



PREDICTIVE EFFECTS OF ACADEMIC ACHIEVEMENT, INTERNET USE DURATION, LONELINESS AND SHYNESS ON INTERNET ADDICTION

AKADEMİK BAŞARI, İNTERNETTE KALINAN SÜRE, YALNIZLIK VE UTANGAÇLIĞIN İNTERNET BAĞIMLILIĞI ÜZERİNDEKİ YORDAYICI ETKİLERİ

Jale ELDELEKLIOĞLU* Meryem VURAL-BATIK**

ABSTRACT: This study investigated whether internet addiction is related to gender, academic achievement, duration of internet use, loneliness and shyness. The study was carried out with 206 adolescents aged between 15-18 years ($X=16.50$) and studying public high schools. 55.8% (115) of the participant students are female and 44.2% (91) are male. To collect data, the “Personal Information Form” developed by the researchers, the “Internet Addiction Scale” developed by Young (1998), the “UCLA Loneliness Scale” developed by Russel, Peplau and Cutrona (1980), and the “Shyness Scale” developed by Cheek and Buss (1981) were used. The results indicated that internet addiction changed according to gender, academic achievement and duration of internet use. Moreover, while academic achievement significantly and negatively predicted internet addiction, duration of internet use and shyness significantly and positively predicted internet addiction. However, the variables of gender and loneliness were found to have no significant effects on internet addiction.

Keywords: Internet addiction, academic achievement, duration of internet use, loneliness, shyness

ÖZET: Bu çalışmada internet bağımlılığının cinsiyet, akademik başarı, internete girilen süre, yalnızlık ve utangaçlık ile ilişkili olup olmadığı araştırılmıştır. Araştırma, devlet liselerinde öğrenim gören 15-18 yaş arası ($X=16.50$) 206 ergen ile yapılmıştır. Araştırmaya katılan öğrencilerin %55.8 (115)’i kız, %44.2 (91)’i erkektir. Araştırmanın verileri sırası ile araştırmacılar tarafından geliştirilen “Kişisel Bilgi Formu”, Young (1998) tarafından geliştirilen “İnternet Bağımlılığı Ölçeği”, Russel, Peplau and Cutrona (1980) tarafından geliştirilen “UCLA Yalnızlık Ölçeği” ve Cheek and Buss (1981) tarafından geliştirilen “Utangaçlık Ölçeği” ile toplanmıştır. Araştırmanın sonuçları internet bağımlılığının cinsiyet, akademik başarı, internet kullanım süresine göre farklılaştığını göstermiştir. Ayrıca akademik başarının internet bağımlılığını negatif yönde anlamlı olarak yordadığı, internet kullanım süresi ve utangaçlığın ise internet bağımlılığını pozitif yönde anlamlı olarak yordadığı görülmüştür. Cinsiyet ve yalnızlık değişkenlerinin internet bağımlılığı üzerinde anlamlı etkileri bulunamamıştır.

Anahtar Sözcükler: İnternet bağımlılığı, akademik başarı, internete girilen süre, yalnızlık, utangaçlık

1. INTRODUCTION

Advances in technology have made the internet an indispensable part of our lives. However, it has also turned out to be an important source of risk. Although the definition of internet addiction has remained uncertain, Shapira, Goldsmith, Keck, Khosla and McElroy (2000) defined internet addiction as problematic and pathological internet use. Young (1997) defined an internet use of at least 38 hours a week in addition to academic study and work as internet addiction.

Shapiro (1999) accepted an internet use of 2, 8 to 5 hours a week as normal. Although internet addiction was defined in relation to the duration internet use in the past, it is no longer a criterion (Simkova and Cincera 2004). Pathological internet use is defined as psychological addiction to internet (Nalwa and Anand 2003). Young and Rodgers (1998a) related internet addiction to poor impulse control. Moreover, Shapira et al. (2000) stated that internet addiction might result in lack of control, manifest anxiety, time consumption, and social, professional and financial problems. Internet addiction can be characterized as spending a gradually increasing amount of money and time on

* Assoc. Prof. Dr., Department of Guidance and Counseling Psychology, Uludag University, Bursa, Turkey
eldelek@uludag.edu.tr

** Department of Special Education, Ondokuz Mayıs University, Samsun, Turkey. meryem.vural@omu.edu.tr

activities on the internet, emerging of unpleasant feelings when staying away from the internet, and decrease in anxiety and problematic behaviour while on the net (Nalwa and Anand 2003).

Many of the reviewed studies have showed negative results of internet use. For example, internet achieves evident changes in communication and in interpersonal behaviors (Weiser 2001).

Internet addiction leads to emotional, social and sexual function disorders, psychiatric disorders and anxiety (Shapira et al. 2000), introversion (Young 2007), increase in level of depression (Cao, Su, Liu and Gao 2007; Caplan 2002; Kang 2007; Kraut, Paterson, Lundmark, Kiesler, Mukophadhyay and Scherlis 1998; Sang, Whang, Lee and Chang 2003; Shapiro, 1999; Young and Rodgers 1998b). Furthermore, recent studies have indicated that internet addicts gradually become less interested in social activities (Nie and Erbring 2000; Robin and Cooper 2003; Shapiro 1999), start to exhibit non-functional social behaviors (Sang et al. 2003), have narrowing social environments (Kraut et al. 1998), have daily life problems (Chou and Hsiao 2000; Young 2007) and have weakening in-family communications (Kraut et al. 1998; Willoughby 2008). Shortly, internet addiction might result in social, academic, familial and professional degenerations (Young 2007).

Caplan (2002) specified the variables related to problematic internet use as depression, loneliness, shyness and self-esteem. One of the variables related to internet addiction is loneliness (Engelberg and Sjöberg 2004) and the studies made on this yielded different results. Although internet increases loneliness (Kraut et al. 1998; Morahan-Martin 1999; Shapiro 1999; Young 2007), lone individuals are more inclined to using the internet (Caplan 2007; Yellowlees and Marks 2007; Young and Rodgers 1998a), and it is also likely that they get an opportunity to decrease their loneliness by setting up social relationships (Ando and Sakamoto 2008; Sum, Mathews, Hughes and Campbell 2008). However, the inactive more lonely adolescents are more likely to become pathological internet users (Young and Rodgers 1998a). In fact, most authors have stated that the loneliness levels of pathological internet users are high (Cao et al. 2007; Morahan-Martin and Schumacher 2000; Nalwa and Anand 2003; Sang et al. 2003; Sum et al. 2008; Young 1996) and they get in less interaction with their peers (Harman, Hansen, Cochran and Lindsey 2005).

Few studies investigating the relationship between internet addiction and shyness have showed that the possibility of being rejected and criticized in cyber communications is very low (Pollock 1999, cited by Durmuş 2007) and for this reason shy individuals use the internet more frequently (Henderson and Zimbardo 2005, cited by Durmuş 2007) and they are more prone to become internet addicts (Chak and Leung 2004). Caplan (2002) found a relationship between problematic internet use and shyness. Furthermore, Khambekar (2003) states that children spending a lot of time on the internet without feeling a need to set up a face-to-face relationship with other people are unable to learn social skills and this leads them to become shy individuals (Cited by Hasdemir 2005). Studies have shown that another variable related to internet addiction is academic success. Overuse of the internet causes academic problems (Anderson and Dill 2000; Brenner 1997; Niemz, Griffiths and Banyard 2005; Young 1999; Willoughby 2008). Relevant studies have indicated that internet addiction or spending long hours on the internet leads to low academic success (Anderson and Dill 2000; Bayraktar 2001; Young 1996). Different from these, Willoughby (2008) states that not non-use or over-use but average use of the internet is related to academic success. In addition to the fact that internet use leads to low academic success, it should also be taken into consideration that individuals with low academic success are more inclined to use the internet.

Studies have investigated mostly the relationship between internet addiction and gender. While many of these studies have found that boys use the internet more frequently than girls (Bayraktar 2001; Morahan-Martin and Schumacher 2000; Willoughby 2008), there are also other studies having revealed that girls use the internet more frequently than boys (Henderson and Zimbardo 2005, cited by Durmuş 2007). Another important variable closely related to internet addiction is the internet use duration. Studies have shown that pathological internet users spend more time on the internet (Chou and Hsiao 2000; Chak and Leung 2004; Ferraro, Caci, D'Amico and Blasi 2007; Nalwa and Anand

2003; Simkova and Cincera 2004; Young 1996) and addiction grows with the increase in the duration of internet use (Bayraktar 2001; Chou, Chou and Tyan 1999).

Although there are studies aiming to determine the characteristics of adolescents using the internet, there are no studies investigating relationships between internet addiction and gender, academic success, internet use duration, loneliness and shyness. Considering all these, the present study aims to investigate the relationships between internet addiction and gender, academic success, internet use duration, loneliness and shyness. For this purpose, answers have been sought for the following questions:

- 1- Does internet addiction differ according to gender, academic achievement, internet use duration, loneliness and shyness?
- 2- Are there any significant differences between the internet addiction scores and those of loneliness and shyness?
- 3- To what extent do gender, academic achievement and duration of internet use, loneliness and shyness predict internet addiction?

2. METHOD

2.1. Sample

The study was carried out during the 2011- 2012 educational year in three high schools, two Anatolia high schools and one general high school, in the province of Bursa. These high schools were chosen because they represent middle socio-economic level and are easy to reach. The study was carried out with a total of 206 students aged between 15-18 years. The mean age of the students was calculated as 16.5 (SD=7.89). 55.8% (115) of the participant students are female and 44.2% (91) are male. The details related to demographic variables are shown in Table 1 in the 'Findings' section.

2.2. Instruments

To collect data for the study, first the "Personal Information Form" was used, then the "Internet Addiction Scale" was used to determine internet addiction levels of the students, next the "UCLA Loneliness Scale" was used to determine the loneliness levels of the students, and finally the "Shyness Scale" was used to determine the shyness levels of the students.

Personal Information Form (PIF): The Personal Information Form prepared by the researchers with the aim of collecting data about the adolescents participating in the study included items inquiring about the participant students' genders, ages, grades, academic achievement levels, internet access places and internet use durations. Academic achievement level was calculated over 100 and divided into four groups; namely low, middle, good and very good.

Internet Addiction Scale (IAS): The IAS developed by Young (1998) was translated into Turkish by Bayraktar (2001). For the reliability of the scale, Bayraktar (2001) found that the Cronbach alpha was .91 and the Spearman- Brown value was .87. The scale aiming to determine internet addiction in adolescents is composed of 20 items. It is a six-point likert type scale. The scale asked the participants to mark one of the alternatives of "never", "rarely", "sometimes", "mostly", "very frequently" and "always". These alternatives were scored 0, 1, 2, 3, 4 and 5 points in the given order. Those scoring 80 points and over were described as "Pathological Internet Users", those scoring between 50-79 points were described as "Limited Symptoms", and those scoring 50 points and under were described as "No Symptoms".

University of California Los Angeles Loneliness Scale (UCLA): The scale developed by Russel, Peplau and Cutrona (1980) was adapted by Demir (1989) into Turkish and the Cronbach alpha was found to be .96 and the correlation coefficient was found to be .94. The scale was composed of 20 items, 10 forward and 10 reverse, and one dimension. The participants were asked to indicate the

frequency of their experiences in regard to the situations specified in the items on a four-point Likert type scale. The scale was scored like this: the items including positive statements were scored 4 points for “I never experience”, 3 points for “I rarely experience”, 2 points for “I sometimes experience”, and 1 point for “I often experience“, and the ones including negative statements were scored in the contrary way. The highest point which could be obtained from the scale was 80 and the lowest one was 20. As the point obtained from the scale increased, so did the level of loneliness.

Shyness Scale (SS): The scale developed by Cheek and Buss in 1981 originally included 9 items, but later the number of items was increased to 13 by Cheek in 1983. It was adapted into Turkish by Güngör (2001) and its validity and reliability studies were made. By adding 7 items, a new scale composed of 20 items was obtained. The reliability coefficient of the scale was found to be .83 and the Cronbach alpha was found to be .91. For the validity of the scale, the method of “Validity of Similar Scales” was applied and the relationship between was found to be .78. As a result of the factor analysis applied, it was concluded that the scale was to be evaluated uni-dimensionally. The shyness scale was a 20-item five-point Likert type scale and included statements. The scale was administered by asking individuals to choose one of the alternatives “Very Uncharacteristic”, “Uncharacteristic”, “Neutral”, “Characteristic” and “Very Characteristic”. The highest score which can be obtained from the scale is 100 and the lowest score is 20. High score means that the individual perceives him/herself “shy”.

2. 3. Procedure and Data Analysis

Data collection tools were administered by the researchers during the spring semester of the 2011-2012 educational year to the students spending more than one hour on the internet in groups in a single session. The reason why the scales were administered to those students was the thought that more number of problematic users could be reached. Before administering the data collection tools to the students, a preliminary study was made to determine the students spending more than one hour on the internet and the scales were administered to the voluntary ones. During the administration, the school guidance teachers were in the classroom. The administration of the measurement tool took about 30 minutes.

In the direction of the research questions, the independent samples t-test was applied to determine if internet addiction changed according to the variable of gender. Again in order to see if internet addiction changed according to loneliness and shyness, academic success, duration of internet use, one-way ANOVA was employed. The Pearson Product Moments Correlation Analysis was made to look at the relationship between internet addiction and loneliness and shyness, multiple regression analysis was applied to examine the effects of academic success, duration of internet use, loneliness and shyness on internet addiction. The data was analyzed by using “SPSS 13.0 for Windows” package program. In the study, the significance level was accepted as .05, which is used in testing hypotheses.

3. FINDINGS

Below are given the findings, tables and interpretations obtained as a result of the analyses made with the data collected in accordance with the aim of the study. Firstly, the data collected through the Personal Information Form, then the scores obtained from the scales, and finally relationships between the variables are presented.

3.1. Findings Regarding Gender, Age, Academic Success, Place of Internet Connection and Internet Use Duration

The frequencies and percentages regarding gender, age, class, academic success, place of internet connection and duration of internet use of the participant students are given in Table 1.

Table 1: Descriptive Statistics of Gender, Age, Class, Academic Success, Place of Internet Connection and Internet Use Duration

	Groups	(n)	(%)
Gender	Boys	91	44,2
	Girls	115	55,8
Age	15	53	25,7
	16	58	28,2
	17	42	20,4
	18	53	25,7
Class	9th Class	51	24,7
	10th Class	64	31,1
	11th Class	26	12,6
	12th Class	65	31,6
Academic success	Bad	19	9,2
	Average	83	40,3
	Good	95	46,1
	Very good	9	4,4
Place of internet connection	House	145	70,4
	Internet Café	18	8,7
	Mobile Phone	43	20,9
Internet use duration	1- 2 hours	121	58,7
	2- 3 hours	47	22,8
	3- 5 hours	24	11,7
	More than 5 hours	14	6,8

When Table 1 is examined, it is observed that 55,8% of the total 206 participant students are girls and 44,2% of them are boys. 25,7% of the students are below 16, 28,2% of them are 16, 20,4% of them are 17 and 25,7% of them are above 17 and the mean age is 16,5. 31,6% of the students are the 12th graders and 31,1% of them are the 10th graders. In terms of academic achievement, it is observed that 9.2% of the students have low level, 40.3% of them have middle level, 46,1% of them have good level and 4.4% of them have very good level of academic achievement. 70.4% of the students state that they connect the internet at home, 8.7% of them at an internet café and 20.9% of them at their mobile phones. When the duration of internet use is examined, it is observed that 58.7% of the students state that they spend 1-2 hours on the internet, 22,8% of them spend 2-3 hours, 11.7% of them spend 3-5 hours and 6.8% of them spend more than 5 hours.

3.2. Findings Concerning the Internet Addiction, Loneliness and Shyness

Table 2 shows the frequencies, percentages, means and standard deviations of the scores which the participant students obtained from the loneliness, shyness and internet addiction scales.

Table 2: Means and Standard Deviations of the Internet Addiction, Loneliness and Shyness Scores

	Groups	(n)	(%)	X	SD	(n)
Internet Addiction	No Symptoms (0-50)	175	85,0	30,61	18,42	206
	Limited Symptoms (51-79)	30	14,5			
	Pathological Internet User (80-100)	1	0,5			
Loneliness	Low (20-40)	155	75,2	35,26	9,19	206
	Average (40-60)	49	23,8			
	High (60-80)	2	1,0			
Shyness	Low (20-50)	84	40,8	54,28	16,23	206
	Average (50-70)	92	44,7			
	High (70-100)	30	14,5			

When Table 2 is examined, it is observed that 85% of the participant students are not internet addicts, 14.5% of them are partly internet addicts and 0.5% of them are pathological internet addict. The average internet addiction level is 30.61 and the standard deviation is 18.42. From the loneliness scale, 75.2% of the adolescents obtained scores ranging between 20-40, 23.8% of them between 40-60 and 2% of them between 60-80. The mean of the loneliness level is 35,26 and the standard deviation is 9,19. From the shyness scale, 40.8% of the adolescents obtained scores ranging between 20-50, 44.7% of them between 50-70 and 14.5% of them between 70-100. The mean of the shyness level is 54,28 and the standard deviation is 16,23. In general, it can be stated that the internet addiction and loneliness levels of the participant adolescents are low and their shyness levels are moderate.

3.3. Findings Indicating the Relationships between Internet Addiction and Gender, Academic Success and Internet Use Duration

The results of the independent samples t-test and one-way ANOVA applied in order to determine if the internet addiction scores of the participant students change according to the variables of gender, academic success and internet use duration are given in Table 3.

Table 3: t-test and One Way ANOVA Results

		Internet Addiction Scale Scores (IASS)		
	Groups	X±SD	t	Dif.
Gender	Boys (n=91)	34,34±17,90	-2,622**	
	Girls (n=115)	27,66±18,36		
	Groups	X±SD	F	Dif.
Academic Success	Bad (n=19)	48,84±20,73	11,713**	2, 3 – 1
	Average (n=83)	30,02±18,52		
	Good (n=104)	27,75±16,04		
	Groups	X±SD	F	Dif.
Internet Use Duration	Max 2 hours (n=121)	27,53±16,67	10,441**	1, 2 – 3
	Between 2-5 hours (n=71)	32,07±17,38		
	5 hours and above (n=14)	49,86±25,66		

**p<.01 *p<.05

When Table 3 is examined, it is observed that, according to the t-test results, there are significant differences between the girls and the boys in terms of internet addiction scores ($p < .01$). According to the results of the study, the internet addiction levels of the boys are significantly higher than those of the girls.

According to the one way ANOVA results, it is observed that there are significant differences between the internet addiction scores of the students with low, middle and good academic achievement levels ($p < .01$). According to the results, the internet addiction levels of the students with low academic achievement level are significantly higher. Moreover, in terms of internet use duration, too, it is observed that the internet addiction scores differed ($p < .01$). The internet addiction scores of those spending over 5 hours on the internet are higher when compared to those of the students spending 2-5 hours and less than 2 hours on the internet. As the internet use duration increases, so does the internet addiction significantly.

3.4. Correlations between the Internet Addiction, Loneliness and Shyness Scores

As a result of the Pearson correlation analysis made to see if there is a significant relationship between the variables of internet addiction, loneliness and shyness, it is found that there are significant positive relationships between internet addiction and loneliness ($r = .17$, $p < .05$) and between internet addiction and shyness ($r = .26$, $p < .01$) at low levels.

3.5. The Result of the Multiple Regression Analysis

Multiple regression analysis was made to see the predictive effects of the variables of gender, academic success, internet use duration, loneliness and shyness on internet addiction and the results are given in Table 4.

Table 4: Multiple Regression Analysis for Internet Addiction

Depend.V.	R	R ²	F	Indep. V.	t	P
Internet Addiction Scale	0,471	0,222	8,070**	Constant	2,250	0,026*
				Gender	.760	0,448
				Academic Success	-1,987	0,048*
				Internet Use Duration	2,672	0,008**
				Loneliness score	,775	0,439
				Shyness score	3,160	0,002**

**p<.01 *p<.05

As a result of the regression analysis made, it is observed that the model is significant (R=.471, R²= .222, F= 8.070, p= 0,000) and all the dependent variables entering the regression analysis explain 22% of the changes on the dependent variables. As seen in Table 4, when all the predictive variables entering the regression analysis are taken one by one, it is observed that the variable of academic success predicts internet addiction significantly in a negative way (p< .05). However, internet use duration and shyness, the other predictive variables, are observed to predict internet addiction significantly in a positive way (p< .01). The variables of gender and loneliness do not have any predictive effects on internet addiction. According to the standardized regression coefficient (B), the relative importance order of the predictors of internet addiction is shyness, internet use duration and academic success. When the t-test results related to the significance of the regression coefficients are examined, it is observed that the variables of academic success, internet use duration and shyness are significant predictors of internet addiction scores.

4. DISCUSSION

In this study, the relationships between the internet addiction levels of 15-18-year-old adolescents enrolled in secondary education and the variable of gender, academic success, duration of internet use, loneliness and shyness were examined. According to the findings obtained from the study, internet addiction differs according to gender. The boys' internet addiction levels are higher compared to the girls' (p< .01). However, according to the regression analysis results, gender does not predict internet addiction significantly. These findings overlap some of those of research studies made previously (Bayraktar 2001; Morahan-Martin, Schumacher 2000; Willoughby 2008). According to the results of this study, internet addiction is higher in boys. Different from these, in a study made by Henderson ve Zimbardo (2005), it was found that girls use internet more intensively than boys (Cited by Durmuş 2007). Again, in the literature, while it is stated that the gender variable of some studies predict internet use significantly (Aktaş-Arnas 2005; Bayraktar 2001), in the study by Günüç (2009), the gender variable was found to be a significant predictor of internet use.

When we look at the results of the study, it is observed that those with low academic success have higher level of internet addiction and academic success predicts internet addiction negatively. That the level of internet addiction changes according to academic success is an expected result. This finding is supported by many studies (Anderson and Dill 2000; Bayraktar 2001; Brenner 1997; Morahan-Martin and Schumacher 2000; Niemz et al. 2005; Young 1996; Young 1998; Young 1999; Willoughby 2008). Moreover, it is observed that academic success predicts internet addiction

negatively. Günüç (2009), in a study made with adolescents, states that academic success predicts internet addiction negatively. These two findings show parallelism.

One of the findings of the study is that internet addiction level changes according to internet use duration and internet use duration predicts internet addiction positively. That the internet addiction scores of the adolescents spending more than 5 hours a day on the internet were found to be higher than those of the adolescents spending less than one hour a day on the internet is supported by some research findings. For example, while Chou et al. (1999) state that as internet use duration increases so does internet addiction level, most authors put forward that internet addicts use the internet more frequently (Chak and Leung 2004; Chou and Hsiao 2000; Ferraro et al. 2007; Nalwa and Anand 2003; Simkova and Cincera 2004; Young 1996). Under the light of these findings, it can be stated that as internet use duration increases, adolescents connect the internet and use it more.

According to the results of the study, although there is a weak negative significant relationship between loneliness and internet addiction, it is observed that loneliness does not predict internet addiction significantly. In studies made in Turkey and abroad to investigate into relationships between loneliness and internet addiction, different findings have been obtained. Many researchers state that loneliness increases internet use (Engelberg and Sjöberg 2004; Kang 2007; Kraut et al. 1998; Morahan-Martin and Schumacher 2003; Shapiro 1999; Young 2007). However, Eldeleklioğlu (2008) found in her study made with adolescents that internet use duration does not have a significant effect on loneliness. These different findings indicate that such questions as “Does internet increase or decrease loneliness?” and “Do internet addict adolescents become alone or they use internet more frequently because they are alone?” have not been answered yet. Moreover, it should be remembered that internet use does not make the same effect on every adolescent and while it decreases loneliness in some adolescents, it increases in others.

Another finding of the study is that there is a significant positive relationship between internet addiction and shyness and shyness predicts internet addiction significantly. Moreover, in the studies made by Chak and Leung (2004) and Ebeling, Frank and Lester (2007), shyness was found to be a significant predictor of internet addiction. In some studies investigating into relationship between shyness and internet addiction, it was stated that shy individuals are more prone to become internet addicts (Chak and Leung 2004) and problematic internet use is related with shyness (Caplan 2002). It is considered that fewer social skills (Engelberg and Sjöberg 2004; Harman et al. 2005) and lower self-esteem (Niemz et al. 2005; Young and Rodgers 1998a) observed in individuals using the internet more frequently might cause an increase in shyness. Despite these findings, the question whether internet addict individuals become shy or shy individuals become internet addicts has not become clear yet. In order to make better interpretations about this matter, more study results are needed. As a matter of fact, due to the lack of the possibility of shy individuals’ being rejected or criticized in cyber communications (Pollock 1999, cited by Durmuş 2007), they might more possibly be turning towards the internet.

In summary, the results of the present study indicate that internet addiction differ according to gender, academic success and internet use duration; moreover, academic success, internet use duration and shyness are significant predictors of internet addiction. However, our study has some limitations. The participant girl students’ being more in number compared to boy students, taking only gender, academic success, internet use duration, loneliness and shyness as the variables predicting internet addiction, the study’s having been carried out at middle-SES high schools can be mentioned among the limitations of our study.

Starting from the findings of the study, we can make these suggestions: When the characteristics of adolescence period are taken into consideration, it is understood that shyness and low academic success pose a risk for excessive internet use. It will be appropriate to attach more importance to works aiming to decrease shyness and increase social skills at schools by basing on preventive and developmental guidance. Besides this, it will be useful that psychological counselors should help students and parents, especially during the first years of adolescence, with respect to the matter of directing students to social environments where they can meet their social and emotional needs.

Adolescents' participating in social environments more frequently might decrease their internet use durations. In addition to this, in order to increase academic success, educational guidance works might be attached more importance. Moreover, psychological guidance works based on cognitive-behavioral approach can be performed intended for internet addict adolescents.

REFERENCES

- Aktaş-Arnas, Y. (2005). 3-18 Yaş grubu çocuk ve gençlerin interaktif iletişim araçlarını kullanma alışkanlıklarının değerlendirilmesi. *The Turkish Online Journal of Educational Technology*, 4(4) article 9.
- Anderson, C.A. & Dill, K.E. (2000). Video games and aggressive thought, feelings, and behavior in the laboratory and in life. *Journal of Personality and Social Psychology*, 78 (4) ; 772- 790.
- Ando, R. & Sakamoto, A. (2008). The effect of cyber-friends on loneliness and social anxiety: Differences between high and low self-evaluated physical attractiveness groups. *Computers in Human Behavior*, 24 (3); 993- 1009.
- Bayraktar, F. (2001). "İnternet kullanımının ergen gelişimindeki rolü". Yüksek lisans tezi, Ege Üniversitesi Eğitim Bilimleri Enstitüsü.
- Brenner, V. (1997). Psychology of computer use: VLVII. Parameters of internet use, abuse and addiction: the first 90 days of the internet usage survey. *Psychological Reports*, 80; 879- 882.
- Cao, F., Su, L., Liu, T. & Gao, X. (2007). The relationship between impulsivity and internet addiction in a sample of Chinese adolescents. *European psychiatry: The Journal of the Association of European Psychiatrists*, 22(7); 466- 471.
- Caplan, S.E. (2002). Problematic internet use and psychosocial well-being: Development of a theory-based cognitive behavioral measurement instrument. *Computers in Human Behavior*, 18(5); 553- 575.
- Caplan, S.E. (2007). Relations among loneliness, social anxiety, and problematic internet use. *CyberPsychology & Behavior*, 10(2); 234- 42.
- Chak, K., & Leung, L. (2004). Shyness and locus of control as predictors of internet addiction and internet use. *Cyber Psychology & Behavior*, 7(5); 559- 570.
- Cheek, J. M. & Buss, A. H. (1981). Shyness and sociability. *Journal of Personality and Social Psychology*, 41(2), 330-339.
- Chou, C., Chou, J. & Tyan, N.N. (1999). An exploratory study of internet addiction, usage and communication pleasure- the Taiwan's case. *International Journal of Educational Telecommunications*, 5; 47- 64.
- Chou, C. & Hsiao, M.C. (2000). Internet addiction, usage, gratification and pleasure experience: the Taiwan college students' case. *Computer & Education*, 35; 65- 80.
- Demir, A. (1989). UCLA Yalnızlık Ölçeği'nin geçerlilik ve güvenilirlik çalışması. *Psikoloji Dergisi*, 7 (23); 14- 18.
- Durmuş, E. (2007). The perceptions of shy and non-shy students. *Ankara University Journal of Faculty of Educational Sciences*, 40, (1); 243- 268.
- Ebeling- Witte, S., Frank, M.L., & Lester, D. (2007). Syness, internet use and personality. *Cyber Psychology & Behavior*, 10(5); 713-716.
- Eldeleklioglu, J. (2008). Gender, romantic relationships, internet use, perceived social support and social skills as the predictors of loneliness. *Eurasian Journal of Educational Research*, 33; 127- 140.
- Engelberg, E. & Sjöberg, L. (2004). Internet use, social skills, and adjustment, *CyberPsychology & Behavior*, 7 (1); 41- 50.
- Ferraro, G., Caci, B., D'Amico, A. & Blasi, M. (2007). Internet addiction disorder: An Italian Study. *CyberPsychology & Behavior*, 17; 170- 75.
- Harman, J. P., Hansen, C. E., Cochran, M. E. & Lindsey, C. R. (2005). Liar, Liar: Internet faking but frequency of use affects social skills, self-esteem, social anxiety and aggression. *CyberPsychology & Behavior*, 8 (1); 1- 6.
- Hasdemir, A. (2005). Sosyal beceri eğitiminin lise öğrencilerinin utangaçlık düzeylerine etkisi. Yayınlanmamış yüksek lisans Tezi, Ankara Üniversitesi Eğitim Bilimleri Enstitüsü.
- Güngör, A. (2001). Utangaçlık Ölçeği'nin geliştirilmesi geçerlik ve güvenilirlik çalışmaları. *Türk Psikolojik Danışma ve Rehberlik Dergisi*, 2 (15); 17- 22.
- Günüç, S. (2009). *Development of Internet Addiction Scale*. Yayınlanmamış Yüksek Lisans Tezi. Yüzüncü Yıl Üniversitesi, Sosyal Bilimler Enstitüsü.
- Kang, S. (2007). Disembodiment in online social interaction: impact of online chat on social support and psychosocial well-being. *CyberPsychology & Behavior*, 10(3); 475- 477.

- Kraut, R., Paterson, M., Lundmark, V., Kiesler, S., Mukophadhyay, T. & Scherlis, W. (1998). Internet paradox: A social technology that reduces social involvement and psychological well-being? *American Psychologist*, 53 (9) ; 1017-1031.
- Morahan-Martin, J. (1999). The relationship between loneliness and internet use and abuse. *Cyber Psychology and Behavior*, 2(5); 31- 440.
- Morahan-Martin, J.M. & Schumacher, P. (2000). Incidence and correlates of pathological internet use among college students. *Computers in Human Behavior*, 16; 13- 29.
- Morahan-Martin, J.M. & Schumacher, P. (2003). Loneliness and social uses of the internet. *Computers in Human Behavior*, 19(6), 659-671.
- Nalwa, K. & Anand, A. (2003). Internet addiction in students: A cause of concern. *CyberPsychology & Behavior*, 6 (6), 653-656.
- Nie, N. & Erbring, L. (2000). Debating the societal effects of the internet: Connecting with the world. *Public Perspective*, 11; 42- 43.
- Niemz, K., Griffiths, M. & Banyard, P.(2005). Prevalence of pathological internet use among university students and correlations with self-esteem, the general health questionnaire (GHQ), and disinhibition. *CyberPsychology & Behavior*, 8(6) ; 562- 570.
- Robin M. M. & Cooper, A.(2003). The duration and frequency of internet use in a nonclinical sample: Suicidality, behavioral problems, and treatment histories. *Psychotherapy: Theory, Research, Practice, Training*, 40(1-2); 125-135.
- Russell, D., Peplau, L.A. & Cutrona, C.E. (1980). The revised UCLA Loneliness Scale: Concurrent and discriminant validity evidence. *Journal of Personality and Social Psychology*, 39; 472-480.
- Sang, L., Whang, M., Lee, S. & Chang, G.(2003). Internet over-users' psychological profiles: A behavior sampling analysis on internet addiction. *CyberPsychology & Behavior*, 6(2); 143- 150.
- Shapira, N.A., Goldsmith, T.D., Keck, P.E., Khosla, U.M. & McElroy, S.L. (2000). Psychiatric features of individuals with problematic internet use. *Journal of Affective Disorders*, 57; 267- 272.
- Shapiro, J. S. (1999). Loneliness: Paradox or artifact? *American Psychologist*, 54(9); 782- 783.
- Simkova, B. & Cincera, J. (2004). Internet addiction disorder and chatting in the Czech Republic, *CyberPsychology and Behavior*, 7 (5); 536-539.
- Sum, S., Mathews, R.M., Hughes, I. & Campbell , A. (2008). Internet use and loneliness in older adults. *CyberPsychology & Behavior*, 11(2); 208- 211.
- Weiser, E. B. (2001). The functions of internet use and their social and psychological consequences, *CyberPsychology and Behavior*, 4 (6); 723- 731.
- Willoughby, T. (2008). A short-term longitudinal study of Internet and computer game use by adolescent boys and girls: Prevalence, frequency of use, and psychosocial predictors. *Developmental Psychology*, 44(1); 195- 204.
- Yellowlees, P.M. & Marks, S. (2007). Problematic internet use or internet addiction? *Computers in Human Behavior*, 23(3);1447- 1453.
- Young, K. S. (1996). Pathological Internet Use: A case that breaks the stereotype. *Psychological Reports*, 79, 899-902.
- Young, K. S. (1997). *What makes the internet addictive: potential explanations for pathological internet use*. University of Pittsburgh at Bradford, Paper presented at the 105th annual conference of the American Psychological Association, August 15, Chicago, IL.
- Young, K. S. (1998). *Caught in the Net: How to recognize the signs of Internetaddiction and a winning strategy for recover*. John Wiley, New York.
- Young, K. S. (1999). Innovations in Clinical Practice: A Source Book, 17. In A. Vande Creek, L., & Jackson, T. (Eds.), *Internet Addiction: Symptoms, Evaluation, And Treatment* (pp. 19–31). Sarasota: Professional Resource Press.
- Young, K. S. (2007). Treatment outcomes with internet addicts. *CyberPsychology & Behavior*, 10(5); 671 -679.
- Young, K. S. & Rodgers, R. C. (1998a). *Internet addiction: personality traits associated with its development*. 69th Annual Meeting of the Eastern Psychological Association.
- Young, S. K, & Rodgers, R. C. (1998b). The relationship between depression and internet addiction. *CyberPsychology and Behavior*, 1(1); 25- 28.

Geniş Özet

Teknolojinin gelişmesi ile birlikte internet kullanımı hayatın vazgeçilmez bir parçası olmuştur. Ancak internet hayatı kolaylaştırmanın yanı sıra önemli bir risk kaynağı haline gelmiştir. İnternet bağımlılığının tanımı hala belirsizliğini korumakla beraber, problemlili ve patolojik internet kullanımı olarak tanımlanmaktadır. Akademik çalışma ve iş hariç haftada en az 38 saat kullanımı internet bağımlılığı olarak kabul edilmiştir. İlk zamanlarda internet bağımlılığının interneti kullanma süresine göre tanımlanmasına karşın günümüzde internette geçirilen zaman ölçütü olarak alınmamaktadır. Patolojik internet kullanımı internete psikolojik bağımlılık olarak tanımlanmakta ve internet bağımlılığı, dürtü kontrolünün zayıf olması ile bağdaştırılmaktadır. Ayrıca internet bağımlılığının kontrolsüzlük, belirgin kaygı, zaman tüketimi, sosyal, mesleki ve maddi sorunlarla sonuçlanacağı belirtilmektedir. İnternet bağımlılığı internet üzerindeki aktivitelere giderek daha fazla zaman harcanması, internete girilmediği zamanlarda hoş gitmeyen duyguların ortaya çıkması, internete girildiği zamanlarda ise kaygının ve problemlili davranışın azalmasıyla karakterize edilebilir.

Yapılan literatür taramasında birçok araştırmanın aşırı internet kullanımının olumsuz sonuçlarını ortaya koyduğu görülmüştür. İnternet, iletişimde ve kişilerarası davranışlarda belirgin değişiklikler meydana getirmektedir. İnternet bağımlılığı duygusal, sosyal ve cinsel fonksiyon bozukluklarına, psikiyatrik bozukluklara ve kaygıya, içe kapanmaya, depresyon düzeyinin artmasına yol açmaktadır. Bunun yanı sıra internet bağımlısı bireylerin sosyal faaliyetlerinin azaldığı, işlevsel olmayan sosyal davranışlarının ortaya çıktığı, sosyal çevrelerinin azaldığı, günlük hayatlarının olumsuz etkilendiği ve aile içi iletişimlerinin zayıfladığı ortaya konmuştur. Özetle; internet bağımlılığı sosyal, akademik, ailesel ve mesleki bozulmalarla sonuçlanabilmektedir. Son yıllarda internet ergenler tarafından oldukça sık kullanılan bir iletişim aracı haline gelmiştir. Yapılan araştırmalarda gençler arasında patolojik internet kullanımının yaygın olduğu bulunmuştur. İnternet bağımlısı ergenler interneti eğlendirici, ilginç, interaktif ve doyum verici bulmaktadırlar. Ergenler interneti daha çok sosyal iletişim ve arkadaşlık kurmak amacıyla kullanmaktadırlar.

Son yıllarda internet bağımlılığı ile ilgili yapılan araştırmalarda artış gözlenmektedir. Problemlili internet kullanımıyla ilişkili olan değişkenlerden bazıları depresyon, yalnızlık, utangaçlık ve özsaygı eksikliği, cinsiyet, yaş, sosyo ekonomik düzey olarak belirtilmiştir. Bu araştırmada ise yalnızlık ve utangaçlığın yanı sıra, internet bağımlılığı ile ilişkili olabilecek, cinsiyet, akademik başarı ve internete girilen süre değişkenleri ele alınmıştır. Araştırmanın amacı internet bağımlılığının yalnızlık, utangaçlık, cinsiyet, akademik başarı, internete girilen süre ile ilişkili olup olmadığını ve bu değişkenlerin internet bağımlılığını anlamlı olarak yordayıp yordamadığını ortaya koymaktır.

Araştırma, 2011- 2012 öğretim yılında Bursa ilindeki iki Anadolu lisesi, bir genel lise olmak üzere üç farklı lisede yapılmıştır. Araştırma 15-18 yaş arası toplam 206 öğrenci ile gerçekleştirilmiştir. Araştırmaya katılan öğrencilerin %55.8 (115)'i kız, %44.2 (91)'i erkektir, %51.5'i Anadolu lisesinde 48.5'i genel lisede okumaktadır. Araştırmanın verileri sırası ile araştırmacılar tarafından hazırlanan "Kişisel Bilgi Formu", Young (1998) tarafından geliştirilen, Bayraktar (2001) tarafından uyarlanan "İnternet Bağımlılığı Ölçeği", Russel, Peplau and Cutrona (1980) tarafından geliştirilen Demir (1989) tarafından uyarlanan "UCLA Yalnızlık Ölçeği" ve Cheek and Buss (1981) tarafından geliştirilen Güngör (2001) tarafından uyarlanan "Utangaçlık Ölçeği" ile toplanmıştır.

Araştırmaya katılan öğrencilerin internet bağımlılığının cinsiyete göre farklılaşıp farklılaşmadığını belirlemek için bağımsız gruplar t testi, akademik başarı ve internete girilen süre değişkenlerine göre değişip değişmediğini belirlemek için tek yönlü varyans analizi (ANOVA) yapılmıştır. t testi sonuçlarına göre kız ve erkek öğrenciler arasında internet bağımlılığı puanları bakımından anlamlı farklılık bulunmaktadır ($p < .01$). Bu sonuçlara göre erkeklerin internet bağımlılığı kızlardan anlamlı derecede daha yüksektir. Yapılan tek yönlü varyans analizlerine (ANOVA) göre düşük, orta ve iyi akademik başarısı olan öğrenciler arasında internet bağımlılığı puanları bakımından anlamlı farklılıklar bulunmaktadır ($p < .01$). Bulunan sonuçlara göre; akademik başarısı düşük olanlarda internet bağımlılığı anlamlı derecede daha yüksektir. Ayrıca internet kullanım süresi arttıkça internet bağımlılığı da anlamlı derecede artmaktadır ($p < .01$).

İnternet bağımlılığı yalnızlık ve utangaçlık değişkenleri arasında anlamlı bir ilişkinin olup olmadığını anlamak için uygulanan Pearson Korelasyon analizi sonucunda; internet bağımlılığı ile yalnızlık arasında düşük seviyede pozitif yönde anlamlı bir ilişki ($r = .17, p < .05$), internet bağımlılığı ile utangaçlık arasında da düşük seviyede pozitif yönde anlamlı bir ilişki ($r = .26, p < .01$) bulunmuştur. Uygulanan çoklu regresyon analizi sonucunda modelin anlamlı olduğu ve regresyona giren tüm bağımsız değişkenlerin bağımlı değişken üzerindeki değişimlerin %22'sini açıkladığı görülmüştür. Yordayıcı değişkenlerin internet bağımlılığı üzerindeki görece önem sırası utangaçlık, internet kullanım süresi ve akademik başarıdır.

Özet olarak bu araştırmanın sonuçları internet bağımlılığının cinsiyet, akademik başarı, internet kullanım süresine göre farklılaştığını, ayrıca akademik başarı, internette kalma süresi ve utangaçlığın internet bağımlılığının anlamlı yordayıcıları olduğunu ortaya koymuştur. Ancak araştırmanın bazı sınırlılıkları vardır. Araştırmaya katılan kız öğrencilerin erkek öğrencilere göre fazla olması, interneti yordayan değişkenler olarak sadece cinsiyet, akademik başarı, internette kalınan süre, yalnızlık ve utangaçlık değişkenlerinin ele alınması, araştırmanın orta sosyo ekonomik düzeyden gelen öğrencilerin devam ettiği liselerde yapılması araştırmanın sınırlılıkları arasında sayılabilir.

Araştırmanın bulgularından yola çıkarak şu önerilerde bulunabiliriz: Ergenlik döneminin özellikleri de göz önüne alındığında utangaçlığın ve düşük akademik başarının fazla internet kullanımı için risk oluşturduğu anlaşılmaktadır. Okullarda önleyici ve gelişimsel rehberliğe dayalı utangaçlığı azaltan ve sosyal becerileri artıran çalışmalara ağırlık verilmesinin yerinde olacağı düşünülmektedir. Bunun yanısıra psikolojik danışmanların, özellikle ergenliğin ilk yıllarında öğrencilerin sosyal ve duygusal ihtiyaçlarını karşılayabilecekleri sosyal ortamlara yönlendirilmeleri konusunda, öğrencilere ve ailelere yardımcı olmaları yerinde olacaktır. Ergenlerin sosyal ortamlarda daha fazla bulunması internette kalma sürelerini de azaltabilir. Bunun yanı sıra akademik başarısı düşük olan çocuklar üzerine daha dikkatle eğilmek gerekebilir ve başarısızlığın nedenlerinin araştırılması için çalışmalar yapılabilir. Bunların yanı sıra İnternet bağımlısı ergenlere yönelik bilişsel-davranışçı yaklaşım ağırlıklı psikolojik danışma çalışmaları yapılabilir.

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