

Digital Addiction and Financial Literacy: A Study on University Students

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Abstract: Addiction, basically two groups are examined. The first is piracy of individuals, and the second is psychological theft. Examination as the use bodies of substances related to external factors constantly get used to these substances, depending on external factors, and undesirable results may occur when these components cannot be taken into the body. Traditional habitual hacking, which is described as digital addiction, brings with it an interest in technological devices and a lack of access to them. Digital components guide the spirits that feed the conflict in case the higher units cannot access the relevant devices, and tolerance for guests and other children is observed. Financial literacy, which is the other variable of the research, defines the limits of being able to make effective decisions about the management of money. This concept, which can also be defined as the act of saving information, does not include intelligent action in details such as investment, budget, debt, portfolio diversification. Financial literacy can also be interpreted as making behavioral decisions such as making financial plans, saving and spending results. Financially literate people are well versed in money management and are well acquainted with the economic processes of saving. This concept, which is considered important of financial resources in crisis environments, is evaluated as individuals' correct interpretation of their financial resources and acting in this context. The increase in the concept of financial literacy has revealed economic fluctuations. As a matter of fact, it is seen that countries and societies with high financial information have high savings. These countries are generally the ones that have learned lessons from the financial crises. The aim of the research is to determine whether digital addiction has an effect on financial literacy. In this context, university students were selected as a sample in the study, and a face-to-face survey was applied to 372 university students. Digital addiction scale and financial literacy scale were used as data collection tools in the research. Both of the research scales are in five-point Likert type. The research data were analyzed by the SPSS 26 program, correlation and regression analyzes were carried out between the two related variables that constitute the subject of the study. When the results of the analysis were examined, it was determined that digital addiction did not have a significant relationship on financial literacy. At the same time, within the scope of testing the research hypothesis, it was determined that digital addiction did not have any significant effect on financial literacy.

Key Words: Digital addiction, Financial literacy, University Students

1. Introduction

In the last few years, digital addiction (DA) has emerged as an important research area due to its increasing prevalence (Pan, Chiu and Lin, 2020). Digital addiction, which is considered one of the most important addictions of today's world, is more dangerous for young individuals. It is known that young people feel uncomfortable when they are away from their phones, cannot check their e-mails, and cannot log in to social media (Altınok, 2021: 263). Children who do not have adaptation problems related to the acceptance and use of technology are called "digital natives". This new generation of children is very successful in the use of technology and technological devices compared to the older generations. In this case, the role of the digital elements they are exposed to from the moment they are born is great (Cho, Kim and Lee, 2016: 365). Researching young people's technology use and addiction, Almourad et al. (2020: 240) digital addiction; game addiction, internet addiction and phone addiction. Internet addiction, Wolfling et al. (2014: 7); It is defined as psychosocial behaviors that occur as a result of individuals' excessive internet use. Game addiction is defined as "people who have difficulty in controlling playtime, have low academic performance, do not attend school regularly, engage in interpersonal conflicts, and display maladaptive behaviors due to excessive online gaming, including feelings of anxiety and distress when withdrawing from online games" (Alrobai et al., 2016; Kiraly et al., 2014). One of the reasons why smartphone addiction has become so widespread is that these phones have many functions. Thanks to this technology, individuals can access their bank accounts, control their social media accounts, e-mails, and do many other things remotely. However, as a result, this addiction also changes the habits, socialization and routines of individuals (Samaha and Hawi, 2016: 322).

Although financial literacy, another variable of the research, is a popular concept in the finance literature, there is no clear definition of the concept. Huston (2010) defines the concept as the ability to make effective decisions about the management of money (Huston, 2010). The concept of financial literacy has been revealed by the economic contractions in the world. As a matter of fact, it is seen that countries and societies with high financial

knowledge have more savings. These countries are generally those that have learned lessons from financial crises (Taylor and Wagland, 2013). Financial literacy is also defined as making quality decisions about making financial plans, saving and borrowing (Lusardi and Mitchell, 2014). Individuals with financial literacy are well-versed in money management and know the functioning of economic institutions well (Mahdanzan and Tabiani, 2013). This concept, which is considered to be financially important in crisis environments, is defined as the individual's correct interpretation of financial information and acting in this context (Mason and Wilson, 2000).

In the light of this information, firstly, the introduction part is given for the research, in this context, the related variables are conceptually discussed and a literature review regarding these variables is included. Then, the data collection tools and the validity and reliability analyzes of these tools were included in the method section, and the correlation and regression analyzes and results were mentioned in the findings section. In the conclusion part, the results of the research are interpreted, the limitations of the research and suggestions for other researchers are given.

2. Literature Review

Within the scope of the literature review, firstly, the researches on digital addiction, one of the variables of the research, which have been examined in recent years, are included.

Savcı and Aysan (2017) investigate the effects of internet addiction, social media addiction, digital game addiction and smartphone addiction on social commitment. Analyzing data from 201 adolescents, the study found that these technological addictions significantly predicted 25% of social connectedness. Internet addiction has the strongest effect, followed by social media addiction, digital game addiction and smartphone addiction. These findings highlight the important role of technological addictions in shaping social connectedness.

Marsch (2020) discusses the role of digital technologies in promoting and understanding health, particularly in the context of addiction. It emphasizes the application of digital health approaches in addiction medicine, focusing on advances in real-time measurement of drug use events, factors in the environment, and the use of real-time data to inform sensitive interventions to prevent and treat substance use disorder. While using addiction medicine as an example, the manuscript highlights that science-based digital health has the potential to provide scalable solutions for precision healthcare delivery in a variety of diseases worldwide.

Aleksic (2018) examines the relationships between digital game preferences, habits and addiction among early adolescents. The research sample includes 1262 students aged between eleven and fifteen from 22 schools in Serbia. Within the scope of the study, a psychometric tool was developed and evaluated. The effect of socio-demographic factors on digital game preferences, habits and addiction was analyzed. The research hypotheses were confirmed as the results supported the existence of an association between digital gaming and addiction among early adolescents.

Dresp-Langley and Hutt (2022) examines the relationship between digital addiction and sleep. He discusses how excessive online activity and internet use can lead to sleep disruption and insomnia. The study highlights the neurological implications, behavioral symptoms, and impact of altered motivation, memory function, mood, and lifestyle variables. The article highlights the importance of addressing sleep deprivation as a key factor in digital addiction.

Ali (2018) examines the use of gaming and behavior-changing mechanisms in digital media to enhance user engagement and experience, while also considering their potential negative impact on well-being. As certain usage patterns of digital media meet the criteria for behavioral addiction, concerns arise about the ethical concerns, practices, and responsibilities of software companies. Unlike alcohol, digital media can be designed to detect and respond to problematic use. This invited talk highlights the importance of involving the software engineering community in designing conscious and conscious use of technology.

Aktas, et al. (2022) aimed to examine the relationship between digital addiction, academic performance and sleep disturbance in nursing students. The study included 429 nursing students and used a relational and cross-sectional design. Results revealed a significant positive correlation between mean Sleep Disorder (SD) T-scores and Digital Addiction Scale (DAS) scores ($r = 0.203$, $p < 0.01$). In addition, a positive correlation was found between mean SD T-scores and DAS subscale scores ($p < 0.01$). The results highlight the impact of digital addiction on sleep disturbance among nursing students. It is recommended that nursing students be given training to raise awareness about the negative effects of digital addiction.

The researches that have been examined in recent years during the literature review on financial literacy, which is another variable of the research, are given below.

Nesleha (2017), "Financial Literacy: Study of the Financial Literacy Level" examines the objective level and subjective self-assessment of financial literacy among different age groups. The study aims to measure the difference between the two and identify potential gaps. The research collects data through an electronic questionnaire and uses statistical methods such as t-tests and descriptive statistics to analyze the results. The findings of the study provide valuable information to suggest changes in formal and non-formal education systems to improve financial literacy.

Karakorum-Ozdemir, et al. (2019) explores the importance of financial literacy in increasing the financial well-being of individuals in developing countries. The study focuses on Mexico, Lebanon, Uruguay, Colombia and Turkey and aims to identify the least financially literate groups in each country to facilitate targeted public policy. The findings reveal that low financial literacy scores are associated with women, young adults, and people who do not have literacy skills in their country's official language. Consistent with previous research in developed countries, the study shows that financial literacy is positively associated with education, including both years and quality of education. In addition, the study highlights the existence of regional differences in Mexico and Turkey that should be noted. Persistent inequalities in financial literacy between countries can be explained in part by differences in financial inclusion.

Hidajat and Hamdani (2017) specifically address the need for a measurement tool to assess the level of financial literacy regarding Islamic financial products and services. While traditional financial literacy measures have and continue to evolve, there is currently no comparable tool for Islamic finance. The use of traditional financial information as a measurement tool for Islamic financial literacy is insufficient. Financial literacy has been shown to positively influence financial decision-making and behavior, emphasizing the importance of a specific measurement tool for Islamic financial literacy. This article presents a conceptual framework that aims to develop and measure financial literacy from an Islamic perspective. The proposed Islamic financial literacy index will serve as a valuable tool to measure literacy level related to Islamic financial products and services.

Dolakova (2014) examines the financial literacy of students enrolled in the "Financial Literacy" course at Masaryk University. The study focuses on students' financial literacy levels at the beginning of the course. The aim is to evaluate students' initial financial literacy levels and to determine the impact of the course on their knowledge and abilities. The contribution includes a description of key financial literacy concepts and theoretical knowledge in the first section. The research was conducted through a survey questionnaire, which served as an entrance exam for course enrollments. The results of the survey show that students who completed the course showed improvement in their financial literacy knowledge and skills. Although not all of the enrolled students were enrolled or passed the course, the findings show that the "Financial Literacy" course has a positive effect on the students' financial literacy levels.

Kawamura et al. (2021) examines the relationship between households' financial literacy, behavioral factors, and financial choices using data from a 2018 survey conducted in Japan. The study reveals that financial literacy has a significant impact on financial decision making. Surprisingly, individuals with high levels of financial literacy display counterintuitive behaviors such as taking excessive risks, accumulating high levels of debt, and having naive financial attitudes. In other words, higher financial literacy tends to make individuals more daring and reckless in certain financial aspects. However, financially literate individuals exhibit better retirement planning skills and remain indifferent to gambling. The study also highlights the impact of discount factors on financial choices, as well as individual preferences such as risk and loss aversion.

Zhu (2021) explores the relationship between types of financial literacy, financial behaviors, and the role of financial education among adolescents. The study divides financial literacy into four types based on objective and subjective financial literacy scores: financial literacy overconfidence, underconfidence, competence, and naivety. Data were collected from 330 students aged around 15 years in Hong Kong. The findings reveal that adolescents who are overconfident in their financial literacy are more likely to engage in risky financial behaviors and exhibit higher levels of financial autonomy. Additionally, a randomized experimental study was conducted to evaluate the effect of financial education on the mismatch between financial goal and subjective information. The results showed a significant increase in lack of confidence following the financial education intervention, while no significant change was seen in the other three categories. These findings highlight the existence of overconfidence in financial literacy among both adolescents and adults, highlighting the importance of financial advisors and educators in increasing adolescents' financial inclusion.

Wilson, et al. (2014), explore the need for a clear understanding of the nature and definition of financial literacy. This chapter examines financial literacy in a variety of contexts, including households and government agencies such as for-profit businesses and public sector organisations. Before delving into financial literacy, this section examines the broader concept of literacy, which includes numeracy as a basis for understanding financial literacy. This section addresses the confusion surrounding financial awareness and financial literacy, which are often considered synonymous terms. This confusion is in part attributed to inadequate definitions of financial literacy that hinder its practical application. The authors discuss these limitations and propose a comprehensive definition of financial literacy that serves as a reference point for accounting educators.

Goel and Khanna (2013) emphasize the importance of financial education in achieving financial literacy amid the rapidly evolving financial landscape. With the millions of new consumers entering the global economy each year and the increasing complexity of the financial sector, individuals need to be equipped with the skills, knowledge, attitudes and understanding necessary to make informed financial decisions and protect themselves. The report discusses financial literacy and the meaning of financial education, the need and challenges of financial education in today's financial environment, and highlights various national and international financial education initiatives. The authors also make recommendations to promote financial education.

Findings from the literature reveal that digital addiction may have an impact on financial literacy. In this direction, the model of the research was created as in Figure 1. In addition, the hypothesis put forward within the scope of the research is as follows:

H₁: Digital addiction has an impact on financial literacy.

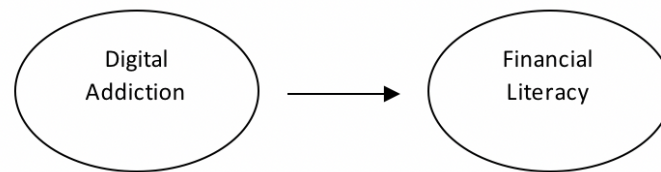


Figure1: Research Model

3. Method

In this section, information about data collection tools, reliability analysis, correlation analysis and simple regression analysis findings for hypothesis testing are given.

Digital Addiction Scale: In this study, which was conducted with a group of 687 students from Siirt, Dicle and Erzincan Universities, a draft scale of 28 items was created based on interviews with two students and their friends who spend a long time with digital tools, and expert opinions. In the pilot application, the Cronbach's alpha value of the scale was calculated as 0.874. For the scale development study conducted by Kesici and Tunç (2018), the test-retest reliability was calculated as $r=.779$ ($p<.001$), which was performed with three-week intervals. According to the results of the factor analysis, it was seen that the scale has a structure consisting of five sub-dimensions called Overuse, Non-Restriction, Inhibition of the Flow of Life, Emotional State and Addiction. According to the findings of the research, it is possible to say that this scale is a valid and reliable measurement tool that can be used to measure the digital addiction of university students. The Cronbach's alpha value of the 14-item scale in this study was determined as .835. This value indicates that the data is reliable on a high surface.

Financial Literacy Attitude and Behavior Scale: The scale was developed by Sarıgül (2015). During the development of the scale, the deductive method was preferred due to the availability of sufficient theoretical knowledge in the foreign literature. In this context, it was aimed to put the scales on a theoretical basis by conducting a wide literature review. In particular, Nash (2011), Robb and Woodyard (2011), OECD (2013), Dew and Xiao (2011), Prawitz et al. (2006) and Jorgensen (2007) used measurement tools. The questions in the scale are in a five-point Likert style. Internal consistency analysis was used to reduce the questions prepared for the scale. In the pilot study, the Cronbach's alpha coefficient was calculated as 0.75. In social sciences, it is stated that the reliability value should be at least 0.70. On the other hand, low-level alpha value is 0.60 for pilot studies for scale development, 0.80 for basic research, and 0.90 - 0.95 for applied research (Şencan, 2005). Then, exploratory factor analysis was performed and Kaiser Mayer Olkin (KMO) was found to be 0.812. The fact that the KMO coefficient is at least 0.60 and the Barlett test is significant indicates that the data are suitable for factor

analysis (Büyüköztürk, 2005). The Cronbach's alpha value of the 23-item scale in this study was determined as .940. This value indicates that the data is reliable on a high surface.

After this stage, frequency analyzes were started. The findings are as in Table 1.

Table 1: Demographic Data of Participants

Variables	Group	Frequency	Percentage
Gender	Female	178	47.8
	Male	194	52.2
Age	18	5	1.3
	19	34	9.1
	20	99	26.6
	21 and over	234	62.9
Class	High school	18	4.8
	Associate degree	214	57.6
	Licence	140	37.6
Total		372	100

When Table 1 is examined, it is seen that 47.8% of the students participating in the research are female and 52.2% are male. In the relevant sample, approximately 63% of the participants are 21 years or older. When the education degrees are examined, it is seen that associate degree graduates constitute approximately 58% of the total participants.

Before starting the regression analysis to test the research hypothesis, correlation analysis was performed to determine the relationship between the variables. The results are as in Table 2.

In the related study, correlation analysis was performed to determine whether there is a relationship between the variables and the data regarding the correlation obtained as a result of the analysis are given in Table 2.

Table 2: Correlation Between Variables

		1	2
Digital Addiction	Pearson Correlation	1	
Financial Literacy	Pearson Correlation	-.035	1

As seen in Table 2, no statistically significant relationship was found between the variables according to the results of the correlation analysis ($p > 0.000$). After this stage, simple regression analysis was applied for hypothesis testing. Since the results of the analysis on the scales reveal that regression analysis can be done to determine whether there is an effect between the two variables, regression analysis is included in order to determine the effect of digital addiction on financial literacy at this stage. The results are as in Table 3.

Table 3: Regression Analysis Findings on the Effect of Digital Addiction on Financial Literacy

Dependent Variable	Independent Variable	t	B	F	p	R ²
Digital Addiction	Constant	16.945	-.038	.457	.500	.001
	Digital Addiction	-.676				

When Table 3 is examined, it is seen that the p value produces an insignificant result ($p > 0.000$). This shows that digital addiction does not have any statistically significant effect on financial literacy. According to this finding, the hypothesis of the research, H_1 , was rejected.

4. Conclusion

In the related research, it is aimed to determine whether digital addiction has an effect on financial literacy. 372 students participated in the research conducted on university students and answered the survey questions. The Digital Addiction Scale and the Financial Literacy Scale were used to determine the effect of the research variables on each other. Both related scales are in 5-point Likert type. According to the findings of the research

conducted on the relevant sample, it was determined that digital addiction did not have a significant effect on financial literacy. In other words, the hypothesis H_1 : "Digital addiction has an impact on financial literacy" is rejected. In this context, the determination of the relationship and effects between digital addiction and different variables may be meaningful for future research. On the other hand, as in every study, this study has certain limitations. The cross-sectional type of the research brings with it the obligation of the students to answer the survey questions in a limited time. In other words, the answers given by the students to the relevant propositions are a reflection of their current psychology. On the other hand, the number of questionnaires applied to different samples for quantitative research designs in social sciences is quite high. This situation is evaluated negatively in terms of participant candidates. In addition to these, the application of the relevant variables in different samples may bring different results.

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