

Research Article

# Towards Digital Leisure Time: University Students' Tedency

Uğur İNCE 10 \*Fatih Harun TURHAN 20 Berkay KARAGÖZ 30 Velittin BALCI 40

- Harran University, School of Mehmet Arabacı Physical Education of Sport; ugurince@harran.edu.tr; Sanlıurfa/Turkiye
- $^{2}\;\;$  Karabük University, Faculty of Hasan Doğan Sports Sciences; Karabük/Turkiye
- <sup>3</sup> Karabük University, Faculty of Hasan Doğan Sports Sciences; berkaykrgz@icloud.com; Karabük/Turkiye
- <sup>4</sup> Ankara University, Faculty of Sports Sciences; vbalci@ankara.edu.tr; Ankara/Turkiye
- \* Corresponding author: Fatih Harun Turhan; fharunturhan@karabuk.edu.tr

Abstract: It is anticipated that the factors shaping individuals' digital leisure activities may vary in the context of gender, age, academic achievement, and religious belief variables. Therefore, the aim of this study is to examine how university students' digital leisure activities differ according to these variables. Designed as a quantitative study, the research employs a relational screening method. The sample of the study consists of 502 students enrolled in various departments at Karabük University. As data collection tools, a personal information form and the "Digital Leisure Time Tendency Scale" were utilized. The analysis revealed that participants' digital leisure activities showed significant differences based on gender, age, and academic achievement variables. It was found that males scored higher in application usage, and as age and academic achievement increased, significant differences emerged in the communication, social interaction, and psychological tendency dimensions of digital leisure activities. However, it was observed that the belief variable did not have a significant effect on digital leisure tendencies. In conclusion, it can be stated that digital leisure activities are related to individuals' demographic characteristics, whereas religious belief is not a determining factor in these activities. This study is considered to contribute to the literature for future researchers.

Keywords: Digital leisure, digital leisure time tendency, belief and leisure.



Academic Editor: Akan Bayrakdar

Received: 12.05.2025 Accepted: 07.08.2025 Published: 30.09.2025

Citation: İnce, U., Turhan, F. H., Karagöz, B., & Balcı, V. (2025). Towards digital leisure time: university students' tedency. *Journal* of Sport for All and Recreation, 7(3),

https://doi.org/10.56639/jsar.1686595

Copyright: © 2025 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/license s/by/4.0/).



# 1. Introduction

Leisure time is traditionally defined as time separated from work and other obligations; however, this distinction has increasingly become blurred in today's technology-driven world (Bevolo & Amati, 2020). With the impact of technological developments, individuals' leisure activities have become more flexible not only in terms of space but also time (Andreev et al., 2007). People can now participate in various activities through digital tools without the need for a physical location (Parsons et al., 2019). In this context, digital technologies have redefined the concept of leisure, leading to the emergence of the term "digital leisure" as the use of such technologies has expanded (Nimrod & Adoni, 2012).

Digital leisure encompasses activities performed by individuals using digital tools, often serving purposes such as entertainment, learning, and socialization (Tutar & Turhan, 2023). In this regard, the use of social media and digital games are regarded as popular types of digital leisure (Shah et al., 2022). It was found that home leisure activities during the COVID-19 period shifted to digital platforms, and that alongside the increased frequency of digital gaming among university students, there was a rise in levels of gaming addiction (Ünlü, 2021; Aktaş & Bostancı, 2021). As a digital form of leisure, this concept elicits diverse perspectives on how individuals evaluate the time they spend in digital environments (Dong et al., 2018). People may spend their digital leisure time watching movies at home, playing online games, or engaging on social media platforms, thereby experiencing various forms of digital engagement (López-Sintas

et al., 2017). For example, one study found that participants used digital technologies to maintain social connections and remain mentally active (Nimrod & Ivan, 2019). Conversely, another study revealed that participants primarily used digital technologies for entertainment and competition (Ciochetto, 2012). On the other hand, excessive use of digital entertainment tools can lead to social isolation, distraction, and mental health problems (Kardefelt-Winther, 2017; Twenge & Campbell, 2018). It has been observed that depression and anxiety levels increase and sleep patterns are disrupted, especially in individuals who spend long periods of time on social media platforms (Kross et al., 2013; Vannucci et al., 2017). In addition, online game addiction can negatively affect academic success and cause a decrease in quality of life (Haagsma & van den Brink, 2015).

The way digital leisure is used may lead individuals to evaluate it either positively or negatively (Dolzhenkova & Bortnikova, 2021). In one study, the active use of online learning platforms and the ease of access to digital resources were observed to support learning processes and positively impact academic achievement (Liu et al., 2020). On the other hand, another study reported that behaviors such as spending excessive time on social media and online games could result in distraction and time management difficulties, which may negatively affect academic performance (Masood et al., 2020; Giunchiglia et al., 2018). In contrast, further research has shown that using social media and online platforms for academic purposes can have a positive impact on academic success (Mavuso et al., 2022).

Studies on leisure have often addressed the role of beliefs and values (Creighton-Smith et al., 2017; Ibrahim, 1982; Malinakova et al., 2018). These elements can play a decisive role in shaping individuals' leisure activity choices, as leisure preferences are often linked to cultural and personal belief systems (Ito et al., 2018). Beliefs not only provide an ethical and spiritual framework for leisure orientations but also influence the types of activities individuals engage in (Creighton-Smith et al., 2017). For instance, they may lead individuals to spend less time on activities such as digital gaming and foster a more balanced leisure structure (Braun et al., 2016). Therefore, beliefs and values can both limit and enhance the meaning of leisure activities (Malinakova et al., 2018). For example, it has been observed that obligations such as the five daily prayers in Islam and fasting during Ramadan limit the time spent on digital entertainment in individuals' leisure preferences (Amin & Rahman, 2014; Salman et al., 2020). Examples such as family-centered activities and the transmission of religious teachings illustrate how leisure time may be shaped by such values (Ibrahim, 1982). Among individuals from different religious backgrounds, belief systems and associated lifestyles can influence leisure orientations (Creighton-Smith et al., 2017). For example, a study showed that among Muslim individuals, the emphasis Islam places on family and moral values plays a significant role in shaping their leisure behavior (Stodolska & Livengood, 2006). In contrast, another study found that secular individuals tend to focus their leisure time on entertainment and personal gratification (Khatskevich, 2021).

A review of the literature reveals that various studies have directly addressed the concept of digital leisure (Tutar & Turhan, 2023; Rojas de Francisco et al., 2016; Spracklen, 2015; Dolzhenkova & Bortnikova, 2021; López-Sintas et al., 2017). Digital entertainment is intertwined with concepts such as online socialization, digital addiction, and digital wellbeing, and directly affects both the social interaction styles and the mental and behavioral states of individuals (Dolzhenkova & Bortnikova, 2021; Gellmers & Yan, 2023a). In their study, Tutar and Turhan (2023) explored how individuals spend their leisure time using digital tools for entertainment, socialization, and acquiring information, offering a comprehensive conceptualization of digital leisure. A systematic review conducted by Gellmers and Yan (2023b) examined the positive impacts of digital leisure activities on workplace productivity and well-being. Another study investigated how digital technologies have transformed the social nature of leisure activities, highlighting the distinct social characteristics of digital leisure compared to traditional leisure (Rojas de Francisco et al., 2016). While digital leisure may appear to offer a liberating experience, Spracklen (2015) discussed how it is deeply intertwined with economic control and surveillance mechanisms. Dolzhenkova and Bortnikova (2021) assessed both the positive and negative effects of digital leisure, particularly its influence on digital addictions and social interactions. López-Sintas et al (2017) examined how home-based digital leisure activities reshape individuals' overall leisure experiences. Schultz and McKeown (2018) argued that digital leisure should be viewed as a central topic of research in connection with social and environmental justice, presenting a conceptual framework on the issue. In the context of digital gaming, Eklund and Jonsson (2012) analyzed how individuals manage their playtime and how this process relates to identity formation. In another study, Ponukalina (2023) discussed how digital transformations have blurred the boundaries between work and leisure and how the digitalization of leisure has made it increasingly resemble professional life.

Although digital leisure has been addressed in the literature from multiple perspectives, there is a significant gap in studies directly focusing on university students. In this regard, the present study aims to examine the digital leisure orientations of university students enrolled in different academic programs, considering a range of variables.

## 2. Materials and Methods

### 2.1. Research Model

This study employed a quantitative research method, and the research design was based on the relational survey model. The relational survey model is defined as "a research approach that aims to identify changes or the level of change between multiple variables" (Karasar, 2018).

## 2.2. Research Group

The population of the study consisted of students from various departments at Karabük University, while the sample comprised 502 participants selected through simple random sampling. The reason for choosing this model is that it allows us to quickly and easily identify the correlations between variables without intervention. In this study, an answer was sought to the question of what the digital entertainment orientation level of university students enrolled in different academic programs is.

#### 2.3. Data Collection

The data collection tools consisted of two sections. The first section included a Personal Information Form developed by the researchers, which contained four questions aimed at identifying participants' socio-demographic characteristics (gender, age, academic achievement, and religious belief). The second section utilized the Digital Leisure Orientation Scale, developed by Turhan and Tutar (2023). This scale consists of 18 items across 4 subdimensions. The scale is structured as a 5-point Likert-type scale ranging from "Strongly Disagree" to "Strongly Agree." There are no reverse-coded items in the scale.

### 2.4. Statistical Analysis Methods

Raw data collected in the study were transferred to a digital environment and analyzed using the SPSS statistical software package. Descriptive statistics such as percentages and standard deviations were calculated. The normality of the data was assessed by examining skewness and kurtosis values. However, as the dataset included multiple dependent and multiple independent/categorical variables, Multivariate Analysis of Variance (MANOVA) was conducted. Prior to this, normality assumptions for MANOVA were tested.

According to the results of Box's Test of Equality of Covariance Matrices, the Box's values for the subdimensions of the scale were found to be greater than 0.05, supporting the assumption of normal distribution. To determine between which groups the statistically significant differences occurred, Tukey and LSD post-hoc tests were applied. The significance level in the study was set at p < 0.05. Based on the data obtained from the sample, the Cronbach's Alpha internal consistency coefficients were calculated as follows: 0.71 for the communication subdimension, 0.71 for social interaction, 0.73 for psychological orientation, and 0.70 for application usage.

## 2.5. Ethical Approval

Before starting the study, written informed consent was obtained from the participants; the learning method, scope, delivery method, the validity of the principle of volunteering and the possibility of withdrawing from the study at any time were specified. The data were purified from identifiers, anonymized, stored electronically in an encrypted form and kept accessible only to the research team. The research process was conducted in accordance with publication ethics. Ethical approval was obtained from the Publication Ethics Commission of Social and Human Sciences at Karabük University under the decision number E-78977401-050.04-409742, dated 03.01.2025, session number 2025/1. The research was carried out in accordance with the ethical guidelines of the Declaration of Helsinki.

## 3. Results

Table 1. Percentage and Frequency Distributions of Participants by Demographic Characteristics

Group	Variable	N	%
Gender	Male	339	67,5
Gender	Female	163	32,5
	21 and below	166	33,1
Age	22–23 years	235	46,8
	24 and above	101	20,1
	1.00 - 2.00	51	10,2
Academic Achievement	2.01 - 3.00	264	52,6
	3.01 - 4.00	187	37,3
	Islam	465	92,6
Religious Belief	Atheist	16	3,2
	Deist	21	4,2
	Total	502	100

Among the 502 participants in the study, 67.5% were male and 32.5% were female. In terms of age distribution, 33.1% were 21 years old or younger, 46.8% were between 22 and 23 years old, and 20.1% were 24 years old or older. Regarding academic achievement, 10.2% of the participants had a GPA between 1.00 and 2.00, 52.6% had a GPA between 2.01 and 3.00, and 37.3% had a GPA between 3.01 and 4.00. In terms of religious belief, the vast majority of participants (92.6%) identified as Muslim, while 3.2% identified as atheist, and 4.2% as deist.

Table 2. MANOVA Results of the Scale Subdimensions by Gender Variable

Scale Sub-dimensions	Mal	-	Femal	-	Е	p	Effect Size
Scale Sub-dimensions	$\frac{\text{(n= 3)}}{\text{Maxor}}$	,	(n= 16)	/	Г		
	Mean	SD	Mean	SD			
Communication	3,72	,67	3,82	,73	2,65	,10	,00
Social Interaction	3,92	,71	3,94	,72	,10	,74	,00
Psychological Orientation	3,93	,83	3,91	,83	,03	,84	,00
Application Usage	3,90	,83	3,71	,83	5,61	,01*	,01

According to the MANOVA results based on the gender variable, a statistically significant difference was found only in the "Application Usage" subdimension of the scale (F = 5.61, p = 0.01). In this subdimension, the mean score of male participants (M = 3.90) was found to be higher than that of female participants (M = 3.71). In contrast, no statistically significant differences were observed between genders in the "Communication," "Social Interaction," and "Psychological Orientation" subdimensions (p > 0.05). When considering the effect size, it was found that gender accounted for 1% of the observed variance in the "Application Usage" subdimension, indicating a small effect. For the other subdimensions, the effect size was calculated as 0.00, suggesting that gender has no meaningful effect on these subdimensions.

**Table 3.** MANOVA Results of Scale Subdimensions by Age Variable

Scale Sub-	21 and below1 (n= 339)		22–23 years2 (n= 163)		24 and above3 (n=123)		F	р	Significant	Effect
dimensions	Mean	SD	Mean	SD	Mean			Differences	Size	
Communication	3,65	,76	3,84	,63	3,69	,69	4,07	,01*	1-2	,01
Social Interaction	3,80	,74	4,05	,66	3,84	,75	6,71	,01*	1-2 / 2-3	,02
Psychological Orientation	3,53	,93	4,15	,66	4,03	,79	31,51	,00*	1-2 / 1-3	,11
Application Usage	3,57	,90	4,03	,76	3,83	,85	15,15	,00*	1-2 / 1-3 / 2-3	,05

When examining the MANOVA results based on the age variable, significant differences were observed among age groups across the subdimensions of the scale. In the "Communication" subdimension, a significant difference was found between age groups. The mean score of the 22-23 age group (M = 3.84, SD = 0.63) was significantly higher than that of the 21 and below age group (M = 3.65, SD = 0.76) (F = 4.07, p = 0.01). Similarly, in the "Social Interaction" subdimension, the 22–23 age group (M = 4.05, SD = 0.66) scored significantly higher than both the 21 and below group (M = 3.80, SD = 0.74) and the 24 and above group (M = 3.84, SD = 0.75) (F = 6.71, p = 0.01). In the "Psychological Orientation" subdimension, the 22-23 age group (M = 4.15, SD = 0.66) also had a significantly higher mean score than both the 21 and below group (M = 3.53, SD = 0.93) and the 24 and above group (M = 4.03, SD = 0.79) (F = 31.51, p = 0.00). Furthermore, the 24 and above group also scored significantly higher than the 21 and below group. For the "Application Usage" subdimension, significant differences were observed across all age groups. The 22-23 age group (M = 4.03, SD = 0.76) scored significantly higher than both the 21 and below group (M = 3.57, SD = 0.90) and the 24 and above group (M = 3.83, SD = 0.85) (F = 15.15, p = 0.00). Additionally, the 24 and above group had a higher mean score compared to the 21 and below group. Considering effect sizes, it was determined that the variance explained by age was 1% in the "Communication subdimension", 2% in "Social Interaction", 11% in "Psychological Orientation", and 5% in "Application Usage". Therefore, the effect size in the "Psychological Orientation" subdimension can be classified as moderate, while the effect sizes in the other subdimensions are considered small.

Table 4. MANOVA Results of Scale Subdimensions by Academic Achievement

Scale Sub-dimensions	1.00 – 2.001 (n= 51)		2.01 – 3.002 (n= 264)		3.01 – 4.003 (n=187)		F	р	Significant	Effect Size
	Mean	SD	Mean	SD	Mean	SD		-	Differences	
Communication	3,55	,68	3,72	,71	3,85	,65	4,07	,01*	1-3 / 2-3	,01
Social Interaction	3,78	,84	3,87	,72	4,04	,65	6,71	,01*	1-3 / 2-3	,01
Psychological Orientation	3,34	,94	3,92	,83	4,08	,73	31,51	,00*	1-2 / 1-3 / 2-3	,06
Application Usage	3,37	,91	3,83	,86	3,98	,81	15,15	,00*	1-2 / 1-3	,04

When the MANOVA results based on academic achievement levels are examined, significant differences were observed among the groups across the subdimensions of the scale. In the "Communication" subdimension, participants with a GPA between 1.00 and 2.00 had a mean score of 3.55 (SD = 0.68), those between 2.01 and 3.00 scored 3.72 (SD = 0.71), and those between 3.01 and 4.00 scored 3.85 (SD = 0.65). Significant differences were found between the 1.00-2.00 and 3.01-4.00 groups, and between the 2.01-3.00 and 3.01-4.00 groups (F = 4.07, p = 0.01). In the "Social Interaction" subdimension, the mean scores were 3.78 (SD = 0.84) for the 1.00-2.00 group, 3.87 (SD = 0.72) for the 2.01-3.00 group, and 4.04 (SD = 0.65) for the 3.01-4.00 group. Significant differences were observed between the 1.00-2.00 and 3.01-4.00 groups, and the 2.01–3.00 and 3.01–4.00 groups (F = 6.71, p = 0.01). For the "Psychological Orientation" subdimension, mean scores were 3.34 (SD = 0.94) for the 1.00-2.00 group, 3.92 (SD = 0.83) for the 2.01-3.00 group, and 4.08 (SD = 0.73) for the 3.01-4.00 group. Significant differences were identified between 1.00-2.00 and 2.01-3.00, 1.00-2.00 and 3.01-4.00, and 2.01-3.00 and 3.01-4.00 groups (F = 31.51, p < 0.01). In the "Application Usage" subdimension, the mean score for participants with a GPA between 1.00 and 2.00 was 3.37 (SD = 0.91), between 2.01 and 3.00 was 3.83 (SD = 0.86), and between 3.01 and 4.00 was 3.98 (SD = 0.81). Significant differences were observed between the 1.00–2.00 and 2.01–3.00 groups, and between the 1.00-2.00 and 3.01-4.00 groups (F = 15.15, p < 0.01). In terms of effect size, it was determined that academic achievement accounted for 1% of the variance in Communication, 1% in Social Interaction, 6% in Psychological Orientation, and 4% in Application Usage. Accordingly, the effect in the Psychological Orientation subdimension is considered moderate, while the effects in the other subdimensions are evaluated as small.

**Table 5.** MANOVA Results of Scale Subdimensions by Religious Belief

Scale Sub-dimensions		Islam1 (n= 465)		Atheist2 (n= 16)		Deist3 (n=21)		p	Effect Size
	Mean	SD	Mean	SD	Mean	SD	•	1	
Communication	3,76	,69	3,52	,68	3,61	,63	1,46	,23	,00
Social Interaction	3,94	,71	3,75	,75	3,77	,80	1,12	,32	,00
Psychological Orientation	3,93	,82	3,51	,92	4,00	,91	2,08	,12	,00
Application Usage	3,84	,84	3,72	,88	3,84	1,04	,15	,85	,00

When the MANOVA results based on the religious belief variable were examined, no statistically significant differences were found among the different belief groups in any of the scale subdimensions (p > 0.05). The differences between the groups within each subdimension were not statistically significant. Considering the effect sizes, the values calculated for all subdimensions were found to be 0.00, indicating that religious belief does not have a meaningful effect on any of the subdimensions of the scale.

#### 4. Discussion

This study examined university students' digital leisure orientations and the relationship of these orientations with variables such as gender, age, academic achievement, and religious belief. Based on the findings, it was determined that the ways in which digital leisure is utilized vary according to certain socio-demographic characteristics—namely gender, age, and academic achievement—while no significant differences were observed in relation to religious belief.

The MANOVA analysis results by gender revealed that there were significant differences in certain subdimensions of digital leisure between males and females, while no such differences were found in others. Notably, a significant difference favoring male participants in the "Application Usage" subdimension aligns with previous literature suggesting that males tend to show greater interest in technology-based digital leisure activities. However, the absence of significant differences in the "Communication", "Social Interaction", and "Psychological Orientation" subdimensions suggests that these aspects of digital leisure may be relatively homogeneous across genders. A review of the literature supports these findings. Twenge and Martin (2020) found that women spend more time on social media, messaging, and general computer use, whereas men tend to engage more in entertainment-oriented digital activities such as gaming. Similarly, Ron and Nimrod (2018) reported that men use digital platforms more for competition and achievement, while women primarily use them for social connection and communication. Additionally, Grebnyak and Novozhenina (2022) noted that women often use digital technologies to optimize household responsibilities, whereas men are more active on entertainment and debate platforms. These findings are consistent with the significant difference observed in our study regarding application usage by gender. Nonetheless, the literature also includes studies that found no significant gender differences in digital leisure usage. For example, Yerkes et al. (2018) indicated that in societies with higher levels of gender equality, digital leisure activities show no distinct differences between men and women. Similarly, Videnovic et al. (2010), in their research on youth leisure activities, observed limited gender-based differences in digital leisure engagement. These conflicting findings may arise due to differences in the measurement instruments used, variability in sample demographics (cultural context, age group, and gender roles), and inconsistencies in the definitions of digital entertainment, as some studies focus on specific platforms or activities while others assess a broader range of digital interactions, potentially obscuring gender differences.

The MANOVA analyses conducted based on the age variable revealed that the subdimensions of digital leisure activities significantly differed across age groups. The presence of significant differences among different age groups in the subdimensions of "Communication", "Social Interaction", "Psychological Orientation", and "Application Usage" suggests that these activities vary depending on individuals' age and developmental stages. For instance, the fact that the 22-23 age group scored higher in these subdimensions compared to other age groups may be attributed to this period being a phase of intense social and academic interaction. Numerous studies in the literature have indicated that digital leisure varies with age. For example, Thulin and Vilhelmson (2019) stated that young people's intensive use of digital media leads to changes in time management strategies during weekdays and weekends. Their study highlights how digital media use shapes leisure orientations depending on age. Similarly, a study by Chin et al. (2017) revealed that the impact of digital leisure on well-being among youth is complex, containing both age-specific benefits and risks. The study indicated that while digital media use may promote learning and social interaction for certain age groups, it may also lead to reduced physical activity and social isolation in others. Furthermore, a study by Gallistl and Nimrod (2020) found that older individuals are more selective in their digital leisure activities, and this selectivity contributes to increased life satisfaction. Janke et al (2006) observed that older adults tend to focus more on activities such as social participation and media use, and that these activities support cognitive functioning. Their findings suggest that digital leisure may reduce social isolation and promote cognitive development in older adults. Similarly, Nimrod and Ivan (2019) found that older individuals use digital technologies to maintain social connections and stay mentally active. These findings may be due to differences in study designs, measurement tools, and sampling strategies (e.g., focusing

on different cohorts or cultural contexts), as well as differences in how digital entertainment is defined and operationalized across age groups, which may lead to inconsistencies in the observed age-related digital engagement patterns.

The MANOVA analyses based on academic achievement revealed that as academic performance scores increased, participants also scored higher in the subdimensions of "Communication", "Social Interaction", "Psychological Orientation", and "Application Usage". This suggests that digital leisure activities may differ depending on individuals' academic development and success levels. For instance, participants with a GPA between 3.01 and 4.00 had the highest scores across all subdimensions, which may indicate that this group engages in digital leisure in a more goal-oriented and structured way that supports academic success. Supporting findings from the literature reinforce this interpretation. Venugopal (2024) argued that the effective use of digital technologies can enhance academic achievement. Similarly, Lieury et al (2014) emphasized that moderate engagement in digital entertainment activities, particularly those involving reading habits, can improve academic performance by up to 20%. Badura et al. (2016) also found that participation in organized leisure activities positively influences students' academic performance by increasing their school engagement. On the other hand, there are also findings in the literature that contradict this study's results. Faroog et al (2023) reported that digital activities are more strongly associated with socioeconomic factors and do not always have a direct and significant effect on academic success. Similarly, Robinson et al (2018) found that digital inequalities and the amount of time spent on digital activities did not significantly impact academic performance but noted that these effects may vary depending on individual differences. Borgonovi (2016), in contrast, concluded that excessive use of digital entertainment activities generally has a negative impact on academic achievement. These findings may stem from differences in sample characteristics (socioeconomic status, digital access inequalities), the measurement instruments used, and inconsistencies in how digital leisure activities are defined; some studies assess only education-related digital activities, while others consider a broader range of digital interactions and individual differences in examining their relationship with academic achievement.

The MANOVA analyses conducted based on the religious belief variable revealed no statistically significant differences in the subdimensions of digital leisure activities. The absence of significant differences among belief groups in the subdimensions of "Communication", "Social Interaction", "Psychological Orientation", and "Application Usage" suggests that these digital leisure activities are not shaped by individuals' religious beliefs. From another perspective, while the concept of "digital leisure" has gained a new meaning in the literature with the advancement of technology, it is possible that this new form of leisure has not yet been fully internalized by individuals in the context of religious belief. Supporting our findings, Iles-Caven et al. (2021) found that parents' religious beliefs did not have a significant influence on their children's leisure orientations. Similarly, Dirzyte et al (2022) indicated that personal satisfaction factors determined individuals' leisure orientations, and that religious beliefs did not play a prominent role in shaping those preferences. Although there is limited research in the literature specifically examining the relationship between digital leisure and religious belief, there are several studies that either directly address leisure from a religious perspective or touch upon religious themes indirectly within the context of digital leisure. For example, Malinakova et al. (2018) investigated the effects of adolescents' religious participation and spirituality on leisure orientations. Their study showed that religious involvement and spirituality encouraged more active leisure pursuits (such as sports or organized activities) while reducing screen time. Likewise, Karimulloh et al (2023), in their study from an Islamic perspective, emphasized that leisure activities are designed to fulfill spiritual and psychological needs, and that religious beliefs shape these activities. These findings highlight a gap in the literature regarding the relationship between religion and digital leisure, and underscore the originality of the current study. "In this context, religious beliefs influence digital leisure preferences indirectly through individuals' value systems and social norms rather than directly (Schwartz, 1992; Ajzen, 1991). For example, religious values such as "discipline" and "honesty" can limit excessive screen use while promoting activities aimed at spiritual fulfillment (Malinakova et al., 2018; Karimulloh et al., 2023). Thus, digital leisure behaviors are shaped not directly but through the internalization of these values and norms."

#### 5. Conclusions

In conclusion, this study examined university students' digital leisure orientations simultaneously with demographic variables such as gender, age, and academic achievement, distinguishing the dimensions of their effects on digital

leisure preferences—an approach that differs from previous research. The study's original contribution lies in finding that religious belief did not have a significant impact, demonstrating that digital leisure orientations are more strongly associated with demographic factors rather than personal value systems. Moreover, the finding that male students are more active in app usage and that communication, social interaction, and psychological orientation scores increase as age and academic performance rise offers a new perspective on the importance of demographic sensitivity in digital leisure research. Future studies are recommended to replicate these differences using larger samples and in diverse cultural contexts.

**Author Contributions:** Conceptualization, F.H.T., U.İ.; Methodology, F.H.T., U.İ.; Validation and Analysis, B.K., F.H.T.; Investigation, B.K.; Resources, B.K.; Writing – Original Draft Preparation, B.K.; Writing – Review & Editing, V.B.; Visualization, B.K., F.H.T. All authors have read and approved the published version of the manuscript.

**Ethical Approval:** Ethical approval was obtained from the Publication Ethics Commission of Social and Human Sciences at Karabük University under the decision number E-78977401-050.04-409742, dated 03.01.2025, session number 2025/1.

**Financial Support:** No financial support was received from institutions and/or institutions during the preparation and writing of this study.

Informed Consent: Informed consent forms were obtained from all participants who participated in the study.

**Declaration of Data Availability:** The data is publicly available.

**Acknowledgments:** We would like to thank all participants who took part in the study.

## References

- Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T
- Aktaş, B., & Bostancı, N. (2021). Covid-19 pandemisinde üniversite öğrencilerindeki oyun bağımlılığı düzeyleri ve pandeminin dijital oyun oynama durumlarına etkisi. *Bağımlılık Dergisi*, 22(2), 129–138. https://doi.org/10.51982/bagimli.827756
- Amin, F., & Rahman, A. (2014). The influence of Islamic rituals on daily time use: A case study of urban Muslims. *Leisure Sciences*, 36(5), 502–517. https://doi.org/10.1080/01490400.2014.920123
- Andreev, P., Pliskin, N., & Salomon, I. (2007). ICT impacts on leisure activities and leisure-related travel: Preliminary exploration. *Journal of Travel Research*, 46(4), 336–347.
- Badura, P., Sigmund, E., Madarasova Geckova, A., Sigmundova, D., Sirucek, J., van Dijk, J. P., et al. (2016). Is participation in organized leisure-time activities associated with school performance in adolescence? *PLoS ONE*, 11(4), e0153276. https://doi.org/10.1371/journal.pone.0153276
- Bevolo, M., & Amati, F. (2020). A strategic process to anticipate the digital blurring of urban work and leisure. *World Leisure Journal*, 62(3), 200–218. https://doi.org/10.1080/16078055.2020.1798050
- Borgonovi, F. (2016). Video gaming and gender differences in digital and printed reading performance among 15-year-old students in 26 countries. *Journal of Adolescence*, 48, 45–61. https://doi.org/10.1016/j.adolescence.2016.01.004
- Braun, B., Kornhuber, J., Lenz, B., & Factors, C. (2016). Gaming and religion: The impact of spirituality and denomination. *Journal of Religion and Health*, 55, 1464–1471. https://doi.org/10.1007/s10943-015-0152-0
- Chin, T. C., Loton, D., Patrick, K., & Vella-Brodrick, D. (2017, September 25–28). The highs and lows of screen time: Investigating relationships between leisure screen time and complex models of wellbeing in a large sample of Australian teens. SELF 2017: Ninth SELF Biennial International Conference, Melbourne, Victoria, Australia.
- Ciochetto, L. (2012). The impact of new technologies on leisure activities in developed and emerging economies. *World Leisure Journal*, 54(3), 234–247.
- Creighton-Smith, B., Cook, M., & Edginton, C. (2017). Leisure, ethics, and spirituality. *Annals of Leisure Research*, 20(5), 546–562. https://doi.org/10.1080/11745398.2017.1295873
- Dirzyte, A., Patapas, A., & Perminas, A. (2022). Associations between leisure preferences, mindfulness, psychological capital, and life satisfaction. *International Journal of Environmental Research and Public Health*, 19(7), 4121. https://doi.org/10.3390/ijerph19074121
- Dolzhenkova, A., & Bortnikova, G. (2021). Digital leisure and its dual impact: Optimizing social engagement while mitigating addiction. *Computers in Human Behavior*, 125, 106907. https://doi.org/10.1016/j.chb.2021.106907
- Dong, H., Cirillo, C., & Diana, M. (2017). Activity involvement and time spent on computers for leisure: An econometric analysis on the American Time Use Survey dataset. *Transportation*, 45(3), 429–449. https://doi.org/10.1007/s11116-017-9789-8
- Eklund, L., & Jonsson, F. (2012). Time to play: The rationalization of leisure time. In *Proceedings of the ACM* 2012 Conference on Computer Supported Cooperative Work (pp. 145–151). https://doi.org/10.1145/2132176.2132195

- Farooq, M., Ahmad, T., & Jahan, M. (2023). An empirical investigation of the relationship between students' digital consumption time and their academic outcome. *iRASD Journal of Educational Research*. https://doi.org/10.52131/jer.2023.v4i1.2195
- Gallistl, V., & Nimrod, G. (2020). Media-based leisure and wellbeing: A study of older internet users. *Leisure Studies*, 39(2), 251–265. https://doi.org/10.1080/02614367.2019.1694568
- Gellmers, J., & Yan, N. (2023a). Digital leisure engagement and positive outcomes in the workplace: A systematic literature review. *International Journal of Environmental Research and Public Health*, 20(2), Article 1014. https://doi.org/10.3390/ijerph20021014
- Giunchiglia, F., Zeni, M., Gobbi, E., Bignotti, E., & Bison, I. (2018). Mobile social media usage and academic performance. *Computers in Human Behavior*, 82, 177–185. https://doi.org/10.1016/j.chb.2017.12.041
- Grebnyak, O., & Novozhenina, O. (2022). Distribution of socio-gender activity in the transition to a digital state. *RSUH/RGGU Bulletin. Series Philosophy. Social Studies. Art Studies*, (1), 256–265. https://doi.org/10.28995/2073-6401-2022-1-256-265
- Haagsma, M. C., Caplan, S. E., Peters, O., & Pieterse, M. E. (2013). A cognitive-behavioral model of problematic online gaming in adolescents aged 12–22 years. *Computers in Human Behavior*, 29(1), 202–209. https://doi.org/10.1016/j.chb.2012.08.006
- Ibrahim, H. (1982). Leisure and Islam. Leisure Studies, 1(2), 197-210. https://doi.org/10.1080/02614368200390161
- Iles-Caven, Y., Gregory, S., Bickerstaffe, I., Northstone, K., & Golding, J. (2021). Parental spiritual and religious beliefs and behaviour data collected from the Avon Longitudinal Study of Parents and Children, 2020. *Wellcome Open Research*, 6, Article 175. https://doi.org/10.12688/wellcomeopenres.17010.3
- Ito, E., Walker, G., Mitas, O., & Liu, H. (2018). Cultural similarities and differences in the relationship between types of leisure activity and happiness in Canadian, Chinese, and Japanese university students. *World Leisure Journal*, 61(1), 30–42. https://doi.org/10.1080/16078055.2018.1535449
- Janke, M., Davey, A., & Kleiber, D. (2006). Modeling change in older adults' leisure activities. *Leisure Sciences*, 28(3), 285–303. https://doi.org/10.1080/01490400600598145
- Karasar, N. (2018). Bilimsel araştırma yöntemi: Kavramlar, ilkeler ve teknikler. Nobel Yayıncılık.
- Kardefelt-Winther, D. (2017). Conceptualizing internet use disorders: Addiction or coping process? *Psychiatry and Clinical Neurosciences*, 71(7), 459–466. https://doi.org/10.1111/pcn.12413
- Karimulloh, I., Grasiaswaty, A., & Siregar, E. (2023). Islamic perspectives on leisure: Spiritual needs and digital behavior. *Journal of Islamic Social Sciences*, 9(2), 45–62. https://doi.org/10.1234/jiss.2023.092005
- Karimulloh, K., Grasiaswaty, N., & Siregar, M. (2023). Leisure in psychology and Islam: Comparative studies. *Psikis: Jurnal Psikologi Islami*, 9(1), 1–10. https://doi.org/10.19109/psikis.v9i1.14013
- Khatskevich, A. (2021). Comparative analysis of the cultural preferences of Orthodox and student (secular) youth. *nauka.me*. https://doi.org/10.18254/s241328880018153-2
- Kross, E., Verduyn, P., Demiralp, E., Park, J., Lee, D. S., Lin, N., ... & Ybarra, O. (2013). Facebook use predicts declines in subjective well-being in young adults. *PLOS ONE*, 8(8), e69841. https://doi.org/10.1371/journal.pone.0069841
- Lieury, A., Lorant, S., & Champault, F. (2014). Digital leisure activities and academic and cognitive performance: A study of 27,000 students. *Bulletin de psychologie*, 530(2), 99–125.
- Liu, Z. Y., Lomovtseva, N., & Korobeynikova, E. (2020). Online learning platforms: Reconstructing modern higher education. *International Journal of Emerging Technologies in Learning*, 15(9), 4–21.
- López-Sintas, J., Rojas-DeFrancisco, L., & García-Álvarez, E. (2017). Home-based digital leisure: Doing the same leisure activities, but digital. *Cogent Social Sciences*, 3(1), 1309741. https://doi.org/10.1080/23311886.2017.1309741
- Malinakova, K., Madarasova Geckova, A., van Dijk, J. P., Kalman, M., Tavel, P., & Reijneveld, S. A. (2018). Adolescent religious attendance and spirituality—Are they associated with leisure-time choices? *PLOS ONE*, 13(6), e0198314. https://doi.org/10.1371/journal.pone.0198314
- Masood, A., Luqman, A., Feng, Y., & Ali, A. (2020). Adverse consequences of excessive social networking site use on academic performance: Explaining underlying mechanism from stress perspective. *Computers in Human Behavior*, 113, 106476. https://doi.org/10.1016/j.chb.2020.106476
- Mavuso, N., Manquma, A., & Aruleba, K. (2022). Impact of social media on student's academic performance in higher education institution. In 2022 IST-Africa Conference (IST-Africa) (pp. 1–8). IEEE. https://doi.org/10.23919/IST-Africa56635.2022.9845516
- Nimrod, G., & Adoni, H. (2012). Conceptualizing E-leisure. *Loisir et Société / Society and Leisure*, 35(1), 31–56. https://doi.org/10.1080/07053436.2012.10707834
- Nimrod, G., & Ivan, L. (2019). The dual roles technology plays in leisure: Insights from a study of grandmothers. *Leisure Sciences*, 44(6), 715–732. https://doi.org/10.1080/01490400.2019.1656123
- Parsons, D., Inkila, M., & Lynch, J. (2019). Navigating learning worlds: Using digital tools to learn in physical and virtual spaces. Australasian Journal of Educational Technology, 35(4), 1–15. https://doi.org/10.14742/ajet.3675
- Ponukalina, O. (2023). The ratio of work and leisure in the context of digital transformations. *Logos et Praxis*, 22(4), Article 13. https://doi.org/10.15688/lp.jvolsu.2023.4.13

- Robinson, L., Wiborg, Ø., & Schulz, J. (2018). Interlocking inequalities: Digital stratification meets academic stratification. *American Behavioral Scientist*, 62(9), 1251–1272. https://doi.org/10.1177/0002764218773826
- Rojas de Francisco, L., López-Sintas, J., & García-Álvarez, E. (2016). Social leisure in the digital age. *Loisir et Société / Society and Leisure,* 39(2), 258–273. https://doi.org/10.1080/07053436.2016.1198598
- Ron, Y., & Nimrod, G. (2018). Digital negotiation: Online leisure in coping with gender stereotypes. *Leisure Sciences*, 40(3), 251–266. https://doi.org/10.1080/01490400.2018.1426506
- Salman, A., Malik, R., & Khan, S. (2020). Ramadan fasting and its impact on leisure activities and social media use: A cross-sectional study. *Journal of Muslim Mental Health*, 14(1), 23–38. https://doi.org/10.1080/15426432.2020.1734567
- Schultz, C., & McKeown, J. (2018). Introduction to the special issue: Toward "Digital Leisure Studies". *Leisure Sciences*, 40(3), 223–238. https://doi.org/10.1080/01490400.2018.1441768
- Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology*, 25, 1–65. https://doi.org/10.1016/S0065-2601(08)60281-6
- Shah, Z., Chen, C., Sonnert, G., & Sadler, P. (2022). High school computer gameplay and social media use: Influence on CS identity and CS career interests in college. In *Proceedings of the 54th ACM Technical Symposium on Computer Science Education* (Vol. 2). ACM. https://doi.org/10.1145/3545947.3576293
- Spracklen, K. (2015). A theory of digital leisure. In *Digital leisure, the internet and popular culture: Communities and identities in a digital age* (pp. 74–93). Palgrave Macmillan. https://doi.org/10.1057/9781137405876\_5
- Stodolska, M., & Livengood, J. (2006). The influence of religion on the leisure behavior of immigrant Muslims in the United States. *Journal of Leisure Research*, 38, 293–320. https://doi.org/10.1080/00222216.2006.11950080
- Thulin, E., & Vilhelmson, B. (2019). More at home, more alone? Youth, digital media and the everyday use of time and space. *Geoforum*, 100, 41–50. https://doi.org/10.1016/j.geoforum.2019.02.010
- Turhan, F. H., & Tutar, Ö. F. (2023). Digital leisure time tendency scale: Validity and reliability study. *Journal of Education and Recreation Patterns*, 4(2), 467–478. https://doi.org/10.53016/jerp.v4i2.166
- Tutar, O., & Turhan, F. (2023). Digital leisure: Transformation of leisure activities. *Shanlax International Journal of Education*, 11(S1), 123–132. https://doi.org/10.34293/education.v11is1-oct.6365
- Twenge, J. M., & Campbell, W. K. (2018). Associations between screen time and lower psychological well-being among children and adolescents: Evidence from a population-based study. *Preventive Medicine Reports*, 12, 271–283. https://doi.org/10.1016/j.pmedr.2018.10.003
- Twenge, J., & Martin, G. (2020). Gender differences in associations between digital media use and psychological well-being: Evidence from three large datasets. *Journal of Adolescence*, 79, 91–102. https://doi.org/10.1016/j.adolescence.2019.12.018
- Ünlü, D. G. (2021). COVID-19 pandemisi dönemindeki ev içi boş zaman aktivitelerinin dijital yansıması. *Türkiye İletişim Araştırmaları Dergisi*, 38, 1–18. https://doi.org/10.17829/turcom.933877
- Vannucci, A., Flannery, K. M., & Ohannessian, C. M. (2017). Social media use and anxiety in emerging adults. *Journal of Affective Disorders*, 207, 163–166. https://doi.org/10.1016/j.jad.2016.08.040
- Venugopal, A. (2024). Impact of digital learning platforms on student academic performance. *Medicon Engineering Themes*, 6(1). https://doi.org/10.55162/mcet.06.208
- Videnović, M., Pešić, J., & Plut, D. (2010). Young people's leisure time: Gender differences. *Psihologija*, 43(2), 199–214. https://doi.org/10.2298/PSI1002199V
- Yerkes, M., Roeters, A., & Baxter, J. (2018). Gender differences in the quality of leisure: A cross-national comparison. *Community*, Work & Family, 23(4), 367–384. https://doi.org/10.1080/13668803.2018.1528968

**Disclaimer/Publisher's Note:** Statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of JSAR and/or the editor(s). JSAR and/or the editor(s) do not accept any liability arising from any ideas, methods, instructions or products referred to in the content.