



## The Relationship between the Leisure Boredom, Leisure Satisfaction, and Smartphone Addiction: A Study on University Students

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# The Relationship between the Leisure Boredom, Leisure Satisfaction, and Smartphone Addiction: A Study on University Students

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## Abstract

This study aimed to describe the relationships between leisure boredom, leisure satisfaction, and smartphone addictions among university students. The study sample consisted of 258 participants, 143 males and 115 females, studying at Istanbul University-Cerrahpaşa Faculty of Sports Sciences. The participants were selected using the purposeful sampling method. Data collection tools involved a personal information form, the "Leisure Boredom Scale (LBS)", the "Leisure Satisfaction Scale (LSS)" and "Smartphone Addiction Scale-Short Version (SAS-SV)". Independent t-Test results revealed a significant difference in SAS-SV by gender. The MANOVA results indicated a significant difference between the "Satisfaction" sub-dimension of LBS and the "Educational," "Social," "Physical," and "Relaxation" sub-dimensions of LSS by gender. A significant difference was found between LBS's "Satisfaction" sub-dimension and all sub-dimensions of LSS by income status. According to the ANOVA results, there was no significant relationship between the SAS-SV scores by income status of the participants. Besides, there was a negative and low-level correlation between age and the "Satisfaction" sub-dimension of LBS, the "Physical" and "Relaxation" sub-dimensions of LSS and SAS-SV. There was a negative and low correlation between "Boredom" of LBS and "Psychological," "Social," and "Relaxation" sub-dimensions of LSS, and there was a positive and low correlation between LBS and SAS-SV. Similarly, a positive and low-level relationship was determined between all sub-dimensions of LSS and SAS-SV. In this sense, it was concluded that the LBS, LSS, and SAS-SV scores differed according to the socio-demographic characteristics of the participants. As leisure boredom increased, leisure satisfaction decreased, and smartphone addiction increased. It was also found that as leisure satisfaction improved, smartphone addiction increased.

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## Introduction

Due to the many conveniences provided by modern technology to people, it is known that individuals all over the world increasingly have leisure (Roberts, 2018; Samuel, 2011; Gürbüz et al., 2018). Besides, the increase in leisure in the 20th century also led to an increase in academic studies on leisure activities and the efficient use

and evaluation of leisure (Jackson, 1991; Çerez et al., 2021). In this context, leisure refers to the time when individuals are not subject to any obligations for themselves or others and engage in an activity of their choice (Soyer et al., 2017; Er et al., 2019). In other words, leisure is associated with pleasing, enjoyable, and rewarding experiences that take people out of their routines and the tensions of daily life (Íglesias & Bello, 2019). Briefly, leisure is expressed as the time period in which individuals can evaluate the remaining time from their private life and daily work (Williams, 2003; Tükel and Temel, 2020).

Leisure activities play a vital role in improving social relations and reducing stress and tension stemming from intense workload (Mahoney & Stattin, 2000; Soyer et al., 2019). From this point of view, leisure activities are defined as activities that people want to do, do in their free time, satisfactorily and willingly (Lazar & Nguyen, 2017; Stebbins, 2008). Leisure activities usually occur at discretionary times when individuals have the freedom to choose activities that are intrinsically satisfying, enjoyable, and provide experiences and are pursued by their own rewards (Lobo, 2006; Tsaur et al., 2012). In addition, it has been stated that leisure activities contribute to supporting social cohesion, strengthening the immune system, reducing stress and renewing attention, thus providing many health benefits (Brajša-Zganec et al., 2011; Newman et al., 2014; Liu et al., 2020).

Although leisure activities have such positive benefits, Wang et al., (2012) have stated that individuals can get bored when they do not have enjoyable things to do in their leisure. The perception of leisure boredom has become the focus of attention as a potential element reflecting a qualitative attitude or tendency towards leisure (Barnett, 2005). In this sense, the concept of leisure boredom refers to the lack of leisure activities that help individuals spend meaningful and quality time, the inability to participate in engaging activities or to create alternatives despite having excessive leisure time (Iso-Ahola & Weissinger, 1987; Russell, 1996; Shaw et al., 1996; Kara and Özdedeoglu, 2017).

In other words, leisure boredom is a common and undesirable outcome that individuals who do not know how to spend their leisure time beneficially are more likely to experience (Iso-Ahola & Weissinger, 1990; İskender & Güçer, 2018). Leisure boredom generally stems from the monotonous assessment of activities in time (Shaw et al., 1996; Yaşartürk et al., 2017). Participating in activities, which can create awareness for individuals in evaluating their leisure and provide more satisfaction with varying activities, can minimize the perception of boredom (Doğan et al., 2019). In other words, Iso-Ahola and Weissinger (1990) have emphasized that the perception of leisure boredom arises when leisure experiences do not meet people's expectations and needs, and it is important to experience satisfaction in leisure occupation to minimize feelings of boredom (Kil et al., 2021).

Leisure satisfaction is important for individuals as it reflects the degree of experiences in their lives that meet their needs or desires for expression, rest and relaxation, entertainment and other personal attention (Chick et al., 2021). In this context, leisure satisfaction is acknowledged as a positive outcome of participating in leisure activities and refers to individuals' satisfaction with their overall experience (Needham et al., 2018; Rosa et al., 2019). Similarly, Lepp (2018) states that leisure satisfaction shows people's satisfaction with leisure routines (Serdar & Demirel, 2020). Leisure satisfaction is widely accepted as the evaluation of someone's experiences while participating in leisure activities (Zhou et al., 2021). Besides, relative satisfaction is the difference

between the expectations from leisure activities and the existing situation (Yurcu et al., 2018). According to Beard and Ragheb (1980), there are six dimensions of leisure satisfaction: psychological, educational, social, relaxation, physical, and aesthetics. The psychological dimension focuses on the mental benefits of leisure participation. The education dimension refers to the perceptions of what individuals gain from participating in leisure activities. The social dimension involves meeting new people and building a personal network. The relaxational dimension refers to relieving stress. The physiological dimension is related to contentment with physical health that improves due to participating in leisure activities. The aesthetics dimension includes the sanitation and design of recreational areas where individuals engage in leisure activities (Beard & Ragheb, 1980; Choi & Yoo, 2017).

Although smartphones are essential daily life devices today, they lead to specific problems, one of the most critical is smartphone addiction (Göldağ, 2019). Smartphone addiction is a type of obsession that damages social relations due to excessive and uncontrolled use of smartphones (Fidan, 2016; Daysal and Yilmazel, 2020). In other words, smartphone addiction is characterized by excessive smartphone use (Jeong et al., 2020). According to Lin et al., (2014), smartphone addiction is a type of technological addiction that is non-chiral and includes human-machine interaction (Rahim et al., 2021).

Although smartphone addiction is similar to other technological addictions, it can be much more dangerous than the others due to its unique features such as portability and ease of connection (Demirci et al., 2014; Kaya and Kaya, 2020). Smartphone users can browse the Web and take advantage of the many applications they download from the Internet. Smartphone addicts may have withdrawal and dependence symptoms and functional impairments (Lin et al., 2014; Sigerson et al., 2017). Smartphone addiction also leads to stress, reduces life satisfaction, and negatively affects academic performance (Samaha & Hawi, 2016; Joseph & Andrew, 2012; Chaudhury & Tripathy, 2018). Therefore, the study aimed to determine the relationships between leisure boredom, leisure satisfaction, and smartphone addiction of university students.

## Method

### Research Design

Following the aim of the study, the relational screening model was used in the research. The relational screening model was defined as trying to determine the existence, direction and severity of change of two or more variables together (Karasar, 2014).

### Research Sample

The sample consisted of 258 participants selected using the purposeful sampling method from Istanbul University-Cerrahpaşa Faculty of Sport Sciences. There were 143 males ( $\text{Mean}_{\text{age}}=23.08\pm5.10$ ) and 115 females ( $\text{Mean}_{\text{age}}=22.11\pm4.31$ ) in the sample. Among the participants, 42.2% had "6-10 hours" of weekly leisure, and 62.8% had "medium" income.

## **Research Instruments and Procedures**

*Personal Information Form:* The researcher developed the form to collect information about the participants. It included questions such as gender, age, income status, and weekly leisure.

*Leisure Boredom Scale (LBS):* The tool was developed by Iso-Ahola and Weissinger (1990) and adapted into Turkish by Kara et al. (2014) to evaluate the individual differences in leisure boredom. There were ten items and two sub-dimensions on the scale: "Boredom" and "Satisfaction". In the original scale, the internal consistency coefficients of the sub-dimensions were .72 and .77, respectively. Moreover, they were .80 and .78 in this study. The 5-point Likert scale was scored from 1 (Strongly Disagree) to 5 (Strongly Agree).

*Leisure Satisfaction Scale (LSS):* The scale was developed by Beard and Ragheb (1980) to assess leisure satisfaction and adapted into Turkish by Gökçe and Orhan (2011). The 5-point Likert type scale included 24 items and six sub-scales: "Psychological", "Educational", "Social", "Physiological", "Relaxation", and "Aesthetics". The Cronbach alpha coefficient of the original scale was .90. It was .77 for the psychological, .77 for the educational, .76 for the social, .79 for the physiological, .80 for the relaxation, and .79 for the aesthetic sub-scales. For the current study, it was measured .70 for psychological, .76 for educational, .70 for social, .79 for physiological, .75 for relaxational and .82 for aesthetics sub-scales. The 5-point Likert scale was scored from 1 (Rarely true) to 5 (Always True).

*Smartphone Addiction Scale-Short Version (SAS-SV):* The instrument was developed by Kwon et al. (2013) to measure smartphone addiction and adapted into Turkish by Noyan et al. (2015). There was one dimension and ten items on the scale. The reliability coefficient was .86 for the original scale, and it was measured .91 for the current study. The items on the scale were scored from 1 (Strongly Disagree) to 6 (Strongly Agree).

## **Data Analysis**

The data were analyzed using the SPSS 20.0 package program. The percentage and frequency methods were applied to show the distribution of personal information. The skewness and kurtosis values were examined to determine whether the data had a normal distribution. The results indicated a normal distribution. Thus, independent t-test, ANOVA, MANOVA, and Pearson correlation analysis were performed in the data analysis. Finally, Cronbach Alpha coefficients were calculated to ensure reliability.

## **Results**

As seen in Table 1, the highest mean was scored in the "Satisfaction" (3.79) sub-dimension of LBS, and the lowest mean was in the "Boredom" (3.08) sub-dimension. It was determined that the highest mean was in the "Educational" (3.71) and "Physical" (3.71) sub-dimensions of LSS, and the lowest mean was in the "Psychological" (3.46) sub-dimension. The mean score of the participants in SAS-SV was (3.67).

Table 1. Distribution of Scale Scores

	<b>Sub-Dimensions</b>	<b>Items</b>	<b>n</b>	<b>Mean</b>	<b>Sd.</b>	<b>Sk.</b>	<b>Kur.</b>
<b>LBS</b>	Boring	5	258	3.08	0.98	0.03	-1.01
	Satisfaction	5	258	3.79	0.78	-0.71	0.49
<b>LSS</b>	Psychological	4	258	3.46	0.80	-0.23	0.56
	Educational	4	258	3.71	0.78	-0.70	0.59
<b>SAS-SV</b>	Social	4	258	3.63	0.77	-0.55	0.79
	Relaxation	4	258	3.60	0.81	-0.51	0.29
<b>SAS-SV</b>	Physical	4	258	3.71	0.84	-0.76	0.50
	Aesthetics	4	258	3.66	0.88	-0.61	0.04
<b>SAS-SV</b>	Smartphone Addiction	10	258	3.67	1.00	-0.09	0.40

Table 2 shows the analysis results by gender of the participants. MANOVA analysis results revealed that the main effect of the gender on the sub-dimensions of LBS was significant [ $\lambda= 0.975$ ,  $F_{(2,255)} = 3.312$ ;  $p<0.05$ ]. There was a statistically significant difference only in the "Satisfaction" sub-dimension [ $F_{(1-256)} = 6.649$ ;  $p<0.05$ ]. Females' mean scores were higher than males' scores. It was also found that the main effect of gender on the sub-dimensions of LSS was not significant [ $\lambda= 0.962$ ,  $F_{(6,251)} = 1.649$ ;  $p>0.05$ ].

Table 2. The LBS, LSS, and SAS-SV Scores by Gender

Scales	Male (n=143)		Female (n=115)		
	Mean	Sd.	Mean	Ss.	P
<b>LBS</b>					
<b>Boring</b>	3.06	0.96	3.10	1.01	0.736
<b>Satisfaction</b>	3.68	0.85	3.93	0.67	<b>0.010*</b>
<b>LSS</b>					
<b>Psychological</b>	3.38	0.83	3.55	0.75	0.097
<b>Educational</b>	3.58	0.85	3.86	0.66	<b>0.004*</b>
<b>Social</b>	3.53	0.77	3.75	0.74	<b>0.019*</b>
<b>Physical</b>	3.59	0.90	3.85	0.73	<b>0.011*</b>
<b>Relaxation</b>	3.51	0.81	3.71	0.78	<b>0.044*</b>
<b>Aesthetics</b>	3.58	0.91	3.76	0.83	0.103
<b>SAS-SV</b>	3.55	1.02	3.80	0.95	<b>0.046*</b>

However, there were significant differences in "Educational" [ $F_{(1-256)} = 8.475$ ;  $p<0.05$ ], "Social" [ $F_{(1-256)} = 5.531$ ;  $p<0.05$ ], "Physical" [ $F_{(1-256)} = 6.480$ ;  $p<0.05$ ] and "Relaxation" [ $F_{(1-256)} = 4.111$ ;  $p<0.05$ ] sub-dimensions. The mean scores of females were higher than the mean scores of males. According to the independent t-Test results, there was a statistically significant difference between the SAS-SV scores by gender ( $t=-2.002$ ;  $p<0.05$ ). Females' scores were higher than males' scores.

Table 3 shows the analysis results by income status of the participants. To the MANOVA analysis results, the main effect of the income status on the sub-dimensions of LBS was significant [ $\lambda = 0.881$ ,  $F_{(4,508)} = 8.341$ ;  $p < 0.05$ ]. There was also a statistically significant difference only in the "Satisfaction" sub-dimension [ $F_{(2-255)} = 13.704$ ;  $p < 0.05$ ]. The mean scores of the medium-income participants were higher than the average scores of other participants.

Table 3. The LBS, LSS, and SAS-SV Scores by Income Status

<b>Scales</b>	<b>Low (n=41)</b>		<b>Medium (n=162)</b>		<b>High(n=55)</b>		<b>P</b>
	<b>Mean</b>	<b>Sd.</b>	<b>Mean</b>	<b>Sd.</b>	<b>Mean</b>	<b>Sd.</b>	
<b>LBS</b>							
<b>Boring</b>	3.24	0.92	3.00	0.99	3.20	1.00	0.211
<b>Satisfaction</b>	3.25	0.97	3.94	0.64	3.76	0.84	<b>0.000*</b>
<b>LSS</b>							
<b>Psychological</b>	3.04	0.93	3.58	0.68	3.42	0.92	<b>0.001*</b>
<b>Educational</b>	3.08	0.93	3.91	0.60	3.56	0.88	<b>0.000*</b>
<b>Social</b>	3.23	0.88	3.78	0.63	3.47	0.91	<b>0.000*</b>
<b>Physical</b>	3.11	1.00	3.87	0.66	3.67	0.99	<b>0.000*</b>
<b>Relaxation</b>	3.06	0.82	3.77	0.68	3.48	0.95	<b>0.000*</b>
<b>Aesthetics</b>	3.09	0.97	3.81	0.73	3.67	1.04	<b>0.000*</b>
<b>SAS-SV</b>	3.37	1.21	3.76	0.88	3.61	1.13	0.080

According to MANOVA analysis the results, the main effect of income status on the sub-dimensions of LSS was significant [ $\lambda = 0.815$ ,  $F_{(12,500)} = 4.488$ ;  $p < 0.05$ ]. It was also statistically meaningful in "Psychological" [ $F_{(2-255)} = 7.677$ ;  $p < 0.05$ ], "Educational" [ $F_{(2-255)} = 22.700$ ;  $p < 0.05$ ], "Social" [ $F_{(2-255)} = 10.318$ ;  $p < 0.05$ ], "Physical" [ $F_{(2-255)} = 14.760$ ;  $p < 0.05$ ], "Relaxation" [ $F_{(2-255)} = 14.954$ ;  $p < 0.05$ ] and "Aesthetics" [ $F_{(2-255)} = 11.645$ ;  $p < 0.05$ ] sub-dimensions. The sub-dimension mean scores of the participants with medium income were higher than the mean scores of other participants. According to the ANOVA analysis results, there was no statistically significant difference in SAS-SV scores by income status of the participants ( $f = 2.549$ ;  $p > 0.05$ ).

Table 4 shows the analysis results of the LBS, LSS, and SAS-SV scores by age. According to the analysis results, there was a negative and low-level relationship between age and the "Satisfaction" sub-dimension of the LBS. Similarly, there was a negative and low-level relationship between age and the "Physical" and "Relaxation" sub-dimensions of the LSS.

A negative and low-level correlation was found in SAS-SV by age. There was also a negative and low-level correlation between the "Boredom" sub-dimension of the LBS and the "Psychological," "Social," and "Relaxation" sub-dimensions of the LSS. There was a positive and low-level correlation between the sub-dimensions of LBS and SAS-SV and a positive and low-level correlation between all sub-dimensions of LSS and SAS-SV.

Table 4. Correlation Analysis Results of LBS, LSS and SAS-SV Scores by Age

	<b>Age</b>	<b>F1</b>	<b>F2</b>	<b>F3</b>	<b>F4</b>	<b>F5</b>	<b>F6</b>	<b>F7</b>	<b>F8</b>	<b>F9</b>
<b>Age</b>	1									
<b>F1</b>	-.058	1								
<b>F2</b>	-.177*	.141*	1							
<b>F3</b>	-.044	-.329*	.531*	1						
<b>F4</b>	-.117	-.084	.578*	.672*	1					
<b>F5</b>	-.079	-.196*	.551*	.686*	.711*	1				
<b>F6</b>	-.116*	-.227*	.546*	.663*	.707*	.679*	1			
<b>F7</b>	-.153*	-.086	.607*	.658*	.781*	.697*	.671*	1		
<b>F8</b>	-.065	-.121	.606*	.660*	.719*	.691*	.724*	.724*	1	
<b>F9</b>	-.186*	.371*	.383*	.321*	.205*	.312*	.272*	.311*	.300*	1

( $p<0.05$ ) \* F1=Boredom, F2=Satisfaction, F3= Psychological, F4=Educational, F5=Social, F6=Relaxation, F7=Physical, F8=Aesthetics, F9=SAS-SV

## Discussion

This study aimed to determine the relationships between university students' leisure boredom, leisure satisfaction, and smartphone addiction. The results were discussed. The main effect of gender on the sub-dimensions of LBS was significant, and the satisfaction mean scores of female participants were higher than the mean scores of male participants, which overlaps with the findings of Kaas and Uğur (2017) and Kara (2019). However, the main effect of genders on the sub-dimensions of the LSS was not significant, except for the significant differences in the "Educational," "Social," "Physical," and "Relaxation" sub-dimensions, which suggests that women were more satisfied than men in educational, social, physical, and relaxation aspects of leisure activities. In the literature, Doğan et al. (2019), Sönmezoglu et al. (2014), Serdar and Demirel (2020), Serdar and Ay (2016) and Serdar et al. (2018) reaches similar results. When the SAS-SV scores were according to the gender variable, it was determined that females were more addicted to smartphones than males. As a result, it can be inferred that participant women used smartphones more frequently than men, and they were likely to be addicted. When the studies in the literature were reviewed, Soyer et al. (2019), Güngör and Koçak (2020), Yalçın et al., (2017) and Onuoha and Bada (2018) reached different results that did not overlap with the current findings. However, the findings of Aljomaa et al. (2016) and Gümüşgül (2018) showed parallelism with this study.

The main effect of the participants' income status on the sub-dimensions of LBS was significant, and there was a significant difference only in the satisfaction sub-dimensions. In other words, the satisfaction mean scores of participants with regular income were higher than the mean scores of others. In the literature, the findings of Kara et al. (2018) and Çakır (2019) did not overlap with the current results. Similarly, the main effect of income status on the sub-dimensions of the LSS was statistically significant. The mean scores of the participants with normal income status in all sub-dimensions of the LSS were higher than the mean scores of the others. Nevertheless, in the literature Ngai (2005) and Tian et al. (2020) reached different results. Despite the high level

of smartphone addiction of people with regular income, there was no statistically significant difference. The study results of Kumcağız and Gündüz (2016) align with the results of this study.

There was a negative and low-level relationship between age and the "Satisfaction" sub-dimension of LBS. In other words, as people got old, their satisfaction levels decreased. Therefore, it can be inferred that people get bored in leisure as they get old. There was a negative and low-level relationship between age and the "Physical" and "Relaxation" sub-dimensions of the LSS, which can be explained that as age increases, leisure satisfaction levels in physical and relaxation aspects decrease. In the light of the literature findings, Kılıç et al. (2016), Ngai (2005) and Yaşartürk et al. (2019) found different results while Cheng et al. (2010), Tian et al. (2020), Muzindutsi and Masango (2015) and Soyer et al., (2019) reached similar findings. There was a negative and low-level relationship between age and SAS-SV. In other words, as people get old, smartphone addiction decreases. In a study by Yalçın et al., (2017), a significant difference was found in the smartphone addiction levels of individuals between 21-25. That is, as age increases, so does smartphone addiction. The results of Yalçın et al. (2017) were not similar to the results of this study. There was a negative and low-level relationship between the "Boredom" sub-dimension of the LBS and the "Psychological," "Social," and "Relaxation" sub-dimensions of the LSS. In other words, as leisure boredom levels increase, leisure satisfaction in terms of psychological, social, and relaxation aspects decrease. There was a positive and low-level relationship between the sub-dimensions of LBS and SAS-SV. As the leisure boredom levels increased, smartphone addiction increased. In the study conducted by Khang et al., (2013), it was stated that frequent or excessive use of smartphones in leisure was associated with escaping from leisure boredom and experience (Kil et al., 2021). There was a positive and low-level correlation between all sub-dimensions of LSS and SAS-SV. In other words, as leisure satisfaction increases, smartphone addiction also increases.

## **Conclusion**

When the results of the study conducted in this direction are examined, it was determined that females' leisure boredom, leisure satisfaction, and smartphone addiction were higher than males. Although the smartphone addiction of the participants with regular income was high, there was no difference in smartphone addictions between participants. Similarly, the participants with a regular income had higher leisure boredom and leisure satisfaction levels than others. As age increases, leisure boredom, leisure satisfaction levels, and smartphone addiction decrease. Finally, there was a negative relationship between leisure boredom and leisure satisfaction, a positive relationship between leisure boredom and smartphone addiction, and leisure satisfaction and smartphone addiction.

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