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Digital Literacy, Digital Addiction and Life Satisfaction: Study of Judo Athletes

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ABSTRACT
This study aimed to investigate the relationship between digital literacy, digital addiction, and life satisfaction among judo athletes. The study group of the research consists of N=139 active licensed judo athletes (N=77 female, N=62 male) who accepted to participate in the research completely voluntarily. In the collection of research data, the digital literacy scale developed by Ng (2012) and translated into Turkish by Hamutoglu et al. (2017), the digital addiction scale (Arslan et al., 2015), and the Satisfaction with Life Scale developed by Diener et al. (1985) and adapted into Turkish by Daglı and Baysal (2016) and a personal information form were used. The relational model included descriptive statistics as well as correlation and regression analysis. According to the regression analysis results, digital addiction did not have a significant effect on life satisfaction, while digital literacy had a positive and significant (β=0.193; p<0.001) effect on life satisfaction. In conclusion, it was found that digital literacy has a positive effect on life satisfaction and that life satisfaction will increase as the level of digital literacy increases.

Keywords: Digital Addiction, Digital Literacy, Judo Athletes; Life Satisfaction

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INTRODUCTION

Judo is a defense sport. It may also be characterized as a sport that develops one's character and body (Yuksel, 2019). Towards the end of the nineteenth century, a Japanese educationalist amalgamated different martial arts and established judo not as a sport but as a way of life (Sato, 2013). Judo constantly evolved, and its educational and sportive values were widely recognized in Japan and abroad. Apart from contests and self-defense, modern judo encompasses the research, practicing of kata "patterns", physical training, and spiritual development. Nowadays, the International Judo Federation unites more than 200 national federations and 5 continental unions (Tulendiyava et al., 2021).

The trend of digital addiction has increased significantly over the last two decades (Meng et al., 2022). Digital addiction has previously been shown to be associated with significant impairments of social functions, particularly health, as well as significant problems with personal and social well-being (Peper & Harvey, 2018). Research has shown that there is a significant correlation between digital addiction and other life problems, and despite being aware of the problem, people cannot stop their behavior (Dahl & Bergmark, 2020). On the other hand, the positive effects of sports on human life are obvious. Mentally, physically, and psychologically, sports contribute to the well-being of individuals (Kayhan & Sabah, 2022). According to Liu et al. (2019), smartphone addiction has become a public health problem, and exercise interventions may be effective in treating this condition. Park et al. (2016) reported that sports participation has a significant effect on self-control and internet addiction, and argued the effectiveness and necessity of sports and physical activity in the treatment of internet addiction. Several studies have demonstrated the physical, mental, and cognitive benefits of physical education and sports, as reported by Kuter et al. (2012). According to Chetty et al. (2018), digital literacy also provides individuals with basic skills to make valuable acquisitions in life. As can be seen in the relevant literature, digital addiction leads to various problems. Meanwhile, high levels of digital literacy are thought to have positive effects. In addition to all these, the rehabilitative effect of sports is undeniable. Judo is practiced worldwide as an Olympic sport (Sato, 2013). With this research, it was aimed to investigate the digital addiction and digital literacy levels of judo athletes and the effect of these two variables on life satisfaction. The question of whether digital addiction and literacy levels of individuals who continue to play judo affect their life satisfaction constitutes the starting point of the research. In the following sections of the study, these three concepts are addressed and the research hypotheses are presented.

The ease of access to information as the digital world has settled into the lives of individuals has brought digital literacy to the forefront (Baydar-Arcan, 2022). Digital literacy is the ability of individuals to make optimal use of digital devices to access, identify and manage digital resources, create new knowledge and communicate (Martin, 2006). Digital literacy is generally emphasized as the ability to receive and process information and produce new content through information and communication technology (Akman, 2021). Digital literacy has two aspects. The first is to appropriately plan and monitor the effectiveness of the strategies used to search and manage the information available online. The second is the ability to examine and integrate these sources of information appropriately (Greene et al., 2014). The term 'digital literacy' is also used to describe the ability to understand when, where, how much, and how to use digital devices in a conscious and correct manner. According to Eshet (2012), having digital literacy requires more than just the ability to use software or operate a digital device; it includes a wide range of acquisitions such as cognitive, motoric, sociological, and emotional skills that users need to master to use digital environments effectively.
Following the integration of digitalization with communication technologies, daily life continues under the dominance of digital tools. Individuals continue their lives in an intense technology spiral and use these technologies in the work they need to do in their daily routines. From the past to the present, none of the digital tools that have entered our lives with the internet have been so effective and connected in human life and digital tools have become an integral part of individuals' lives. The urge to stay connected and in control of digital technologies has turned into a disadvantage for some individuals, leading to addiction. Nowadays, the close relationship that individuals have with technology has led them to become digital addicts, and they have turned these tools into tools they constantly interact with rather than using them for a specific purpose (Biricik, 2022). The World Health Organization (WHO) defines digital addiction as a mental illness that causes repetitive and persistent attitudes that provide a comprehensive priority over other interests and their impact on life (Jamil et al., 2022). Digital addiction is a condition referring to a control disorder that involves the obsessive use of digital devices, digital technologies, and digital platforms, namely the internet, video games, online platforms, mobile devices, digital tools, and social networking platforms (Singh & Singh, 2019). As a chronic disorder, digital addiction negatively impacts the psychology of the individual (Berthon et al., 2019).

Meanwhile, digital literacy is a process. This process includes cognitive, motor, sociological, and emotional skills that individuals can use in digital media (Eshet, 2004). Digital literacy is the awareness, attitude, and ability of individuals to use digital tools and possibilities appropriately to identify, access, manage, integrate, evaluate, analyze, and synthesize digital resources, create new knowledge, create media expressions, and communicate with others. It is also the ability to reflect on a process for enabling constructive social action in the context of specific life situations (Martin, 2005). Smartphone use has a significant positive influence on digital literacy skills. This suggests that practicing daily tasks will help you develop your digital literacy skills, especially when using technology (Nooorrizki et al., 2022).

Given the increasingly prominent role of digital technologies in people's daily lives, it is important to understand their impact on individual life satisfaction (Lissitsa, & Chachashvili-Bolotin, 2016). According to Diener et al (1985), life satisfaction is the satisfaction that an individual perceives from the way of life (Fleming, 2021). Life satisfaction is a broad concept that summarizes one's feelings about life (Stahnke, 2022). In order to define life satisfaction, the concept of satisfaction must first be explained. Satisfaction is the fulfillment of expectations, needs, wishes, and desires. Life satisfaction, meanwhile, is the state or result obtained by comparing one's expectations with what one has. Life satisfaction shows the result of comparing one's expectations with the actual situation. Life satisfaction generally includes one's entire life and various aspects of that life. Life satisfaction does not refer to satisfaction with a specific situation, but to satisfaction in all experiences in general (Ozer & Karabulut, 2003). A further definition of life satisfaction is that it refers to a cognitive/judgmental process by which individuals assess their quality of life according to their own criteria (Hammaji & Ay, 2020). Huebner et al. (2006) suggest that life satisfaction positively contributes to a person's resilience to life's challenges.

The use of digital technologies is constantly increasing and renewed (Baydar-Arıcan, 2022). It is also a fact that digital uses increase life satisfaction (Lissitsa & Chachashvili-Bolotin, 2016). However, due to digital addiction, digital natives spend more time than necessary in virtual environments and are negatively affected both physically and psychologically (Altınok, 2021). Briefly, digital technologies have a say in all aspects of daily life and have a substantial impact on work, education, social relations, and communication styles (Terras & Ramsay, 2016). It can also be stated that concepts such as digital literacy and
digital addiction have emerged as a result of this interaction. Undoubtedly, digitalization is with us in every aspect of life. In today's age of technology, it is considered important to investigate the relationship between digital literacy, digital addiction, and life satisfaction. With this study, it was aimed to investigate the relationship between digital literacy, digital addiction, and life satisfaction in a sample of judo athletes, and to analyze the hypotheses established within the scope of the research model (H1: Digital literacy positively affects life satisfaction. H2: Digital addiction negatively affects life satisfaction).

**METHOD**

**Research Model**

Correlational survey models are research models that aim to determine the existence or degree of change between two or more variables (Karasar, 2019). In this study, a correlational survey model was used. The conceptual model of the research (Digital literacy-Digital addiction-Life satisfaction) is presented in Figure 1 below.

![Figure 1. Conceptual model of the research](image)

H1: Digital literacy positively affects life satisfaction.

H2: Digital addiction negatively affects life satisfaction.

**Research Group**

139 judo athletes (Age M=15.92 ± SD= 2.93, N=77 females, N= 62 males) participated in the study.

**Data Collection Tools**

Digital Literacy Scale: The scale developed by Ng (2012) was translated into Turkish by Hamutoglu et al. (2017). The scale consists of 17 items and 4 sub-dimensions. These dimensions are: "attitude (α=0.79)", "technical (α=0.75)", "cognitive (α=0.70)" and "social (α=0.74)". In this study, the overall Cronbach's Alpha value of the scale was found to be α=0.81.

Digital Addiction Scale: It was developed by Arslan et al. (2015). The scale consists of three sub-dimensions, namely "digital game addiction (α=0.83)" and "social media addiction (α=0.77)" and "impact on daily life (α=0.82)" and 29 items in total. In this study, the overall Cronbach's Alpha value of the scale was found to be α=0.86.
The Satisfaction with Life Scale: It was developed by Diener et al (1985). The Turkish adaptation of the scale was conducted by Daglı and Baysal (2016). The scale consists of 5 items and one dimension. In this study, Cronbach's Alpha value of the scale was found to be (α=0.71).

**Ethical Considerations**

The ethics committee approval of Osmaniye Korkut Ata University, Scientific Research, and Publication Ethics Committee dated 28/12/2022 with the decision number of 2022/10/02 was obtained for the research.

**Data Analysis**

Descriptive statistics, the Tukey test, and One Way-Anova analyses were used in the study. Within the scope of the correlational model, Pearson correlation and multiple regression analysis were used to test the relationships between the scales.

**FINDINGS**

In this section, the results of "Correlation and Regression" analyses of the scores of judo athletes' Digital Literacy Scale, Digital Addiction Scale, and Life Satisfaction Scale are given.

**Table 1.** Descriptive Characteristics of the Athletes Participating in the Research

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Literacy</td>
<td>3.35</td>
<td>.573</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digital Addiction</td>
<td>3.08</td>
<td>.590</td>
<td>.237**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life Satisfaction</td>
<td>3.36</td>
<td>.839</td>
<td>.193*</td>
<td>.043</td>
<td></td>
</tr>
</tbody>
</table>

*p<0.005, **p<0.001

Table 1 presents the findings of the correlation analysis between the general averages of the scales used in the study. It was found that digital literacy and digital addiction (r=.237; p<.001) were positively and weakly correlated, while digital literacy and life satisfaction (r=.193; p<.005) were negatively and weakly correlated.

**Table 2.** Regression Analysis Results

<table>
<thead>
<tr>
<th>Model</th>
<th>B</th>
<th>Std. Error</th>
<th>Beta (β)</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>2.416</td>
<td>.417</td>
<td>-</td>
<td>5.788</td>
<td>.000</td>
</tr>
<tr>
<td>1- Digital literacy</td>
<td>.282</td>
<td>.123</td>
<td>.193</td>
<td>2.302</td>
<td>.023*</td>
</tr>
<tr>
<td>R=.193</td>
<td></td>
<td>R2=.037</td>
<td></td>
<td>p=.023*</td>
<td></td>
</tr>
<tr>
<td>F(1-137)= 5.301</td>
<td></td>
<td>p=.023*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>3.175</td>
<td>.381</td>
<td>-</td>
<td>8.332</td>
<td>.000</td>
</tr>
<tr>
<td>2-Digital addiction</td>
<td>.061</td>
<td>.121</td>
<td>.043</td>
<td>.505</td>
<td>.614</td>
</tr>
</tbody>
</table>

Dependent variable: Life satisfaction
Table 2 presents the results of the regression test between the overall averages of the Digital Literacy Scale, the Digital Addiction Scale, and the Satisfaction with Life Scale. The multiple regression model shown in the first part of the table is statistically significant ($F(1, 137)=5.301; p<0.001$). The $R^2$ value of the model was found to be 0.037 and the Beta value to be $\beta=.193$. It was found that 3% ($R^2=0.037$) of the variance in the dependent variable (life satisfaction) was explained by the independent variable (digital literacy). Accordingly, the independent variable predicts the dependent variable positively and significantly. In other words, as digital literacy increases, life satisfaction also increases. Thus, hypothesis 1 (H1), which was established within the scope of the research model, was confirmed.

The regression model shown in the second part of the table is statistically insignificant ($F(1, 137)=0.256; p>0.005$). Additionally, it can be stated that it is difficult to make a statistical prediction of the independent variable digital addiction based on the dependent variable life satisfaction. Hence, hypothesis 2 (H2), which was established within the scope of the research model, was not confirmed.

**DISCUSSION**

Individuals who are active licensed athletes in the branch of judo participated in this study, which investigated the relationship between digital literacy, digital addiction, and life satisfaction. The study also presents the effects of digital literacy and digital addiction on life satisfaction in a sample of judo athletes.

According to the correlation analysis findings of the research within the scope of the correlational model, a positive and weak correlation was found between digital literacy and digital addiction, while a positive and weak correlation was found between digital literacy and life satisfaction (Table 1). The results of the regression analysis indicate that the independent variable digital literacy has a significant and positive effect on the dependent variable life satisfaction. The regression analysis conducted to examine the effect of digital addiction on life satisfaction revealed, however, that digital addiction did not have a significant impact on life satisfaction within this sample of participants (Table 2). While the relevant results do not support hypothesis 2 (H2: Digital addiction negatively affects life satisfaction), which was established within the scope of the research model, the results support the hypothesis 1 (H1: Digital literacy affects life satisfaction positively). It has been determined that as digital literacy increases, life satisfaction will also increase.

When the studies in the related literature are reviewed, it is seen that Taskin and Ok (2022) designed a cross-sectional study to analyze data from a nationwide study of digital (smartphone) addiction conducted between 2019 and 2020 by the Ministry of Science and ICT of South Korea and the National Agency for Information Society. As a result of the research conducted with the participation of 41,883 people, they found that there is a positive correlation between digital literacy and life satisfaction. A study conducted by Bae (2022) with the participation of older adults concluded that digital literacy is positively associated with life satisfaction. Sagong and Yoon (2022) reported that smartphone usage levels of the research participants showed significant and positive effects on their life satisfaction. According to Yukay-Yuksel et al (2020), life satisfaction decreased as digital (social media) addiction increased in their research in which young adults were involved. In the study investigating the relationship between smartphone addiction and the life satisfaction of sports sciences faculty students, it was found that as the smartphone addiction levels of individuals decreased, their life satisfaction levels increased (Kula et al., 2020). In another study conducted with the participation of university students, it was found that digital addiction negatively predicted life satisfaction (Atasever et al., 2022). Samaha and Hawi (2016), Fischer-Grote et al. (2021), and
Yakut et al. (2022) found that digital (smartphone) addiction showed a negative correlation with life satisfaction. According to the related findings, life satisfaction decreases as digital addiction increases. Chiu (2014) found that the digital addiction levels of university students in Taiwan can be used to predict their life stress, and as their life stress increases, their digital addiction increases. Based on the results of the related research, in other words, we can conclude that the decrease in students' life satisfaction is linked to the increase in their digital phone addiction. Tas et al (2022) found that an increase in life satisfaction led to a decrease in digital game addiction.

To keep pace with the times, adapt to the development of technological conditions, and maintain awareness, many people today strive to improve their "literacy" levels (Yazıcıoglu et al, 2020). On the other hand, digital literacy also increases subjective satisfaction in key aspects of life such as interpersonal relationships (Bae, 2022). Yeon and Choi (2019) argued that the increase in digital literacy level has a significant impact on life satisfaction. Digital literacy level positively affects life satisfaction (Choi & Song, 2020). Wang et al. (2022) revealed that digital literacy significantly positively affects the job and life satisfaction of low-income groups in rural areas. Similarly, Shan et al (2022) found that digital literacy has an incentive effect on the accumulation of property income in rural households. Moreover, Yustika and Iswati (2020) found that a high level of digital literacy increases the level of learning and contributes positively to students' academic performance.

Digital devices serve as a vast communication network where individuals can create all kinds of sharing and discussion environments without time and space limitations. The effects of digital uses (smartphones) on individuals can be considered in two dimensions: positive and negative. Positive features of digital uses provide creativity, knowledge sharing, and web-based interactions, access to job opportunities and rich educational content, and enrich individuals' digital media consumerism. However, it leads to problems such as excessive time expenditure, insomnia, cyberbullying, depression, violation of privacy, advertising, and consumer rights (Tukel, 2020). It is thought that digital literacy is important for increasing the positive effects of digitalization and reducing its negative effects. As proven in this study, digital literacy positively affects life satisfaction. Thus, it can be concluded that studies designed to enhance the level of digital literacy of individuals are important.

Conclusion

In conclusion, it is considered that the findings of this study have both theoretical and practical contributions. Firstly, the main theoretical contribution of the research is that digital literacy has a positive impact on life satisfaction in line with the views of the research participants in today's rapidly digitalized world. The practical contribution is that life satisfaction will increase as the level of digital literacy increases. Therefore, it can be suggested that individuals should engage in activities to increase their digital literacy levels in order to achieve sufficient life satisfaction.

Limitations and Recommendations

This study was conducted with the participation of a limited number of judo athletes. Hence, it is thought that further studies with the participation of individuals in different sports branches will enrich the related literature. Therefore, a research study may be conducted with the participation of individuals from a wide variety of sports disciplines who practice individually or as a team.
REFERENCES


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Author(s)’ statements on ethics and conflict of interest

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