



Digital Gaming Participation from a Serious Leisure Perspective Examining Digital Literacy and Mindful Attention Awareness Levels

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Abstract

The aim of this study is to examine the relationship between digital game participation, digital literacy and mindful attention awareness levels from a serious leisure perspective. The study utilized the relational screening model, one of the quantitative research methods. The demographic information form, Digital Literacy Scale, Mindful Attention Awareness Scale and Serious Leisure Scale prepared by the researchers were used as data collection tools. The sample group of the study consists of 171 females (%36.3) and 300 males (%63.7) with an average age of 24.71 ± 8.434 . When the findings of the study are examined, no significant difference was found in terms of serious leisure seriousness, personal benefit and social benefit sub-dimensions, digital literacy and mindful attention awareness in terms of gender variable. While significant differences were found in terms of serious leisure and digital literacy levels in terms of weekly participation frequency in digital games, no significant difference was found in terms of conscious awareness level. While a difference was found in terms of serious leisure and digital literacy levels in terms of daily participation duration in digital games, no significant difference was found in mindful attention awareness level. The results show that there is a relationship between serious leisure, digital literacy and mindful attention awareness. However, digital literacy is a predictor of serious leisure and mindful attention awareness level. In addition, mindful attention awareness level is a predictor of serious leisure social benefit dimension.

Keywords: Digital games, digital literacy, mindful attention awareness, serious leisure perspective

INTRODUCTION

Digital games have constituted an important experience point in terms of individuals' serious leisure preferences in recent years (Bayrak et al., 2023; Pizzo, 2023). In line with the changing leisure preferences with technological developments, the relationship between digital games, which are frequently preferred, and literacy and awareness levels in terms of serious leisure perspective, which expresses systematic participation, should be examined. With the development of technology, digital games have become an important experience center as a leisure activity (Gerling et al., 2011; Eklund, 2012)

As technological developments rapidly become central to human life, new concepts or approaches to digitalization have emerged. It is seen that the concept of digital literacy, which has emerged in relation to digital technologies, has been addressed in the literature with different approaches in recent years. Gilster (1997) defines digital literacy as the ability to understand and use information in multiple formats provided from different sources via computers and the internet. Bulger et al. (2014) defines digital literacy as the ability to read and write using online resources. However, they emphasize that digital literacy includes the ability to select relevant sources, transform information into a message, synthesize it and convey it to the target audience. Lankshear and Knobel (2008) state that digital literacy includes the ability to decipher complex images and sounds as well as the ability to sequence words. In studies that address the concept of digital literacy as skill components, according to Alkalai and Hamburger (2004); it is defined as a combination of photographic-visual skills, reproduction skills, branching skills, information skills and socio-emotional skills. Hague and Payton (2011) addressed digital literacy as a concept consisting of functional skills, creativity, critical thinking skills, cultural and social understanding, collaboration, the ability to find and select information, effective communication skills and e-safety. Considering the systematic participation of individuals in digital games within a serious leisure time approach, it can be said that it is directly related to the level of literacy and mindful attention awareness in terms of participation duration and frequency.

The concept of mindful attention awareness refers to a way of directing attention that has its roots in the Eastern meditation tradition (Kabat & Zinn, 2000). According to Buddhist psychology, there are two combined states: awareness and the objects that create awareness. By definition, it is expressed as an individual focusing their attention on what is happening at the moment without judgment and with acceptance (Kabat-Zinn, 1994; Brown & Ryan, 2003). Mindfulness reflects an opportunity to be fully alive and alert in life. Mindfulness, which emerges as a skill that allows us to approach events more actively, can help increase our sense of well-being. Mindfulness reflects increased awareness and mindful engagement with life experiences. However, certain common aspects of mindfulness are expressed as follows; it is non-conceptual, focused on the present, non-judgmental, purposeful, requires participant observation, is non-verbal, is based on discovery, and is liberating (Germer et al., 2005). It is seen that the concept of mindful attention awareness is associated with addiction studies that express continuous and negative participation in digital games and is negatively affected by this. This effect represents negative situations such as addiction to digital games (Keskin, 2019; Yönet Demirhan et al., 2023; Shabban, 2023). However, it is also seen that the level of mindful attention awareness can have positive contributions for individuals who

participate in digital games at an addictive level (Tharumiya, et al., 2024). The serious leisure perspective, which reflects the systematic pursuit of leisure activities, may be related to conscious awareness, which implies focus and pursuit. Therefore, it would be useful to address the serious leisure approach.

When the serious leisure approach is examined, it is seen that it expresses the theoretical framework developed by Robert Stebbins with many years of studies and classifies leisure activities as serious, casual and project-based leisure, synthesizing the distinctive features, similarities and relationships of these leisure forms (Stebbins, 2007; Stebbins, 2020). Serious leisure is the systematic pursuit of an activity that participants find interesting and satisfying, whether amateur, hobby or volunteer. The content of activities considered serious leisure may enable individuals to achieve a career by demonstrating or developing their special skills, knowledge and experience (Stebbins, 2015). Serious leisure has some distinguishing features among amateurs, hobbyists and volunteers. These features can be listed as the need for perseverance, the opportunity to achieve a career, personal effort, continuous benefits, identification with unique moral values and norms (Cohen-Gewerc & Stebbins, 2013; Stebbins, 2016). However, within the serious leisure approach, individuals can gain positive benefits, including personal and social rewards. Personal rewards that can be obtained within the serious leisure approach are listed as personal enrichment, self-realization, self-expression, self-image, personal satisfaction, individual renewal-recreation, financial return. Social rewards are expressed as social attraction, group success and contribution to the development of the group. When examining the relationship between mindfulness and digital games, it appears that technological advancements have focused on studies that increase interest in mindfulness (Sliwinski et al., 2015). However, there are also studies that argue for the positive effects of digital games in terms of focusing on mindfulness, especially in the virtual environment after the real, physical world (Collins et al., 2019). It can also be argued that digital games are used as a way to focus on mindfulness in education (Bereczki et al., 2024).

When digital game participation is examined within the serious leisure approach, it can turn into a systematic situation in terms of participation duration and frequency and reach the level of serious occupation. Today, especially young adult individuals evaluate their leisure experiences with digital games in terms of preference and in this case, it turns into a serious leisure activity in line with continuous participation. These activities are important in terms of examining the concept of literacy, which constitutes the component of skills related to the use of digital technologies, and the awareness of consciousness in the dimension of focus. These stated reasons constitute the subjective aspect of the study.

This study aims to present original results by examining the focus on digital games, which constitute a systematic experience in the leisure time experiences of individuals living in the digital age, from the perspective of literacy, conscious awareness and serious leisure. The aim of this study is to examine the relationship between digital game participation, digital literacy and mindful attention awareness levels from a serious leisure perspective. In addition, examining the differences in digital literacy, mindful attention awareness and serious leisure evaluation styles of individuals who participate in digital games in terms of gender, digital game participation frequency and digital game participation duration variables constitute the sub-objectives.

METHOD

Research Model

In the study, the relational screening model, one of the quantitative research methods, was used. The relational screening model aims to examine the existence or degree of change between two or more variables (Creswell & Creswell, 2017).

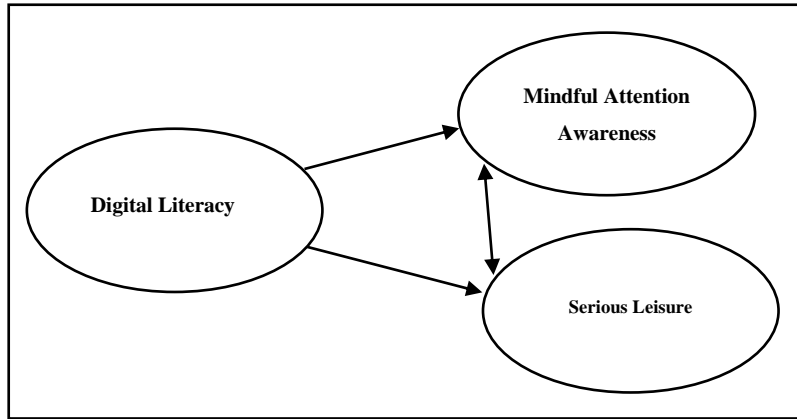


Figure 1. Research Model

Research Group

The universe of the study consists of individuals who regularly participate in digital games as a serious leisure activity. The sample group of the study consists of 171 women (%36.3) and 300 men (%63.7) with an average age of 24.71 ± 8.434 . The study utilized a convenience sampling method and aimed to observe the differences between individuals who play digital games and those who do not.

Table 1. Descriptive statistics regarding the research group

Variables		\bar{X}	S.d.
Age		24.71	8.434
Demographic Information		n	%
Gender	Female	171	36.3
	Male	300	63.7
Digital Game Participation Frequency	1-2 days	28	5.9
	3-4 days	69	14.6
	5 days and above	374	79.4
Digital Game Participation Time	Less than 1 hour	117	24.8
	1-2 hours	128	27.2
	3-4 hours	101	21.5
	5 hours and above	125	26.5

When the weekly digital game participation frequency of the research group is examined, it is seen that %5.9 play digital games for 1-2 days, %14.6 for 3-4 days, and a significant portion of %79.4 for 5 days or more. When examined in terms of daily digital game participation duration, it is seen that %24.8 play digital games for less than 1 hour, %27.2 for 1-2 hours, %21.5 for 3-4 hours, and %26.5 for 5 hours or more.

Data Collection Tools

In the study, demographic information form prepared by the researchers, digital literacy scale, mindful attention awareness scale and serious leisure scale were used as data collection tools.

Digital Literacy Scale: Scale developed by Ng (2012), was found to have been validated and reliable in terms of Turkish culture by (Üstündağ et al., 2017). The scale, consisting of a total of 10 items, has a one-dimensional structure and is calculated based on the total score. The scale has a 5-point Likert-type structure, with 1-strongly disagree and 5-strongly agree. In this study, the Cronbach Alpha reliability coefficient of the scale was determined as .86.

Mindful Attention Awareness: Scale developed by Brown and Ryan (2003), the mindful attention awareness scale was adapted to Turkish culture by Catak (2012). The scale, which has a total of 15 items and a one-dimensional structure, is calculated based on the total score. The scale, which has a 6-point Likert-type structure, can be answered as 1-almost always and 6-almost never. In this study, the Cronbach Alpha reliability coefficient of the scale was determined as .87.

Serious Leisure Scale: Scale developed by Işık et al. (2020) has a structure consisting of 18 items and 3 sub-dimensions. These sub-dimensions are seriousness, personal benefit and social benefit. The scale has a 5-point Likert-type structure as 1-strongly disagree and 5-strongly agree. Cronbach Alpha reliability coefficient was determined as .74 for the seriousness sub-dimension, .76 for the personal benefit sub-dimension and .71 for the social benefit sub-dimension in this study.

Table 2. Mean scores and reliability values for the scales

Variable	n	\bar{X}	S.d.	α
Seriousness	471	2.12	.86	.74
Personal Benefit	471	2.05	.75	.76
Social Benefit	471	2.17	1.01	.71
Digital Literacy	471	3.43	.83	.86
Mindful Attention Awareness	471	3.61	.94	.87

Data Collection / Procedure

After the design of the research was completed, before proceeding to the data collection phase, ethics committee approval was obtained from the Istanbul Aydın University Social and Human Sciences Ethics Committee.

Data Analysis

SPSS 25 package program was used in the analysis of the data. Extreme value analysis was performed for the data that were thought to be incorrect and left blank among the participants' answers. In this direction, descriptive statistics, Independent Samples t-test, single factor variance analysis-ANOVA, pearson correlation test and simple linear regression analysis were applied to the total data set of 471 people.

FINDINGS

The normality distribution of the data was examined with the Shapiro-Wilk (Field, 2009) and Skewness-Kurtosis tests (Tabachnick & Fidell, 2013) skewness and kurtosis tests. The data showed normal distribution and tests showing normal distribution were applied to the data accordingly.

Table 3. Independent samples t-test results for gender variable

Variable	Gender	n	\bar{X}	S.d.	t	df	p
Seriousness	Female	171	2.04	.72	-1.518	425.169	.130
	Male	300	2.15	.92			
Personal Benefit	Female	171	2.01	.70	-.776	469	.438
	Male	300	2.07	.78			
Social Benefit	Female	171	2.14	.96	-.524	379.448	.601
	Male	300	2.19	1.04			
Digital Literacy	Female	171	3.36	.76	-1.206	469	.228
	Male	300	3.46	.86			
Mindful Attention Awareness	Female	71	3.55	.82	-1.080	409.457	.281
	Male	300	3.64	.99			

Table 3 shows the results of the independent samples t-test in terms of the gender variable. According to these results, no significant difference was found in terms of the seriousness of leisure, personal benefit and social benefit sub-dimensions, digital literacy and mindful attention awareness in terms of the gender variable ($p>.05$).

Table 4. Analysis of variance (anova) results regarding digital game participation frequency

Variable		Sum of Square	df	Mean Square	F	p
Seriousness	Between Groups	11.813	2	5.906	8.305	.000*
	Within Groups	332.842	468	.711		
	Total	344.655	470			
Personal Benefit	Between Groups	4.027	2	2.013	3.616	.028*
	Within Groups	260.600	468	.557		
	Total	264.627	470			
Social Benefit	Between Groups	6.208	2	3.104	3.059	.048*
	Within Groups	474.862	468	1.015		
	Total	481.070	470			
Digital Literacy	Between Groups	19.296	2	9.648	14.935	.000*
	Within Groups	302.320	468	.646		
	Total	321.616	470			
Mindful Attention Awareness	Between Groups	4.787	2	2.394	2.754	.065
	Within Groups	406.716	468	.869		
	Total	411.504	470			

$p^*<.05$

Table 4 shows the results of analysis of variance (anova) regarding the frequency of digital game participation. According to the results, a significant difference was found in the seriousness ($F=8.305$; $p=.000$), personal benefit ($F=3.616$; $p=.028$) and social benefit ($F=3.059$; $p=.048$) sub-dimensions. Bonferroni post-hoc test was applied to determine the source of the significant difference. According to the results; it was found that the difference in the seriousness, personal benefit and social benefit sub-dimensions was between those who participated in digital games 1-2 days a week and those who participated 3-4 days a week and was in favor of those who participated 3-4 days. A significant difference was also found in the total score of digital literacy in terms of the frequency of digital game participation variable

($F=14.935$; $p=.000$). As a result of the bonferroni post-hoc test performed to determine the source of the significant difference, it is seen that the difference is between those who participate in digital games 1-2 times a week and those who participate 3-4 times a week and in favor of those who participate 3-4 days; and between those who participate 3-4 days and those who participate 5 days and more in favor of those who participate 5 days and more. No significant difference was found in the mindful attention awareness sub-dimension in terms of digital game participation frequency ($F=2.754$; $p=.065$).

Table 5. Analysis of variance (anova) results regarding digital game participation time

Variable		Sum of Square	df	Mean Square	F	p
Seriousness	Between Groups	13.399	3	4.466	6.296	.000*
	Within Groups	331.257	467	.709		
	Total	344.655	470			
Personal Benefit	Between Groups	4.986	3	1.662	2.989	.031*
	Within Groups	259.641	467	.556		
	Total	264.627	470			
Social Benefit	Between Groups	6.625	3	2.208	2.174	.090
	Within Groups	474.445	467	1.016		
	Total	481.070	470			
Digital Literacy	Between Groups	40.306	3	13.435	22.304	.000*
	Within Groups	281.309	467	.602		
	Total	321.616	470			
Mindful Attention Awareness	Between Groups	6.187	3	2.062	2.376	.069
	Within Groups	405.317	467	.868		
	Total	411.504	470			

$p^* < .05$

Table 5 shows the results of analysis of variance (anova) according to digital game participation duration. A significant difference was found in the seriousness ($F=6.296$, $p=.000$) and personal benefit ($F=2.989$; $p=.031$) sub-dimensions in terms of digital game participation duration. Tukey post-hoc test was used to examine the source of the significant difference. When the results were examined, it was found that the significant difference was in favor of those who participated in digital games for less than 1 hour and those who participated for more than 5 hours in terms of both subdimensions. No significant difference was found in the serious leisure time social benefit subdimension in terms of digital game participation duration ($F=2.174$; $p=.090$). When the results were examined in terms of digital literacy, a significant difference was found ($F=22.304$; $p=.000$). As a result of the Tukey post-hoc test performed in order to determine the source of the significant difference, the difference was between those who participated for less than 1 hour and those who participated for 5 hours and more; It was determined that there was a difference between those who participated for 1-2 hours and those who participated for 5 hours and above; between those who participated for 3-4 hours and those who participated for 5 hours and above. All differences were in favor of participants who participated for 5 hours and above. No significant difference was found in the mindful attention awareness level of participants according to the duration of digital game participation ($F=2.376$; $p=.069$).

Table 6. Pearson correlation test results for the relationship between digital literacy, mindfulness and serious leisure

Variable		Digital Literacy	Mindful Attention Awareness
Seriousness	r	.314**	.012
	p	.000	.788
Personal Benefit	r	.264**	.067
	p	.000	.146
Social Benefit	r	.236**	.110*
	p	.000	.017
Digital Literacy	r	1	.199**
	p		.000
Mindful Attention Awareness	r		1
	p		

*p<.05; **p<.01

Table 6 presents the Pearson correlation test results for the relationship between digital literacy, mindfulness and serious leisure. The findings show that there is a moderate positive relationship with digital literacy and serious leisure seriousness (r=.314; p=.000) sub-dimension; and a low positive relationship with digital literacy and personal benefit (r=.264; p=.000) and social benefit (r=.236; p=.000) sub-dimensions. While no relationship was found between mindful attention awareness levels and serious leisure seriousness (r=.012; p=.788) and personal benefit (r=.264; p=.000) sub-dimensions, a low positive relationship was found with the social benefit (r=.110; p=.017) sub-dimension. A low positive relationship was found between the digital literacy and mindful attention awareness levels of digital game participants (r=.199; p=.000).

Table 7. Results of simple linear regression analysis for predicting mindful attention awareness of digital literacy level

Dependent Variable	Independent Variable	B	Standart Error	β	t	p	Binary	Partial r	Tolerance	VIF
Mindful Attention Awareness	(Constant)	2.842	.181		15.739	.000				
	Digital Literacy	.225	.051	.199	4.386	.000	.199	.199	1.000	.000

R= .199^a R²=.039 Adj.R²=.037 F=19.241 p=.000

p*<.05

In order to test the direct effect of digital literacy level on mindful attention awareness of digital game participants, simple linear regression analysis was used. The results of the simple linear regression analysis applied to the data set are shown in Table 7. The results show that the correlation value between the variables is .199. According to these results, %3.7 of mindful attention awareness depends on digital literacy. The adjusted R² value shows how much of the dependent variable, mindful attention awareness, is explained by the independent variable, digital literacy (Gürbüz & Şahin, 2018). In this direction, it can be said that %3.7 of the variance in mindful attention awareness level depends on digital literacy.

Table 8. Results of simple linear regression analysis to predict serious leisure participation of digital literacy level

Dependent Variable	Independent Variable	B	Standart Error	β	t	p	Binary	Partial r	Tolerance	VIF
Seriousness	(Constant)	.001	.160		.251	.000				
	Digital Literacy	.325	.045	.314	.168	.000	.314	.314	1.000	1.000
R=.314 ^a R ² =.099 Adj.R ² =.097 F=51.379 p=.000										
Dependent Variable	Independent Variable	B	Standart Error	β	t	p	Binary	Partial r	Tolerance	VIF
Personal Benefit	(Constant)	1.228	.142		.621	.000				
	Digital Literacy	.240	.040	.264	.934	.000	.264	.264	1.000	1.000
R=.264 ^a R ² =.070 Adj.R ² =.068 F=35.210 p=.000										
Dependent Variable	Independent Variable	B	Standart Error	β	t	p	Binary	Partial r	Tolerance	VIF
Social Benefit	(Constant)	1.180	.194		6.098	.000				
	Digital Literacy	.289	.055	.236	5.269	.000	.236	.236	1.000	1.000
R=.236 ^a R ² =.056 Adj.R ² =.054 F=27.766 p=.000										

p* < .05

Table 8 shows the results of simple linear regression analysis for the prediction of serious leisure participation by digital literacy level. According to the results, %9.7 of the seriousness sub-dimension of serious leisure, %6.8 of the personal benefit sub-dimension and %5.4 of the social benefit sub-dimension are predicted by digital literacy.

Table 9. Results of simple linear regression analysis to predict the level of mindful attention awareness on serious leisure participation

Dependent Variable	Independent Variable	B	Standart Error	β	t	p	Binary	Partial r	Tolerance	VIF
Social Benefit	(Constant)	1.741	.185		9.403	.000				
	Mindful Attention Awareness	.119	.050	.110	2.405	.017	.110	.110	1.000	1.000
R=.110 ^a R ² =.012 Adj.R ² =.010 F=5.783 p=.017										

p* < .05

Table 9 shows the results of the simple linear regression analysis for the prediction of the level of mindful attention awareness on serious leisure time participation. The results of the simple linear regression analysis applied to the data set show that %1 of the serious leisure sub-dimension social benefit is predicted by mindful attention awareness.

DISCUSSION AND CONCLUSION

This study was conducted to examine the relationship between digital game participation, digital literacy and mindful attention awareness levels from a serious leisure perspective. As sub-objectives, differences in digital literacy, mindful attention awareness and serious leisure time evaluation styles of individuals participating in digital games were examined in terms of gender, digital game participation frequency and digital game participation duration variables. It was concluded that there are significant relationships between digital literacy, mindful attention awareness and serious leisure dimensions of digital game participants. To our knowledge, no study has been found in the literature examining the relationship or impact between serious leisure perspective, digital game participation, and digital literacy. In this

study, it was concluded that it is related to digital literacy and mindful attention awareness. It was also determined that digital literacy is related to seriousness, personal benefit and social benefit in terms of serious leisure. Mindful attention awareness is only related to serious leisure in terms of social benefits. While social benefits help us develop skills that simplify and improve our lives, such as communication, expressing emotions, and adapting to different circumstances, these benefits can contribute to an individual's social development. This can also be interpreted as contributing to their level of conscious awareness. The second result obtained in the study is that the digital literacy levels of digital game participants have a low level of effect on mindful attention awareness, a medium level on the seriousness dimension of serious leisure, and a low level on personal and social benefits. The third result of the research is the effect of the mindful attention awareness levels of digital game participants on the social benefit obtained in serious leisure. However, mindful attention awareness has no effect on the seriousness and personal benefit dimensions of serious leisure time. It was concluded that gender was not a factor variable in the digital literacy, mindful attention awareness and serious leisure dimensions of digital game participants. There are studies on differences in technology use in terms of digital literacy (Rizal et al., 2021) and similarly, there are studies on whether there is a gender difference in terms of conscious awareness or whether women's conscious awareness increases with age compared to men (Thirumaran et al., 2020; Mustafa & Gulati, 2022). In other words, being male or female did not make a difference in digital literacy, mindful attention awareness or serious leisure dimensions in digital game participation. According to the results obtained in the study regarding the participation period, it is that individuals who play digital games differ significantly in terms of weekly participation frequency in terms of serious leisure seriousness, personal benefit and social benefit sub-dimensions and digital literacy levels. According to these results, it can be said that as the weekly participation frequency of individuals increases, their literacy levels also increase, their continuous follow-up in terms of serious leisure becomes systematic in terms of seriousness, and the personal and social benefits they obtain increase. It has been determined that the increase or decrease in the participation frequency does not create a difference in the level of mindful attention awareness. While mindfulness awareness can be affected by many internal and external factors, it may not be affected by the variable or may not make a difference in participation in any activity. A significant difference was found in the seriousness of leisure and personal benefit sub-dimensions in terms of digital game participation duration of digital game participants. This situation can be interpreted as the seriousness dimension of leisure activity gains importance due to systematic participation as the daily participation duration increases and the personal benefits obtained increase. It is seen that the daily participation duration does not create any difference in terms of social benefit. Similarly, it can be said that the participation duration does not create a difference in the mindful attention awareness levels of digital game participants.

When the literature is examined, it is seen that digital literacy in terms of leisure is associated with cognitive, emotional and behavioral leisure attitudes (Öztaş et al., 2023). It can be said that the studies in which the concept of digital literacy is addressed with the concept of leisure are limited and are generally associated with studies in the field of education (Grimley, 2012; Bjorgen & Erstad 2015; Martinez, 2019). The reason why the studies are concentrated in this

area can be shown as the effect of digital technologies on education, developments in method differences and the necessity of the skills covered by the concept to develop in the teacher-student relationship (Sulak, 2024). When the literature is examined in terms of the concept of mindful attention awareness; It is seen that it is the subject of studies on life satisfaction (Güler & Usluca, 2021), psychological well-being (İmroğlu et al., 2021), anxiety and depression (Li et al., 2023) and even artificial intelligence-supported awareness in activities in the tourism sector (Wang & Uysal, 2024). It can be said that one of the important areas of mindful attention awareness in terms of the concept of serious leisure is yoga activities and that it has important contributions to individuals' private or business lives (Zafeiroudi et al., 2022). With the results of this study, the relationship and effect between digital literacy, mindful attention awareness and serious leisure have been revealed and examined in terms of some variables, and it is thought that the study will make original contributions to the literature. However, the limitations of the study should not be ignored due to the sample size and characteristics, cultural context and research design. Different results can be obtained in experimental studies on digital games in conscious awareness and serious leisure time with the support of digital literacy education in different studies.

REFERENCES

- Alkali, Y. E., & Amichai-Hamburger, Y. (2004). Experiments in digital literacy. *CyberPsychology & Behavior*, 7(4), 421-429. <https://doi.org/10.1089/cpb.2004.7.421>
- Bayrak, A., Demirel, M., & Demirel, D. H. (2023). Dijital oyun bağımlılığının ciddi boş zaman faaliyeti perspektifinden incelenmesi. *Çatalhöyük Uluslararası Turizm ve Sosyal Araştırmalar Dergisi*, (11), 1-11. <https://doi.org/10.58455/cutsad.1326110>
- Bereczki, E. O., Takacs, Z. K., Richey, J. E., Nguyen, H. A., Mogessie, M., & McLaren, B. M. (2024). Mindfulness in a digital math learning game: Insights from two randomized controlled trials. *Journal of Computer Assisted Learning*, 40(4), 1567-1590. <https://doi.org/10.1111/jcal.12971>
- Bjorgen, A. M., & Erstad, O. (2015). The connected child: tracing digital literacy from school to leisure. *Pedagogies: An International Journal*, 10(2), 113-127.
- Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, 84, 822-848. <https://doi.org/10.1037/0022-3514.84.4.822>
- Bulger, M. E., Mayer, R. E., & Metzger, M. J. (2014). Knowledge and processes that predict proficiency in digital literacy. *Read Writ*, 27(9), 1567-1583. <https://doi.org/10.1007/s11145-014-9507-2>
- Catak, D. P. (2012). The Turkish version of mindful attention awareness scale: Preliminary findings. *Mindfulness*, 3(1), 1-9. <https://doi.org/10.1007/s12671-011-0072-3>
- Cohen-Gewerc, E. & Stebbins, R. A. (2013). *Serious leisure and individuality*. Montreal & Kingston, London, Ithaca: McGill-Queen's Press-MQUP.
- Collins, E., Cox, A., Wilcock, C., & Sethu-Jones, G. (2019). Digital games and mindfulness apps: comparison of effects on post work recovery. *JMIR Ment Health*, 6(7), e12853. <https://doi.org/10.2196/12853>
- Creswell, J. W. & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. USA: Sage publications.
- Field, A. P. (2009). *Discovering statistics using SPSS (3rd Ed.)* London Sage.
- Gerling, K. M., Schulte, F. P., & Masuch, M. (2011, November). *Designing and evaluating digital games for frail elderly persons*. Proceedings of the 8th International Conference on Advances in Computer Entertainment Technology, ACE 2011, Lisbon/Portugal.
- Germer, C. K., Siegel, R. D., & Fulton, P. R. (2005). *Mindfulness and psychotherapy*. New York: Guilford.
- Gilster, P. (1997). *Digital literacy*. John Wiley & Sons Inc.

- Grimley, M. (2012). Digital leisure-time activities, cognition, learning behaviour and information literacy: What are our children learning?. *E-learning and Digital Media*, 9(1), 13-28. <https://doi.org/10.2304/elea.2012.9.1.13>
- Güler, K., & Usluca, M. (2021). Yetişkin bireylerde bilinçli farkındalık ile yaşam doyumu arasındaki ilişkinin incelenmesi. *Uluslararası Anadolu Sosyal Bilimler Dergisi*, 5(1), 372-383. <https://doi.org/10.47525/ulasbid.868875>
- Hague, C., & Payton, S. (2010). *Digital literacy across the curriculum*. Bristol: Futurelab.
- Işık, U., Kalkavan, A., & Demirel, M. (2020). Ciddi boş zaman ölçeği-kısa formu (18-madde)'nin faktör yapısının türkiye örneklemine yönelik sınanması: Geçerlik ve güvenirlik çalışması. *Spormetre: The Journal Of Physical Education & Sport Sciences/Beden Eğitimi ve Spor Bilimleri Dergisi*, 18(3). <https://doi.org/10.33689/spormetre.693678>
- İmroğlu, A., Demir, R., & Murat, M. (2021). Psikolojik iyi oluşun yordayıcıları olarak bilişsel esneklik, bilinçli farkındalık ve umut. *Elektronik Sosyal Bilimler Dergisi*, 20(80), 2037-2057. <https://doi.org/10.17755/esosder.859555>
- Kabat-Zinn, J. (1994). *Wherever you go there you are*. New York: Hyperion.
- Kabat-Zinn, J. (2000). Indra's net at work: The mainstreaming of Dharma practice in society. In G. Watson & S. Batchelor (Eds.). *The psychology of awakening: Buddhism, science, and our day-to-day lives* (pp. 225-249). North Beach, ME: Weiser.
- Keskin, B. (2019). *Ortaokul öğrencilerinin dijital oyun bağımlılığı ile psikolojik sağlamlık ve bilinçli farkındalık düzeyleri arasındaki ilişkinin incelenmesi*. Yüksek lisans tezi, Bursa Uludağ Üniversitesi, Eğitim Bilimleri Enstitüsü, Eğitim Bilimleri Anabilim Dalı, Bursa.
- Lankshear, C., & Knobel, M. (2008). Introduction digital literacies-concepts, policies and practices. In C. Lankshear, & M. Knobel (Eds.). *Digital literacies: Concepts, policies and practices* (ss. 1-16). Peter Lang.
- Li, J., Li, C., Puts, M., Wu, Y. C., Lyu, M. M., Yuan, B., & Zhang, J. P. (2023). Effectiveness of mindfulness-based interventions on anxiety, depression, and fatigue in people with lung cancer: a systematic review and meta-analysis. *International Journal of Nursing Studies*, 140, 104447. <https://doi.org/10.1016/j.ijnurstu.2023.104447>
- Martinez, C. (2019). Promoting critical digital literacy in the leisure-time center: Views and practices among Swedish leisure-time teachers. *Nordic Journal of Digital Literacy*, 14(3-4), 134-146. <https://doi.org/10.18261/issn.1891-943x-2019-03-04-04>
- Mustafa, M., & Gulati, S. (2022). Influence of age and gender on mindfulness attention awareness and perceived stress. *Indian Journal of Positive Psychology*, 13(4), 377-381.
- Ng, W. (2012). Can we teach digital natives digital literacy? *Computers & Education*, 59(3), 1065-1078.
- Öztaş, M., Ekinc, H. B., Mallı, A. Y., & Akcan, İ. O. (2023). Investigation of the leisure attitudes and digital literacy levels of the physical education and sports department students. *Anatolia Sport Research*, 4(1), 25-33. <http://doi.org/10.29228/anatoliasr.38>
- Pizzo, A. D. (2023). Hypercasual and hybrid-casual video gaming: A digital leisure perspective. *Leisure Sciences*, 1-20. <https://doi.org/10.1080/01490400.2023.2211056>
- Rizal, R., Rusdiana, D., Setiawan, W., Siahaan, P., & Ridwan, I. M. (2021). Gender differences in digital literacy among prospective physics teachers. *Journal of Physics: Conference Series*, 1806, 1-6. <https://doi.org/10.1088/1742-6596/1806/1/012004>
- Shabban, H. (2023). Relation between mindfulness awareness and internet gaming addictive behavior among suez canal university students. *Trends in Nursing and Health Care Journal*, 7(2), 222-245. <https://doi.org/10.21608/tnhcj.2023.204196.1013>
- Sliwinski, J., Katsikitis, M., & Jones, C. M. (2015, August). Mindful gaming: how digital games can improve mindfulness. In *IFIP Conference on Human-Computer Interaction* (pp. 167-184). Cham: Springer International Publishing.
- Stebbins, R. A. (2007). *Serious leisure: A perspective for our time*. New Jersey: Transaction

- Stebbins, R. A. (2015). *Leisure and the motive to volunteer: Theories of serious, casual, and project-based leisure*. London: Palgrave Macmillan Publishers.
- Stebbins, R. A. (2016). *Leisure and positive psychology: Linking activities with positiveness*. London: Palgrave Macmillan.
- Stebbins, R. A. (2020). *The serious leisure perspective: A synthesis*. Cham: Palgrave Macmillan.
- Sulak, S. E. (2024). Dijital okuryazarlık ölçeğinin geliştirilmesi: Geçerlik ve güvenirlik çalışması. *Social Sciences Studies Journal (SSSJJournal)*, 5(31), 1329-1342. <http://dx.doi.org/10.26449/sssj.1345>
- Tabachnick, B. G. & Fidell, L. S. (2013). *Using multivariate statistics*. Boston: Allyn and Bacon.
- Tharumiya, A. K., P, R., Sakthivel, K., K, J., & Manicka, M. M. (2024). Influence of mindfulness on game addiction-mediating role of emotional control. *Psychological Reports*, 00332941241232940. <https://doi.org/10.1177/00332941241232940>
- Thirumaran, M., Vijayaraman, M., Irfan, M., Khaja Moinuddin, S., & Shafaque, N. (2020). Influence of Age and Gender on Mindfulness-Cognitive Science. *Indian Journal of Public Health Research & Development*, 11(3), 882-886. <https://doi.org/10.37506/ijphrd.v11i3.1442>
- Üstündağ, M. T., Güneş, E., & Bahçivan, E. (2017). Turkish adaptation of Digital Literacy Scale and investigating pre-service science teachers' digital literacy. *Journal of Education and Future*, 12, 19-29.
- Wang, Y. C., & Uysal, M. (2024). Artificial intelligence-assisted mindfulness in tourism, hospitality, and events. *International Journal of Contemporary Hospitality Management*, 36(4), 1262-1278. <https://doi.org/10.1108/IJCHM-11-2022-1444>
- Yönet Demirhan, C., Cırcır, O., Aydemir, M., Balcı, H., Can, H. R., & Gökce, Z. (2023). Ergenlerde dijital oyun bağımlılığı ile bilinçli farkındalık arasındaki ilişkide duygu düzenlemenin aracı rolünün incelenmesi. *Milli Eğitim Dergisi*, 52(239), 1875-1896. <https://doi.org/10.37669/milliegitim.1131011>
- Zafeiroudi, A., Yfantidou, G., Kouthouris, C., & Zanna, A. (2022). Yoga as serious leisure activity: Socio-demographic differences in mindfulness levels among yoga retreat participants. *Academic Journal of Interdisciplinary Studies*, 11(6), 8-18. <https://doi.org/10.36941/ajis-2022-0144>

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Literature Review	Recep CENGİZ, Batuhan ER
Data Collecting	Recep CENGİZ
Data Analysis	Batuhan ER
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Statement of Ethics Committee	
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Statement of Conflict	
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