

EXPLORATION OF PROBLEMATIC INTERNET USE AND LONELINESS AMONG DISTANCE EDUCATION STUDENTS

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ABSTRACT

The current study investigated the relationship between problematic Internet use and levels of loneliness among 311 distance education students. "The Problematic Internet Use Scale" and "UCLA-Loneliness Scale III" were used to collect the data. Independent-samples t-test and one-way ANOVA were conducted to examine the differences; and correlation and regression analyses were used to examine the relationships between variables. Findings revealed that male students' use of the Internet was more problematic compared to female students'. As the time spent on the Internet increased, so did the problematic Internet use levels. In addition, the problematic Internet use levels of students varied with regard to marital status and not varied regard to their ages. A significant relationship was found between the level of problematic Internet use and loneliness, and loneliness was found to be among the predictors of problematic Internet use. Implications and suggestions for further research are provided.

Keywords: Problematic internet use, loneliness, distance education student.

INTRODUCTION

In the early 1960s, due to the increasing significant of computers in sharing information, the Internet emerged through ARPANET, which was a military and scientific project. In the last 50 years, the Internet has rapidly spread worldwide and has become the most important information and communication technology in our age. In parallel with the world, Internet use in Turkey increases incrementally every year. According to Turkish Statistical Institute (TSI), household Internet use rate was 41.6%; this increased to 45.0% in 2011 and 47.2% in 2012. Similarly, according to the same research's results on Household Use of Information Technologies, 47.7% of the individuals, who belong to the 16-74 age group, use the Internet regularly.

This rapid increase of Internet use may have negative consequences such as pathological/problematic Internet use (Nalwa & Anand, 2003).

According to Beard and Wolf, (2001) problematic Internet use is overusing Internet which causes difficulties in physiological, social, educational or professional life of individuals. According to Caplan (2005) problematic Internet use is a multidimensional syndrome, which has cognitive and behavioral signs, cause negative consequences in social, academic,-professional areas.

As Shapira, Goldsmith, Keek Jr, Khosla and McElroy (2000) state, problematic Internet use can be defined as inability to control Internet use which causes individuals to be under intensive stress and creates negative impacts daily activities of individuals. Davis (2001) explains problematic Internet use as a psychiatric state which includes incompatible thoughts and pathological behaviors.

At the DSM-IV (Diagnostic and Statistical Manual of Mental Disorders), problematic Internet use is evaluated in the context of substance abuse and non-classified impulse control disorders.

According to Shapira, Lessig, Goldsmith, Szabo, Lazoritz and Gold (2003) problematic Internet use is like obsessive thinking and a pathology which is accompanied with obsessive-compulsive disorder.

In the context of reactions towards serotonin reuptake, it is considered as a derivation of obsessive-compulsive disorder. On the other hand, Yellowlees and Marks (2005) underline those individuals, who have tendency o problematic Internet use, suffered from impulse-control and addiction in the past. Although problematic Internet use is a common problem of several cultures (Cao & Su, 2007), teenagers and university students aged 16–24 (TSI, 2012) who are the most frequent users of the Internet, made up with the riskiest group (Chou, Condron & Belland, 2005; Kandell, 1998; Mossbarger, 2008; Öztürk, Odabasıoglu, Eraslan, Genç & Kalyoncu, 2007). On the one hand, a university student can easily access Internet during lectures and during his free time, on the other hand he has to struggle against psychological, social and environmental difficulties (Tutgun & Deniz, 2010; Kim & Davis, 2009; Ceyhan, Ceyhan & Gürcan, 2007).

If a student fails to struggle against these difficulties, problems such as stress or depression can occur.

In order to keep out of these problems, students can embrace the Internet which he considers it as a relaxation (Joinson, 2001) and answer to problems (Kandell, 1998; Morahan-Martin & Schumacher, 2003; Shepherd & Edelman 2005).

This situation causes university students to turn into problematic Internet users (Kim & Davis, 2009; Koç, 2011; Şahin, Balta & Ercan, 2010).

In the literature, there are several studies analysing the relationship between problematic Internet use and many variables such as gender (Ceyhan, 2010, 2008; Doğan, Işıklar & Eroğlu, 2008; Frangos, Frangos & Sotiropoulos, 2011; Ghamari, Mohammadbeigi, Mohammadsalehi & Hashiani 2011; Kim & Davis, 2009; Niemz, Griffiths

& Banyard, 2005; Odacı, 2011; Tutgun & Deniz 2010), Internet use frequency (Acier & Kern, 2010; Chou & Hsiao, 2000; Kim & Davis, 2009; Mazhari, 2012; Morahan-Martin & Schumacher, 2000; Tahiroğlu, Celik, Uzel, Özcan & Avcı, 2008; Yang & Tung, 2007), age (Mazhari, 2012; Mesudoglu, Aydın & Yerin-Güneri, 2011; Tutgun, Deniz & Moon, 2011), and marital status (Ghamari, Mohammadbeigi, Mohammadsalehi & Hashiani, 2011; Mazhari 2012). However results of these studies are different due to research samples. Some studies found a significant difference between problematic Internet use and the age variable, with males scoring higher (Balta & Horzum, 2008; Kim & Davis, 2009; Li & Chung, 2006; Odacı & Kalkan, 2010; Tahiroglu, Celik, Uzel, Ozcan & Avcı, 2008; Tutgun, Deniz & Moon, 2011), whereas some other studies fail to find any significant difference between males and females concerning problematic Internet use points (Batıgün & Hasta, 2010; Odacı, 2011; Subrahmanyam & Lin, 2007).

Another important factor to identify problematic Internet use is the Internet use frequency. In the literature, researchers came with the conclusion that the increase in the Internet use frequency also increases the possibility of problematic Internet use (Acier & Kern, 2010; Chou & Hsiao, 2000; Kim & Davis, 2009; Mazhari, 2012; Morahan-Martin & Schumacher 2000; Odacı & Kalkan, 2010; Tahiroglu, Çelik, Uzel, Özcan & Avcı, 2008; Tutgun & Deniz 2010; Yang & Tung, 2007).

The most prominent disagreement in the literature is related with daily time spent on the Internet. Some studies report that individuals, who spend more than 8 hours a day using the Internet, are likely problematic Internet users (Balta & Horzum, 2008). There are some other studies claiming that individuals, who spend more than 5 hours a day using the Internet, are possibly problematic Internet users (Odacı & Kalkan, 2010)

LONELINESS

The spread of Internet use day by day has enabled individuals to carry out several daily activities, particularly communication, through this media. The increase of Internet use for communication purposes lead to changes in cultural and social structure that modern individuals have become lonely individual having troubles to establish healthy social relations and experiencing social deviances (Erdogan, 2008; Lavin, Marvin, McLarney, Nola & Scott, 1999; Özodaşık, 2001; Rehm, 2003; Yıldız & Bölükbas, 2005). Loneliness is one of the leading troubles of today's human beings. Peplau and Perlman (1982) define loneliness as a negative situation which occurs after an individual perceives the difference between the existing social relationship and the desired social relationship. Weiss (1973) defines loneliness as the lack of social relations that are desired by the individual or as the lack of sincerity and affinity in the individual's current relations.

In the literature, a number of studies identified that there is a significant relationship between problematic Internet use and loneliness (Kim, LaRose & Wei 2009; Erdoğan, 2008; Keser-Ozcan & Buzlu, 2007; Moody, 2001, Tutgun, Deniz & Moon, 2011). In Çağır (2010)'s research on the relationship between problematic Internet use levels of teenagers and their levels of loneliness and well-being states shows that there is a significant and positive relationship between problematic Internet use and loneliness. Deniz and Tutgun (2010)'s research found problematic Internet use and loneliness levels of teacher candidates who are studying at the faculty of education. Similarly the findings obtained by Batıgün and Hasta (2010) support this conclusion.

Ceyhan and Ceyhan (2008) conducted a research on 589 university students and found that loneliness is the most effective variable in determining problematic Internet use. This variable was followed by depression and computer self-efficacy. Odacı and Kalkan's (2010) research on problematic Internet use, loneliness and social interaction anxiety of university students identified a significant and positive relationship between problematic Internet use and loneliness. Caplan (2007) found that loneliness and the perceived social benefits of online communication are two significant predictors of problematic Internet use among university students.

Purpose of the study

Although the literature is rich with studies focusing on problematic Internet use, so far no study dealt with distance education students and their possible problematic use of Internet and examined this issue in terms of several variables. In Turkey, there are approximately two million distance education students. In consideration of TSI (2012) data showing that Internet use is increasing day by day, it has become significant to identify possible problematic Internet use of distance education students who use Internet more frequently than formal education students. In this context, the main purpose of this research is to identify the relationship between the problematic Internet use levels of distance education students and the demographic variables and their level of loneliness. In this context, the study seeks answers to the following questions:

- Are there significant differences between the problematic Internet use levels of students by gender, age, marital status and the frequency of Internet use?
- Is there a significant relationship between the problematic Internet use levels of students and their levels of loneliness?

METHOD

This research is a descriptive research. In the research, relational screening model was employed. According to Karasar (2008), relational screening model aims to determine the change or levels of the change between two or more variables. The relations found through screening are not necessarily cause-effect relations; however the situation identified in variable may give hints about the other variable(s). In this context, the relationship between the problematic Internet use levels of students and their loneliness levels was analysed through correlation oriented relational screening model. The comparative relational screening model was used in order to determine whether there is a difference between the variables gender, age, marital status and the frequency of Internet use.

Participants

Participants were 311 distance education students who study at the Tunca Vocational School of the University of Trakya during the fall semester in the academic year of 2012-2013. 218 of the students are male, 93 of them are female. 110 students are between 23 and 26 years old, 105 students are between 18 and 22, 55 students are between 27 and 30, 28 students are between 31 and 34 and 13 students are over 35. 63 of the participants are married and 248 are single. 39.9% of the participants use the Internet 5-6 hours per day, 28.3% use it 3-4 hours, 15.1% use it 7 hours or more. 12.9% of the participants use the Internet 1-2 hours per day and 3.9% of them use it less than 4 hours in a week.

Data Collection Tools

Personal Information Form: This form was prepared by the researcher. It includes a group of questions which were asked to determine demographic information such as gender, age, marital status and the frequency of Internet use. **The Problematic Internet Use Scale (PIUS):** PIUS is a 33-item and five point Likert scale developed by Ceyhan, Ceyhan, and Gürcan (2007) to measure the levels of problematic Internet use of university students. The responses of the scale range from "strongly disagree" to "strongly agree".

The total score, which a respondent can receive from the scale, varies between 33 and 165 and the higher the score, the less healthy the Internet use of the individual concerned, the stronger its negative effects on the life of the respondent, and the higher the tendency for the respondent to develop an Internet addiction pathology. The scale consists of two sub factors: "negative consequences of Internet ($\alpha=.91$)", "social benefit/social comfort ($\alpha=.85$)" and "excessive use ($\alpha=.75$)". These three factors together explain 48.96% of the total variance.

The negative consequences of Internet factor alone explains 25.36% of the total variance, the social benefit/social comfort factor alone explains 14.62% of the total variance and the excessive use factor alone explains 8.98% of the total variance. Internal consistency coefficient of the scale was found ($\alpha=.94$), test retest correlation was found .81 ($p<.01$) and the correlation between these two items were found .83 (20). Internal consistency coefficient of the scale in this current study was found ($\alpha=.92$). Internal consistency coefficients of the three factors that constitute the scale were found ($\alpha=.89$), ($\alpha=.86$) and ($\alpha=.74$) respectively. **UCLA-The Loneliness Scale III (UCLA-LS 3):** UCLA-LS 3 is a 20-item and four point Likert scale in order to determine level of loneliness that is perceived by the individuals. The responses of the scale range from "never" to "always". The higher the score, the more intensive loneliness is experienced. The consistency and reliability of the scale in Turkey were tested by Durak and Senol-Durak (2010) and internal consistency coefficient of the scale was found ($\alpha=.90$). Internal consistency coefficient of the scale was found ($\alpha=.88$) for the current study's sample.

Data Collection and Analysis

The data were obtained from 327 students who participated in survey before the final exam in May 2012. The survey was made online. The students were provided information about the research topic and data collection tools prior to the survey. Then it was emphasized that the survey was voluntary. Next, the questions were answered approximately in 15 minutes. Before the data analysis, data input was verified and distribution of variables was tested whether they are compatible with the normality. Z score values were calculated whether the scores of the students were outliers. It was found that data of 11 students were outliers. In addition, the data obtained from 5 students, who did not properly fill data collection tools, were removed. The final sample of the research was 311 students. Prior to analysis, the Kolmogorov-Smirnov Test was applied in order to check whether the distribution of data was normal. The result of the test was $p>.05$ for the variables and the distribution was found normal. In analysing data, the study benefited from descriptive statistics, t test and the single factor variance analysis (ANOVA) test. The Pearson correlation coefficient was used in order to determine the relationship between the scales. The level of significance in these comparisons was accepted as .05.

FINDINGS

Table: 1 presents that there were significant differences between the genders with regards to the scores of distance education students from all three dimensions of the problematic Internet use scale. The significant differences were: between the negative consequences and gender ($t_{(309)}=-2.846$, $p<.05$), between social benefit/social comfort and gender ($t_{(309)}=-2.448$, $p<.05$) and between excessive use and gender ($t_{(309)}=-2.428$, $p<.05$). The mean score of the male participants was higher than the mean score of the female participants.

Tablo: 1
Distance education students' PIU levels with respect to the variable of gender

Variable	Group	N	\bar{X}	S	sd	t	p
Negative consequences of the Internet	Female	93	33.01	14.102	309	-2.846	.015
	Male	218	37.34	14.363			
Social benefit/social comfort	Female	93	20.95	8.270	309	-2.448	.022
	Male	218	23.46	9.020			
Excessive usage	Female	93	17.63	5.030	309	-2.428	.011
	Male	218	19.14	4.606			

Table: 2 shows that there were no significant differences between the age variable with regards to the scores of distance education students from all three dimensions of the problematic Internet use scale. These differences were not significant: between the negative consequences and age ($F_{(4-306)}=1.982$, $p>.05$), between social benefit/social comfort and age ($F_{(4-306)}=1.225$, $p>.05$) and between excessive use and age ($F_{(4-306)}=2.244$, $p>.05$).

Table: 2.
Distance education students' PIU levels with respect to the variable of age

Variable	Source of Variance	Sum of Squares	sd	Mean Square	F	p
Negative consequences of the Internet	Between Groups	1623.334	4	405.833	1.982	.097
	Within Groups	62660.036	306	204.771		
	Total	64283.370	310			
Social benefit/social comfort	Between Groups	384.060	4	96.15	1.225	.300
	Within Groups	23976.313	306	78.354		
	Total	24360.373	310			
Excessive usage	Between Groups	201.683	4	50.421	2.244	.064
	Within Groups	6877.063	306	22.474		
	Total	7078.746	310			

Table: 3 shows that there were significant differences between the marital status variable with regards to the scores of distance education students from all three dimensions of the problematic Internet use scale. The significant differences were: between the negative consequences and marital status ($t_{(309)}=-2.027$, $p<.05$), between social benefit/social comfort and marital status ($t_{(309)}=-2.661$, $p<.05$) and between excessive use and marital status ($t_{(309)}=-2.239$, $p<.05$). The mean score of the single students was higher than the mean score of the married ones.

Table: 3
Distance education students' PIU levels
with respect to the variable of marital status

Variable	Group	N	\bar{X}	S	sd	t	p
Negative consequences of the Internet	Married	63	32.78	12.961	309	-2.027	.044
	Single	248	36.88	14.652			
Social benefit/social comfort	Married	63	20.08	7.627	309	-2.661	.008
	Single	248	23.38	9.045			
Excessive usage	Married	63	17.49	5.168	309	-2.239	.026
	Single	248	18.99	4.637			

Table: 4 indicates that there were significant differences between the frequency of Internet use variable with regards to the scores of distance education students from all three dimensions of the problematic Internet use scale.

Table: 4
Distance education students' PIU levels
with respect to the variable of Internet use frequency

Variable	Source of Variance	Sum of Squares	sd	Mean Square	F	p	Meningfull Difference
Negative consequences of the Internet	Between Groups	11081.622	3	3693.874	21.315	.000	D-A, D-B, D-C
	Within Groups	53201.748	307	173.296			
	Total	64283.370	310				
Social benefit/social comfort	Between Groups	2940.922	3	980.307	14.051	.000	D-A, D-B, D-C
	Within Groups	21419.451	307	69.770			
	Total	24360.373	310				
Excessive usage	Between Groups	324.927	3	108.309	4.923	.002	D-A, D-B, D-C
	Within Groups	6753.819	307	21.999			
	Total	7078.746	310				

D: More than 5 hours per day C: 3-4 hours per day B: 1-2 hours per day A: 4 hours or less per week

The significant differences were: between the negative consequences and the frequency of Internet use ($F_{(3-307)}=23.467$, $p<.05$), between social benefit/social comfort and the frequency of Internet use ($F_{(3-307)}=15.175$, $p<.05$) and between excessive use and the frequency of Internet use ($F_{(3-307)}=5.533$, $p<.05$).

Problematic Internet use levels of the students significantly vary by the frequency of Internet use. The Scheffe test was employed in order to identify the groups having difference in terms of the frequency of Internet use (Table: 5). According to the results of the test, students who use the Internet more than five hours a day, have higher levels of problematic Internet use than other students. Table: 5 present's findings comprehensively about the comparison between problematic Internet use levels of the students and the means of the frequency of Internet use. It was observed that when the frequency of Internet use increases, the means of scores, which were obtained from the sub-scales of problematic Internet use scale, also increase.

Table: 5
Descriptive statistics of the distance education students for PIU levels with respect to the variable of Internet use frequency

Variable	Internet use frequency	N	\bar{X}	S
Negative consequences of the Internet	4 hours or less per week	12	27.42	7.154
	1-2 hours per day	40	29.68	11.702
	3-4 hours per day	88	29.65	10.194
	More than 5 hours per day	171	41.43	15.002
	Total	311	36.05	14.400
Social benefit social comfort	4 hours or less per week	12	16.83	5.024
	1-2 hours per day	40	18.55	6.516
	3-4 hours per day	88	20.14	7.989
	More than 5 hours per day	171	25.42	9.053
	Total	311	22.71	8.865
Excessive usage	4 hours or less per week	12	16.83	6.576
	1-2 hours per day	40	17.10	5.037
	3-4 hours per day	88	17.94	4.447
	More than 5 hours per day	171	19.57	4.581
	Total	311	18.69	4.779

The analysis revealed that there is a positive and moderate level relationship between the frequency of Internet use of distance education students and negative consequences of the Internet and the social benefit/social comfort dimension of problematic Internet use. Similarly

Table: 6
The relationship between the variable of Internet use frequency and the distance education students' PIU levels

	Internet use frequency	Negative consequences of the Internet	Social benefit social comfort	Excessive usage
Negative consequences of the Internet	.366**	-	.601**	.400**
Social benefit/social comfort	.331**	.601**	-	.284**
Excessive usage	.207**	.400**	.284**	-

**p<.01

Table: 6 shows that there is a positive and low level relationship between the frequency of Internet use and excessive use. In other words, more frequent users of the Internet also receive higher problematic Internet use scores. Table: 7 shows that there is a positive and moderate level relationship between the negative consequences of the Internet and social benefit/social comfort and there is a positive and low level relationship between level of loneliness and excessive use.

Table: 7
The relationship between the variable of UCLA III
and the distance education students' PIU levels

	UCLA III	Negative consequences of the Internet	Social benefit social comfort	Excessive usage
Negative consequences of the Internet	.364**	-	.601**	.400**
Social benefit/social comfort	.284**	.601**	-	.284**
Excessive usage	.294**	.400**	.284**	-

**p<.01

In this study, it was analyzed whether loneliness is a predictor of problematic Internet use. The simple regression analysis indicates that social loneliness is a predictor of all dimensions of problematic Internet use. It was found that loneliness explained 10% of the total variance concerning the negative consequences of the Internet [$r=.364$, $R^2=.13$, $F_{(1,309)}=41.138$, $p<.01$], 8% of the total variance concerning social benefit/social comfort [$r=.284$, $R^2=.08$, $F_{(1,309)}=27.093$, $p<.01$] and 8% of the total variance concerning excessive use [$r=.294$, $R^2=.08$, $F_{(1,309)}=29.159$, $p<.01$].

DISCUSSIONS and CONCLUSION

In this research, the relationship between problematic Internet use levels of distance education university students and their demographic characteristics and loneliness levels. Initial research findings showed that problematic Internet use levels of male students are higher than problematic Internet use levels of female students.

This finding is compatible with several findings of the previous literature (Balta & Horzum, 2008; Çuhadar 2012; Kim & Davis, 2009; Li & Chung, 2006; Odacı & Kalkan, 2010; Tahiroğlu, Çelik, Uzel, Özcan & Avcı, 2008; Tekinarslan & Gürer, 2011) but not compatible with the studies indicating that there is no significance difference between male and female students concerning problematic Internet use (Batigün & Hasta, 2010; Odacı, 2011; Subrahmanyam & Lin, 2007). According to this finding, the Internet, for male students may be considered as a medium through which they can communicate with other people more easily and better express themselves and prefer an online communication to face-to-face interaction. Similarly, Ceyhan (2008) states that males can better express their feelings on the initial stages of relationship, therefore they prefer the Internet rather than face to face communication.

On the other hand, it was thought that in our patriarchal society males can easily spend more time in the Internet cafes where they can play online games in comparison to females. This can explain higher levels of problematic Internet use of the males.

Another finding obtained from the research is that the increase of the frequency of Internet use causes a linear increase in the scores of problematic Internet use. This finding is compatible with the findings of the previous literature (Acier & Kern, 2010; Chou & Hsiao, 2000; Çuhadar 2012; Kim & Davis, 2009; Mazhari, 2012; Morahan-Martin & Schumacher, 2000; Tahiroğlu, Çelik, Uzel, Özcan & Avcı, 2008; Yang & Tung, 2007). It is considered that problematic use of Internet is connected to students' quest for relieving from daily life troubles, establishing social relations, watching video or visuals, playing games and spending time with entertainment activities in an unrestrained way.

The study also found that problematic Internet use levels of single students are higher than problematic Internet use levels of married ones. This finding is supported by some research in the literature (Ghamari, Mohammadbeigi, Mohammadsalehi & Hashiani, 2011) but it is not compatible with some studies as well (Mazhari, 2012). The responsibilities and liabilities of marriage lead individuals to an organized and regular daily life and eventually limit several activities like Internet use. However, individuals' need for establishing social relations with new people may diminish with marriage. Therefore, it is considered that the frequency of Internet use and consequently problematic Internet use level can decrease. Cultural factors may play a role in differences between the findings of the current research and previous literature. Further comparative, qualitative and quantitative studies are needed to analyse these differences in a more accurate way.

The study identified that there is no significant difference between the ages of distance education students and problematic Internet use. In other words, the change in students' ages does not affect problematic Internet use. These finding parallels the findings of some studies in the literature (Tutgun, Deniz & Moon, 2011), however it does not coincide with research findings of some studies as well (Mazhari, 2012; Mesudoğlu, Aydın & Yerin-Güneri, 2011).

This difference may stem from the fact that the average age of the participants to this study (25 years old) is higher than the participants (21-23 years old) at the above mentioned research. It is considered that senior individuals use Internet more consciously and purposefully. In his thesis, Çağır (2010) compares problematic Internet use of high school and university students. Accordingly, students whose ages are between 18 and 23 have higher problematic Internet use levels than the ones who are over 23 years old. Similarly, Lee (2009) found that teenagers have higher problematic Internet use levels than adults and identified a negative correlation between problematic Internet use and age.

Another finding of the research is that loneliness level is a moderate level predictor of problematic Internet use. Previous research on this issue supports this finding (Caplan, 2007; Ceyhan & Ceyhan, 2008; Çağır, 2010; Kim, LaRose, & Peng, 2009; Lavin, Yuen, Weinman, & Kozak, 2004; Chak, & Leung, 2004; Morahan-Martin & Schumacher, 2003). Individuals with problematic social lives can express themselves more freely in the virtual world, communicate better with other people and gradually become more isolated and lonely individuals.

These unbounded efforts in the Internet may turn individuals into problematic Internet users. Similarly Koç (2011) states that individuals, who seek social support, try to satisfy this need through Internet. This causes results in psychological problems such as depression and loneliness and leads individuals to become problematic Internet users and even to show indications of addiction.

In this research it was found that problematic Internet use level of distance education students are moderate and male students use the Internet in a more problematic way in comparison to female students. It was also found that the increase in the frequency of Internet use leads to an increase in problematic Internet use level. Marital status influences problematic Internet use. There is no significant relationship between age and problematic Internet use level.

Besides, it was identified that there is a significant relationship between loneliness level and problematic Internet use level and loneliness is predictor of problematic Internet use. With regards to the spread of Internet use and diminishing age of Internet users, awareness of the students, who consider the Internet as a way to relieve from daily troubles, should be raised before they turn into problematic Internet users. They may be directed to several social activities to become sociable. The students, who have become problematic Internet users, should be assisted by several advisors and counsellors in order to overcome this problem.

This study has several limitations. One major limitation is that the research findings are restricted to distance education students who constituted the research's population. As each university has a distinctive academic and social structure, it would be better to conduct future studies with distance education students of different universities and findings should be evaluated in this context. Another limitation of the study is that findings are based on students' own opinions and choices. Further studies analyzing the interaction between problematic Internet use of distance education students and their loneliness levels by adding different variables or scales would add a new dimension to the current study.

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