2020) determined that individuals with low health literacy levels had poor quality of life (6). These results emphasized the importance of increasing health literacy levels to protect and maintain the quality of life of individuals during the ongoing pandemic. Likewise, in pre-pandemic studies, Duong et al. (2015), Akçilek (2017), and Kayupova et al. (2017) associated increased health literacy with better health status (25-27).

The study determined that the vocational school of health services students' levels of health literacy and quality of life were high and found a significant relationship between them. "Health literacy" is important in controlling the current pandemic and possible pandemics. Especially during this difficult pandemic process, the high level of health literacy of healthcare professionals is very important not only to improve their health and quality of life but also to protect the health of the individuals they are responsible for caring for (28).

CONCLUSION

This study determined a positive and significant relationship between health literacy and quality of life. As the health literacy level of the students increases, their quality of life also increases. The role of health literacy is great for a healthy and quality life. It is necessary to maintain the level of health literacy in order for vocational school of health services students to have a quality life and keep future generations healthy. Health literacy is an essential element of social responsibility and improving quality of life and should be seen as an important tool for information buyers and providers to reduce and control possible future pandemics.

Limitations:

The study is the first one that investigates the "health literacy and quality of life" of the vocational school of health services students during the pandemic in Turkey, but it has some limitations. Causality could not be inferred from this study where a cross-sectional design was used and the survey was conducted online. Collecting data via Google Forms allowed access only to individuals with media connections. The research was carried out with university students in a single institution. Therefore, the study's limitation is that the research findings cannot be generalized to the whole population.

REFERENCES

1. Duman D. Fear of Covid-19 and intolerance of uncertainty among university students. The Journal of Social Science. 2020;4(8):426-437.
2. Majumder J, Minko T. Recent developments on therapeutic and diagnostic approaches for Covid-19. The Aaps Journal. 2021;5;23(1):14.
3. Kim JK, Crimmins EM. How does age affect personal and social reactions to Covid-19: results from the national understanding America study. Plos One. 2020;15(11):E0241950.
4. Cohen G, Russo MJ, Campos JA, Allegri RF. Living with dementia: increased level of caregiver stress in times of Covid-19. Int Psychogeriatr. 2020;32(11):1377-1381.
5. Hernantes N, Pumar-Méndez MJ, López-Dicastillo O, Iriarte A, Mujika A. Volunteerism as adolescent health promotion asset: a scoping review. Health Promotion International. 2020;35(3):610-623.
6. Riiser K, Helseth S, Haraldtad K, Torbjornsen A, Richardsen KR. Adolescents' health literacy, health protective measures, and health-related quality of life during the Covid-19 pandemic. Plos One. 2020;15(8):E0238161.
7. Estrada CA, Ramos Gregorio EJR, Kanyasan K, Hun J. School health promotion in south-east Asia by Japan and partners. Pediatrics International.2020;62(9):1029-1038.

8. Dinçer A, Kurşun Ş. Determining the health literacy levels of university students. Sted. 2017;26(1):20-26.
9. Spring H. Health literacy and Covid-19. Health Info Libr J. 2020;37(3):171-172.
10. Nguyen HC Nguyen MH, Do BN, Tran CQ, Nguyen TTP, Pham KM et all. People with suspected Covid-19 symptoms were more likely depressed and had lower health-related quality of life: the potential benefit of health literacy. J Clin Med. 2020;9(4):965.
11. Tran TY, Nguyen HC, Pham LY, Nguyen MH, Nguyen HC, Ha TH. et al. Impacts and interactions of Covid-19 response involvement, health-related behaviours, health literacy on anxiety, depression and health-related quality of life among healthcare workers: a cross-sectional study. Bmj Open. 2020;10(12): E041394.
12. Peksoy Kaya S. ve Kaplan S. Evaluation of the relationship between Covid-19 pandemic awareness and health behaviors and health literacy among nursing students. HEAD. 2020;17(4):304-11.
13. Okyay P, Abacıgil F. Turkish health literacy scales reliability and validity study. Ministry of Health, 2016.
14. Eser S, Fidaner H, Fidaner C, Elbi H, Eser E, Göker E. Measure of quality-of-life whoqol-100 and whoqol-bref. 3p Journal.1999;7:5-13.
15. Kuloglu Y, Uslu K. The impact of health literacy on the perception of health in the health workers of the future. Dogus University Journal. 2022;23(1):255-277.
16. Patil U, Kostareva U, Hadley M, Manganello JA, Okan O, Dadaczynski K et al. Health literacy, digital health literacy, and Covid-19 pandemic attitudes and behaviors in US. College students: implications for interventions. Int. J. Environ. Res. Public Health. 2021;18,3301.
17. Chesser A, Ham AD, Woods NK. Assessment of Covid-19 knowledge among university students: implications for future risk communication strategies. Health Educ Behav. 2020;47(4):540-543.
18. Roy, D, Tripathy S, Kar SK, Sharma N, Verma SK. and Kaushal V. Study of knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during Covid-19 pandemic. Asian Journal Of Psychiatry. 2020;51,102083.
19. Paasche-Orlow MK. and Wolf MS. The causal pathways linking health literacy to health outcomes. American Journal Of Health Behavior. 2007;31,19-26.
20. Turkish ministry of health, general directorate of health promotion, Turkey health literacy level and related factors study. (TSOYA-2017). Ankara 2018, ministry of health publication no. 1103.
21. Nurhayati F, Wahjuni ES, Andrijanto D, Febriyanti I, Kaharina A. Quality of life and level of physical activity in sports education students during the Covid-19 pandemic. IJCAH, 2020;491.
22. Bulguroğlu Hİ, Bulguroğlu M, Özaslan M. Covid-19 investigation of physical activity, quality of life and depression levels of university students during the pandemic process. Acıbadem University Journal of Health Sciences. 2021;12(2):306-311.
23. Abdullah MFILB, Murad NS, Teoh SH, Mohamad MA. Quality of life of university students during the Covid-19 pandemic: assessing the level of quality of life and the associated factors after the end of movement lockdown. Research Square. 2020.
24. Mazza C, Ricci E, Biondi S, Colasanti M, Ferracuti S, Napoli C, et al. Survey of psychological distress among Italian people during the Covid-19 pandemic: immediate psychological responses and associated factors. International Journal of Environmental Research and Public Health.2020;17(9):3165.
25. Duong TY, Lin IF, Sørensen K, Pelikan JM, Van Den Broucke S., Lin YC et all. Health literacy in Taiwan: a population-based study. Asia-Pac. J. Public Health. 2015;27:871–880.
26. Kayupova G, Turdaliyeva B, Tulerayev K, Duong TY, Chang PW, Zagulova D. Health literacy among visitors of district polyclinics in Almaty, Kazakhstan. Iran. J. Public Health. 2017;46:1062–1070.
27. Akcilek, E. Investigation of health literacy and quality of life in university students. (unpublished master thesis). Istanbul Medipol university institute of health sciences, Istanbul, 2017.

28. Güzel A, Turan S, Üner S. Health literacy levels of university students and some related factors. Value in Health Sciences. 2022;12(3):390-400.