

The Effect of Digital Literacy Levels of Health Managers and Employees on Job Satisfaction: The Case of Sakarya

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ABSTRACT	
<p>Corresponding Author Elif DEMİRCİ</p> <p>DOI https://10.48121/jihsam.1398522</p> <p>Received 30.11.2023</p> <p>Accepted 17.01.2024</p> <p>Published Online 30.04.2024</p> <p>Key Words Digital Literacy, Job Satisfaction, Hospital, Management, Healthcare Professionals</p>	<p><i>Increasing internet usage enables individuals to easily access the information they are searching for. This situation brings up the concept of digital literacy. Healthcare institutions are also increasingly keeping up with this internet age. In this study, it was tried to reveal the difference between the socio-demographic characteristics of healthcare managers and employees working in healthcare institutions and the lower dimensions of digital literacy and job satisfaction. This study also aims to investigate the impact of digital literacy lower dimensions on job satisfaction's lower dimensions and make suggestions. The research was carried out with the participation of health managers and employees consisting of 396 people working in Sakarya University Training and Research Hospital. According to the research results, a low-level positive relationship was found between digital literacy lower dimensions and internal and external satisfaction ($p < 0.005$), but no positive or negative effect was found ($p > 0.001$). In the research, it was determined that the lower dimensions of digital literacy do not differ according to gender, marital status and age, but vary according to the position in the institution. While there is a significant difference between internal satisfaction, which is a lower dimension of job satisfaction, and gender, age and position in the institution, there is a significant difference between external satisfaction and only the position in the institution. It is thought that the offered service will be provided more efficiently and effectively by eliminating the deficiencies determined as a result of the analysis in the institution where the study is conducted.</i></p>

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1. INTRODUCTION

1.1. Digital Literacy

While it was difficult and expensive to obtain the needed data in the past, today, with the development of technology and science, this situation has become both easier and cheaper. This has led to the widespread use of the internet. People can easily access the data they need thanks to the internet. However, there is a question mark in minds whether the data obtained is reliable or not. Whether the data obtained from the internet is reliable or not can be understood by having a good level of literacy. This situation has introduced the concept of digital literacy to us. As time progresses, rapid developments in technology have provided new opportunities for innovations, learning and digital opportunities in the field of education (Kop and Fournier, 2010:2). There is a lot of information in digital media. The diversity of digital technology has required people to constantly improve their skills in accessing information. Literacy levels come to the fore in order to understand and use the accuracy of the information obtained from the digital environment, and this situation reveals the concept of digital literacy.

The word digital is a French word meaning "numerical" and "electronic display of data on a screen" and is derived from the word "digital" (Url-1). Digital literacy appeared for the first time in the work named "Digital Literacy" published by Paul Gilster in 1997 (Kum, 2022:33). Paul Gilster defined digital literacy as "The ability to understand and use information from different sources via computers."

According to Martin (2008), acquiring knowledge, methods, attitudes and individual qualities and using the ability to plan, realize and evaluate situations in life by using these qualities is called digital literacy. This definition includes a lack of creative functions (Reddy et al., 2020: 18).

Bawden (2008) stated that traditional literacy has also been digitized, that is, it has been made suitable for digital environments, and digital literacy is an insight into technology by using technological tools and equipment other than cognitive.

In the study titled "Digital Literacy: Determining Boundaries and Identifying Partners", digital literacy is expressed as the ability to research content through both information technology and the internet, use the content found after evaluating it and share it with the environment (Walton, 2016:1).

Digital literacy consists of a combination of three skills: technical dimension, cognitive dimension and socio-emotional dimension (Üstündağ et al., 2017:21; Nawaz and Kundi, 2010:20). Wan Ng developed three dimensions for digital literacy. The dimensions are technical, cognitive and social-emotional, respectively (Onursoy, 2018:994). Having both technical and

functional skills to effectively use information and communication technologies is the first dimension of digital literacy, the technical dimension (Tuncay, 2021:24). The cognitive dimension, which is the second dimension of digital literacy, is the skills that one must have in order to search for information critically on the internet by being informed about moral and legal obligations, and to analyze and evaluate the information obtained (Tuncay, 2021: 24; Doğan, 2022:18). Considering ethical and legal obligations, the skill required for the safe use of the internet, which is used in communication, socialization and access to information, is expressed as the social-emotional dimension (Tuncay, 2021:24).

Digital literacy has an important place in people's communication with each other, in business life and in all public transactions, leaving aside traditional methods and adopting the phenomenon of digitalization, which is the need of the age (Özkaya and Erat, 2022:253). With digitalization, there is a lot of information in our world, which we call the information age, and its number increases with every passing second. It has become important to raise people with a high level of digital literacy in increasing the amount of information and accessing the needed correct information (Öztürk and Budak, 2019:159).

The concept of digital literacy becomes important for employees as digital technologies are integrated into business life and daily activities. The concept and skills of digital literacy have been emphasized by the OECD, international organizations, governments and experts as important both in workplaces and in society and economic life (Bejaković and Mrnjavac, 2020: 923).

The World Health Organization (WHO) defines health as "a state of complete mental, physical and social well-being and not merely the absence of disease or infirmity." In the Universal Declaration of Human Rights, the importance of health is expressed as "no economic necessity shall hinder human health". Health services are one of the most important sectors within economic systems. All countries in the world allocate a large share of their budget to provide services in the health sector. The lack of substitutes for health services made it necessary for the employees to personally adapt to technological developments and renew themselves (Erbir, 2021:347).

While the possibilities offered by technology were limited in the past, nowadays with the development of technology, digitalization processes have caused great changes in business life. Technological innovations and changes in the work life of employees in all sectors have also been effective in the health sector (Eden et al., 2019:2). Health institutions use technological developments to increase the reliability of the service provided, the quality of patient care and treatment (Brown et al., 2020:452). The comprehensive and complex structure of health institutions provides both

advantages and disadvantages to the digital institution. First of all, it is thought that health institutions with a complex structure will make important contributions to facilitate the work done (Tüfekçi et al., 2017:147). With digital transformation, patient records, recording of observation results in digital fields, etc. is a professional requirement. One of the most important conditions of mastering these processes is digital literacy (Akalin and Veranyurt, 2020:133). The ability of healthcare workers to type and enter information into the system with the help of a keyboard and to use a mouse is considered an example of digital literacy (Kuek and Hakkennes, 2021:593). Since there have not been enough studies revealing the digital literacy levels of healthcare professionals and managers in our country, this study will try to partially fill the gap in the literature.

1.2. Job Satisfaction

Business life adds new values and different emotions to the person every day (Eğinli, 2009:36). The main factor that determines all the feelings and thoughts that people show in their business life is job satisfaction (Buyrukoğlu, 2022:3). The most used definition of job satisfaction was made by Locke (1976). He defined job satisfaction as "a pleasant or positive state of mind resulting from the value one attaches to one's job or work experiences" (Locke, 1976:27). The concept of job satisfaction took its place in the management and business literature with the book "Work Motivation" written by Herzberg and his friends in 1959 (Lacy and Sheehan, 1997:305). Davis's definition of job satisfaction has been used most in studies on job satisfaction. Davis defined job satisfaction as the state of individuals being satisfied or dissatisfied with their job (Davis, 1998:45). People spend most of their daily life at work. The job that is worked affects the person economically and psychologically. The fact that the society can be more healthy, happy and productive is related to the high job satisfaction of the people (Mutlupoyraz, 2010:22).

Health institutions are complex organization that provides 24/7 service, includes many occupational groups, have a Matrix organizational structure, has labor-intensive technology and is oriented to human life (Arıcıoğulları, 2021:29; Tekingündüz et al., 2015:28). Considering the quality of the service provided in health institutions and customer satisfaction, the attitudes and behaviors of health workers towards work emerge as a serious issue (Hoş and Oksay, 2015:2). Because the concept of health and disease directly affects human health. For this reason, job satisfaction and motivation of health workers are important (Ürtürk, 2020:73).

Factors affecting the job satisfaction of healthcare workers are listed as objective decision-making on promotions and salaries, rational distribution of tasks,

fair distribution of shifts, and impartial attitude of the management (Kitsios and Kamariotou, 2021:2). The environment and conditions in which healthcare professionals work affect their job satisfaction. Having a comfortable working environment, allowing the staff to rest, having the equipment and consumables used and being suitable for use, and having good teamwork and relationships with other employees increase the job satisfaction of employees (Shopman et al., 2016:6). Managers in health institutions play an important role for the institution to serve effectively and efficiently. Therefore, good management of the institution is ensured by managers being responsible and valuing their employees (Soysal and Sezgin, 2018:184). When health personnel are not satisfied with their work and this situation is not taken into account by the manager, employees see their work as worthless, simplify their work and become alienated from their work (Aşık, 2010:45-46). If the health workers who experience job dissatisfaction disrupt or slow down their work, the workload of other employees increases in order to maintain the service uninterrupted (Ürtürk, 2020:63). The aim of this study is to reveal whether there is a difference between the socio-demographic variables of managers and employees working in health institutions and the lower dimensions of digital literacy and job satisfaction. Another aim is to reveal whether the lower dimensions of the digital literacy level affect the lower dimensions of job satisfaction, and if so, which lower dimensions affect it, and to make suggestions accordingly.

There are not enough studies in the literature in which the terms "digital literacy and job satisfaction" are used together. With this study, the gap in the literature will be filled to some extent and the results will provide feedback for the health institution, helping to eliminate the deficiencies and increase the service quality of the institution.

2. MATERIALS AND METHOD

In this study, the survey method, one of the data collection tools, was used to reveal the effect of digital literacy on job satisfaction. The survey forms are divided into 3 parts. The survey forms consisting of 45 questions are listed as "Personal and Demographic Information Form", "Digital Literacy Scale" and "Minnesota Job Satisfaction Scale".

The digital literacy scale was developed by Ng in 2012 (Ng, 2012:1069). The scale, which was applied in a study in Australia, was translated from English to Turkish and its validity and reliability analysis was done by Hamutoğlu et al. (2016). The Digital Literacy Scale consists of 4 lower dimensions named attitude, technique, cognitive and socio-emotional including 17 questions.

The Minnesota Satisfaction Questionnaire was developed by Weis et al. in 1967. The scale consisted

of long questions of 100 ones, and then it was converted into short questions of 20 ones. Minnesota Job Satisfaction Scale was adapted from English to Turkish by Ashi Baycan Binark in 1985.

The Cronbach Alpha reliability coefficient was used to reveal the internal consistency, also known as the reliability, of the digital literacy and job satisfaction scales used in this study to achieve the determined goal. The Cronbach Alpha value of the digital literacy scale was 0,937. The attitude lower dimension has the highest rate among the lower dimensions with a reliability value of 0.921. The technical lower dimension reliability value was found to be 0.879, the cognitive lower dimension reliability value was 0.601 and the socio-emotional lower dimension reliability value was 0.517. The job satisfaction scale consists of 2 lower dimensions, internal and external, and 20 statements. The Cronbach alpha value of the scale was found to be 0.906. Internal satisfaction reliability value was found to be 0.854 and external satisfaction reliability value was 0.840.

The universe in this study is 2962 people including health managers, doctors, nurses and midwives working in the Training and Research Hospital in Sakarya Province. Since it was not possible to reach all of the health managers and employees who formed the universe of the research, the study was continued with the sample group determined in the universe. The sample of the study was determined according to the snowball sampling method, which is one of the probability-free sampling methods. The sample group consists of 396 people, including 76 health administrators, 120 doctors, 111 nurses and 89 midwives.

With the digitalizing age, studies in the digital field have increased in recent years. Some hypotheses were created by bringing together the basic topics of this study. In line with the research purpose and model, 5 hypotheses have been developed and the created hypotheses are listed below, respectively.

Hypothesis 1: The lower dimensions of digital literacy of health managers and employees show a significant difference according to socio-demographic characteristics.

H1a : The lower dimensions of digital literacy of health managers and employees show a meaningful difference according to gender .

H1b : The lower dimensions of digital literacy of health managers and employees show a meaningful difference according to marital status.

H1c : The lower dimensions of digital literacy of healthcare managers and employees show meaningful differences according to age .

H1d: The lower dimensions of digital literacy of healthcare managers and employees show a meaningful difference according to the position in the institution.

Hypothesis 2: There are significant differences between the socio-demographic characteristics of health managers and employees and the internal lower dimension of job satisfaction.

H2a : The internal lower dimension of job satisfaction of health managers and employees shows a meaningful difference according to gender.

H2b : The internal lower dimension of job satisfaction of health managers and employees shows a meaningful difference according to marital status.

H2c : The internal lower dimension of job satisfaction of health managers and employees shows a meaningful difference according to age.

H2d : The internal lower dimension of job satisfaction of health managers and employees shows a meaningful difference according to the position in the institution.

Hypothesis 3: There are significant differences between the socio-demographic characteristics of health managers and employees and the external lower dimension of job satisfaction.

H3a : The external lower dimension of job satisfaction of health managers and employees shows a meaningful difference according to gender.

H3b : The external lower dimension of job satisfaction of health managers and employees shows a meaningful difference according to marital status.

H3c : The external lower dimension of job satisfaction of health managers and employees shows a meaningful difference according to age.

H3d : The external lower dimension of job satisfaction of healthcare managers and employees shows a meaningful difference depending on the position in the institution.

Hypothesis 4: The lower dimensions of digital literacy of health managers and employees have a positive effect on the internal lower dimension of job satisfaction.

Hypothesis 5: The lower dimensions of digital literacy of health managers and employees have a positive effect on the external lower dimension of job satisfaction.

The data collected for the research was analyzed using the SPSS 27.0 package program. "Independent Sample T-Test" was used to reveal the differences between two groups, and "One Way ANOVA Test" was used to reveal the differences between three or more groups. Tukey Test, one of the Post-Hoc tests, was used to determine the source of the difference. Correlation Analysis was used to determine the relationship between the variables in the research, and Multiple Regression Analysis was used to determine the effect.

3. RESULTS

The percentage (%) and frequency distribution of the participants are given in the Table 1.

Table 1. Distribution of socio-demographic variables of the sample group

Variables		F	%
Gender	Female	283	71.5
	Male	113	28.5
Marital status	Single	165	41.7
	Married	231	58.3
Age	21-25	78	19.7
	26-30	106	26.8
	31-35	74	18.7
	36-40	44	11.1
	41 and over	94	23.7

Position in the Institution	Hospital Management	76	19.2
	Doctor	120	30.3
	Nurse	111	28.0
	Midwife	89	22.5

As a result of the analysis, most of the participants in the study are women and married. Considering the age status, most of the participants in the study are between the ages of 26-30. Most of the participants in the study were doctors, followed by nurses, midwives and hospital management, respectively.

Table 2. Comparison of lower dimensions of digital literacy and job satisfaction of healthcare managers and employees based on socio-demographic variables

Variables	n	Digital Literacy				Job Satisfaction	
		Attitude Mean ± SD	Socio-Emotional Mean ± SD	Technical Mean ± SD	Cognitive Mean ± SD	Inner Satisfaction Mean ± SD	External Satisfaction Mean ± SD
Gender							
Male	113	4.19±0.83	3.66±0.85	3.85±0.77	3.69±0.90	3.74±0.62	3.32±0.87
Female	283	4.16±0.66	3.83±0.81	3.82±0.69	3.71±0.80	3.57±0.62	3.18±0.77
Statistical analysis		t: 0.364	t: -1.867	t: 0.404	t: -0.168	t: 2.444	t: 1.572
Possibility		0.716	0.063	0.686	0.867	0.015*	0.117
Marital Status							
Single	165	4.13±0.73	3.75±0.88	3.80±0.74	3.74±0.87	3.56±0.63	3.24±0.79
Married	231	4.19±0.70	3.81±0.78	3.84±0.69	3.67±0.80	3.65±0.62	3.21±0.81
Statistical analysis		t: -0.738	t: -0.654	t: -0.554	t: 0.738	t: -1.130	t: 0.337
Possibility		0.461	0.514	0.580	0.461	0.184	0.736
Age							
21-25	78	4.17±0.50	3.68±0.78	3.87±0.54	3.83±0.65	3.68±0.59	3.35±0.73
26-30	106	4.23±0.60	3.91±0.80	3.91±0.71	3.67±0.93	3.59±0.60	3.15±0.72
31-35	74	4.25±0.71	3.93±0.75	3.86±0.78	3.80±0.89	3.45±0.59	3.09±0.81
36-40	44	4.06±0.93	3.72±0.95	3.86±0.77	3.65±0.90	3.56±0.74	3.21±0.93
41 and over	94	4.06±0.84	3.64±0.84	3.65±0.75	3.56±0.75	3.74±0.64	3.30±0.86
Statistical analysis		F:1.249	F:2.299	F: 1.923	F: 1.460	F:2.681	F: 1.464
Possibility		0.290	0.058	0.106	0.214	0.031*	0.213
Position							
Hospital Management	76	4.38±0.55	3.95±0.65	3.97±0.60	3.81±0.76	3.76±0.58	3.55±0.67
Doctor		4.09±0.85	3.63±0.86	3.67±0.79	3.54±0.94	3.60±0.68	3.07±0.87
Nurse	120	4.17±0.53	3.90±0.76	3.94±0.59	3.80±0.75	3.45±0.65	3.10±0.80
Midwife	111	4.07±0.79	3.72±0.93	3.78±0.80	3.70±0.79	3.71±0.52	3.29±0.73
	89	4.16±0.71	3.79±0.82	3.83±0.71	3.70±0.83	3.61±0.63	3.22±0.80
Statistical analysis		F:3.281	F: 3.347	F: 4.000	F: 2.560	F:4.599	F: 6.813
Possibility		0.021*	0.019*	0.008*	0.055	0.004*	0.001*

*p<0.05, SD: Standard Deviation

In the findings in Table 2, the participants' attitude lower dimension (t: 0.364; p > 0.05), socio-emotional lower dimension (t: -1.867; p> 0.05), technical lower dimension (t: 0.404; p> 0.05) and cognitive lower dimension (t:-0.168; p>0.05) were found to have no statistically significant difference according to gender variable. In this case, H1a hypothesis was rejected.

The findings in Table 2, it was determined that the averages of the answers given to the digital literacy lower dimensions did not differ statistically according

to marital status and age variables (p>0.05). In this case, hypotheses H1b and H1c were rejected.

The averages of the answers given to the surveys by the health managers and employees in the research were compared according to the position variable in the institution. Depending to the analysis results, it was determined that the cognitive lower dimension (F: 2.560; p>0.05) did not show a significant difference depending on the position variable in the institution.

Attitude lower dimension (F:3.281; p<0.05), socio-emotional lower dimension (F:3.347; p<0.05) and technical lower dimension (F:4.000; p<0.05) according to position groups in the institution. It was found that there was a significant difference. To determine the source of the difference, the Tukey test, one of the post-hoc tests, was used. According to the Tukey test, it was concluded that the average of the answers given by those in hospital management positions in the attitude lower dimension was significantly higher than the average of the answers given by employees in other positions (p<0.05). In the socio-emotional lower dimension, it was concluded that the average of the answers given by employees in hospital management positions was significantly higher than the average of answers given by employees in doctor positions (p<0.05). In the technical lower dimension, it was concluded that the average of the answers given by hospital managers and nurses was significantly higher than the average of the answers given by physicians (p<0.05). Hypothesis H1d was partially accepted.

Participants' internal satisfaction levels differed according to gender (t: 2.444; p<0.05). When the source of the differences was examined, it was found that men's internal satisfaction levels were higher than women's (p<0.05). Hypothesis H2a was accepted. However, it was determined that external satisfaction

did not differ according to gender (t: 1.572; p>0.05). Hypothesis H3a was rejected.

Participants' internal satisfaction (t: -1.130; p>0.05) and external satisfaction (t: 0.337; p>0.05) levels did not differ according to marital status. H2b and H3b hypotheses were rejected.

According to the analysis results, the internal satisfaction levels of the participants differed according to the age variable (F:2.681; p<0.05). When the source of the differences were examined, it was determined that the answer averages of participants aged 41 and over were higher than the answer averages of participants aged 31-35 (p<0.05). Hypothesis H2c was accepted. It was determined that the age variable did not differ on external satisfaction (F:1.464; p>0.05). Hypothesis H3c was rejected.

According to the findings, it was determined that the participants' internal satisfaction (F:4.599; p<0.05) and external satisfaction (F:6.813; p<0.05) levels differed significantly depending on the position variable in the institution. When the source of the differences were examined, it was determined that the internal and external satisfaction levels of those in hospital management positions were higher than those in other positions (p>0.05). Hypotheses H2d and H3d were accepted.

Table 3. Correlation analysis between participants' lower dimensions of digital literacy and internal satisfaction

N: 396	Inner Satisfaction	Attitude	Socio-Emotional	Technical	Cognitive
Inner Satisfaction	1	r : 0.205* p : 0.000	r : 0.157* p : 0.001	r : 0.192* p : 0.000	r : 0.178* p : 0.000

*P<0.05

The findings in Table 3, show the correlation between the lower dimensions of digital literacy and internal satisfaction of health managers and employees. It was revealed that there was a low level of positive relationship between internal satisfaction and attitude lower dimension (r: 0.205; p: 0.000). It has been determined that there is a low-level positive relationship between inner satisfaction and the socio-

emotional lower dimension. (r: 0.157; p: 0.001). It was determined that there was a low level of positive correlation between internal satisfaction and the technical lower dimension (r: 0.192; p: 0.000). It was determined that there was a low level of positive correlation between inner satisfaction and cognitive lower dimension (r: 0.178;p:0.000).

Table 4. Correlation analysis between participants' digital literacy lower dimensions and external satisfaction

N: 396	External Satisfaction	Attitude	Socio-Emotional	Technical	Cognitive
External Satisfaction	1	r : 0.147* p : 0.002	r : 0.131* p : 0.005	r : 0.160* p : 0.001	r : 0.138* p : 0.003

*p<0.01

Table 4 shows the correlation between digital literacy lower dimensions and external satisfaction. It was determined that there was a low level positive relationship between external satisfaction and the attitude lower dimension (r: 0.147; p: 0.002). It was determined that there was a low-level positive relationship between external satisfaction and the

socio-emotional lower dimension (r: 0.131; p: 0.005). It was determined that there was a low level positive relationship between external satisfaction and the technical lower dimension (r: 0.160; p: 0.001). It was determined that there was a low-level positive relationship between external satisfaction and the cognitive lower dimension (r: 0.138; p: 0.003).

Table 5. Multiple regression analysis of the effect of digital literacy lower dimensions on intrinsic satisfaction

Independent variables	Dependent Variable: Intrinsic Satisfaction						
	B.	Std. error	Beta (β)	T	p	Tolerance	VIF
Still	2.773	0.193		14.353	0.000		
Attitude	0.106	0.069	0.121	1.540	0.124	0.397	2.517
Socio Emotional	0.012	0.052	0.015	0.228	0.820	0.531	1.883
Technical	0.049	0.072	0.056	0.688	0.492	0.364	2.744
cognitive	0.046	0.054	0.060	0.844	0.399	0.476	2.103
MODEL							
R	R ² -	Adjusted R ²	F	p	Durbin-Watson		
0.221	0.049	0.039	5.002	0.000	1.708		

According to the results of the multiple regression analysis between the independent and dependent variables in Table 5, a low degree of positive and statistically significant relationship was found between intrinsic satisfaction and the lower dimensions of digital literacy ($R : 0.221$; $p < 0.001$). The model established in this relationship turned out to be significant and valid. According to the findings that

emerged as a result of the analysis, the attitude lower dimension ($\beta: 0.121$; $p > 0.001$), socio-emotional lower dimension ($\beta: 0.015$; $p > 0.001$), technical lower dimension ($\beta: 0.056$; $p > 0.001$), and cognitive lower dimension ($\beta: 0.060$; $p > 0.001$) It was found that there was no effect on internal satisfaction. H3 hypothesis was accepted.

Table 6. The effect of digital literacy lower dimensions on extrinsic satisfaction multiple regression analysis

Independent variables	Dependent Variable Extrinsic Satisfaction						
	B.	Std. Mistake	Beta (β)	T	p	Tolerance	VIF
Still	2.400	0.249		9.645	0.000		
Attitude	0.048	0.089	0.043	0.546	0.585	0.397	2.517
Socio-Emotional	0.038	0.067	0.038	0.563	0.574	0.531	1.883
Technical	0.093	0.092	0.083	1.010	0.313	0.364	2.744
cognitive	0.033	0.070	0.034	0.477	0.634	0.476	2.103
MODEL							
R	R ² -	Adjusted R ²	F	p	Durbin-Watson	R	R ² -
0.172	0.029	0.020	2.966	0.020	1.619	0.172	0.029

According to the results of the multiple regression analysis between the independent and dependent variables in Table 6, a low-level positive and statistically meaningful relationship was found between extrinsic satisfaction and the lower dimensions of digital literacy ($R : 0.172$; $p < 0.05$). The model established in this relationship turned out to be significant and valid. According to the findings that emerged as a result of the analysis, the attitude lower dimension ($\beta: 0.043$; $p > 0.001$), socio-emotional lower dimension ($\beta: 0.038$; $p > 0.001$), technical lower dimension ($\beta: 0.083$; $p > 0.001$) and cognitive lower dimension ($\beta: 0.034$; $p > 0.001$) it was found that there was no effect on external satisfaction. H4 hypothesis was accepted.

4. DISCUSSION

Health institutions are labor-intensive businesses that provide 24/7 service and the latest technologies are used. Since human health is at the forefront, errors are not allowed in the service. Providing uninterrupted,

complete and error-free service within this intensity is possible with a high level of job satisfaction. Job satisfaction is the positive feelings of employees in an organization towards their job. The higher job satisfaction level of an employee resulted in the higher contribution to the organization.

When health institutions, where information is used extensively, provide services with false information, it can cause mistakes that are difficult and impossible to reverse. In order to avoid this situation, every obtained information should be evaluated critically and provided with good information literacy. All of these have introduced the concept of digital literacy.

In this study, no statistically significant difference was found when the average answers given by the participants to the lower dimensions of digital literacy were evaluated according to gender. This situation is explained by the fact that the male and female employees participating in the research know how to evaluate digital information. In the study conducted by Aksoy et al. (2021), it was revealed that there is no significant difference between the digital literacy level

and the gender variable. In the study administered by Yılmaz et al. (2020) on participants studying in the field of health, it was revealed that digital literacy did not differ according to gender. Some studies have found that women's digital literacy levels are lower than men's (Acar, 2015; Özerbaş and Kuralbayeva, 2015). In the literature, the results between the lower dimensions of digital literacy and gender may vary depending on the sample group to which the study is applied.

In this study, no significant difference was found between the marital status of the participants and the average answers they gave to the technical, attitude, socio-emotional and cognitive dimensions which were the lower dimensions of digital literacy. In the study status by Yeşildal (2018), there was a significant difference between the mean answers given to the attitude, technical and socio-emotional lower dimensions of digital literacy and marital status, while there was no difference in the cognitive dimension. According to the study conducted by Ağaç (2020), it was determined that there was a significant difference between digital literacy and marital status, and that single people's digital literacy levels were higher than married people. The reason why being married or single has no effect on the research results can be attributed to the fact that they know where and how they use technological devices and are more conscious than in the past.

According to the conclusion of this work, no significant difference was found between age and lower dimensions of digital literacy. In the study carried out by Aksoy et al. (2021), there is a significant difference between the technical and socio-emotional dimensions and the age variable, which are the lower dimensions of digital literacy, while there is no significant difference in attitude and cognition. In the study conducted by Alipur and Pyandeh (2022) on healthcare professionals working in a training and research hospital, it was established that there was no meaningful difference between the digital literacy levels of the employees and the age variable. Some studies have found a difference between age and digital literacy (Carrington and Robinson, 2009, Marsh et al. 2019). According to the results of the study, the reason why the age variable is ineffective can be shown as the fact that everyone, young and old, has kept up with technological life and started using it in every field. There is no fixed result in the literature and it may vary depending on the place where the study is applied.

When the answer averages of healthcare managers and employees participating in the research to the lower dimensions of digital literacy are evaluated according to position groups in the institution, it is observed that there is a meaningful difference. The difference occurred in the hospital management position in the attitude dimension, socio-emotional dimension, and cognitive dimension. The cause for this situation can be

clarified by the fact that hospital managers use information and communication technologies more than doctors, nurses and midwives due to their working conditions. In their study by Oo et al. (2021) on healthcare professionals working in a hospital providing tertiary healthcare services, it was observed that doctors had more information and communication technology literacy than nurses. In the study conducted in the study carried out by Erbir (2021), it is seen that there is no difference in the digital literacy level of those who are nurses and work in the space of administration of the institution.

In this research, it was resolved that the internal satisfaction levels of the participants indicates a significant difference according to the gender variable. It has been concluded that men are more satisfied than women in terms of internal satisfaction according to the gender factor. The reason for the difference may be that women in the health sector are more tired than men in the working conditions and that men are more socially active. In their study on 292 employees providing emergency medicine services, Blau and Gibson (2011) revealed that there was a meaningful difference between gender and internal satisfaction. There are studies in which there is a significant difference between internal satisfaction and gender factors, as well as studies in which there is no difference (Aydoğmuş, 2021; Fidan 2021; Kirkcaldy and Martin, 2000).

When examined according to marital status, the answer averages of married participants were found to be higher than those of single participants. However, no significant difference was found between marital status and internal satisfaction. It can be counted as marital status not being an obstacle to making a career and not creating a difference in responsibilities according to changing conditions. In the study carried out by Güder (2021), in his research on administrative staff, doctors, nurses and other healthcare professionals working in a healthcare institution, he found that being married or single did not make a difference on internal satisfaction. It seems that this study gives the same result as our study. There are other studies supporting this result (Kara, 2020; Pan et al. 2015; Görgülü and Akilli, 2016). There are studies that give opposite results to this study (Saner and Eyüpoğlu, 2013; Demirbaş, 2022; Özyaydın and Özdemir, 2014). It can be said that the type of hospital where the research was conducted caused the results to be different in the literature.

According to the comparison results, it was determined that the average response to internal satisfaction differed significantly according to age groups. The group with the greatest difference in internal satisfaction was found to be 41 and over. The reason may be that they do not want to work in shifts and lead a monotonous life due to their age. Elias et al. (2012) investigated the effect of attitudes toward technology on job satisfaction and found that as age increases, intrinsic satisfaction increases. Briones and Tobernero

(2012) revealed in their study that internal satisfaction decreases as age increases. In another work, it was found that there was a positive relation between the age levels and internal satisfaction of the employees of an institution providing home care services (Denton et al., 2002). As a result of the research, it was determined that there was no significant difference between the age variable and internal satisfaction (Keklik and Coşkun Us, 2013).

When the response averages of the health managers and employees participating in the research to internal satisfaction are evaluated according to the position groups in the institution; A significant difference was found in internal satisfaction in hospital management and midwife positions. Leblebici and Mutlu (2014) found a significant difference between the position in the institution and job satisfaction, and it overlaps with our study in this regard. In a study, doctors had the highest level of internal satisfaction, while nurses had the lowest. This result revealed that there is a significant difference between internal satisfaction and the position in the institution (Güder, 2021). In the studies of Arslan and Demir (2017) and Kayabaşı (2019), internal satisfaction of physicians is high while nurses are low. Although there is a significant difference between internal satisfaction and the position in the institution, there are studies where there is no difference (Nal and Nal, 2018; Ürtürk, 2021). It can be said in the literature that the location of the hospital where the research was conducted causes different results.

When the health managers and employees participating in the research were evaluated according to gender, although the average of the answers of the men was higher than the average of the answers of the women, no considerable difference was found between the extrinsic satisfaction and the gender variable. In the study resolved by Nur (2011) on public hospitals, it was determined that there was no considerable difference between the gender variable of health workers and their job satisfaction. In the study conducted by Keklik and Coşkun Us (2013) on health workers working in a public institution, it is seen that the external satisfaction scores of men are higher than the external satisfaction scores of women, but there is no significant difference. Aikins et al., (2023) found a considerable difference between gender and extrinsic satisfaction in a study conducted on healthcare professionals working in 34 primary healthcare institutions. In most of the studies, no significant difference was found between extrinsic satisfaction and gender factor.

When analyzed according to marital status, the average of the answers of the single participants is higher than the married participants. However, no considerable difference was found between marital status and external satisfaction. In the study of Jayasuria et al., (2012) on nurses working in rural areas, the extrinsic

satisfaction scores of married nurses are lower than the extrinsic satisfaction scores of single nurses, and there is no significant difference between extrinsic satisfaction and marital status variables. In a study conducted by Görgülü and Akilli (2016) on doctors, nurses and other health workers, the extrinsic satisfaction response averages of married workers were found to be higher than those of single workers.

According to the results of the analysis made between age and external satisfaction in this study, it was decided that there was no statistically considerable difference. There are similar studies in the literature that do not have a significant difference between extrinsic satisfaction and age. In the study of Aydın et al., (2014), no considerable difference was found between extrinsic satisfaction and age. This result was supported by the studies of Ürtürk (2020) and Aydoğmuş (2022). There are results that are the opposite of these results (Sharma and Joyti, 2009; Saner and Eyüpoğlu 2012; Pickett and Sevastos, 2003). When the response averages of the participants to external satisfaction are evaluated according to the institution position, those in the hospital management position have the highest average, and those in the doctor position have the lowest average. According to the conclusions of this research, there was a significant difference among the position in the institution and the external satisfaction. The reason for this difference is that the doctors are in more communication with the patients and their relatives, their workload, their work in turn, the high patient density of the institution they are in, etc. can be sorted accordingly. Similarly, in Kayabaşı's (2019) research, it was determined that there was a significant difference among external satisfaction and the position in the institution, and those in the midwife position had a lower average than the doctor and nurse. However, contrary to our study, in the study conducted by Çağan and Günay (2015) on primary healthcare workers, it is seen that the extrinsic satisfaction response averages of doctors, nurses and midwives are the same. In this study revealed that there is no significant difference between position in the institution and external satisfaction.

It was aimed to investigate whether digital literacy, which is the main subject of the study, has an impact on job satisfaction. According to the conclusions of the research, multiple regression analysis was conducted to analyze whether the lower dimensions of digital literacy of health workers and managers have an effect on internal satisfaction. In the model created according to the results of the analyze, there is a low surface of positive and significant relationship ($R: 0.221$; $p < 0.001$) between the lower dimensions and internal satisfaction, while the attitude lower dimension ($\beta: 0.121$; $p > 0.001$), the socio-emotional lower dimension ($\beta: 0.015$; $p > 0.001$), technical lower dimension ($\beta: 0.056$; $p > 0.001$) and cognitive lower dimension ($\beta: 0.060$; $p > 0.001$) did not have an effect on internal

satisfaction concluded. Likewise, multiple regression analysis was conducted to analyze whether the lower dimensions of digital literacy had an effect on external satisfaction. In the model created according to the outcomes of the analysis, there was a low surface of positive and meaningful relationship ($R: 0.172; p < 0.05$) between the lower dimensions and external satisfaction. Attitude lower dimension ($\beta: 0.043; p > 0.001$), socio-emotional lower dimension ($\beta: 0.038; p > 0.001$), technical lower dimension ($\beta: 0.083; p > 0.001$), and cognitive lower dimension ($\beta: 0.034; p > 0.001$) had no effect on extrinsic satisfaction. In the study of Emer (2021), it was aimed to investigate the effect of the level of technology used on job satisfaction. As a result of the study, it was revealed that the level of technology has a positive effect on inner and extrinsic satisfaction. In the study of Itsekor and James (2012), it was determined that having digital literacy skills in information and communication technologies increases job satisfaction, so there is a positive effect between them. In the research conducted by Akinlade and Gberevbie (2022), it was concluded that information and communication technologies positively affect job satisfaction, and if information and communication technologies are misused for employees in the institution, it may have negative consequences.

5. CONCLUSION

Health institutions are sectors where information is used intensively. Undesirable results may occur if institutions, especially health institutions, are managed with false information and provided services. If a doctor, a nurse or a midwife serves a patient with false information, the patient's life may be endangered. If those at the hospital management level continue to manage the institution with incomplete or incorrect information, they may cause the institution's service to stop and be closed. In order to avoid this situation, the missing information must be completed, and the incorrect information must be replaced with the correct information.

Employees performing their jobs with incorrect information affects their job satisfaction levels. Job satisfaction is a person's reaction to his job. One of the sectors is the healthcare sector in which job satisfaction is important. Healthcare institutions are sectors that

have a large number of employees and provide uninterrupted services. Disruption of the services provided in health institutions causes serious consequences. In these businesses where human life is at stake, employees must be satisfied with their jobs in order to ensure that the service does not fail. Necessary improvements should be made to prevent employees from experiencing job dissatisfaction.

Partially meaningful discrepancy was found between the socio-demographic factors of the participants in the study and the lower dimensions of digital literacy. Employees' use of information and communication technologies in their workplaces, using intensive health technology, knowing how to solve technical problems, and how to obtain information from the internet have partial difference on employees' digital literacy.

It was analyzed whether there was a significant difference between intrinsic and external satisfaction, which are the lower dimensions of job satisfaction, which is the other main subject of the research, and socio-demographic variables. According to the analysis, a partial difference was found. It can be said that situations such as the working conditions of managers and employees working in health institutions, the applicability of work-related decisions, their wages, promotion opportunities, the management of the institution, the appreciation of their work and the sense of success cause differences in the intrinsic and external satisfaction of the participants.

Acknowledgments: We thank those who contributed to the research.

Conflict of Interest: There is no conflict of interest between the authors.

Ethical Approval: Permission for the research was acquired from the ethics committee of Sakarya University of Applied Sciences with the letter numbered E-26428519-044-65519 dated 08.11.2022. Permission was received from the Sakarya Provincial Health Directorate to collect data for the study with the letter numbered E-18343338-604.02.99 dated 05.12.2022.

Funding: No

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