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Research Article

The Association between Internet Addiction and Impulsivity among Academicians*

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Abstract

This study seeks to identify the association between academicians' Internet addiction and impulsivity predispositions of academics and some underlying factors behind it. The study has been conducted with 232 academicians employed at a state university in Turkey's central Anatolian region. The data have been collected using a participant questionnaire, the Internet Addiction Scale, and the Barratt Impulsiveness Scale. The mean age of the included academicians is 34.91 ± 8.33 years, with 53.4% being male. The participants' total mean score for Internet addiction is 30.00 ± 8.74. The mean score for impulsivity is 63.58 ± 5.64. The study has found no meaningful association between overall Internet addiction scores with overall impulsivity scores. However, varying levels of association have been observed for all subscales from both scales. The subscales of impulsivity and time spent on the Internet have also been found as predictive factors for Internet addiction. The study has concluded the academicians to have mild degrees of impulsivity and low levels of internet addiction, all sub-dimensions of Internet addiction and impulsivity to be interrelated, and the time spent online to associate with Internet addiction and impulsivity.

Keywords

Academicians • Addiction • Internet addiction • Impulsivity

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The Internet first started being used in the United States in 1960 by members of certain specific professions and over the next 50 years has become a global phenomenon. The Internet has become popular worldwide as it offers easy access to information, entertainment, and shopping. This popularity serves as the fundamental source of Internet addiction. Internet addiction can generally be described as the temptation to overuse the Internet; the devaluation of time spent offline; excessive nervousness and aggressiveness when one has no Internet connectivity; and gradual deterioration in one's professional, social, and family life (Arısoy, 2009; Young, 2004).

Internet addiction is a problem for all age groups. A study on the prevalence of Internet addiction in German society reported a prevalence of 5.1% in the 25-34 age group (Müller, Glaesmer, Brähler, Woelfling, & Beutel, 2013). A meta-analysis study by Kuss, Griffiths, Karila, and Billieux (2014) on the prevalence of Internet addiction reported Internet addiction rates of 1.6% among Norwegian adults, 22.8% among Iranian adults, and 1.8% among Swedish adults. A prevalence study in Turkey found subjects to meet at least five of the diagnostic criteria suggesting Internet addiction at a rate of 4.5% (Cömert & Ögel, 2009).

Internet addiction is reported to be associated with certain psychological problems. Adalıer and Balkan's (2012) study on university students reported correlations for Internet addiction with somatization, obsessive-compulsive disorder, interpersonal sensitivity, depression, anxiety, enmity, and paranoid ideation. Similarly, Ko, Yen, Yen, Chen, and Chen's (2012) literature review found correlations among substance abuse disorders, depression, enmity, social anxiety, and Internet addiction. Being male, the length of Internet usage, and perfectionist character traits were reported as particular risk factors for Internet addiction (Şenormancı et al., 2014). A positive correlation was also reported between Internet addiction and impulsivity, and that impulsivity could be the precursor of Internet addiction (Akın, 2014; Burnay, Billieux, Blairy, & Larøi, 2015; Lee et al., 2012).

Studies conducted on patients with various addiction problems including Internet addiction or drug addiction have demonstrated the degrees and certain sub-dimensions of impulsivity to be higher among patients with addiction (Cao, Su, Liu, & Gao, 2007; Eroğlu 2016; Evren et al., 2014; Ögel, Sarp, Tamar Gürol, & Ermağan, 2014; Reed, Osborne, Romano, & Truzoli, 2015; Robinson & Clark, 2015). Studies on the relationship between impulsivity and dependence reported structural and functional defects to exist in certain regions of the brain. Ko et al. (2015) reported individuals with Internet gaming disorders to have high impulsivity and low gray-matter density in the brain. Bühler and Mann (2017) found activity in the prefrontal region of patients with IGD to be increased compared to the control group in their study using the go/no-go paradigm. They also found an increase in impulsive choices (Bühler & Mann, 2017).

Impulsivity has been described as acting without sufficient evaluation of the alternatives and as quick and unplanned reactions to inner and outer impulses by individuals while ignoring potentially negative outcomes both for themselves as well as for others (Güzel Özdemir, Selvi, & Aydın, 2012; Moeller, Barratt, Dougherty, Schmitz, & Swann, 2001). Impulsive people have been reported to demonstrate personality traits that include impatience, carelessness, over-excitement, extroversion, and poor harm-potential calculations (Güzel Özdemir et al., 2012; Peluso et al., 2007). Impulsivity is not covered as a single action but as part of a behavioral pattern and an inclination (Moeller et al., 2001). Although impulsivity can also be seen in normal societies, it pathologically impairs individuals' quality of life and reduces their functionality (Moeller et al., 2001). At the same time, individuals who express problems related to the Internet were reported to become more impulsive after being exposed to the Internet (Reed et al., 2015). Considering the important role of impulsivity in the widespread use of social networking sites and Internet use, the risk of academicians spending excessive hours on computers or online and being exposed to harmful effects from the Internet is significant. This paper seeks to identify the association between academicians' Internet addiction and impulsivity predispositions and some of the underlying factors. In addition, the study purposes to examine the predictive effects of age, marital status, time spent online, and impulsivity on Internet addiction.

Method

Research Type

This is a descriptive correlational study. The study has been planned descriptively in order to determine academicians' levels of Internet addiction and impulsive behavior. However, the question being researched is "Is there a relationship between Internet addiction and impulsive behavior?"

Participants

The study sample consists of 2,328 academicians employed at a state university in Turkey's central Anatolian region. The study sample consists of academicians who have agreed to cooperate between March 2015 and August 2016. The sample of the study contains 218 people at a 97% confidence interval. Determining the sample size has been based on Cömert and Ögel's (2009) study. Measurement tools have been applied to 240 people in prediction of data loss. The study has been completed through the 232 people who had filled the scales completely. Academicians who know Turkish have been included in the study.

The mean age of the included academicians is 34.91 ± 8.33 years, with 53.4% being male, 62.1% being married, and 44.0% having Instructor Lecturer/Research Assistant.

Around 29.7% reported mostly spending their leisure time exercising, 29.7% listening to music, 46.6% reading books, and 41.8% spending time online. Around 55.6% of the participants reported accessing the Internet using a computer, with 68.5% reporting intermittent Internet use throughout the day. Some 37.1% of the participants spend 3-4 hours online per day, while 32.8% spend 1-2 hours online. Approximately 92.2% use the Internet to conduct academic research, 50.0% to watch movies/listen to music, 49.6% to share social messages, and 31.9% to generally surf the web (see Table 1).

Table 1
Distribution of Academicians according to Demographic Variables

Demographic Variables		
Gender *n* = 226	***n***	**%**
Female	102	45.1
Male	124	54.9
Marital Status *n* = 232		
Married	144	62.1
Single	88	37.9
Degree *n* = 232		
Prof. Dr.	14	6.0
Assoc. Prof. Dr.	26	11.2
Assist. Prof. Dr.	53	22.8
Instructor Dr.	10	4.3
Instructor	19	8.2
Lecturer	8	3.4
Research Asst.	102	44.0
Spare time activities (Multiple boxes checked)		
Reading	108	46.6
Spending time online	97	41.8
Doing sports	69	29.7
Listening to music	69	29.7
Club activities	11	4.7
Playing on a computer	9	3.9
Access to Internet (*n* = 230)		
Mobile	101	43.9
Computer	129	56.1
Internet usage time		
Between 9 am - 5 pm	30	12.9
Between 5 pm - 11 pm	43	18.5
All day long sporadically	159	68.5
Time spent online (Hours per day)		
Less than 1 hour	17	7.3
1-2 hours	76	32.8
3-4 hours	86	37.1
5-6 hours	35	15.1
7 hours or more	18	7.8
Purpose of Using the Internet (Multiple boxes checked)		
Academic study	214	92.2
Social network	115	49.6
Surf the web	74	31.9
Watching movies / listening to music	116	50.0
Playing games	16	6.9

Data Collection Tools

The study's data have been collected using a self-administered questionnaire (SAQ), the Internet Addiction Scale (Hahn & Jerusalem, 2001), and the Barratt Impulsiveness Scale (Barratt Impulsiveness Scale-11, Barratt, 1959).

Self-administered Questionnaire (SAQ). The SAQ consists of nine questions that include demographic data covering the respondents' age, gender, and field of study, as well as their Internet usage patterns.

Internet Addiction Scale (IAS). The Internet Addiction Scale was designed by Hahn and Jerusalem (2001), back-translated into Turkish, and assessed for validity and reliability by Şahin and Korkmaz (2011). The IAS is a 5-point Likert scale condensed to 19 items under three factors. Response options in the scale range from Never (1) to Always (5). The total score can range from 19 (lowest) to 95 (highest). The higher the score is, the greater the level of addiction. The scale also has three sub-dimensions: Loss of control, urge to spend more time online, and deterioration in social relations. The scale's Cronbach alpha was reported as 0.85 (Şahin & Korkmaz, 2011). This study has calculated Cronbach's alpha as 0.90.

Barratt Impulsiveness Scale (Barratt Impulsiveness Scale-11). Designed by Barratt in 1959, the BIS has gone through numerous revisions over the years, with the BIS-11 being its most current form and designed in 1995. The BIS is a 30-item self-reporting scale that evaluates the presence of impulsivity. The item answers range from 1 to 4 in a 4-point Likert scale with 1 = rarely/never, 2 = sometimes, 3 = frequently, and 4 = almost always/always. The scale has 3 unique subscales with solid reliability: non-planning impulsiveness, motor impulsiveness, and attentive impulsiveness. Aside from the total score, three different sub-scores are obtained when evaluating the BIS-11: non-planning impulsiveness, attentive impulsiveness, and motor impulsiveness. A high BIS score indicates a higher level of impulsiveness. A validity and safety study was conducted by Güleç et al. (2008) in Turkey, with Cronbach's alpha being reported as 0.78 (Güleç et al., 2008). Cronbach's alpha is 0.52 in the present study.

Data Collection

Data collection forms have been given to the participants. Participants answered the forms themselves with the researchers present.

Data Analysis

The descriptive findings in this study are expressed as percentages and means. The Shapiro-Wilk test has been used to test for normal distributions. All sub-dimensions and total scores from both scales are not normally distributed ($p < .05$). As such, the Mann-Whitney *U*-test, Kruskal-Wallis test, Spearman

correlation analyses, and multiple linear regression analyses have been used for statistical analysis purposes.

Results

The study's results are given as follows.

Table 2
Academicians' Scale Scores

Scales					
Barratt Impulsiveness Scale	***n***	**$\overline{X}$ ± *SD***	**Min.**	**Max.**	***M***
Attentional Impulsiveness	232	16.52 ± 2.26	11.00	26.00	16.00
Motor Impulsiveness	232	19.30 ± 2.92	13.00	32.00	19.00
Non-planning Impulsiveness	232	24.32 ± 3.49	14.00	34.00	24.00
Total Impulsiveness Scores	232	63.58 ± 5.64	49.00	88.00	64.00
Internet Addiction Scale					
Loss of Control	232	12.22 ± 3.98	7.00	30.00	12.00
Tolerance Development	232	7.79 ± 3.07	4.00	16.00	7.00
Negative Consequences for Social Relationship	232	9.99 ± 3.48	7.00	24.00	9.00
Internet Addiction Total Scores	232	30.00 ± 8.74	19.00	65.00	29.00

The participants' total Internet addiction scores range from a minimum of 19.0 to a maximum of 65.00 with a mean score of 30.00 ± 8.74. The mean impulsivity score is 63.58 ± 5.64 (min. = 49.00, max. = 88.00; see Table 2).

Table 3
Academicians' Internet Addiction Scale Averages according to Demographic Variables

	Internet Addiction Scale			
Demographic variables	**Loss of Control**	**Tolerance Development**	**Negative Consequences for Social Relationship**	**Internet Addiction Total Scores**
Gender	$\overline{X}$ ± *SD* (*M*)	$\overline{X}$ ± *SD* (*M*)	$\overline{X}$ ± *SD* (*M*)	$\overline{X}$ ± *SD* (*M*)
Female	12.02 ± 4.20 (12.0)	7.88 ± 3.28 (7.0)	9.80 ± 3.30 (8.0)	29.71 ± 9.08 (28.0)
Male	12.35 ± 3.87 (12.0)	7.71 ± 2.89 (7.0)	10.22 ± 3.68 (9.0)	30.29 ± 8.66 (27.0)
U *p*	5919.50 0.406	6297.00 0.956	5712.00 0.182	5959.00 0.455
Marital Status				
Married	11.66 ± 3.60 (11.0)	7.37 ± 2.79 (7.0)	9.55 ± 2.85 (8.0)	28.58 ± 7.56 (27.0)
Single	13.14 ± 4.41 (13.0)	8.45 ± 3.38 (8.0)	10.73 ± 4.23 (9.0)	32.33 ± 10.01 (30.0)
U ***p***	5050.00 **0.009**	5203.50 **0.022**	5409.00 **0.046**	4954.50 **0.005**
Internet usage time				
Between 9 am- 5 pm	10.57 ± 3.31 (10.0)	6.73 ± 2.36 (6.0)	8.90 ± 3.03 (8.0)	26.20 ± 7.47 (24.0)
Between 5 - 11 pm	13.09 ± 4.19 (12.0)	7.81 ± 2.79 (8.0)	11.46 ± 5.05 (9.0)	32.37 ± 9.87 (31.0)
All day long sporadic	12.29 ± 3.97 (12.0)	7.98 ± 3.22 (8.0)	9.80 ± 2.89 (9.0)	30.08 ± 8.44 (29.0)
χ^2 ***p***	8.65 **0.013**	3.58 0.168	13.08 **0.001**	11.52 **0.003**
Time spend online (Hours/Day)				
Less than 1 hour	11.00 ± 5.56 (9.0)	5.70 ± 1.99 (5.0)	9.88 ± 3.84 (8.0)	26.59 ± 10.86 (23.0)
1-2 hours	11.24 ± 3.38 (11.0)	7.10 ± 2.93 (6.0)	9.00 ± 1.56 (8.0)	27.34 ± 6.29 (26.5)
3-4 hours	12.19 ± 3.73 (12.0)	7.86 ± 2.74 (8.0)	10.14 ± 3.74 (8.5)	30.19 ± 8.01 (29.5)
5-6 hours	13.86 ± 4.24 (13.0)	9.05 ± 3.36 (10.0)	10.46 ± 4.12 (9.0)	33.37 ± 10.44 (31.0)
7 hours or more	14.44 ± 3.69 (13.0)	9.83 ± 3.42 (9.0)	12.72 ± 4.79 (11.5)	37.00 ± 9.77 (34.0)
χ^2 ***p***	21.63 **0.001**	25.53 **0.001**	14.51 **0.006**	27.27 **0.001**

The scores obtained from the scales do not vary by gender. From the perspective of score distribution by marital status, Internet addiction scores for single people are found to be higher than married people's ($p < .05$). Likewise, loss of control, deterioration in social relations, and the total scores for Internet addiction of those who said they mostly used the Internet between 5 pm and 11 pm were higher than those who mostly used the Internet at other times ($p < .05$; see Table 3).

Table 4
Academicians' Barratt Impulsiveness Scale Averages according to Demographic Variables

	Barratt Impulsiveness Scale			
Demographic variables	**Attentional Impulsiveness**	**Motor Impulsiveness**	**Nonplanning Impulsiveness**	**Total Impulsiveness Scores**
Gender	$\overline{X} \pm SD$ (*M*)	$\overline{X} \pm SD$ (*M*)	$\overline{X} \pm SD$ (*M*)	$\overline{X} \pm SD$ (*M*)
Female	16.25 ± 2.08 (16.0)	19.51 ± 2.98 (19.0)	24.62 ± 3.34(24.0)	63.87 ± 4.89(64.0)
Male	16.74 ± 2.38 (17.0)	19.17 ± 2.89 (19.0)	24.11 ± 3.67(24.0)	63.57 ± 6.31(63.0)
U p	5505.00 0.091	5721.50 0.214	5785.50 0.268	5993.50 0.498
Marital Status				
Married	16.53 ± 2.35 (16.0)	19.20 ± 3.03 (19.0)	24.59 ± 3.48 (24.0)	63.97 ± 5.64 (63.0)
Single	16.49 ± 2.14 (16.0)	19.45 ± 2.74 (19.0)	23.87 ± 3.48 (24.0)	63.22 ± 5.65 (64.0)
U p	6209.00 0.796	5605.00 0.137	5460.50 0.076	6151.00 0.709
Internet usage time				
Between 9 am- 5 pm	16.43 ±1.87 (16.0)	18.60 ± 2.84 (18.0)	24.77 ± 3.59 (24.0)	63.53 ± 4.89 (64.0)
Between 5 pm - 11 pm	16.23 ±2.33 (16.0)	19.09 ± 2.89 (19.0)	23.51 ± 3.33 (23.0)	62.27 ± 5.45 (62.0)
All day long sporadic	16.61 ±2.32 (17.0)	19.48 ± 2.94 (19.0)	24.45 ± 3.49 (24.0)	64.09 ± 5.79 (64.0)
χ^2 ***p***	0.74 0.691	3.99 0.136	3.01 0.222	3.23 0.119
Time spend online (Hours/Day)				
Less than 1 hour	15.41 ± 2.39 (15.0)	18.53 ± 2.43 (18.0)	23.47 ± 4.06 (24.0)	61.00 ± 7.04 (63.0)
1-2 hours	16.19 ± 2.21 (16.0)	18.96 ± 2.97 (18.0)	24.47 ± 3.76 (15.0)	63.22 ± 6.11 (63.0)
3-4 hours	16.59 ± 2.04 (16.5)	19.79 ± 3.29 (19.0)	24.28 ± 3.37 (24.0)	64.31 ± 5.25 (64.0)
5-6 hours	16.80 ± 2.57 (17.0)	18.85 ± 2.07 (19.0)	24.28 ± 2.98 (25.0)	63.08 ± 4.82 (63.0)
7 hours or more	18.00 ± 2.11 (17.5)	19.94 ± 2.29 (19.0)	24.72 ± 3.37 (24.0)	66.33 ±4.35 (66.0)
χ^2 ***p***	14.10 0.007	7.26 0.123	1.26 0.869	9.97 0.041

A statistical difference was found between the participants' attentive impulsiveness scores and time spent online; this difference is comes from the group that spends 7 hrs or more online daily ($p < 0.05$). However, participants' scores for all subscales of the Internet Addiction Scale increase as their time spent online increases. The difference between the groups has been found to be statistically significant ($p < 0.05$; see Table 4).

The study found no meaningful correlation for total Internet addiction scores with total impulsivity scores. However, the study did find a correlation of varying degree among all subscales of both scales. A weak negative correlation exists between loss of control and non-planning impulsiveness, and a slightly positive correlation between attentive impulsiveness and motor impulsiveness. A slightly positive correlation was found for the urge to spend more time online with attentive impulsiveness and motor impulsiveness. A weak negative correlation was found between deterioration in social relations and non-planning impulsiveness, and a weak positive correlation was found

between attentive impulsiveness and motor impulsiveness. Likewise, the subscales from both scales are found to have inter-correlations with each other (see Table 5).

Table 5
Relationship between Academicians' Age and Scale Scores

	Age	Internet Addiction Total Scores	Loss of Control	Tolerance Development	Negative Consequences for Social Relationship	Total Impulsiveness Scores	Non-planning Impulsiveness	Attentional Impulsiveness	Motor Impulsiveness
Age *r*	1	-0.155(*)	-0.102	-0.159(*)	-,136(*)	-0.054	.079	-0.127	-0.153(*)
p		.023	.135	.019	.045	.431	.244	.062	**.024**
Internet Addiction Total Scores		1	.884(**) **.000**	.806(**) **.000**	.749(**) **.000**	.127 .053	-0.181(**) **.006**	.452(**) **.000**	.213(**) **.001**
Loss of Control			1	.544(**) **.000**	.582(**) **.000**	.148(*) **.024**	-0.140(*) **.033**	.511(**) **.000**	.198(**) **.002**
Tolerance Development				1	.463(**) **.000**	.116 .078	-0.090 .173	.319(**) **.000**	.151(*) **.021**
Negative Consequences for Social Relationship					1	.051 .438	-0.214(**) **.001**	.283(**) **.000**	.170(**) **.009**
Total Impulsiveness Scores						1	.559(**) **.000**	.561(**) **.000**	.609(**) **.000**
Non-planning Impulsiveness							1	.036 .590	-0.073 .266
Attentional Impulsiveness								1	.313(**) **.000**
Motor Impulsiveness									1

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

In Table 6, age, marital status, Internet usage time of day, and time spent online are seen to be predictive of Internet addiction. These four variables explain 12% of Internet addiction. According to the standardized regression coefficients (β), only time spent on the Internet (β = .312, t = 4.585, p = .001) has a significant effect on Internet addiction.

Attentional impulsiveness, motor impulsiveness, non-planning impulsiveness, and overall impulsiveness explain 25.4% of Internet addiction. According to the standardized regression coefficients (β), the variables of total impulsiveness (β =

Table 6
Results of Regression Analysis on the Effects of Age, Marital Status, Internet Usage Time, and Time Spent Online for Predicting Internet Addiction

Factors	*B*	Std. Error	β	*t*	*p*
Model 1	F = 7.662, R = .355, R^2 = .126, Adjusted R^2 = .110, p < .05				
Age	-.062	.076	-.059	-.814	.416
Marital Status	1.962	1.291	.110	1.520	.130
Internet usage time	-.607	.841	-.049	-.723	.471
Time spent online (Hours/Day)	2.716	.592	.312	4.585	**.000**

.384, t = -3.419, p = .001), attentional impulsiveness (β =.761, t = 7.107, p = .001), motor impulsiveness (β =.433, t=2.686, p = .008) and non-planning impulsiveness (β = .324, t = 2.012, p = .045) have relative effects on Internet addiction (see Table 7).

Table 7
Results of Regression analysis predicting effect of impulsivity for internet addiction

Factors	*B*	Std. Error	β	*t*	*p*
Model 2	F = 19.300, R = .504, R^2 = .254, Adjusted R^2 = .241, p < .05				
Total Impulsiveness	-1.312	.384	-.847	-3.419	.001
Attentional Impulsiveness	2.936	.413	.761	7.107	.000
Motor Impulsiveness	1.296	.482	.433	2.686	.008
Non-planning Impulsiveness	.811	.403	.324	2.012	.045

Discussion

The participants' mean Internet addiction total scores in the present study, in which we have aimed to investigate the relationship between Internet addiction and impulsivity, are found to be 30.00 ± 8.74. A review of the literature reveals studies to have mostly focused on adolescents and Internet addiction (Cömert & Ögel, 2009; Kuss et al., 2014; Müller et al., 2013). However, the Internet addiction scale we have used in this study has no cut points, with high scores suggesting addiction. So academics can be concluded as being considered slightly addicted. Tonioni et al. (2012), in a study conducted on individuals who had and individuals who had not been admitted to a clinic for Internet addiction, reported mean scores of 47.1 ± 20.3 and 28.4 ± 19.9, respectively (Tonioni at al., 2012). The findings of this study are similar to those for individuals who had not been admitted to a clinic.

Internet addiction is included as a concept in DSM-V in the compulsive-impulsive spectrum disorder, which also covers online or offline computer use (American Psychiatric Association, 2013). Impulsivity can be described as the predisposition to act in ignorance of potential outcomes (Güzel Özdemir et al., 2012). This study found academicians' mean impulsivity scores to be 63.58 ± 5.64. Akın's (2014) study reported college students' mean impulsivity scores to be 96.40 ± 14.84. Although variations are found in scores due to the different measurement tools employed, the implied impulsiveness is similar considering the possible scale scores. One can conclude all these individuals to have demonstrated a mild degree of impulsivity.

Impulsivity is an important personality trait in developing and maintaining behavioral addictions. Studies have revealed impulsivity to be related to addictive behavior (Castellanos-Ryan, O'Leary-Barrett, Sull, & Conrod, 2013; Grant & Chamberlain, 2014; Gullo, Loxton, & Dave, 2014; Robinson & Clark, 2015) and individuals with addictive behavior to have higher impulsivity scores (MacKillop et al., 2011). This study found no significant association for overall Internet addiction scores with overall impulsivity scores (p > .05; see Table 5). However, a significant association has been found for both scales' subscales (p < .05; see Table 5). According to regression analysis, attentional impulsiveness,

motor impulsiveness, non-planning impulsiveness, and overall impulsiveness explain 25.4% of Internet addiction (see Table 7). This indicates impulsivity to have a significant impact on Internet addiction. However, investigating other factors that have an impact on addiction may be useful. Studies investigating the association between Internet addiction and impulsivity have focused mostly on adolescents and young adults. A study by Cao et al. (2007) reported an association between Internet addiction and impulsiveness for all sub-dimensions (non-planning, attentive, motor impulsiveness). In a study on adolescents, Zhang, Mei, Chai, Li, and Du (2015) found impulsivity to have a direct influence on Internet addiction. One of the studies covering a wide spectrum of age groups including adults, the study by Lee et al. (2012) found a high degree of association between Internet addiction and impulsivity. Likewise, the study by Burnay et al. (2015) reported impulsivity to be one of the psychological factors influencing Internet addiction. In this study, loss of control over the internet, desire to stay online more, and negativity in social relations have been observed to increase, especially academicians' attention impulsivity. The stimuli presented onscreen on the Internet are thought to attract the attention of adults and cause the Internet to be used beyond one's aim. We suggest that further studies are needed with a broader population in order to cover impulsivity and addictive behaviors that can be observed in adult groups as well.

Time spent online is an important indicator of internet addiction. Studies exist demonstrating a relation between increased addiction levels and increased time spent online (Durak Batıgün, & Kılıç, 2011; Tonioni et al., 2012). This study found the overall Internet addiction scores in all sub-scales ($p < .05$) to be higher for individuals spending 7 hours or more online compared to those who spend less time online (see Table 3). In the regression analysis, increases in Internet usage have been determined to affect Internet addiction (see Table 5). The study has also revealed attentive impulsiveness and overall impulsivity scores to be higher for individuals spending 7 hours or more online compared to those spending less time online ($p < .05$; see Table 4). Considering that academicians spend a long time online, particularly for conducting scientific research, awareness studies can be carried out on this group as a particular risk group for Internet addiction.

Conclusion

This study concludes academicians to demonstrate a mild degree of impulsivity and Internet addiction and all sub-dimensions of Internet addiction and impulsiveness to interrelated, especially the amount of time spent online being related to Internet addiction and impulsivity. We suggest that further studies with broader populations and different groups can create greater awareness on the subject.

Ethical Dimension

Ethical approval was received from the Ethics Committee of the university's Department of Social Sciences for the carrying out this study. Permission was obtained from the relevant health authorities. Written and verbal consent has been obtained from all participants. The procedures conform to the Helsinki Declaration.

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