



## LEISURE PARTICIPATION, INTERNET ADDICTION AND LEISURE BOREDOM IN UNIVERSITY STUDENTS

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### Abstract

The aim of the study is to examine the leisure participation, internet addiction and leisure boredom in university students. Population consisted of 3665 students taking elective physical education courses. From the sampling formula ( $n = \frac{Nt^2pq}{d^2(N-1) + t^2pq}$ ) sample size was 348 and 498 students were selected as sample. For data collection "Internet Addiction" and "Leisure Boredom" scales were utilized. Mann Whitney U test and Spearman Correlation Coefficient were used in statistical analyses. Leisure boredom scores showed positive correlation with social isolation and withdrawal, meanwhile leisure satisfaction scores showed negative correlations with control difficulty, withdrawal, disorder in functionality and social isolation. Active sport participants had lower boredom, lower satisfaction, higher withdrawal, lower control difficulty levels. Women participants showed higher boredom, satisfaction and lower withdrawal scores ( $p < 0.05$ ). For future studies internet addiction can be associated with various leisure concepts such as family leisure or leisure education.

**Keywords:** Recreation, Leisure, Internet Addiction, Leisure Boredom.

### INTRODUCTION

The Internet is a network of millions of computers used for exchanging information, academical research, entertainment, communication and commerce (Frangos, Frangos & 2010). Despite the benefits that people derive from internet, the negative impacts of internet on an individual's daily life function, family relationships and emotional stability were mentioned as terms like "Internet addiction", "Problematic internet usage" or "Pathological internet use"(Dalbudak et al., 2013; Ko, Yen, Yen, Chen, & Chen, 2012). The problematic usage of Internet or "Internet Addiction" is defined as "inability to control one's use of the Internet which leads to negative consequences in daily life" (Scherer, 1997; Young, 1998; Li, O'Brien, Snyder, & Howard, 2015). With increasing concern on this problem there were many studies comparing excessive Internet users with others, case studies of these groups, psychometric properties of these groups, heavy usage and problems like depression, loneliness, academic performance, or different vulnerable groups like students (Niemz, Griffiths, & Banyard, 2005).

### Literature Review

Positive way of using the Internet was explained with the term "healthy internet use" which was defined as "using the Internet to achive a specific aim within and appropriate time frame with no conceptual or behavioral difficulties "(Davis, 2001; Odacı & Kalkan, 2010). For the unhealthy way of internet usage different researchers used different terms such as "Internet Addiction"(Goldberg, 1997), "Internet Dependency"(Scherer, 1997) or "Pathological Internet Use" (Davis, 2001) taking into

consideration the length of time spend on the internet, being restless, tense and irritable while not using the Internet and feeling a strong need to be longer on the internet (Young & Rodgers, 1998, Odacı & Kalkan, 2010). In another study common criteria to define Internet Addiction are excessive use of internet that is loss of sense of time, concept of withdrawal, that is having feelings of anger, tension or depression when one can not access computer, needing more advanced equipment and more hours of use, negative social results (Tao et al., 2010). In some studies there are findings showing that internet users began to show parallel behaviours of drug, alcohol or gambling addicts (Young 1998; Ceyhan, Ceyhan, & Gürcan, 2007). Internet addiction was related with different psychological variables such as depression and in a recent study applied to students, internet addiction had positive correlation with depression as well as anxiety and stress (Akin & İskender, 2011). Depression was related with internet addiction besides loneliness and a positive relationship was obtained in Turkish university students meanwhile a negative correlation was found with social support (Keser Özcan & Buzlu, 2007). The relationship of loneliness and internet addiction was inquired in Turkish university students and a positive relationship was obtained with loneliness, and communication anxiety (Odacı & Kalkan, 2010). Excessive internet usage was found to be causing academic, social and interpersonal problems and these users showed lower levels of self-esteem (Niemz, Griffiths & Banyard, 2005). Other problems reported in university students who are overusing Internet are sleep deprivation, academic failure in achievement, lack of exercise, failure in engaging face-to-face social activities, decreased ability to concentrate (Li, O'Brien, Snyder, & Howard, 2015). In Hong Kong, heavy users of internet showed lower likelihood of engaging in healthy activities such as exercising but shows unhealthy behaviours such as skipping meals or sleeping late (Kim et al., 2010). Internet addiction was also related with personality traits and agreeableness and extraversion was negatively associated with internet addiction in Italian university students (Servidio, 2014). Among English university students, frequent online shopping and social online activities, high neuroticism and low agreeableness increased the chances of having Internet addiction (Kuss, Griffiths, & Binder, 2013).

One of the important problem that internet addicts are facing is time management problems (Chou, Condrón, & Belland, 2005; Lin, Lin & Wu, 2009) which may result from being unable to allocate time properly to different leisure activities. In a study conducted to Korean adolescents showed that the concept of leisure constraints was an important determinant on the level of problematic involvement in Internet gaming. If young people can overcome leisure constraints, manage leisure and feel satisfied with different leisure activities in the real life they may not need to spend time online so much. But if they feel bored and lack satisfaction during leisure activities they may see Internet as an alternative way of spending leisure (Lin, Lin & Wu, 2009). The concept of boredom is described as "an anxiety about the absence of meaning or loss of purpose in an activity or situation, accompanied by feelings of dissatisfaction, irritability, restlessness, stress and a sense of entrapment" (Wegner, 2011). Leisure boredom occurs when individuals do not feel enough satisfaction from their leisure experiences, their needs are not met during these leisure experiences, they lack necessary skills to participate in activities and they do not find the activities challenging enough (Iso-Ahola & Weissinger, 1990; Wegner, Flisher, Chikobvud, Lombard, & King, 2008). According to Iso-Ahola and Weissinger (1987) there are six psychological factors which decrease the perception of leisure boredom: a larger leisure repertoire, lower perception of leisure constraints, higher level of awareness for leisure value, higher leisure ethic, lower work ethic and higher level of self-motivation (Barnett, 2005). One of the studies highlighting the importance of leisure boredom showed no significant relationship between alcohol use and leisure boredom in university students in Australia but in another study the combined influence of peer pressure and leisure boredom predicted substance use among adolescents in South Africa (Hendricks, Savahl, & Florence, 2015). According to a study conducted to adolescents in Taiwan, leisure boredom and involvement in internet increases the likelihood of internet addiction meanwhile family and outdoor activities decrease the probability of internet addiction (Lin, Lin & Wu, 2009). When all the above mentioned literature is examined it can be observed that Internet addiction is a worldwide problem among university students. As internet use is stated to be highest during ages 16-24 according to studies conducted (Kandell, 1998; Öztürk et al., 2007; Odacı, 2010), it can be proposed that university students are a potential risk group for internet addiction (Odacı & Kalkan,

2010; Odacı, 2010). So the aim of the study is to examine internet addiction and leisure boredom in university students.

## METHOD

This study is designed as descriptive and cross-sectional study. Population of the study consisted of 3665 students taking elective physical education courses in Akdeniz University. From the sampling formula ( $n = Nt^2pq / d^2 (N-1) + t^2 pq$ ) sample size was calculated as 348 and 500 students were taken to sample where 498 students returned back the questionnaires (rate of return=99.6%). Mean age of participants was  $20.99 \pm 2.43$ . Demographic information about participants were presented in Table 1.

Table 1: Demographic Information of the Participants

		n	%
<b>Gender</b>	<b>Men</b>	155	31.1
	<b>Women</b>	343	68.9
	<b>Total</b>	498	100.0
<b>Place of Birth</b>	<b>City</b>	388	77.9
	<b>Town</b>	83	16.7
	<b>Village</b>	27	5.4
	<b>Total</b>	498	100.0
<b>Perceived Socio-Economical Status</b>	<b>Very Low</b>	2	.4
	<b>Low</b>	56	11.2
	<b>Middle</b>	319	64.1
	<b>High</b>	121	24.3
	<b>Very High</b>	0	0
	<b>Total</b>	498	100.0
<b>Level of Income</b>	<b>≤2000 TL.</b>	248	49.8
	<b>2001-3000 TL.</b>	129	25.9
	<b>3001-4000 TL.</b>	59	11.8
	<b>4001-5000 TL.</b>	19	3.8
	<b>≥5001 TL</b>	43	8.6
	<b>Total</b>	498	100.0

Data collection tool of the study is a questionnaire consisting of four parts. In the first part demographic information, in the second leisure participation are inquired. In the third part of the data collection tool, "Leisure Boredom Scale" developed by Iso-Ahola and Weissinger (1990) and adapted to Turkish by Kara, Gürbüz and Öncü (2014) was used. According to the explanatory factor analysis, 47.96% of the variance was explained. Reliability coefficients were  $\alpha=0.72$  for both subscales named "Boredom" and "Satisfaction". The scale consisted of 10 questions of 5-point Likert type. The goodness of fit indexes obtained from confirmatory factor analysis validated the factor structure of the scale. (Chi-square/df=1.83, RMSEA=0.05, SRMR=0.05, CFI=0.95, GFI=0.96, NFI=0.90). Reliability coefficients were found to be  $\alpha=0.764$  and  $\alpha=0.727$  for "Boredom" and "Satisfaction" subscales respectively. The fourth part of the questionnaire form was "Internet Addiction Scale" developed by Günüş (2009). The scale was developed by examining the literature and students' views. The reliability coefficient was found as  $\alpha=0.944$ . According to the explanatory factor analysis, 47.463% of the variance is explained. The scale consisted of 35 questions of 5-point Likert type which were distributed under four subscales named "Withdrawal", "Controlling difficulty", "Disorder in functionality", "Social isolation". The goodness of fit indexes obtained from confirmatory factor analysis validated the factor structure of the scale (Chi-square=1187.430, RMSEA=0.039, CFI=0.870, GFI=0.830). Reliability coefficients were found to be  $\alpha=0.859$ ,  $\alpha=0.904$ ,  $\alpha=0.936$  and  $\alpha=0.900$  respectively for the subscales in this current study.

Statistical analyses were carried out by SPSS 18.0. Besides descriptive statistics, Mann Whitney U test, Kruskal Wallis tests were used as data showed non-parametrical distribution. Non-parametrical Spearman Correlation test was utilized.

## FINDINGS

In the findings section of the study, findings concerning leisure participation, internet addiction and leisure boredom are presented.

Table 2: Recreational activity participation: With whom do they participate

		Frequency of ticks	%	n
<b>I participate in recreational activities...</b>	<b>Alone</b>	135	27.1	498
	<b>With friends</b>	422	84.7	498
	<b>With family</b>	262	52.6	498

According to Table 2, "participating with friends" was marked with highest frequency. Among 498 students 422 (84.7%) marked this choice. In Table 3 the level of participation in recreational activities are given.

Table 3: Recreational Activity Participation of Participants

		Frequency	%
<b>Weekly Duration of Participation</b>	1-5 hours	175	35.1
	6-10 hours	162	32.5
	11-15 hours	105	21.1
	≥16 hours	56	11.2
	Total	498	100.0
<b>Weekly Frequency of Participation</b>	1-2 times	195	39.2
	3-4 times	220	44.2
	5-6 times	68	13.7
	≥7 times	15	3.0
	Total	498	100.0
<b>Participation in Sport Activities</b>	Active	313	62.9
	Passive	185	37.1
	Total	498	100.0
<b>Participation in Social Activities</b>	Active	394	79.1
	Passive	91	18.3
	Total	485	97.4
	Missing	13	2.6
	Total	498	100.0
<b>Participation in Cultural Activities</b>	Active	253	50.8
	Passive	204	41.0
	Total	457	91.8
	Missing	41	8.2
	Total	498	100.0

When the findings in Table 3 is examined it is found out that participants mostly preferred to participate 1-5 hours (35.1%) and 3-4 times (44.2%) weekly. Active participation was preferred in sport activities (62.9%) and social activities (79.1%), meanwhile passive participation was preferred in cultural activities (50.8%). In Table 4 descriptive statistics that participants obtained from scales are presented.

Table 4: Descriptive statistics obtained from scales

Scales	n	X	Sd
<b><i>Leisure Boredom Scale</i></b>			
<b>Boredom</b>	498	2.62	0.94
<b>Satisfaction</b>	498	3.27	0.87
<b><i>Internet Addiction Scale</i></b>			
<b>Withdrawal</b>	498	2.99	0.81
<b>Controlling Difficulty</b>	498	2.31	0.81
<b>Disorder in Functionality</b>	498	2.29	1.09
<b>Social Isolation</b>	498	1.98	0.83

According to the results in Table 4, the highest scores from "Leisure Boredom" were achieved from "Satisfaction" subscale. When "Internet Addiction Scale" is considered, the highest score was obtained from "Withdrawal" subscale. In Table 5 the correlation scores between Leisure Boredom and Internet Addiction Scales are presented.

Table 5: Correlation Coefficients Between Leisure Boredom and Internet Addiction Scales

	Boredom	Satisfaction
<b>Boredom</b>	1	.065
<b>Satisfaction</b>	.065	1
<b>Withdrawal</b>	.153**	-.186**
<b>Controlling Difficulty</b>	.087	-.205**
<b>Disorder in Functionality</b>	.008	-.230**
<b>Social Isolation</b>	.149**	-.264**

\* $p < 0.05$ ; \*\* $p < 0.01$ , \*\*\* $p < 0.001$

According to the results in Table 5, "Boredom" subscale of "Leisure Boredom" scale showed positive correlations with "Withdrawal" and "Social Isolation" subscales of "Internet Addiction Scale" ( $r = .153$  and  $r = .149$  respectively,  $p < 0.05$ ). When participants feel bored, they do not know what to do in leisure time and do not have knowledge and skills in leisure activities, they may feel more lacking for internet usage, they may need to run away from problems and use internet or their happiest time may be when they are using the internet. Or vice versa. Similarly, when leisure boredom increases internet becomes a better friend and social isolation increases or vice versa. "Boredom" subscale had positive correlations with "Control disability" and "Disorder in functionality" subscales but the correlations were not significant ( $p > 0.05$ ). When "Satisfaction" subscale of "Leisure Boredom" scale is considered it is found out that all subscales of Internet Addiction scale had negative and significant correlations with Satisfaction levels ( $p < 0.05$ ). The more participants perceived leisure as an important part of their life quality and feel excited and motivated, the lower they got from the withdrawal, controlling difficulty, disorder in functionality and social isolation subscales. The highest negative correlations of "Satisfaction" subscale was with "social isolation" subscale ( $r = -.264$ ,  $p < 0.05$ ). When participants derive higher satisfaction from leisure experiences their tendency to socialize in internet environment and socialization problems with friends decrease. In table 6, the scores that participants obtained from "Leisure Boredom" and "Internet Addiction" scales are compared according to participating actively and passively to leisure sport activities.

Table 6: Comparison of Leisure Boredom and Internet Addiction Scores According to Sport Participation

	Active Participants (n=313)		Passive Participants (n=185)		Z	p
	$\bar{x}$	Sd	$\bar{x}$	Sd		
<b><i>Leisure Boredom Scale</i></b>						
<b>Boredom</b>	2.42	0.79	2.96	1.06	-5.638	<0.000
<b>Satisfaction</b>	3.17	0.94	3.46	0.68	-4.079	<0.000
<b><i>Internet Addiction Scale</i></b>						
<b>Withdrawal</b>	3.04	0.80	2.92	0.81	-2.191	0.028
<b>Controlling Difficulty</b>	2.17	0.69	2.53	0.94	-3.360	0.001
<b>Disorder in functionality</b>	2.28	1.07	2.31	1.11	-0.925	0.355
<b>Social Isolation</b>	1.96	0.67	2.02	1.04	-0.017	0.986

The scores that participants obtained from "Leisure Boredom" and "Internet Addiction" scales are compared according to participating actively and passively to leisure sport activities and according to the results, active sport participants had lower boredom scores and lower satisfaction scores. Also withdrawal is higher in active participants and controlling difficulty is higher in passive participants ( $p < 0.05$ ). In table 7, the scores that participants obtained from "Leisure Boredom" and "Internet Addiction" scales are compared according to participating actively and passively to social activities.

Table 7. Comparison of Leisure Boredom and Internet Addiction Scores According to Social Activity Participation

	Active Participants (n=394)		Passive Participants (n=91)		Z	p
	$\bar{x}$	Sd	$\bar{x}$	Sd		
<b><i>Leisure Boredom Scale</i></b>						
<b>Boredom</b>	2.64	0.90	2.51	1.15	-0.307	0.759
<b>Satisfaction</b>	3.34	0.80	2.91	1.08	-1.658	0.097
<b><i>Internet Addiction Scale</i></b>						
<b>Withdrawal</b>	2.92	0.85	3.32	0.54	-5.664	<0.001
<b>Controlling difficulty</b>	2.20	0.79	2.82	0.77	-7.525	<0.001
<b>Disorder in functionality</b>	2.09	1.03	3.23	0.83	-8.430	<0.001
<b>Social Isolation</b>	1.80	0.71	2.88	0.73	-10.910	<0.001

The scores that participants obtained from "Leisure Boredom" and "Internet Addiction" scales are compared according to participating actively and passively to social activities and according to the

results, internet addiction is lower in all subdimensions of internet addiction scale ( $p < 0.05$ ). Meanwhile leisure boredom levels did not reveal any significant results ( $p > 0.05$ ).

Table 8: Comparison of Leisure Boredom and Internet Addiction Scores According to Gender

	<b>Males (n=155)</b>		<b>Females (n=343)</b>		<b>Z</b>	<b>p</b>
	$\bar{x}$	<b>Sd</b>	$\bar{x}$	<b>Sd</b>		
<b><i>Leisure Boredom Scale</i></b>						
<b>Boredom</b>	2.41	0.84	2.71	0.97	-2.797	0.005
<b>Satisfaction</b>	3.10	1.01	3.36	0.78	-2.253	0.024
<b><i>Internet Addiction Scale</i></b>						
<b>Withdrawal</b>	3.19	0.81	2.90	0.79	-2.746	0.006
<b>Controlling difficulty</b>	2.22	0.66	2.34	0.87	-0.536	0.592
<b>Disorder in functionality</b>	2.22	0.91	2.32	1.15	-0.662	0.508
<b>Social Isolation</b>	1.93	0.67	2.01	0.89	-0.402	0.688

The scores that participants obtained from "Leisure Boredom" and "Internet Addiction" scales are compared according to gender and females showed significantly higher boredom and satisfaction levels when compared with males. Another significant result was obtained from withdrawal scores. Males showed higher withdrawal scores which can mean that they may have more serious problems compared with females when they can not use access internet.

## DISCUSSION AND CONCLUSION

The aim of the study is to examine internet addiction and leisure boredom in university students. 498 university students participated in this study with a mean age of  $20.99 \pm 2.43$ . Sample consisted of participants who were born in cities, perceived their economical status as medium and females had a higher percentage in the sample. Participants preferred to join recreational activities actively with friends (84%), preferred a duration of 1-5 hours and frequency of 3-4 times a week. When scores obtained from "Internet addiction" scale is considered it can be observed that participants had higher scores in "Satisfaction" subscale. This can show that students perceive their leisure experiences as important for their quality of life and participants are eager to be active and try new activities. This result is parallel with the results reported in a study by Kara, Gürbüz & Öncü (2014). Among the subscales of "Internet addiction" scale, withdrawal subscale indicated the highest scores. This may show that participants might have a feeling of deprivation or lacking for internet use, feel unhappy when they can not have use internet and internet use provides relaxation for these people. The lowest scores obtained from "Internet addiction" scale was from social isolation subscale. This may indicate lower levels of having problems with friends due to internet use. "Boredom" subscale of "Leisure Boredom" scale showed positive correlations with "Withdrawal" and "Social Isolation" subscales of "Internet Addiction Scale". When participants feel bored, do not know what to do in leisure time and do not have knowledge and skills in leisure activities, they may feel more lacking for internet usage, they may need to run away from problems and use internet or their happiest time may be when they are using the internet.. Similarly, when leisure boredom increases internet becomes a better friend and social isolation increases or vice versa. "Boredom" subscale had positive correlations with "Control disability" and "Disorder in functionality" subscales but the correlations were not significant ( $p > 0.05$ ). When "Satisfaction" subscale of "Leisure Boredom" scale is considered it is found out that all subscales

of Internet Addiction scale had negative and significant correlations with Satisfaction levels ( $p < 0.05$ ). The more participants perceived leisure as an important part of their life quality and feel excited and motivated, the lower they got from the withdrawal, controlling difficulty, disorder in functionality and social isolation subscales. The highest negative correlations of "Satisfaction" subscale was with "social isolation" subscale. When participants derive higher satisfaction from leisure experiences their tendency to socialize in internet environment and socialization problems with friends decrease. The scores that participants obtained from "Leisure Boredom" and "Internet Addiction" scales are compared according to participating actively to social activities and according to the results, internet addiction is lower in all subdimensions of internet addiction scale for active participants ( $p < 0.05$ ). Meanwhile leisure boredom levels did not reveal any significant results ( $p > 0.05$ ). The scores that participants obtained from "Leisure Boredom" and "Internet Addiction" scales are compared according to gender and females showed significantly higher boredom and satisfaction levels when compared with males. Another significant result was obtained from withdrawal scores. Males showed higher withdrawal scores which can mean that they may have more serious problems compared with females when they can not use access internet. In a cross-national study comparing the Internet addiction levels of Chinese and U.S. students where Chinese students showed higher dependency to internet, males showed higher rate of addiction than females (Zhang, Amos & McDowell, 2008). This result is consistent with another study conducted to Italian university students where males were found to be more inclined to use the internet than females (Servidio, 2014). Also in Turkish university students levels of problematic Internet use in males was significantly higher than female students (Odacı & Kalkan, 2010). One of the limitations of the study was the size and representation of the sample. A sample representing the university students of Turkey would enable us to make generalizations. As university students might be a risk group for an excessive use of internet and face with the consequences that this situation may bring the literature concerning leisure habits and internet use is gaining importance. Internet addiction could be further inquired with other leisure concepts.

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