University Students' Internet Addiction Status and Relationship to Their Perceptions of Internet

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Abstract: Intense Internet use, which disrupts people's daily routine responsibilities and disrupts the quality of life, points to the problem of Internet addiction (IA). This problem is more common among youngsters. Especially university students who move away from family surveillance and have more access to the Internet are in the high risk group. Therefore, this study aimed to investigate their IA status and its relationship to perception of the Internet. It was designed as a correlational survey research. The sample was composed of 143 students studying at Suleyman Demirel University in Isparta, Turkey. The data were collected through a questionnaire form and analyzed using statistical techniques. The findings showed that 2.8% of the participants were Internet addicts and 29.4% were in the risky group with regards to IA. According ANOVA results, the level of IA did not change significantly across class level, but it changed significantly by gender, with a higher rate for male students. Correlation analysis revealed that IA was not related to age, but was significantly associated with Internet perception. IA was negatively associated with perceiving the internet as a "communication tool" and "source of information" and positively with perceiving it as "dangerous".

Keywords: Internet addiction, Internet perception, Demographics, University students

Introduction

Internet can be defined as a worldwide and ever-growing communication network in which many computer systems are interconnected (Polat, 2002). With the help of this technology, people can access information in many fields easily, cheaply, quickly and safely. Almost all kinds of social structuring takes place on the Internet today. It has added many innovations and made crucial transformations in all aspects of daily life from our lifestyles to working life, from education to training, from commerce to entertainment and so on (Sahin & Baturay, 2013). Although the Internet can be used for various purposes, the main purposes of its usage are known as information, communication, entertainment, and business or trading (Dittmar & Eilks, 2019; Gezgin, & Mihci, 2020; Onat Kocabiyik, 2021a, 2021b; Parlak, 2005; Tukel, 2020). Developments in mobile devices

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and network technologies have rapidly increased Internet access and use in the society.

If we look at the short history of the Internet in the world, it is seen that the first studies (packet switched network) started with the establishment of ARPANet in 1969 at the US Department of Defense. Later, TCP/IP (Transmission Control Protocol/Internet Protocol) protocol was developed on the same network and it has been used on ARPANet since 1983. The creation of the first Internet backbone network was carried out by NSFNet (National Science Foundation) in 1986. Following this process, the TCP/IP protocol and the Internet have gained great momentum since the 90s and have become publicly available (Parlak, 2005).

It is easy to describe the Internet in all its technical aspects, but it is not that easy to see and feel its social, psychological and cultural effects. While the areas where the internet benefits are not counted, there are also some negative consequences. According to Ertugrul and Keskin (2012), as a result of unconsciously spent time on the computer and the Internet, psychological and physical diseases may occur on the person. Today, internet use has become commonplace for individuals and its deprivation may causes problems such as mood changes, unhappiness and inability to focus (Akturk, 2020; Gezgin, Cakir, & Yildirim, 2018; Kocadag, Aksoy & Zengin, 2014). While we used to use the internet only from computers, now we can use it from our tablets, mobile phones, televisions and even from our watches. As a result, we can always connect to the internet without making a reservation. When this opportunity is limited, we can turn into people who do not know what to do and feel uncomfortable. Intense Internet use, which disrupts people's daily routine responsibilities and disrupts the quality of life, points to the problem of Internet addiction (IA). This problem is more common among youngsters. Especially university students who move away from family surveillance and have more access to the Internet are in the high risk group.

The problem of IA is also commonly referred as pathological Internet use, problematic Internet usage, Internet abuse, Internet dependence, and obsessive/compulsive Internet use. Some clinicians prefer to use the term “Internet addiction” to define this condition as a form of impulse control disorder (e.g., Young, 1998). Despite various conceptualization of IA, studies acknowledged its existence and reported similar symptoms such as school and work–related impairments, interpersonal problems, preoccupation with using the Internet, using the Internet to improve negative moods, and serious disturbances in users’ social capitals (Gencer & Koc, 2012; Morahan–Martin, 2008). Although the symptoms of IA differ according to the users, Beard (2005) proposes five diagnostic criteria in the identification of IA in the general population: preoccupation with the Internet (constantly thinks about past or future use), need to use the Internet with increased amounts of time to gain satisfaction, unsuccessful attempts to control, cut back, or stop use of the Internet, feeling restless, moody, depressed, or irritable when attempting to control Internet use, and staying online longer than originally intended.

Previous research studies existed to investigate the prevalence of IA among the Turkish university students and its associations with several variables. For example, Balci and Gulnar (2009) found that of the 953 university students 23% of the participants were identified as Internet addicts and 28% as risky Internet addicts. They

found IA to be positively related to the amount of monthly expenditure while it was not related to gender, grade level, type of residence and income level. On the other hand, it was striking that the addiction rate of the participating students who connect to the Internet from home and dormitory was higher than the participants who connect from other places. Alacam, Atesci, Sengul and Tumkaya (2015) studied the relationship between IA and cigarette and alcohol use among 2096 university students. IA rate was found to be 8.6% and the IA score of the participants who stated that they smoked was found to be significantly higher than the IA score of those who stated that they did not smoke. In another study by Sahin (2014), out of the sample group of 328 students, 20 (6%) students showed limited symptoms, and 6 (2%) students identified as addicted. Also, no significant relationship was found between aggression and IA. Akdag, Sahan Yilmaz, Ozkan and San (2014) examined the IA status of 1325 university students (pre-service teachers) in terms of different variables. As a result of the study, 16.4% of the students were found to be Internet addicts. In addition, while IA did not change according to the type of education and income, it differed according to the gender variable (higher prevalence of IA among males than females). Ceyhan (2011) investigated whether university students' IA levels and perceived communication skill levels differ according to the basic reasons for using the Internet. According to the findings, it was found that the IA levels of university students who “use the Internet for fun” and “use the Internet to establish social relations with people they do not know” were significantly higher than the students who “use the Internet to obtain information” in terms of the main reason for using the Internet. This result indicated that the use of the internet for entertainment and social interaction may be an important risk factor in the development of IA.

Internet users' perception of the Internet and their definitions of the Internet are important to understand their Internet use and habits because it is well known that beliefs systems shape behaviors. Understanding underlying conceptual beliefs and ideas about what the Internet is may provide significant implications for the assessment and treatment of IA as well. Therefore, the main purpose of this study is to investigate university students’ IA status and its relationship to perception of the Internet.

Method

Since this study aimed to explore the prevalence of IA among university students and its relationships with some demographic variables and students’ perception levels of the Internet, it was designed as correlational descriptive research within the quantitative research context. Correlational survey is a research model that aims to determine the existence or degree of co-variance between two or more variables (Karasar, 2012).

The accessible population of the research consists of university students studying at the Suleyman Demirel University in Isparta city center. Using the convenience sampling procedure, the sample consisted of 143 students who were available in the campus during the administration of questionnaire form and volunteer to complete this form. The second author visited faculty buildings, made announcements about the purpose and procedures of the study and reached those students who wanted to participate in the study. This sampling

method is known to add speed and practicality to research because the researcher chooses a situation that is close and easy to access (Buyukozturk, Kilic, Cakmak, Akgun, Karadeniz & Demirel, 2011).

The data were collected through a paper-and-pencil questionnaire form and analyzed using statistical techniques. The questionnaire form comprised three main sections. The first section contained several questions asking for participants' demographic characteristics such as gender, age, faculty, grade level. The second section included six Likert type scale items measuring participants' perceptions of the Internet. These items were developed by the authors in accordance with the literature review of those metaphorical and perceptional analyses of Internet users. Six main perceptional themes were identified from the literature: Internet as a "communication tool", "source of information", "vital necessity", "life facilitator", "harmful or dangerous" and "addictive".

Participants were asked to indicate their agreement level on these six items on a five-point Likert scale ranging from "1=strongly disagree" and "5= strongly agree". The final section of the form contained Internet Addiction Test (IAT) developed by Young (1998) and adapted and translated into Turkish language by Bayraktar (2001). The IAT includes 20 items which ask participants to indicate how often they show symptoms of IA such as excessive time spent online, neglect of daily routine tasks, disruption of academic or job performance, concealment of online time and behaviors from others, loss of sleep, social isolation, depressive feelings if usage is restricted, and failure attempts to cut down Internet use. The IAT uses a six–point Likert scale ranging from "0=never" to "5=always". Therefore, the possible total score obtained from the IAT could range from 0 to 100. Young (1998) classified participants with a score of 39 and below as "average user", those with a score of 40 to 69 as "risky user", and those with a score of 70 and above as "Internet addicts".

Results

It was determined that 52% (75 people) of the survey participants were female and 48% (68 people) were male. The ages of the participants varied between 17 and 29 and the mean age was 21.73 years (SD=1.76). Regarding their grade level, a little more than half (52%) were junior and the rest were distributed as follows: 14% freshman, 15% sophomore, and 18% senior. Although there were participants from almost all faculties, most of them were from teacher education (33%) and economics and administrative sciences (37%).

Table 1 demonstrates the perceptions of the participants about the Internet. On average participants agreed with the perceptional statements like "I consider the Internet as a communication tool" (Mean=3.89, SD=1.14), "I consider the Internet as a source of information" (Mean=3.93, SD=1.13), "I consider the Internet as a vital necessity" (Mean=3.49, SD=1.14), "I consider the Internet as a life facilitator" (Mean=4.03, SD=1.09), "I consider the Internet as an addictive thing" (Mean=3.79, SD=1.17) whereas they were rather undecided about the statement "I consider the Internet as a harmful or dangerous thing" (Mean=2.71, SD=1.05).
In order to find out participants' IA status, their total score were calculated by adding all item scores from the

IAT and then participants were divided into three categories according to Young's (1998) grouping criteria based on the normative cut–off scores as described in the method section. The descriptive statistics for participants' IAT scores are given in Table 2. A total of 67.8% of participants were classified as average user (IAT score <=39, Mean=25.65, SD=8.24) with showing no signs of addiction, 29.4% of participants were identified as risky user (40<=IAT score <= 69, Mean=49.36, SD=7.38) and only 2.8% of them were identified as Internet addict (IAT score>70, Mean=77.25, SD=4.65).

Table 1. Participants' Internet Perception Levels

Perceptional theme	Minimum	Maximum	Mean	SD
Communication tool	1	5	3.89	1.14
Source of information	1	5	3.93	1.13
Vital necessity	1	5	3.49	1.14
Life facilitator	1	5	4.03	1.09
Harmful or dangerous	1	5	2.71	1.05
Addictive	1	5	3.79	1.17

A one-way between-groups analysis of variance (ANOVA) was conducted to explore gender differences in participants' IAT scores. There was a significant difference [F(1, 141)=5.72, p<.05] in IAT scores with males (Mean=37.21, SD=15.24) being more addicted than females (Mean=31.20, SD=14.60). Similarly another ANOVA was conducted to explore grade level differences in participants' IAT scores. There was no significant difference [F(3, 139)=.18, p>.05] in IAT scores among freshman (Mean=33.90, SD=13.60), sophomore (Mean=35.82, SD=14.72), junior (Mean=34.11, SD=15.94) and senior (Mean=32.54, SD=15.44).

Table 2. Participants' Internet Addiction Status by IAT Scores

Status	Frequency	Percent	Minimum	Maximum	Mean	SD
Average user	97	67.8	6	39	25.65	8.24
Risky user	42	29.4	40	69	49.36	7.38
Internet addict	4	2.8	73	83	77.25	4.65
Total	143	100	6	83	34.06	15.24

Pearson correlation coefficients between participants' IAT scores and age as well as perception levels were calculated to examine whether IA were related to age and Internet perception. Participants' IAT scores were negatively and lowly correlated with perceiving the internet as a "communication tool" (r=-.18, p<.05), "source of information" (r=-.17, p>.05), positively and lowly correlated with perceiving the internet as "harmful and dangerous" (r=.22, p<.05) whereas they were not significantly correlated with age (r=.01, p>.05) and perceiving the internet as a "vital necessity" (r=.05, p>.05), "life facilitator" (r=-.13, p>.05) and "addictive" (r=.15, p>.05).

Conclusion

The results suggest that participating university students have positive perceptions about the Internet. However, they seem to be undecided about the harmful and dangerous sides or effects of the Internet. Although participants think that the Internet has an addictive nature, they also believe that it is not a danger in their lives. This is also supported by very small proportion of Internet addicts (2.8%) diagnosed through the IAT scores. This finding suggests that IA is not a serious problem among the participants. The findings of IA rate was similar to previous study by Sahin (2014) who find IA rate as 2% among university students but quite smaller than those studies like Balci and Gulnar (2009), Alacam et al. (2015) and Akdag et al. (2014) whose rate ranged from 8.6% to 23%.

In addition, small but significant correlations between IAT scores and Internet perceptions including "communication tool", "source of information" and "harmful and dangerous" suggest that participants seem to be aware of the addictive nature of the Internet and thus control their Internet usage. This suggests that viewing and ultimately using the Internet for informational and communicational purposes may not constitute an important risk factor for the emergence of IA among university students. On the other hand, albeit very small proportion of IA, the finding of more than one quarter of risky users (29.4%) with symptoms of potential IA with moderate problems imply that these users' IA status may get more severe based on their changing life situations and thus suggesting to closely monitor their Internet usage and habits.

The findings show a gender difference with males having a slightly higher level of IA than females. This is corroborating with prior research by Akdag et al. (2014), Balci and Gulnar (2009) and Sahin (2014). It seems that gender difference in IA among Turkish university students is stable and thus can be inferred in general. However, this research has not adequate evidence to interpret why males have higher IA than females. Future studies may focus on Internet usage patterns, gender issues in Turkish socio-cultural contexts, college life parameters, etc. to further examine the nature of gender differences in IA among Turkish university students.

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