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An ınvestigation of the relationship between digital obesity and digital literacy levels of ındividuals in the context of Turkey

Fatıma Betül Demir[1], Ülkü Ulukaya Öteleş[2]* and Erol Koçoğlu[3]

[1]Department of Social Studies Education, Faculty of Education, Bartın University, Bartın, Turkey.
[2]Department of Social Studies Education, Faculty of Education, Muş Alparslan University, Muş, Turkey.
[3]Department of Social Studies Education, Faculty of Education, İnönü University, Malatya, Turkey.

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The concepts of digital obesity and digital literacy, which are interconnected in influencing human beings, can find their place in all areas of life with the virtualized life industry in the globalizing world. Having these competencies, awareness can be explained by the orientation process between these concepts and the individual. In this direction, this study, which aims to examine the relationship between digital obesity and digital literacy levels of individuals, has been carried out, taking into account the existing orientation process. In the study, which was designed as a quantitative research, the relational survey model was used. The research was carried out with 549 participants. The results indicate that the level of digital obesity and digital literacy significantly predict the level. In addition, age, gender and educational status seem to play a partly mediating role in the relationship between digital obesity and digital literacy.

Key words: Digital obesity, digital literacy, ındividual, virtual, addicted.

INTRODUCTION

When we look at the history of humanity, information has always been seen as the most important input of the production process in the process of meeting the needs. It can be said that reaching or reaching information, which is expressed as the most important input, has changed throughout the historical process and reached the present day. This variability can be explained with individual and social development and awareness levels. In other words, in today's world, it can be said that the developments in the field of digitalization and technology applications emphasize the access of information by coding in digital format and by virtual methods. It can be said that the individual, who has the opportunity to access information quickly and easily with these methods offered by digital technology, triggers this technology and its applications to be the center of his/her life and start using it, in a multidimensional way. Digital technology, which is used excessively due to the features it contains,

*Corresponding author. E-mail: u.ulukaya@alparslan.edu.tr. Tel. 0535 783 70 49.

has led to the emergence of the concepts of digital addiction or obesity. Digital obesity, which is accepted as a disease by various circles, can be explained as the use of digital tools to negatively affect the physical, mental and spiritual structure of the individual. The prevention of digital obesity, which negatively affects human health, can be achieved by gaining the awareness of individuals to use digital reasonably and consciously. It can be said that digital literacy has an important function in raising this awareness. Digital literacy can contribute to the prevention of digital obesity in terms of the benefits provided by the individual regarding the correct, effective and ethical use of digital. Therefore, individuals with high digital literacy skills are expected to have low levels of digital obesity. Within the scope of the study, it can be said that the literature review is shaped on the axis of digital literacy and digital obesity.

Dıgıtal lıteracy

Digital literacy was first defined by Gilster as the ability to understand and use the information in the digital environment in different ways (Gilster, 1997; Aabo, 2005). In this direction, it is possible to diversify the definitions of the concept of digital literacy as the skills and competencies that make up digital literacy are changing in parallel with the developments in technology. In that case, it would be appropriate to approach the definitions of digital literacy from a dynamic perspective. As a matter of fact, the related term is accepted as an umbrella type of literacy that includes complex cognitive, psycho-motor and affective skills and integrated sub-disciplines and literacy that individuals need to have in order to work effectively in digital contexts (Eshet, 2002; Calvani et al., 2008), can be evaluated as a result of this dynamic change process. Due to its dynamism, it can be said that digital literacy, which is guided by the technological developments in the world, includes various competencies. Having these competencies listed as access, analysis, evaluation, creation, reflection and action (Hobbs, 2011) are accepted as a basic criteria for being digitally literate. However it cannot be said to be sufficient as it can be stated that this literacy has many types. It can be said that in order to be a good digital literate, it is necessary to have basic knowledge and skills related to the information, visual, media, technology and computer literacy that digital literacy covers (Wilson, 2011). For an individual to be qualified as a digital literate must be aware of the information they need, know how to reach it and how to use it when it reaches it. In other words, it is mandatory to be information literate. The situation is no different in the context of other literacies. For example, it can be stated that a media literate individual needs the skills required by digital literacy while knowing and benefiting from the diversity, distribution forms and sources of media resources (Gambarato, 2017). The close relationship between computer literacy and digital literacy has sometimes even led various researchers to use both literacy interchangeably. This may be due to the fact that the first computer comes to mind when it comes to digital tools, that is, the computer represents digitalization and digital tools. This can be given as evidence of the interaction between digital literacy and other types of literacy.

Dıgıtal obesıty

It can be said that digital media and online devices, which are increasingly used in all areas of daily life, have some advantages in terms of communication, time and space in terms of individual and social aspects (Koçoğlu et al., 2022). However, it can be stated that these advantages bring along a dependency based on excessive use of these media and devices. The internet environment and the effective use of digital devices have led to the emergence of a new type of addiction, "digital addiction". Although the consequences of this addiction vary, digital obesity may be the most striking result. It can be said that digital obesity refers to the situation that occurs as a result of excessive use of digital tools. It is seen that individuals who are digitally obese will inevitably encounter some physiological, spiritual, developmental, emotional, sociological and psychological problems (Mustafaoğlu et al., 2018; Koçoğlu et al., 2022). It can be stated that the number of individuals facing related problems is increasing with each passing day. These problems, bodily disorders, introversion, loneliness and dislike of oneself and so on. Many studies conducted around the world show that the number of digital obesity has reached alarming proportions and that digital obesity negatively affects physical, social, psychological, emotional and cognitive development (Scherer, 1997; Harris et al., 2015; Koçoğlu et al., 2022). The first thing to do to eliminate this negativity is to determine some strategies for the use of internet-based digital devices. Related strategies are expressed as strategies to address digital addiction; acknowledging that technology companies drive the individual to addiction with some applications, planning the usage times of social media accounts, preventing our workspaces from being taken over by digital tools, and discovering the power of silence (Peper and Harvey, 2018). It can be said that the concept of digital literacy, which enables these strategies to create awareness on the individual, is very important for the digital obesity process. As a matter of fact, digital literacy is not only aimed at using digital tools. It also includes the use of digital tools from a critical point of view (Buckingham, 2008). This situation prevents the individual from becoming digitally obese due to excessive and unnecessary use of digital. It can be said that individuals and societies with digital literacy skills have a fairly high level of executive cognition in using digital strategies. In this study, the relationship between the concepts of digital literacy and obesity was evaluated and

it was aimed to Decipher the level of interaction between the concepts. The aim of the study was to Decipher the relationship between the concepts of digital literacy and obesity. The field type is examined, it is seen that obesity is related to digital literacy and digital work separately (Martin, 2006; Dobson and Willinsky, 2009; McVay et al., 2019; Chase and Laufenberg, 2011; Hino et al., 2020). However, there has not been a study on the relationship between digital literacy and digital obesity. Dec. As a matter of fact, digital literacy is considered to be important in preventing digital obesity, which is gradually increasing its impact all over the world. With the related study, it is aimed to create awareness about this issue by determining the effect of digital literacy on digital obesity.

Limitations and assumptions of the study

The research was carried out with a study group of 549 people. Two different scales were used as data collection tools in the study. These mentioned information are the limitations of the study. In the research, it was assumed that the data collection tools were suitable for the purpose of the research and that the participants gave sincere answers.

METHODS

Research pattern

The research was carried out in relational screening model through the applied scales. Relational screening is a model in which variables and parameters are interrelated and information is systematically integrated. A cause-effect relationship is established between the variables (Cohen et al., 2007; Karasar, 2012). In the research, a relational screening model was used as a possible necessity of a study that examines the relationship between digital obesity and digital literacy of individuals in the context of cause and effect.

Sample of the research

The population of the research consists of individuals over the age of 18 living in Turkey. The sample of the study consists of 549 participants determined by simple random sampling from the universe and in line with the principle of voluntary participation. In simple random sampling, there is a probability that individuals are large enough to represent the group and each has an equal chance of being included in the sample (Kerlinger, 1999). The sample of the study was calculated as at least 384, using the "Sample Size Calculator" (Surveysystem, 2021), accepting a 95% confidence interval and a 5% margin of error. It can be said that the sample group participating in the research is at an acceptable level. While 38% of the participants were male (209) and 62% were female (340); 37% aged 18-25 (204), 10% aged 26-30 (59), 17% aged 31-35 (94), 11% aged 36-40 (61), 16% are between the ages of 41-50 (91), 4% are between the ages of 51-55 (27), 13% are 55 and over (13). According to the educational background of the participants, 2% primary school (11), 4% secondary school (20), 11% high school (64), 10% associate degree (54), 57% licence (310) and finally 16% have a postgraduate (90) education level. According to the income level of the participants, 40% is 0-5000 TL (222), 41% is 5001-10000 TL (227), 12% is 10001-15000 TL (68), and 7% is 15001 and above (32) have a socioeconomic level.

Data collection tools

The “Digital Obesity Scale” developed by Koçoğlu, Demir and Ulukaya Öteleş (2021) was used to determine the digital obesity levels of the participants. The “Digital Literacy Scale” developed by Bayrakcı and Narmanlıoğlu (2021) was used to determine the digital literacy levels of the participants.In addition, the demographic information form prepared by the researchers (gender, age, educational status and income status) includes questions about the information of the participants.The Cronbach's Alpha internal consistency coefficients calculated within the scope of the reliability of the scale were calculated as 0.91, 0.81, 0.81, 0.60 and 0.61 for the ego surfing, dependency, accessibility, content loading and reference dimensions, respectively, and 0.93 for the overall scale. The Digital Literacy Scale, developed by Bayrakcı and Narmanlıoğlu (2021), consists of 29 items and 6 factors (ethics and responsibility, general knowledge and functional skills, daily use, professional production, privacy and security, social dimension). The items in the scale were prepared according to the Likert-type five-point rating category and were as follows: I strongly agree (5), agree (4), undecided (3), disagree (2), strongly disagree (1). The Cronbach Alpha reliability coefficient of the scale is 0.91. All of the students studying in this class participated in both the quantitative and qualitative part of the research. Necessary permissions (E-23688910-050.01.04-2200121075) were obtained before the research data were collected.

Data collection and analysis

The data collection process of the research was carried out online in order to reach the maximum number of participants and to provide the accepted number with 95% confidence interval and 5% margin of error.Therefore, in the first stage, the researchers transferred the scale items to google form. Afterwards, the participants' access to the online link link was provided. Participants participated in the research voluntarily. The response time of the form is approximately 15-20 minutes and the data acquisition time is 30 days. After the data of the study were collected by means of scales, the extreme values were cleared, the skewness and kurtosis coefficients were checked and examined in terms of normality assumption. In addition, it was determined that the necessary conditions for the analysis of the data were met. The data were first examined in terms of validity and reliability. Exploratory factor analysis (Büyüköztürk, 2011; Field, 2009) was performed with SPSS to determine the construct validity of the scales, and Cronbach's Alpha coefficients (0.89 and 0.86) were found to be appropriate to determine their reliability.In addition, it was determined that the descriptive statistical values and Kolmogorov-Smirnov normality test results showed a normal distribution of the data. In the research model; correlation analysis and hierarchical multiple regression analysis were performed because it was aimed to examine the effect of digital obesity levels of participants as a dependent variable and digital literacy levels as an independent variable.

RESULTS

Descriptive analysis of variables and correlation matrix

The data on the arithmetic mean, standard deviation,

Table 1. Arithmetic mean, standard deviation, standard error and correlation values of the variables examined within the scope of the research.

S/N	Varıable	$\overline{X}$	S	SD	1	2
1	Dıgıtal obesıty	3.86	0.78	0.47	1	
2	Dıgıtal lıteracy	2.46	1.81	0.65	-0.293*	1

Source: Author.

Table 2. Multiple regression analysis of participants' prediction of digital obesity and digital literacy behaviors.

S/N	Model	Dependent variable: Digital Obesity					
	Independent variable	B	Std. error	Beta	T	p	f
1	(Constant)	102.583	2.791		36.760		
	Digital Obesity	0.357	0.050	0.293	13.314	0.000	
	Gender	-1.096	1.143	-0.034	-0.764	0.445	
	Age	-1.910	1.435	0.450	-4.244	0.000	
	Education status	1.127	0.623	0.080	1.808	0.071	7.100
	Income status	0.640	0.944	0.035	0.678	0.498	
2	(Constant)	104.761	3.414		30.684	0.000	
	Digital Literacy	0.241	0.034	0.293	7.168	0.000	
	Gender	4.121	1.755	0.105	2.348	0.019	
	Age	-1.436	0.550	-0.134	-2.609	0,009	
	Education status	-2.481	0.763	-0.145	-3.153	0.001	5.919
	Income status	0.971	1.154	0.44	0.841	0.401	
	R^2 change	0 ,050					

Source: Author.

standard error values and the relationships between the variables regarding the digital obesity and digital literacy levels of the participants are presented in Table 1. According to Table 1, participants' digital obesity perceptions are "I agree" (4) high and their digital literacy perceptions are "Disagree" (2) low. When the relationships in the correlation matrix are examined, digital obesity perceptions and digital literacy have a weak negative relationship (r=-0.293, p<0.001).

Effect of digital obesity on digital literacy behavior

The findings and results of the multiple linear regression analysis conducted to investigate the mediating effect of participants' digital obesity levels on digital literacy behaviors are presented in Table 2. According to Table 2, after controlling for gender, age, educational status, income level and perceived digital literacy demographic variables, participants' digital obesity scores were added to the model by direct determination (enter) method. As a result of the multiple regression analysis, the effect of digital literacy on digital obesity decreases from β= 0.357 to β=.241. The fact that this effect is significant indicates that demographic variables are the partial mediator variable in this relationship. In other words, digital literacy has an impact on digital obesity behavior. The situation showing this effect is shown in Figure 1. According to the regression coefficients, the predictor variables were digital obesity perceptions and age (β = -1.910); There is a significant relationship between digital literacy perceptions and gender (β=4.121), age (β=-1.436), educational status (β=-2.481).

DISCUSSION, CONCLUSION AND SUGGESTIONS

In this study, which examines the relationship between digital literacy and obesity levels in the context of Turkey, it can be said that remarkable results have been achieved. In the study, digital literacy and digital obesity were examined together and some important results were obtained. According to the hierarchical multiple regression analysis results, it can be stated that the digital literacy levels of the participants affect the digital obesity levels through various partial mediator variables, and this effect

Figure 1. Standardized beta coefficients in the mediating effect of perceived digital literacy on participants' digital obesity behavior (***p<.001).
Source: Author.

brings about the emergence of a significant relationship between the two concepts. This relationship, which emerged in the study, can be considered as an important finding in determining the interaction levels of the participants with the digital world.

One of the important results obtained in the study is the decrease in digital literacy levels in parallel with the increase in the digital obesity levels of the participants. The findings that the participants had high levels of digital obesity are supported by other research findings in the literature. In the studies conducted by Senecal et al. (2020) and Hu et al. (2021), they reported in their studies that the rate of digital obesity in the world has been increasing since the last fifty years. The results of the studies on digital obesity in different fields, emphasizing that the increasing rate of digital obesity in the world brings along a growing problem of chronic diseases and economic burden, are similar to the finding in the study, which expresses the rate of digital obesity. This similarity can be shown as the most important proof that the situation in Turkey, which is taken as a criterion in obtaining the findings in the study, does not differ from the rest of the world. In addition, according to the "Information Society Statistics" published by the Turkish Statistical Institute in 2021, internet access in Turkey is 94.9%, website ownership is 53.7% and household internet access is 90.7%. These data, which show the current digital view of Turkey, can be given as an indication that Turkey is not behind the age and the world in digitalization. It can be said that all these data support the finding of high digital obesity levels of the participants obtained in the study. However, the same cannot be said for digital literacy. Although more than half of the participants are between the ages of 18 and 40, it can be considered as a remarkable result that the level of digital literacy was lower than digital obesity in the study. It can be said that this result reveals evidence for a multidimensional reconsideration of the statement "The young population, who are mostly in the Z generation, is easy to integrate into digital platforms and technologies" in the study conducted by Prensky (2001). It can be stated that the principled statements such as "every individual who is digitally obese has or should have a level of digital literacy" loses its importance with this result obtained in the study.

Based on the results and findings obtained in the study, the fact that the digital literacy rate in Turkey is lower than digital obesity which shows that the metacognitive levels of the participants regarding the use of digital platforms and technologies are insufficient. In order to eliminate the problems caused by this inadequacy, it has been suggested that activities to improve digital literacy competencies should be carried out by relevant institutions and organizations.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interest.

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