Investigation of the Relationship between Leisure Satisfaction and Smartphone Addiction of University Students

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Abstract

The aim of this study was to examine the relationship between Leisure Satisfaction levels and Smartphone Addictions of university students and to determine if these parameters differ in terms of various variables. The Leisure Satisfaction Scale, developed by Beard and Ragheb (1980) and adapted into Turkish by Gökçe and Orhan (2011) and the Smartphone Addiction Scale developed by Kwon *et al.* (2013) and adapted into Turkish by Noyan *et al.* (2015) were used in the study. Convenience sampling method for sample selection and face-to-face survey method for data collection were used. In the analysis of the data, descriptive statistics, independent sample t-test, ANOVA and Pearson correlation analysis were used through SPSS package program. A total of 1636 volunteers, 766 males (46.8%) and 870 females (53.2%), participated in the study. According to the research findings, it was determined that the leisure satisfaction levels of male participants were higher than female participants and the levels of smartphone addiction of female participants were higher than male participants. It was concluded that the leisure satisfaction levels of those aged between 24-26 was higher than the other age groups and that the levels of smartphone addiction of those aged 20 or below were higher than the other age groups. As a result, although leisure satisfaction changed according to various variables, no significant relationship between leisure satisfaction and smartphone addiction was determined.

Contents

1. Introduction

Today, the role of time in society has been extremely important in line with the rapidly evolving technology and the constantly changing living standards (Henderson, 2010). Because of these changing standards, the lives of individuals have become more immobile. The emergence of a need for a special time period in people's inactive lives reveals the importance of the leisure concept (Ceyhun, 2008). Leisure is defined as the period of time that can be used freely, gives a feeling of satisfaction and increase personal satisfaction (Ozdemir *et al.*, 2006). It is also a time period that remained from other compulsory activities (Mull *et al.*, 1997) and that can be spend for personal choices (Sabbağ and Aksoy, 2011) and that has a positive effect on the individuals' lives (Tolukan, 2010.; Ayhan *et al.*, 2017; Soyer *et al.*, 2017). Leisure activities play an important role in decreasing the stress and tension caused by an intensive workload and it is crucial for social development (Mahoney and Stattin, 2000) development of quality of life (Işık *et al.*, 2015; Gumus and Isik, 2018) mental and physical wellbeing of the individuals (Coleman and Iso-Ahola, 1993; Ayhan *et al.*, 2017). Although the aim of participation in leisure activities may vary, individuals participate to such activities generally to get pleasure and consequently to be satisfied (Celik, 2011). Satisfaction is defined as fulfilling the emotional situations such as motivation, expectations and needs. The difference between the expectations of individuals and the things they obtained is a condition that affects the level of satisfaction, and thus the lower the difference is, the higher the satisfaction level will be Kovacs (2007). Leisure satisfaction is defined as positive emotions of individuals obtained as a result of their participation in leisure activities (Beard and Ragheb, 1980) satisfaction levels in leisure (Kovacs, 2007) and meeting the demands, interests and needs from these kinds of activities (Mannell and Kleiber, 1997; Ayhan *et al.*, 2018). Reaching the desires and measuring the levels of happiness through the leisure activities is important for expanding the activity range (Karlı *et al.*, 2008). Leisure activities, had a crucial role in the development of the sense of satisfaction, are thought to have an important effect on smartphone addiction.

The rapid advance of science also causes rapid developments in the field of technology. Together with the technological developments television, computers, internet, mobile phones and now smartphones have become very important in our lives. Smartphones have become devices that make people's jobs easier and can be constantly needed. Smartphones, which are used by almost every person today, offer more communication possibilities than older phones. The new generation of mobile phones has enabled many features, from connecting to the Internet to sharing information. Therefore, mobile phones have become indispensable to our time. The person connects to a computer by using a smartphone has a chance to communicate with the user at any time (İlhan, 2008). Mobile phones, which have offered only communication until recently, have now been replaced by smartphones. Although smartphones offer many conveniences to our daily lives, it is a fact that they have physically and spiritually negative effects on individuals. Also it effects the human relations negatively. The use of smartphones more than necessary makes us think of the concept of addiction. Now it is possible to see people around us who live with their smartphones at any moment and who feel themselves incomplete without phone (Park and Lee, 2012). People can communicate with others whenever and wherever they want, by using the possibility of mobile phones. This situation can cause people to feel that they cannot do without a mobile phone (Ling, 2004). Making this sense in the person and the possibility to use it everywhere will lead people to adapt it as a habit. There is a close relationship between addiction and habit. The habit is the unconscious behavior (LaRose and Eastin, 2004). Habits are shaped by repetitive behaviors in certain situations. Smartphones are a continuously accessible device with applications that offer continuous use. Continuous use of these devices may cause problematic behavior in people (Oulasvirta *et al.*, 2012). Therefore, individuals who are constantly interested in smartphones are likely to make this a habit. As the habit continues, the problematic behaviors experienced in the individual may increase and this situation may turn into an addiction. It is thought that addiction can be decreased by individuals who are satisfied in their leisure through re-participation in activities. In this context, the aim of this study was to investigate the relationship between leisure satisfaction and smartphone addiction.

2. Method

2.1. Research Model

The research was carried out on the basis of quantitative research design. In the population consisting of a large number of member, a general screening model was applied to the whole population or a sample taken from it in order to make a general judgment about the population (Karasar, 2012).

2.2. Research Model

A total of 1636 volunteers selected by convenience sampling method, 766 male (46.8%), 870 female (53.2%), studying in various universities and departments in Turkey, participated in the study. Within the scope of the research, it was aimed to reach a certain part of the university students so, 2200 questionnaires sent to the participants and 1680 questionnaires returned. When the incorrect and incomplete ones were discarded, 1636 correct questionnaires were obtained.

2.3. Data Collection Tools

In order to determine the leisure satisfaction level of participants, "Leisure Satisfaction Scale" developed by Beard and Ragheb (1980) and adapted to Turkish by Gökçe and Orhan (2011) was used. The scale consists of 6 sub-dimensions and 24 items. The scale was 5-point Likert type and all expressions included in the scale were scored between 1 and 5 as "Almost never right", "…………..", "Almost always right". In addition, the Smartphone Addiction Scale, which was developed by Kwon *et al.* (2013) and adapted into Turkish by Noyan *et al.* (2015) was used in order to determine the smartphone addictions.

2.4. Data Analysis

SPSS package program was used to analyze the data obtained from the study. For descriptive statistics, the frequency (f) and percentage (%) distributions of the variables were calculated. Skewness and kurtosis values were

checked to determine whether the data were in normal distribution. These values were checked and evaluated between +2 and -2 (George and Mallery, 2003). As a result of this evaluation, it was determined that the data had a normal distribution. In this direction, Independent Sample t-test, ANOVA and Post-Hoc test, Pearson Correlation Analysis, and Regression analysis were applied.

3. Results

Table-1. According to gender the analysis results of leisure satisfaction and smartphone addiction.

Variables	Gender	N	$\overline{X}$	S.D	t	p
Psychological	Male	766	3,81	,81	6,390	,001
	Female	870	3,54	,88		
Educational	Male	766	3,94	,85	7,847	,001
	Female	870	3,59	,94		
Social	Male	766	3,84	,81	8,134	,001
	Female	870	3,49	,93		
Physical	Male	766	4,04	,80	5,492	,001
	Female	870	3,81	,92		
Relaxation	Male	766	3,78	,77	8,084	,001
	Female	870	3,47	,81		
Aesthetic	Male	766	3,65	,88	5,314	,001
	Female	870	3,41	,92		
Smartphone addiction	Male	766	31,87	12,02	-,137	,891
	Female	870	31,95	11,86		

p<0,05.

When the results of the analysis were examined, it was concluded that there was no statistically significant difference in the smartphone addiction according to gender (p> 0.05). On the other hand, statistically significant difference was determined in all sub-dimensions of leisure satisfaction (p<0.05).

Table-2. Analysis results of leisure satisfaction and smartphone addiction according to age.

Variables	Age	N	$\overline{X}$	S.D.	F	p	Difference
Psychological	20 and below	491	3,69	,86	1,180	,316	
	21-23	882	3,64	,89			
	24–26	209	3,75	,79			
	27 and above	54	3,61	,58			
	Total	1636	3,67	,86			
Educational	20 and below[a]	491	3,79	,91	2,721	,043	b-c
	21-23[b]	882	3,71	,95			
	24–26[c]	209	3,89	,79			
	27 and above[d]	54	3,68	,72			
	Total	1636	3,76	,91			
Social	20 and below[a]	491	3,66	,91	4,125	,006	b-c
	21-23[b]	882	3,62	,90			
	24–26[c]	209	3,84	,81			
	27 and above[d]	54	3,51	,81			
	Total	1636	3,66	,89			
Physical	20 and below	491	3,93	,89	1,222	,300	
	21-23	882	3,89	,89			
	24–26	209	4,01	,76			
	27 and above	54	3,90	,81			
	Total	1636	3,92	,87			
Relaxation	20 and below[a]	491	3,60	,81	6,162	,000	a-c; b-c; c-d
	21-23[b]	882	3,59	,82			
	24–26[c]	209	3,81	,74			
	27 and above[d]	54	3,38	,72			
	Total	1636	3,61	,81			
Aesthetic	20 and below	491	3,52	,88	2,063	,103	
	21-23	882	3,49	,94			
	24–26	209	3,66	,86			
	27 and above	54	3,47	,80			
	Total	1636	3,52	,91			
Smartphone addiction	20 and below	491	32,23	11,31	1,007	,389	
	21-23	882	31,90	12,03			
	24–26	209	31,91	12,84			
	27 and above	54	29,26	12,22			
	Total	1636	31,91	11,93			

p<0,05.

When the analysis results were examined, it was determined that there was no statistically significant difference in the smartphone addiction and psychological, physical and aesthetic sub-dimensions of leisure satisfaction according to age (p> 0.05). On the other hand, it was determined that there was a statistically significant difference in educational, social and relaxation sub-dimensions of leisure satisfaction according to age (p<0.05). According to Table 3 it was determined that there was no statistically significant difference in leisure satisfaction sub-dimensions and smartphone addiction variable according to the grade average (p>0.05).

Table-3. Analysis results of leisure satisfaction and smartphone addiction according to grade average.

Variables	Grade Avarage	N	$\overline{X}$	SD	F	p
Psychological	2.00 and below	290	3,65	,84	,389	,816
	2.01-2.50	418	3,65	,89		
	2.51-3.00	563	3,70	,83		
	3.01-3.50	311	3,67	,89		
	3.51-4.00	54	3,60	,88		
	Total	1636	3,67	,86		
Educational	2.00 and below	290	3,72	,87	1,512	,196
	2.01-2.50	418	3,77	,95		
	2.51-3.00	563	3,78	,88		
	3.01-3.50	311	3,78	,94		
	3.51-4.00	54	3,48	1,03		
	Total	1636	3,76	,91		
Social	2.00 and below	290	3,57	,82	2,368	,051
	2.01-2.50	418	3,68	,87		
	2.51-3.00	563	3,71	,90		
	3.01-3.50	311	3,64	,92		
	3.51-4.00	54	3,41	1,04		
	Total	1636	3,66	,89		
Physical	2.00 and below	290	3,88	,84	1,350	,249
	2.01-2.50	418	3,92	,89		
	2.51-3.00	563	3,95	,86		
	3.01-3.50	311	3,92	,87		
	3.51-4.00	54	3,68	,96		
	Total	1636	3,92	,87		
Relaxation	2.00 and below	290	3,58	,76	,290	,884
	2.01-2.50	418	3,64	,80		
	2.51-3.00	563	3,60	,82		
	3.01-3.50	311	3,64	,83		
	3.51-4.00	54	3,59	,87		
	Total	1636	3,61	,81		
Aesthetic	2.00 and below	290	3,47	,83	,950	,434
	2.01-2.50	418	3,57	,90		
	2.51-3.00	563	3,52	,94		
	3.01-3.50	311	3,55	,93		
	3.51-4.00	54	3,37	,84		
	Total	1636	3,52	,91		
Smartphone addiction	2.00 and below	290	31,98	11,47	,958	,429
	2.01-2.50	418	32,06	12,08		
	2.51-3.00	563	32,42	12,03		
	3.01-3.50	311	30,82	11,57		
	3.51-4.00	54	31,37	14,13		
	Total	1636	31,91	11,93		

p<0,05.

Table-4. Analysis results of leisure satisfaction and smartphone addiction according to the time spent on smartphone.

Variables	Time	N	$\overline{X}$	S.D	F	p	Difference
Psychological	less than a hour	102	3,66	,87	,757	,518	
	1-2 hours	471	3,72	,85			
	3-4 hours	642	3,65	,86			
	5 hours and more	421	3,65	,87			
	Total	1636	3,67	,86			
Educational	less than a hour	102	3,77	,88	1,251	,290	
	1-2 hours	471	3,81	,91			
	3-4 hours	642	3,76	,92			
	5 hours and more	421	3,69	,92			
	Total	1636	3,76	,91			
Social	less than a hour	102	3,63	,96	,072	,975	
	1-2 hours	471	3,67	,88			
	3-4 hours	642	3,65	,88			
	5 hours and more	421	3,66	,90			
	Total	1636	3,66	,89			
Physical	less than a hour	102	3,97	,92	,152	,929	
	1-2 hours	471	3,92	,90			
	3-4 hours	642	3,91	,84			
	5 hours and more	421	3,91	,87			
	Total	1636	3,92	,87			
Relaxation	less than a hour	102	3,61	,87	,811	,488	
	1-2 hours	471	3,66	,83			
	3-4 hours	642	3,59	,78			
	5 hours and more	421	3,59	,81			
	Total	1636	3,61	,81			
Aesthetic	less than a hour	102	3,53	,92	1,413	,237	
	1-2 hours	471	3,56	,92			
	3-4 hours	642	3,47	,90			
	5 hours and more	421	3,57	,90			
	Total	1636	3,52	,91			
Smartphone Addiction	less than a hour[a]	102	26,19	12,29	72,984	,000	a-c; a-d; b-c; b-d; c-d;
	1-2 hours[b]	471	27,52	11,26			
	3-4 hours[c]	642	32,11	10,97			
	5 hours and more[d]	421	37,90	11,25			
	Total	1636	31,91	11,93			

p<0,05.

According to Table 4 it was determined that there was no statistically significant difference in all sub-dimensions of the leisure satisfaction according to the time spent on the smartphone (p> 0.05). On the other hand, it was determined that there was a statistically significant difference in smartphone addiction according to the time spent on the smartphone (p<0.05).

Table-5. Analysis results of leisure satisfaction and smartphone addiction according to income perception of participants.

Variables	Perception	N	$\overline{X}$	SS	F	p	Difference
Psychological	Very Bad	47	3,73	,85	1,962	,098	
	Bad	151	3,71	,81			
	Moderate	834	3,70	,85			
	Good	523	3,58	,89			
	Very Good	81	3,74	,81			
	Total	1636	3,67	,86			
Educational	Very Bad	47	3,79	,86	1,480	,206	
	Bad	151	3,82	,78			
	Moderate	834	3,79	,90			
	Good	523	3,69	,96			
	Very Good	81	3,66	,98			
	Total	1636	3,76	,91			
Social	Very Bad	47	3,69	,87	,830	,506	
	Bad	151	3,60	,85			
	Moderate	834	3,69	,87			
	Good	523	3,62	,91			
	Very Good	81	3,61	,96			
	Total	1636	3,66	,89			
Physical	Very Bad	47	3,84	,82	,776	,541	
	Bad	151	3,96	,73			
	Moderate	834	3,94	,86			
	Good	523	3,88	,91			
	Very Good	81	3,86	,99			
	Total	1636	3,92	,87			
Relaxation	Very Bad[a]	47	3,57	,79	3,233	,012	d-e
	Bad[b]	151	3,65	,83			
	Moderate[c]	834	3,63	,78			
	Good[d]	523	3,55	,83			
	Very Good[e]	81	3,88	,84			
	Total	1636	3,61	,81			
Aesthetic	Very Bad	47	3,52	,89	1,384	,237	
	Bad	151	3,61	,87			
	Moderate	834	3,50	,90			
	Good	523	3,50	,92			
	Very Good	81	3,71	,92			
	Total	1636	3,52	,91			
Smartphone Addiction	Very Bad	47	32,81	11,27	2,112	,077	
	Bad	151	33,85	11,10			
	Moderate	834	31,54	11,89			
	Good	523	31,52	11,97			
	Very Good	81	34,12	13,54			
	Total	1636	31,91	11,93			

p<0,05.

When the analysis results were analyzed, it was determined that there was no statistically significant difference in both the psychological, educational, social, physical and aesthetic sub-dimensions of leisure satisfaction and smartphone dependence variable according to income perception (p> 0.05). On the other hand, according to the income perception, it was determined that there was a statistically significant difference in the relaxation sıb-dimension of leisure satisfaction (p>0.05).

Table-6. Analysis on leisure satisfaction and smartphone addiction.

Variables		1	2	3	4	5	6	7
Psychological[1]	r	1						
	p							
Educational[2]	r	,703**	1					
	p	,000						
Social[3]	r	,620**	,727**	1				
	p	,000	,000					
Physical[4]	r	,688**	,683**	,672**	1			
	p	,000	,000	,000				
Relaxation[5]	r	,582**	,597**	,609**	,648**	1		
	p	,000	,000	,000	,000			
Aesthetic[6]	r	,459**	,544**	,610**	,536**	,590**	1	
	p	,000	,000	,000	,000	,000		
Smartphone Addiction[7]	r	-,046	-,037	,009	-,040	,044	,012	1
	p	,063	,132	,730	,105	,076	,624	

p<0,01**.

According to the results of analysis, there was no statistically significant relationship between leisure satisfaction and smartphone addiction (p>0, 05).

4. Discussion and Conclusion

In this study, the relationship between leisure satisfaction and smartphone addiction in university students and whether these parameters differ according to various variables were investigated.

Gender is an important part of the social impact limiting the participation of individuals in recreational activities (Culp, 1998) and plays an important role in participation to the leisure activities (Moccia, 2000). According to the results of the analysis, it was determined that there was a significant difference in all sub-dimensions of leisure satisfaction according to gender. It was determined that leisure satisfaction levels of male participants were higher than female participants. In the related literature, there are studies that support this study (Gökçe, 2008; Hribernik and Mussap, 2010; Ayhan *et al.*, 2018). Gender is an important factor in participation to the leisure activities. Therefore, it was thought that females were more likely to meet with obstacles in participating in the leisure activities than males. Not enough supports from families to girls for their participation in recreational activities, excessive pressure on society for girls and not be given the opportunity to participate freely in activities can be thought to cause this situation (Raymore *et al.*, 1994; Ayhan *et al.*, 2017). On the other hand, it was determined that there was no statistically significant difference in the smartphone addiction according to gender. When the mean score of smartphone addiction was examined, females and males have a close addiction levels. It was thought that this situation may be due to the sample group. In the related literature, there are studies that support this result (Perry and Lee, 2007; Tatli, 2015; Kuyucu, 2017).

It was determined that there was a statistically significant difference in educational, social and relaxation sub-dimensions of leisure satisfaction according to age. The studies carried out by Ayyıldız (2015); Serdar and Mungan (2016) support this study. It was thought that the reason for this situation may be due to the fact that the elderly students use their leisure more consciously and efficiently as their sense of responsibility increases. On the other hand, there are studies in the literature that do not support the same results as this study (Ekinci *et al.*, 2019). This is due to the fact that the sample groups are different.

According to the grade average, there was no significant difference in all sub-dimensions of leisure satisfaction and smartphone addiction levels. Eccles *et al.* (2003) stated that leisure activities programmed at school or out of school would positively affect the frequency of school attendance, school achievement and other developmental characteristics. The result of this study may be due to the fact that the age of university students who were the sample group of the research was close to each other and they had the same level of leisure satisfaction and smartphone addiction.

There was a statistically significant difference in smartphone addiction variable according to the time spend on smartphone. The reason for this situation may be the usage habits brought with the excess of the applications that promote the use of smartphones were in direct proportion to the addiction. According to the income perception, there was a statistically significant difference in the relaxation sub-dimension of leisure satisfaction. Individuals with high income were likely to be satisfied in terms of relaxation in leisure.

According to the main findings of the study, it was determined that there was no statistically significant difference between leisure satisfaction and smartphone addiction levels. The reason for this result was that the individuals with high addiction spend more time on smartphones and did not spend enough time in leisure activities.

As a result, it was determined that gender and grade averages of university students were not a significant variable on smartphone addiction. In addition, it was determined that there was no significant relationship between smartphone addiction and leisure satisfaction. Increasing the number of indoor and outdoor facilities in order to increase the participation in leisure activities by public institutions and organizations is considered to be important in terms of reducing the smartphone addiction. In this respect, by giving recreation training by educational institutions on the importance of the concept of leisure starting from the primary education can contribute to the decrease in smartphone addiction.

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