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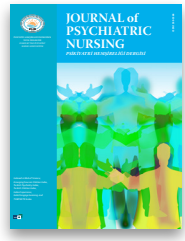

Original Article

The relationship between quality of life and health literacy in individuals presenting to primary health-care institutions

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Abstract

Objectives: This study aimed to determine the relationship between quality of life and health literacy in individuals presenting to primary health-care institutions.

Methods: The study was carried out with a descriptive cross-sectional design between March 5, 2022, and December 20, 2022. The study was completed with 800 individuals (n=800) who presented to Ağın Community Health Center. Descriptive statistics, independent-sample t-tests, analysis of variance, and correlation analyses were used to analyze the data. Data were collected using a descriptive characteristics form, the Turkish Health Literacy Scale, and the World Health Organization Quality of Life Instrument-Short Form.

Results: A significant and positive correlation between health literacy and quality of life was identified among individuals who presented to primary health-care institutions ($p<0.05$). Moreover, it was found that health literacy explained 46% of the variance in quality of life, indicating its strong impact.

Conclusion: In the study, it was determined that the health literacy of the participants was at a sufficient level, and their quality of life was moderate. It was observed that an increase in health literacy led to an improvement in quality of life.

Keywords: Health literacy; primary health-care institutions; quality of life.

With the transformation in health and transition to family medicine in Türkiye, Community Health Centers have started to serve as primary health-care institutions. These institutions aim to identify and improve health-related risks and problems to protect and improve public health.[1] In addition, services planned through preventive, therapeutic, and rehabilitating health-care services included in primary health care can be provided in an efficient way.[2] Health literacy provides individuals with the ability to make decisions about their health.[3] As a concept whose importance is increasing in Türkiye and the rest of the world, health literacy enables efficient resource use in individuals, the development of quality conditions in health-care services, and the making of correct decisions in the field of public health.[4,5] Increased levels of health literacy allow individuals to be informed about their diagnosis and treatment, be involved in the process by displaying positive responses, and understand the services provided and their quality accurately.[6,7] A study on health literacy in Tehran revealed that poor health literacy predicted lower levels of health-promoting behaviors, higher rates of hospitalization, difficulty communicating with health-care providers, and poor health status.[8] With the help of health literacy, individuals can know about their health better, analyze it, have access to adequate information about both their own and public health, follow the policies in effect and effective factors by performing health-related research, and develop solution methods for health problems.[9,10] High levels of health literacy lead to improvements in many areas, including the efficient

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use of health resources and positive changes in the quality of life and behaviors of individuals.[11,12] Health literacy is among the important factors that affect quality of life and the need for health services for both the individual and society.[13] Quality of life is defined as health and happiness perceived by individuals regarding their lives. A good quality of life involves handling an individual's life with its various dimensions, implementing actions for the individual's needs subjectively, and ensuring that the individual is satisfied.[14,15] A high level of health literacy can improve access to health care, shorten treatment times, and improve quality of life.[16] It is important to investigate the relationship between health literacy and quality of life in people attending primary care institutions and identify effective factors.

The health literacy of an individual refers to their capacity to use the health-care system, define their health, express their illness correctly, communicate with health-care professionals, read appointment cards and medical education brochures, and apply medical recommendations and treatment instructions.

It increases the quality of life and life expectancy of individuals. In this context, health literacy facilitates communication with patients for health service providers and enables them to participate in decisions regarding their health, helping both parties understand each other better.[17] High health literacy brings about development in many areas such as positive changes in the behaviors of individuals, as well as the recovery and effective use of resources allocated to health. It is seen that many studies have been conducted on the relationship between health literacy and quality of life.[18,19] Health literacy and quality of life were found to be positively correlated in a study conducted in Türkiye.[20] Numerous international studies in this field have discovered a positive relationship between health literacy and life satisfaction.[21–23] The number and frequency of diseases are increasing day by day in Türkiye and the rest of the world. This situation has a negative impact on the quality of life of individuals. Therefore, the need for the development of nursing initiatives that will improve and maintain the health literacy and quality of life of individuals is extremely high. Therefore, it is anticipated that this study, which aims to ascertain how health literacy and quality of life are related to each other in people who visit primary health-care institutions, will add to the body of knowledge in the field.

Research Questions

- What are the quality of life and health literacy levels of individuals presenting to primary health-care institutions?
- Is there a relationship between the health literacy and quality of life of individuals presenting to primary health-care institutions?

What is presently known on this subject?

- It is reported in the literature that health literacy affects the quality of life, and it has been stated that health literacy has a positive relationship with quality of life.

What does this article add to the existing knowledge?

- The results of the study revealed that the health literacy and quality of life of individuals presenting to primary health-care institutions were moderate. There was a positive and significant relationship between the health literacy and quality of life levels of these individuals.

What are the implications for practice?

- Based on the results of this study, it is expected that determining health literacy levels will facilitate the planning of the effectiveness of the treatment process of individuals presenting to primary health-care institutions and thus contribute to the quality of life of these individuals. In addition, it is expected that this study will provide guidance for psychiatric nurses and other nursing professionals to include approaches aimed at increasing the health literacy levels and quality of life of individuals in their rehabilitation plans.

Materials and Method

Design

A cross-sectional descriptive methodology was used in this study.

Time and Place

The study was conducted at Ağın Community Health Center in the Elazığ province of Türkiye between March 2022 and December 2022.

Population and Sample

The main hypotheses of the study were planned to investigate the relationships between measurements. Similar studies that could be used in sample size calculation were examined, and the sample size calculation that gave the highest number according to the statistical methods to be applied in line with the main hypotheses was taken into account. In this study, using the "G. Power-3.1.9.2" program,[24] in a 95% confidence interval (α=0.05), the standardized effect size was calculated as 0.110[25] based on a similar study, and the minimum sample size was found to be 646 for a theoretical power of 0.80.

Inclusion Criteria

- Being receptive to dialog and cooperation.
- Being at least 18 years old.

Exclusion Criteria

- Having a severe psychiatric problem.
- Having a communication problem.
- Being younger than 18 years old.

Data Collection Instruments

The data were collected using a descriptive characteristics form, the Turkish Health Literacy Scale (THLS), and the World Health Organization Quality of Life Instrument-Short Form (WHOQOL-BREF).

Descriptive Characteristics Form

This form was prepared by the researcher by reviewing the information in the literature. It consisted of a total of 14 questions on the characteristics of the participants (e.g., age, gender, marital status, education level, perceived income level, employment status, perceived health status, interest in health, harmful habits, and regular health follow-ups).

THLS-32

Based on the framework created by the Health Literacy Scale-EU project, Okyay et al.[26] (2016) designed the scale for Turkish society. The scale's Cronbach's alpha coefficient was determined to be 0.93. Each item is rated as "very easy, easy, difficult, very difficult, or I have no idea." There are four categories assigned based on the level of health literacy: A score of 0–25 denotes poor health literacy, a score of 26–33 denotes problematic health literacy, a score of 34–42 denotes sufficient health literacy, and a score of 43–50 denotes excellent health literacy. The scale's Cronbach's alpha coefficient in this study was determined to be 0.85.

WHOQOL-BREF

WHOQOL-100, which includes 100 items, was created based on research conducted in 15 centers across the world. By including 26 items from WHOQOL-100, WHOQOL-BREF was developed. The scale consists of 26 items along with two questions inquiring about perceived quality of life and perceived health status. While the scale does not have a total score, each domain is scored between 20 and 100. The Turkish adaptation study of WHOQOL-BREF was performed by Eser et al.[27] (1999). In this study, the Cronbach's alpha coefficient for the overall scale was found to be 0.80.

Data Collection

The data were collected in person by the researcher in a room equipped for private interviews in line with the COVID-19 pandemic measures and hospital protocols. The instruments were verbally presented to participants aged 18 and over, who were then invited to record their responses on the interview form. The process of administering the instruments took 30–35 min for each participant.

Data Analysis

The analyses of the data collected in the study were conducted with the Statistical Packages for the Social Sciences 25.0 software. Descriptive characteristics of the participants were identified with mean, standard deviation, and percentage values. The independent-sample t-test and analysis of variance methods were employed to determine whether there were any significant differences in the mean scale scores of the participants based on their descriptive characteristics. As the first step in the analysis of the data, normality assumptions were tested with the Shapiro–Wilk test. In the testing of the relationships between the continuous variables, Pearson's correlation coefficient was used when normality assumptions were met, and Spearman's correlation coefficient was used when normality assumptions were not met. Linear regression analysis was used to examine the relationships between the dependent and independent variables and the significance of the mathematical model. A p-value of smaller than 0.05 was accepted as statistically significant.

Ethical Statement

The study was conducted in accordance with ethical approval obtained from the Non-Invasive Clinical Studies Ethics Committee of Fırat University on February 10th, 2022 (decision number 2022/02–49). The study was conducted in accordance with the Declaration of Helsinki.

Results

The distribution of the descriptive characteristics of the participants is presented in Table 1. Accordingly, 52.4% of the participants were male, 61.9% were single, 37.2% had secondary school education, 68.8% had moderate levels of income, 45.1% were unemployed, 39.3% evaluated their health status as moderate, and 57.8% did not regularly exercise. It was also found that 61.6% of the participants were interested in their health at a moderate level, 52% did not have harmful habits, 47% had their health checked regularly, 49% had moderate levels of quality of life, 49.6% did research about their health sometimes, and 46.3% consulted experts for their health-related situations at a moderate frequency (Table 1).

As seen in Table 2, the mean age of the participants was 46.72±19.76 years.

As seen in Table 3, the mean THLS-32 dimension scores of the participants were 36.54±13.79 for health care and 37.71±14.39 for disease prevention and health promotion, whereas their mean total THLS score was 38.52±14.25.

As shown in Table 4, the mean WHOQOL-BREF dimension scores of the participants were 12.13±2.71 for the physical domain, 12.86±2.25 for the psychological domain, 13.03±3.81 for the social domain, and 12.76±3.20 for the environmental domain.

The scale forms used in this study had acceptable levels of internal consistency. As seen in Table 5, a result of the correlation analyses, statistically significant, positive, and moderate relationships were identified between the WHOQOL-BREF total and subscale scores of the participants and their THLS total and subscale scores ($p<0.05$). In line with these results, it was concluded that as the health literacy levels of the participants increased, their quality of life also increased.

Table 1. Descriptive characteristics (n=800)

Descriptive characteristics	n	%	Descriptive characteristics	n	%
Gender			Interest in health		
Male	419	52.4	Little	136	17.0
Female	381	47.6	Moderate	493	61.6
Marital status			A Lot	171	21.4
Married	495	61.9	Harmful habits		
Single	305	38.1	Smoking	274	34.3
Education level			Alcohol	41	5.1
Literate (no formal degree)	79	9.9	Both	69	8.6
Primary school	177	22.1	None	416	52.0
Secondary school	297	37.1	Regular health follow-up attendance		
University	247	30.9	Yes	175	21.9
Perceived income level			No	249	31.1
Poor	100	12.5	Sometimes	376	47.0
Moderate	550	68.8	Quality of life		
Good	150	18.8	Moderate	392	49.0
Employment status			Good	215	26.9
Employed	304	38.0	Very good	79	9.9
Unemployed	361	45.1	Poor	89	11.1
Retired	135	16.9	Very poor	25	3.1
Perceived health status			Performs individual health-related research		
Very good	98	12.3	Never	98	12.3
Good	286	35.8	Sometimes	397	49.6
Moderate	314	39.3	Frequently	191	23.9
Poor	78	9.8	Always	114	14.3
Very poor	24	3.0	Consults experts		
Regular exercise			Rarely	200	25.0
Yes	100	12.5	Sometimes	370	46.3
No	462	57.8	Frequently	230	28.8
Sometimes	238	29.8			

Table 2. Age

	Min-Max	X±SD
Mean age	18–93	46.72±19.76 years

SD: Standard deviation

Table 3. THLS-32 scores (n=800)

THLS-32	Min-max	Mean (SD)
Healthcare	0–50	36.54±13.79
Disease prevention and health promotion	0–50	37.71±14.39
Total	0–50	38.52±14.25

THLS: Turkish Health Literacy Scale; SD: Standard deviation.

Table 4. WHOQOL-BREF scores (n=800)

WHOQOL-BREF	Min-max	Mean (SD)
Physical domain	4–20	12.13±2.71
Psychological domain	4–20	12.86±2.25
Social domain	4–20	13.03±3.81
Environmental domain	4–20	12.76±3.20

WHOQOL-BREF: World Health Organization Quality of Life Instrument-Short Form; SD: Standard deviation.

As seen in Table 6, health literacy was found to explain 46% of the total variance in quality of life (p=0.001).

Discussion

In recent years, health literacy has been a topic that has gained increasing importance in the world, and on which many studies have been conducted. Increasing the current quality of life of individuals, enabling them to understand their health status, helping them have appropriate access to health information when they get sick to lead a healthier life, and allowing them to display advisable behaviors based on this information make

Table 5. Correlation analysis between THLS and WHOQOL-BREF scores

Scales			WHOQOL-BREF			
			Physical domain	Psychological domain	Social domain	Environmental domain
THLS	Health care	r	0.506**	0.599**	0.551**	0.628**
		p	0.000	0.000	0.000	0.000
	Disease prevention and health promotion	r	0.524**	0.590**	0.548**	0.635**
		p	0.000	0.000	0.000	0.000
	Total	r	0.529**	0.610**	0.564**	0.648**
		p	0.000	0.000	0.000	0.000

**: p<0.001. THLS: Turkish Health Literacy Scale; WHOQOL-BREF: World Health Organization Quality of Life Instrument-Short Form.

the influence of health literacy on the quality of life of individuals important. The aim of this study was to determine the relationship between quality of life and health literacy in individuals who presented to primary health-care institutions. The results of this study are discussed in line with the literature in this section.

The mean total THLS score of the participants was 38.52±14.25. Based on their mean total THLS score, it was determined that the participants had adequate levels of health literacy. In other studies conducted on health literacy in the literature, different results have been obtained in Türkiye in comparison to the rest of the world. According to a study conducted in Türkiye, the mean health literacy score of the participants was 33.36±8.44; thus, their levels of health literacy were determined to be adequate in general.[20] Tuğut et al.[28] found that the health literacy levels of their participants were high. On the other hand, another study showed that the general health literacy index value of Türkiye was 30.4, and in the categorical assessments, 24.5% of individuals were found to have inadequate health literacy levels, 40.1% had problematic health literacy levels, 23.4% had sufficient health literacy levels, and 7.7% had excellent health literacy levels.[29] It was stated that individuals with low health literacy levels did not benefit from preventive health services sufficiently, visited hospitals more, spent more on health, had difficulty adapting to applied treatments, had problems with the use of medications and their side effects, were inadequate in the self-management of chronic diseases, and had difficulty understanding health-related education content.[29,30] In a study conducted in Poland, it was determined that the majority of the participants had insufficient health literacy.[31] The health literacy skills of 1,355 participants – the majority of whom were largely from the Dominican Republic – in a cross-sectional study on the relationship between health literacy and drug compliance were found to be inadequate.[32] In this study, the health literacy levels of the participants were found to be adequate in general, and it was determined that their mean score was higher compared those reported in other studies. This situation may have resulted from the use of differently structured tools to measure health literacy in studies conducted in different countries, the small sample size, and differences in cultural factors and health policies.

Table 6. Linear regression analysis for interpretation of the relationship between health literacy and quality of life

	WHOQOL-BREF					
	Regression			Correlation		
	R	R^2	t	p	F	p
THLS	0.67	0.46	39.01	0.001	169.686	0.001

WHOQOL-BREF: World Health Organization Quality of Life Instrument-Short Form; THLS: Turkish Health Literacy Scale.

In this study, the WHOQOL-BREF scores of the participants were determined to be 12.13±2.7 for the physical domain, 12.86±2.25 for the psychological domain, 13.03±3.81 for the social domain, and 12.76±3.20 for the environmental domain. Based on their mean scores in the context of the dimensions of WHOQOL-BREF, it can be concluded that the quality of life of the participants was moderate in the physical, psychological, social, and environmental domains. In a study conducted by Purba et al.,[33] the standard of living in the general population was measured. The results showed that the mean levels of these standards for the physical, social, psychological, and environmental domains were at moderate levels. This result was similar to the results of this study. The mean scores obtained from the dimensions of WHOQOL-BREF in the study conducted by Telatar and Üner, which evaluated factors related to quality of life, were consistent with the mean scores obtained in this study.[34] In another study on the relationships between chronic diseases, multi-morbidity, and quality of life in individuals who presented to family health centers, the quality of life of the participants was found to be moderate in general.[35] Similarly, the participants in a descriptive and correlational study assessing social support and quality of life were found to have moderate levels of life satisfaction.[36]

In this study, there were statistically significant, positive, and moderate relationships between the WHOQOL-BREF total and subscale scores of the participants and their THLS total and subscale scores ($p<0.05$). According to this result, as the health literacy levels of the participants increased their quality of life levels also increased. Health literacy has a significant place in the quality of life of individuals.

In a study by Ehmann et al.,[21] a significant relationship was identified between health literacy and quality of life. Alemayehu et al.[37] also found a significant relationship between health literacy and quality of life, as had been demonstrated in other studies. Jenabi et al.[38] (2020) demonstrated that higher levels of health literacy were associated with enhanced quality of life. Zheng et al.[19] (2018) reported a moderate correlation between health literacy and quality of life in their meta-analysis study. The study by Gonzales-Chica et al.[22] on the impact of health literacy on quality of life revealed that the former had a positive effect on the latter. The results of this study were corroborated by the existing literature. These results demonstrated the significant impact of health literacy on the quality of life of individuals. Furthermore, given the dearth of studies examining the connection between health literacy and quality of life, it is anticipated that the findings of this study will contribute to the existing literature on the topic.

Limitations

A limitation of this study was that it was conducted in a single center, and a limited number of participants were included.

Conclusion and Recommendation

It was determined that the health literacy and quality of life of individuals who presented to primary health-care institutions were at moderate levels. In addition, it was observed that there was a significant and positive relationship between health literacy and quality of life.

In line with these results, it can be recommended that:

- Since health literacy has significant effects on the health outcomes of a society, it is recommended that nurses receive the necessary training on health literacy and that topics or courses that serve this purpose be included in the nursing curriculum
- Studies should be planned using different methods and practices to increase health literacy and quality of life
- Future studies should be conducted with experimental and control groups to represent a wider population.

Implications for Nursing Practice

The concept of health literacy is important for society to make responsible decisions about health and health-care services.[8,9] The aim of the studies conducted in this field and the policies created so far is to raise awareness about health and therefore the quality of health care. As members of the health-care team, nurses have significant responsibilities in the realization of this purpose. Being in one-on-one communication with individuals in primary health-care institutions and all segments of society, nurses take on the responsibilities of education and counseling for health consciousness to develop and for health literacy concepts to be understood by individuals and society through the independent roles they have. In this study, it was shown that health literacy and quality of life were positively correlated with each other. It is important that nurses, who contribute to the quality of life of individuals by helping them increase their levels of health literacy, support these individuals in terms of health literacy through appropriate interventions by developing the required nursing interventions and policies in this regard. It is believed that an increase in the training, knowledge, and skills of nurses regarding the health literacy of society will positively contribute to the health literacy levels of the public and be beneficial for the quality of life of these individuals. In addition, developing studies, methods, and nursing models that aim to promote health literacy for nurses both at an individual level and in the training they receive will contribute to the development of health literacy in society. Therefore, by seeking to raise people's health literacy levels and thus positively affecting their quality of life, an important contribution will be made to the development of the health-care system.

Ethics Committee Approval: The study was approved by the Fırat University Non-interventional Clinical Research Ethics Committee (No: 2022/02–49, Date: 10/02/2022).

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