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EVALUATION OF HEALTH QUALITY LITERACY LEVELS OF HEALTHCARE WORKERS: THE CASE OF KAYSERİ

Zühal KINIŞ[1], Fatih DENİZLİ[2], Etem HIZALER[3]

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Abstract

This study was conducted to evaluate the health quality literacy levels of healthcare workers and to reveal whether they differ according to demographic characteristics. In line with the aim of the study, 370 healthcare workers participated. The "Health quality literacy scale", which consists of 30 statements, was used in the research and the data were collected via a questionnaire. Descriptive analyses, correlation analysis, independent simples t-test, and one way ANOVA were used to analyze the data obtained. The study revealed that the health quality literacy levels of healthcare workers, along with the subdimensions of standards, desire, attitude, and awareness, were higher than the median values. Additionally, the health quality literacy levels of healthcare workers, as well as the subdimension averages of standards, desire, attitude, and awareness, showed significant differences according to demographic characteristics (gender, age group, title, years of service). The findings of the study show that healthcare professionals have above-average literacy in healthcare quality literacy. It is thought that this study will be a practical study that managers in the health sector can benefit from to increase the adequate knowledge and awareness of employees about quality management, standards, and processes, provide important information in the strategic quality planning and policy-making process, and contribute to filling the gap in the relevant literature.

Keywords: Quality in health, Quality literacy, Health workers, Quality management

SAĞLIK ÇALIŞANLARININ SAĞLIKTA KALİTE OKURYAZARLIĞI DÜZEYLERİNİN DEĞERLENDİRİLMESİ: KAYSERİ ÖRNEĞİ

Özet

Bu çalışma sağlık çalışanlarının sağlıkta kalite okuryazarlığı düzeylerini değerlendirmek ve demografik özelliklere göre farklılık gösterip göstermediğini ortaya koymak amacıyla yapılmıştır. Çalışmanın amacı doğrultusunda 370 sağlık çalışanı çalışmaya katılmıştır. Çalışmada 30 ifadeden oluşan “Sağlıkta kalite okuryazarlığı ölçeği” kullanılmış olup veriler anket tekniği ile toplanmıştır. Elde edilen verilerin analizinde tanımlayıcı analizler, korelasyon analizi, bağımsız değişkenler t-testi ve tek yönlü varyans analizi ANOVA analizlerinden yararlanılmıştır. Çalışma, sağlık çalışanlarının sağlıkta kalite okuryazarlığı düzeyleri ile standartlar, istek, tutum ve farkındalık alt boyutlarının ortanca değerin üzerinde yüksek olduğunu ortaya koymuştur. Ayrıca, sağlık çalışanlarının sağlıkta kalite okuryazarlığı düzeyleri ile standartlar, istek, tutum ve farkındalık alt boyut

[1] Dr., Erciyes University, zuhalkns@gmail.com, ORCID: 0000-0003-0417-860X
[2] Dr., Republic of Türkiye Ministry of Health, fatihdenizli0000@gmail.com, ORCID: 0000-0001-5039-7606
[3] Lec., Kayseri University, İncesu Ayşe ve Saffet Arslan Medical Services Vocational School, etemhizaler@kayseri.edu.tr, ORCID:0000-0002-6924-1051

ortalamalarının demografik özelliklere (cinsiyet, yaş grubu, unvan, çalışma yılı) göre anlamlı farklılıklar gösterdiği tespit edilmiştir. Araştırma bulguları sağlık çalışanlarının sağlıkta kalite okuryazarlığı konusunda ortalamanın üzerinde bir okuryazarlığa sahip olduğunu göstermektedir. Çalışmanın, sağlık sektöründeki yöneticilere çalışanların kalite yönetimi, standartları ve süreçleri hakkında yeterli bilgi ve farkındalıklarını artırmak için uygulamaya dönük faydalanabilecekleri bir kaynak olacağı, stratejik kalite planlama ve politika oluşturma sürecinde önemli bilgiler sunacağı ve ilgili alan yazındaki boşluğu doldurmaya yönelik katkı sağlayacağı düşünülmektedir.

Anahtar kelimeler: Sağlıkta kalite, Kalite okuryazarlığı, Sağlık çalışanları, Kalite yönetimi

1. Introduction

In today's rapidly developing and changing healthcare sector, one of the most important factors determining the overall health levels of individuals and society is the quality of healthcare services provided. In particular, in the healthcare sector, where human health is paramount, enhancing, improving, and ensuring the sustainability of quality are among the most important objectives of health systems.

The concept of quality, which dates back to the 2000s BCE with the Code of Hammurabi, first appeared in the field of healthcare in the 5th century BCE, based on the written rules of Hippocrates, who is regarded as the "Father of Medicine" (Akyüz & Akyüz, 2015; Çetin & Arslan, 2020). The concept of quality has been defined in various ways by different individuals and institutions. The American Society for Quality defines quality as the totality of characteristics that fulfill an individual's needs. The American Medical Association considers quality services to contribute to the improvement and maintenance of an individual's quality of life (Kaya, 2014). Shewhart defines quality in terms of conformity to customer needs, whereas Juran defines it as fitness for use (Aggarwal et al., 2019). Today, the provision of quality service is considered an important strategy for businesses to achieve sustainable competitive advantage and maintain their existence (Zeithaml et al., 1996). In this context, promoting and enhancing quality literacy at all levels of organizations is crucial for achieving and ensuring the sustainability of quality in service delivery.

A literature review revealed that studies aimed at determining the level of health quality literacy are insufficient. In this context, the aim of this study was to evaluate the health quality literacy levels of healthcare workers and to determine whether these levels vary according to demographic characteristics. This study contributes to filling the gap in the relevant literature, serves as a practical resource for managers in the healthcare sector, provides important information for strategic quality planning and the policy-making process, and serves as a reference for academic studies in related fields.

2. Conceptual Framework

2.1. Quality Literacy

Quality literacy is a concept associated with total quality management that refers to individuals' knowledge of quality management, standards, and practices, as well as their ability to use this knowledge effectively and efficiently (Ehlers, 2007). Quality literacy is a concept that encompasses both managerial and individual dimensions, beginning with the development of quality management systems within the organization and the establishment of a quality culture. For the creation of a quality culture, it is essential to disseminate and teach the concept of quality throughout the organization (Viljoen & Van Waveren, 2008). Health quality literacy refers to healthcare workers' knowledge, skills, and awareness regarding quality management, quality standards, continuous improvement processes, patient safety, cost-effectiveness, and evidence-based practices, as well as their willingness to participate in these processes (Turan & Altıntaş, 2024). A high level of quality literacy among healthcare workers is crucial for enhancing the quality of healthcare services, increasing employee and patient satisfaction, preventing errors, reducing costs, and positively impacting the performance and sustainability of health systems. In this context, a high level of health quality literacy among healthcare workers is essential for the effectiveness and efficiency of the healthcare services provided.

In recent years, significant developments have occurred in Türkiye regarding quality management in healthcare, and many regulations and policies have been implemented to standardize healthcare services. However, studies examining the effects of these developments on healthcare workers and their levels of quality literacy have been limited. In this context, determining the health quality literacy levels of healthcare workers will serve as an important data source for strategic planning and practices aimed at improving the quality of healthcare services provided.

A review of the relevant literature revealed that a scale development study conducted by Turan and Altıntaş (2024) to assess the health literacy of healthcare workers revealed that their levels of quality literacy were above average and varied according to certain demographic characteristics. A study conducted by Turali (2021) to determine nurses' knowledge, attitudes, and behaviors related to quality management revealed that nurses had a moderate perception of quality in healthcare. Additionally, the study conducted by Ablak (2019) on hospital employees revealed that the participants' perceptions of quality were above average.

In light of the literature review, the hypotheses of the study are as follows:

H1. The health quality literacy levels of healthcare workers are high.

H2a. Health quality literacy levels and subdimensions of healthcare workers vary according to gender.

H2b. The health quality literacy levels and subdimensions of healthcare workers vary according to age group.

H2c. The health quality literacy levels and subdimensions of healthcare workers vary according to title.

H2d. The health quality literacy levels and subdimensions of healthcare workers vary according to years of employment.

3. Method

3.1. Research Design and Sample

The aim of this study was to evaluate the health quality literacy levels of healthcare workers and to determine whether these levels vary according to certain demographic characteristics. The research population consisted of approximately 3000 healthcare workers employed in a public hospital in Kayseri province. The sample size representing the research population was determined to be a minimum of 364 according to the formula developed by Özdamar (2003), and simple random sampling was used as the sampling method (Özdamar, 2003). For this quantitative research, a survey technique was employed, and data were collected from 370 healthcare workers. The data collection process was conducted online.

3.2. Data Collection Tools

In this research, a survey technique was used as the data collection tool. The survey consists of two sections with a total of 34 statements. In the first section, the "Health quality literacy scale," developed by Turan and Altıntaş (2024), which comprises four dimensions and 30 statements, is used to measure health quality literacy. The scale is a 5-point Likert type (Strongly Disagree (1)-Disagree (2)-Neutral (3)-Agree (4)-Strongly Agree (5)). In the second section of the survey, there are four statements aimed at determining the demographic characteristics of the respondents, including gender, age group, job title, and length of service at the institution.

3.3. Statistical Evaluation of Data

The SPSS 22 software package was used for the statistical analysis of the obtained data. The Cronbach's alpha (CA) value of the health quality literacy scale was measured as 0.960. The CA values for the subdimensions of the scale were measured as follows: 0.916 for the standard subdimension, 0.910 for the willingness subdimension, 0.926 for the attitude subdimension, and 0.882 for the awareness subdimension. Accordingly, the health quality literacy scale is highly reliable. Parametric tests were used, as the skewness and kurtosis values of the data were within the ±1.5 range, indicating a normal distribution (George & Mallery, 2010). Descriptive statistics, correlation analysis, independent simples t-test, and one way ANOVA were employed in the analysis of the data.

To carry out the study, an ethics committee report dated 08.08.2024 and numbered 107239 was obtained from the Kayseri University ethics committee.

4. Results and Discussion

Table 1 presents the percentage and frequency distributions of the healthcare workers who participated in the study according to their demographic characteristics.

Table 1. Demographic Characteristics

Variables	n	%
Gender		
Female	162	43.8
Male	208	56.2
Age group		
18-25 years	105	28.4
26-35 years	95	25.7
36-45 years	90	24.3
46 years and above	80	21.6
Title		
Doctor	85	23.0
Nurse/Midwife	82	22.2
Health technician/technician	93	25.1
Health officer	110	29.7
Year of employment		
1-5 years	101	27.3
6-10 years	87	23.5
11-15 years	86	23.2
16 years and above	96	25.9

n:370

Table 1 shows that 56.2% of the participants were male, 28.4% were between the ages of 18–25, 29.7% held the title of health officer, and 27.3% were healthcare workers with 1–5 years of work experience.

Table 2. Participants Results on Health Quality Literacy

Variables	Mean	sd	1	2	3	4
Quality literacy in general health	3.94	.662				
1. Awareness of quality standards	3.65	.691	1			
2. Willingness to participate in quality man. processes	4.02	.725	.724**	1		
3. Attitude toward quality requirement	4.12	.763	.828**	.881**	1	
4. Awareness of the meaning of quality	4.24	.704	.749**	.675**	.776**	1

n:370; ** p<0.01 significance level; quality man. processes: quality management processes

Table 2 presents the descriptive statistics and correlation analysis regarding healthcare workers' health quality literacy. Upon examining the obtained data, it is observed that the average overall health quality literacy score of healthcare workers is ($\bar{x}$=3.94), the subdimension of awareness of quality standards is ($\bar{x}$=3.65), the subdimension of willingness to participate in quality management processes is ($\bar{x}$=4.02), the subdimension of attitude toward the necessity of quality is ($\bar{x}$=4.12), and the subdimension of awareness is ($\bar{x}$=4.24). In light of these findings, it can be stated that healthcare workers' health quality literacy and its subdimensions are above the average threshold value ($\bar{x}$=3). Accordingly, hypothesis 1 has been accepted. Furthermore, the correlation analysis revealed a highly positive relationship between the variables.

Table 3. t-test Results of Health Quality Literacy According to Gender Variable

Variables	Gender	mean	s.d.	t	p
Quality literacy in general health	Female	4.35	.568	12.927	**.000**
	Male	3.62	.619		
1. Awareness of quality standards	Female	4.09	.638	12.538	**.004**
	Male	3.31	.624		
2. Willingness to participate in quality man. processes	Female	4.47	.629	12.375	**.002**
	Male	3.67	.688		
3. Attitude toward quality requirement	Female	4.59	.596	5.262	**.000**
	Male	3.76	.688		
4 Awareness of the meaning of quality	Female	4.45	.565	12.474	**.000**
	Male	4.07	.722		

n:370; Significance level p<0.05

In Table 3, a t-test was conducted to determine whether healthcare workers' health quality literacy and its subdimensions differ according to gender. The overall health quality literacy, standard subdimension, willingness subdimension, attitude subdimension, and awareness subdimension significantly differed according to gender (p=0.000; p=0.004; p=0.002; p=0.000; p=0.000). The overall health quality literacy levels and subdimension averages of female healthcare workers were found to be higher than those of male healthcare workers. Accordingly, hypothesis 2a has been accepted.

Table 4. One Way ANOVA Test Results of Health Quality Literacy According to Demographic Characteristics

	Quality literacy in general health			Standards subdimension			Willingness subdimension			Attitude subdimension			Awareness subdimension		
Age group	**Mean**	**p**	**Diff.**	**Mean**	**p**	**Diff.**	**Mean**	**p**	**Diff.**	**Mean**	**p**	**Diff.**	**Mean**	**p**	**Diff.**
18-25 years	3.43			3.17			3.51			3.64			3.63		
26-35 years	4.40	**.000**	**1<2-3-4**	4.09	**.000**	**1<2-3-4**	4.58	**.000**	**1<2-3-4**	4.62	**.000**	**1<2-3-4**	4.73	**.000**	**1<2-3-4**
36-45 years	4.09		**2>3-4**	3.82		**4<2-3**	4.02		**2>3-4**	4.15		**2>3-4**	4.50		**4<2-3**
46 and above	3.91			3.57		**3<2**	4.03			4.14			4.17		**3<2**
Title															
Doctor	3.86			3.64			3.86			3.95			4.24		
Nurse/Mid.	4.51	**.000**	**4<1-2-3**	4.22	**.000**	**2>1-3-4**	4.61	**.000**	**2>1-3-4**	4.56	**.000**	**2>1-3-4**	4.72	**.000**	**4<1-2-3**
Health tech.	4.10		**2>1-3**	3.69		**4<3**	4.11		**4<3**	4.31		**4<1-3**	4.65		**1<2-3**
Health offi.	3.45		**1<3**	3.20			3.64			3.60			3.52		
Year of employment															
1-5 years	3.92			3.57			4.03			4.22			4.18		
6-10 years	4.11	**.000**	**3<2-4**	3.84	**.000**	**3<2-4**	4.19	**.040**	**3<2**	4.30	**.000**	**3<1-2**	4.35	**.000**	**4>1-2-3**
11-15 years	3.69			3.44		**1<2**	3.88			3.86			3.73		**3<1-2**
16 and above	4.04			3.77			3.99			4.10			4.66		

n:370; Significance level p<0.05

In Table 4, a one-way analysis of variance (ANOVA) was conducted to determine whether healthcare workers' health quality literacy and its subdimensions differ according to the age group variable. First, a Levene test was performed to assess the homogeneity of variances, and it was found that the variances were homogeneously distributed (p>0.05). According to the obtained data, healthcare workers' overall

health quality literacy, standards subdimension, willingness subdimension, attitude subdimension, and awareness subdimension significantly differed according to the age group variable (p=0.000; p=0.000; p=0.000; p=0.000; p=0.000; p<0.05). Accordingly, hypothesis 2b has been accepted.

A post hoc analysis was conducted to identify which groups exhibited differences. Accordingly, the overall health quality literacy averages of healthcare workers in the 18-25 years age group ($\bar{x}$=3.43) were found to be lower than those of the 26-35 years age group ($\bar{x}$=4.40), the 36-45 years age group ($\bar{x}$=4.09), and those aged 46 years and above ($\bar{x}$=3.91). Additionally, the averages of healthcare workers in the 26-35 years age group ($\bar{x}$=4.40) were found to be higher than those of the 36-45 years age group ($\bar{x}$=4.09) and the 46 years and older age groups ($\bar{x}$=3.91).

The averages of the standards subdimension for healthcare workers in the 18-25 years age group ($\bar{x}$=3.17) were found to be lower than those of the 26-35 years age group ($\bar{x}$=4.09), the 36-45 years age group ($\bar{x}$=3.82), and those aged 46 years and older age group ($\bar{x}$=3.57). Furthermore, the averages for those aged 46 years and older age group ($\bar{x}$=3.57) were lower than those of the 26-35 years age group ($\bar{x}$=4.09) and the 36-45 years age group ($\bar{x}$=3.82). Additionally, the averages for the 36-45 years age group ($\bar{x}$=3.82) were found to be lower than those of the 26-35 years age group ($\bar{x}$=4.09). The averages of the willingness subdimension for healthcare workers in the 18-25 years age group ($\bar{x}$=3.51) were found to be lower than those of the 26-35 years age group ($\bar{x}$=4.58), the 36-45 years age group ($\bar{x}$=4.02), and those aged 46 years and older age group ($\bar{x}$=4.03). Additionally, the averages for healthcare workers in the 26-35 years age group ($\bar{x}$=4.58) were found to be higher than those of the 36-45 years age group ($\bar{x}$=4.02) and the 46 years and older age group ($\bar{x}$=4.03).

The averages of the attitude subdimension for healthcare workers in the 18-25 years age group ($\bar{x}$=3.64) were found to be lower than those of the 26-35 years age group ($\bar{x}$=4.62), the 36-45 years age group ($\bar{x}$=4.15), and those aged 46 years and older age group ($\bar{x}$=4.14). Furthermore, the averages for healthcare workers in the 26-35 years age group ($\bar{x}$=4.62) were found to be higher than those of the 36-45 years age group ($\bar{x}$=4.15) and the 46 years and older age group ($\bar{x}$=4.14). The averages of the awareness subdimension for healthcare workers in the 18-25 years age group ($\bar{x}$=3.63) were found to be lower than those of the 26-35 years age group ($\bar{x}$=4.50), the 36-45 years age group ($\bar{x}$=4.73), and those aged 46 years and older age group ($\bar{x}$=4.17). Additionally, the averages for those aged 46 years and older age group ($\bar{x}$=4.17) were lower than those of the 26–35 years age group ($\bar{x}$=4.50) and the 36-45 years age group ($\bar{x}$=4.73). Furthermore, the averages for the 36-45 years age group ($\bar{x}$=4.73) were found to be higher than those of the 26-35 years age group ($\bar{x}$=4.50).

One-way analysis of variance (ANOVA) was conducted to determine whether healthcare workers' health quality literacy and its subdimensions differ according to the title variable. First, a Levene test was performed to assess the homogeneity of variances, and it was found that the variances were homogeneously distributed (p>0.05). According to the obtained data, it was determined that healthcare

workers' overall health quality literacy, the standards subdimension, the willingness subdimension, the attitude subdimension, and the awareness subdimension showed statistically significant differences according to the title variable (p=0.000; p=0.000; p=0.000; p=0.000; p=0.000; p<0.05). Accordingly, hypothesis 2c has been accepted.

A post hoc analysis was conducted to identify which groups exhibited differences. Accordingly, the overall health quality literacy averages of healthcare workers with the title of health officer ($\bar{x}$=3.45) were found to be lower than those of doctors ($\bar{x}$=3.86), nurses/midwives ($\bar{x}$=4.51), and health technicians/technicians ($\bar{x}$=4.10). Furthermore, the averages for those with the title of doctor ($\bar{x}$=3.86) were lower than those of health technicians/technicians ($\bar{x}$=4.10). Additionally, the averages for nurses/midwives ($\bar{x}$=4.51) were found to be higher than those of both doctors ($\bar{x}$=3.86) and health technicians/technicians ($\bar{x}$=4.10). The averages of the standards subdimension for healthcare workers with the title of health officer ($\bar{x}$=3.20) were found to be lower than those of health technicians/technicians ($\bar{x}$=3.69). Additionally, the averages for nurses/midwives ($\bar{x}$=4.22) were found to be higher than those of doctors ($\bar{x}$=3.64), health technicians/technicians ($\bar{x}$=3.69), and health officers ($\bar{x}$=3.20). The averages of the willingness subdimension for healthcare workers with the title of health officer ($\bar{x}$=3.64) were found to be lower than those of health technicians/technicians ($\bar{x}$=4.11). Additionally, the averages for nurses/midwives ($\bar{x}$=4.61) were found to be higher than those of doctors ($\bar{x}$=3.86), health technicians/technicians ($\bar{x}$=4.11), and health officers ($\bar{x}$=3.64).

The averages of the attitude subdimension for healthcare workers with the title of health officer ($\bar{x}$=3.60) were found to be lower than those of doctors ($\bar{x}$=3.95) and health technicians/technicians ($\bar{x}$=4.31). Additionally, the averages for nurses/midwives ($\bar{x}$=4.56) were found to be higher than those of doctors ($\bar{x}$=3.95), health technicians/technicians ($\bar{x}$=4.31), and health officers ($\bar{x}$=3.60). The averages of the awareness subdimension for healthcare workers with the title of health officer ($\bar{x}$=3.52) were found to be lower than those of doctors ($\bar{x}$=4.24), nurses/midwives ($\bar{x}$=4.72), and health technicians/technicians ($\bar{x}$=4.65). Furthermore, the averages for doctors ($\bar{x}$=4.24) were lower than those of nurses/midwives ($\bar{x}$=4.72) and health technicians/technicians ($\bar{x}$=4.65).

One-way analysis of variance (ANOVA) was conducted to determine whether healthcare workers' health quality literacy and its subdimensions differ according to the years of service variable. First, a Levene test was performed to assess the homogeneity of variances, and it was found that the variances were homogeneously distributed (p>0.05). According to the obtained data, it was determined that healthcare workers' overall health quality literacy, the standards subdimension, the willingness subdimension, the attitude subdimension, and the awareness subdimension showed statistically significant differences according to the years of service variable (p=0.000; p=0.000; p=0.000; p=0.000; p=0.000; p<0.05). Accordingly, hypothesis 2d has been accepted.

A post hoc analysis was conducted to identify which groups exhibited differences. Accordingly, the overall health quality literacy averages for those with 11-15 years of service ($\bar{x}$=3.69) were found to be lower than those of individuals with 6-10 years of service ($\bar{x}$=4.11) and those with 16 years of service or more ($\bar{x}$=4.04). The averages of the standards subdimension for those with 11-15 years of service ($\bar{x}$=3.44) were found to be lower than those of individuals with 6-10 years of service ($\bar{x}$=3.84) and those with 16 years of service or more ($\bar{x}$=3.77). Additionally, the averages for those with 1-5 years of service ($\bar{x}$=3.57) were found to be lower than those with 6-10 years of service ($\bar{x}$=3.84). The averages of the willingness subdimension for those with 11-15 years of service ($\bar{x}$=3.88) were found to be lower than those of individuals with 6-10 years of service ($\bar{x}$=4.19).

The averages of the attitude subdimension for those with 11-15 years of service ($\bar{x}$=3.86) were found to be lower than those of individuals with 1-5 years of service ($\bar{x}$=4.22) and those with 6-10 years of service ($\bar{x}$=4.30). The averages of the awareness subdimension for those with 16 years of service or more ($\bar{x}$=4.66) were found to be higher than those of individuals with 1-5 years of service ($\bar{x}$=4.18), 6-10 years of service ($\bar{x}$=4.35), and those with 11-15 years of service ($\bar{x}$=3.73). Additionally, the averages for individuals with 11-15 years of service ($\bar{x}$=3.73) were found to be lower than those of individuals with 1-5 years of service ($\bar{x}$=4.18) and those with 6-10 years of service ($\bar{x}$=4.35).

This study was conducted to assess the levels of health quality literacy among healthcare workers. The majority of the participants were found to be aged between 18-25 years (28.4%), the title of health officer (29.7%), possessing 1-5 years of work experience (27.3%), and were predominantly male (56.2%).

In this study, the level of health quality literacy among healthcare workers were found to be high, exceeding the median value. Accordingly, it can be stated that healthcare workers possess a high level of knowledge and competence regarding health quality management and strategies. These findings are consistent with the results of studies conducted by Ablak (2019), Turali (2021), and Turan & Altuntaş (2024). In this context, hypothesis 1 has been accepted. The study examined whether the health quality literacy levels and subdimensions of healthcare workers showed significant differences based on certain demographic characteristics. The analyses revealed that the levels of health quality literacy and its subdimensions among healthcare workers exhibited significant differences according to gender, age group, title, and years of service. Accordingly, hypothesis 2a, hypothesis 2b, hypothesis 2c, and hypothesis 2d has been accepted. Accordingly, female healthcare workers were found to have significantly higher levels of health quality literacy compared to their male counterparts, particularly in the subdimensions of standards, willingness, attitude, and awareness. It can be stated that female healthcare workers possess a high level of knowledge regarding health quality management and standards, demonstrate greater willingness and motivation toward quality processes, and exhibit a more positive and proactive approach to quality. A review of the literature did not reveal any studies examining whether health quality literacy varies by gender, suggesting that this research could contribute to filling the gap in the existing literature.

The average levels of health quality literacy and its subdimensions among healthcare workers aged 18-25 years were found to be significantly lower than those of the 26-35, 36-45, and 46 and older age groups. Additionally, the averages for those aged 46 years and above were lower than those of the 26-35 years and 36-45 years age groups. It can be stated that healthcare workers aged 18-25 years have lower literacy levels compared to older age groups due to their low knowledge, skills, experience, and awareness regarding quality management processes. Additionally, the decline in literacy levels among those aged 46 and above may be attributed to their resistance to change and lower participation in long-term quality processes as they approach retirement. While the findings of the study conducted by Erdem (2022) are similar, they do not align with the results of studies conducted by Ablak (2019) and Turan & Altuntaş (2024).

The literacy levels and average scores of healthcare workers with the title of health officer in health quality literacy and its subdimensions were found to be significantly lower than those of doctors, nurses/midwives, and health technicians/technicians. The average scores of those with the title of nurse/midwife were found to be significantly higher than those of other titles. It can be stated that healthcare workers with the title of nurse/midwife have higher literacy levels compared to others due to their more active participation in quality management processes and training. Additionally, the direct involvement of nurses and midwives in providing and improving patient care necessitates a more comprehensive understanding of quality management issues. Despite the essential role doctors play in healthcare teams, the findings of this study revealed that their mean scores in health quality literacy were lower than those of midwives/nurses and health technicians. This difference may be attributed to the heavier clinical workload and limited participation of doctors in quality management training programs compared to other healthcare professionals. Previous studies have highlighted that active involvement in quality management processes and training significantly enhances quality literacy (Akyüz & Akyüz, 2015; Bulut, 2021; Georgiou et al., 2021; Turali, 2021). Midwives/nurses and health technicians often have more direct and frequent interactions with patients and quality processes, which may explain their higher scores. Moreover, emphasizing quality literacy among doctors is essential not only to improve individual competencies but also to strengthen interdisciplinary collaboration in healthcare teams. Enhancing education on quality management for all healthcare roles can address these disparities. Additionally, quality literacy plays a crucial role in improving patient safety and care outcomes, as highlighted by Kaya (2014) and Zeithaml et al (1996), emphasizing the need for healthcare systems to integrate continuous training and quality-focused initiatives (Zeithaml et al., 1996; Kaya, 2014; Sarıduman, 2016). There has been no study in the literature examining whether health quality literacy differs by title, suggesting that this research may contribute to filling the existing gap in the literature and indicating that more studies are needed.

Healthcare workers with 11-15 years of experience were found to have lower levels of health quality literacy and mean scores in the standards sub-dimension compared to those with 6-10 years and 16 or

more years of experience. Additionally, the mean scores of the willingness subdimension for healthcare workers with 11-15 years of experience were lower than those of their counterparts with 6-10 years of experience. Healthcare workers with 11-15 years of experience exhibited lower mean scores in the attitude and awareness subdimensions compared to those with 1-5 years and 6-10 years of experience. Conversely, healthcare workers with 16 years or more of experience had higher mean scores in the awareness subdimension than those with 1-5 years, 6-10 years, and 11-15 years of experience. The differences in health quality literacy and its subdimensions based on years of service indicate that healthcare workers' professional experiences may have a significant effect on their attitudes and awareness toward quality. In particular, the low average scores in the standards, willingness, and awareness subdimensions among healthcare workers with 11-15 years of experience suggest a decline in this group's attitudes toward quality. This situation suggests that the relationship between years of service and health quality literacy may stabilize at certain service years or decline due to various reasons, such as workload, burnout, and professional concerns. On the other hand, the high level of awareness among healthcare workers with 16 years or more of experience indicates that their knowledge of quality standards has increased with experience. While the findings regarding the willingness subdimension are similar to the results of the study by Turan and Altıntaş (2024), the findings obtained for the attitude, standards, and awareness subdimensions do not show similarities. Given the limited number of studies on this topic in the literature, it is considered necessary to conduct more research to obtain more comprehensive results.

Quality literacy in health is a cornerstone of patient care quality and safety. It equips healthcare professionals with the necessary knowledge and skills to adhere to evidence-based practices, reduce medical errors, and optimize resource utilization. High levels of quality literacy among healthcare workers contribute to creating a culture of safety within healthcare institutions, which is essential for minimizing risks and ensuring patient well-being. Studies such as Aggarwal et al. (2019) and Zeithaml et al. (1996) emphasize that quality literacy fosters better communication, teamwork, and adherence to standards, all of which are critical for effective care delivery. Furthermore, it empowers healthcare professionals to adapt to evolving healthcare policies and technologies, thereby enhancing resilience and sustainability in healthcare systems (Zeithaml et al., 1996; Aggarwal et al., 2019; Hupal, 2019; Esendemir & Erkan, 2024). Managers and policymakers must prioritize ongoing education and training programs to embed quality literacy into routine healthcare practices, ensuring that patient care remains both safe and effective.

The high levels of health quality literacy reported in this study indicate employees' knowledge of and competence in quality management and standards while also demonstrating the potential to enhance the quality of patient care. This situation can lead to improvements in the effectiveness of healthcare services and patient satisfaction. Furthermore, high levels of education and awareness strengthen employees' ability to adapt to new healthcare policies while also promoting interdisciplinary collaboration. In

conclusion, enhancing health quality literacy will provide significant contributions at both the individual and institutional levels. Additionally, identifying differences based on demographic factors (such as gender, age group, title, and years of experience) emphasizes the importance of educational and awareness-raising strategies for improving health literacy concerning quality. The study was limited to healthcare professionals working in public health institutions in Kayseri and the measurement tool used.

5. Conclusion and Recommendations

In conclusion, this research is expected to make significant contributions to health quality management processes by revealing the levels of health quality literacy among healthcare professionals and how these levels vary according to demographic factors. The study revealed that healthcare professionals possess an above-average level of health quality literacy, indicating that they have sufficient knowledge and awareness of quality management, standards, and processes. Accordingly, continuous education programs should be organized to enhance and sustain healthcare professionals' health quality literacy, participation in quality management processes should be encouraged, and feedback mechanisms should be established. Additionally, taking demographic differences into account, personalized education and awareness-raising strategies should be developed, and necessary motivating measures should be implemented to maintain and enhance quality consciousness as years of experience increase. Future studies could recommend conducting similar research in different regions and institutions (publicly and private) to achieve more comprehensive results. In this context, by comparing the findings of these future studies with those of the current research, interstudy differences could be highlighted. Furthermore, the relationships between health quality literacy and variables such as individual digital competency, technology acceptance, and leadership could be examined. Finally, longitudinal studies could investigate the changes in healthcare professionals' quality literacy over time, allowing for an evaluation of the effectiveness and sustainability of the process.

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