EXAMINATION OF SOME PSYCHOLOGICAL VARIABLES THAT PREDICT INTERNET ADDICTION IN UNIVERSITY STUDENTS: A UNIVERSITY IN CAPPADOCIA

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ABSTRACT

This is a predictive study with a descriptive method and a relational screening model and it was aimed to examine some psychological variables that predict internet addiction. The sample was formed by using the proportional cluster sampling based on stratum weight of the schools. The study was conducted with a total of 521 students. Introductory Information Form, Symptom Check List (SCL-90-R) and Internet Addiction Scale were used. It was found that Cronbach's Alpha coefficient of SCL-90-R scale was 0.97 and Cronbach's Alpha coefficient of the addiction scale was 0.92. The data were assessed by using number, percentage, chi-square, Kruskal-Wallis, Man Whitney U, spearman's correlation and regression analysis. Ethics committee approval and verbal consent were obtained. The average score of the students' general psychological symptom index (GSI) was found to be 1.96 ± 0.63 and 5.3% of the students were addicted to internet. There are statistically significant differences between students' both internet addiction scale scores and Symptom Check List (SCL-90-R) scores and some variables (gender, smoking). It was determined that there was a difference between internet use durations and internet addiction levels and a significant and positive interaction between psychological symptoms and internet addiction. This study shows that the most important predictor of addiction is psychoticism from psychological symptoms. These results are considered to be likely helpful for clinicians and researchers in stages of determining, preventing and treating risk groups.

Key Words: Student, Psychological Variables, Internet Addiction

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1. INTRODUCTION

Along with the developments in information and communication technologies, technology usage is also increasing rapidly in every field and especially the use of computers and internet has become considerably widespread (Çuhadar and Dursun, 2010; Esenyel, 2017). According to the data of the Internet World Stats, the number of internet users which was 3.035.749.340 in 2014 reached to 3.739.698.500 people in 2017. With 46.196.720 internet users, Turkey is the 18th country among the top 20 countries using the internet at the highest rate in the world, and since 56.7% of the its population are the internet users, Turkey is ranked as the 4th in internet usage among European countries (Internet World Stats, 2017a; Internet World Stats, 2017b). Ever increasing rate of the internet users in Turkey has become 61.2% according to the latest data (TÜİK, 2016). While internet usage increasing mostly due to various reasons such as sharing information, communicating, shopping, chatting, etc. causes many problems, it has also become an important mental health problem because of the loss of control over the internet use, its negative effects on the daily life function and affecting the relationships (Anderson, 2000; Rju et al., 2004). Some researchers have identified internet use behaviour at problem level; whereas, some also have used different descriptions based on different causalities. They can be regarded as "internet addiction", "pathological internet use", "problematic internet use", "excessive internet use", "compulsive internet use" and even "internetomani". However, studies conducted until today have indicated that prevalence of problematic internet addiction vary between 0.3-38% even if they have used different criteria. Problematic internet use is prevalent in girls 2-3 times greater than boys and adolescents constitute an important risk group in particular (Bozkurt et al., 2016). It is stated that the increase in the duration of the internet use, the unconscious use of the internet and the satisfaction with communication increase the tendency to internet addiction (Chou and Hsiao, 2005) However, since the dependency measures defined in DSM-V cover only chemical substances and do not cover behavioural addictions, non-chemical behavioural addictions are evaluated as "impulse control disorders" in DSM-V. Studies have revealed that internet users are beginning to exhibit behaviours that resemble drug, alcohol, or gambling addictions for Internet use (Griffiths, 1996). Uncontrolled and unlimited use of the Internet can create negative physical and psychosocial effects especially on young people (Caplan, 2002; Niemz et.al., 2005). In general, internet addiction can be defined as not being able to resist the desire to use excessive internet by the individual, considering time spent without being connected to the internet as insignificant, displaying excessive tension and aggression by the person when it is not connected to the internet, and damaged work, social and family aspects of the life (Young, 1996).

The fact that almost everything is done via technological devices in everyday life has reduced and damaged the relations of people with one another. Human-machine relations have increased instead of human-human relations (Tekeli, 1994). It is found that the Internet can cause some consequences such as isolation of the individual from the society, depression, weakening of social relations, decrease in close friend relations, and feeling of loneliness (Yalçın, 2006). It is also stated that internet addiction may carry as much risk as other substance dependencies due to various psychological, sociological, physical and academic new mental health outbreak for university students in different countries of the world, especially in the Far East (Bernardi and Pallanti, 2009; Shapira et al., 2000). The research examining the factors related to internet addiction in adolescents in recent years revealed that there are other psychiatric disorders that accompany internet addiction in more than half of the adolescents with internet addiction (Çam and Nur, 2015). Internet addiction has recently been defined as a psychological problem and families have been in search of treatment due to problems associated with internet use of their children. Treatment centres related to this disorder and new treatment methods have been implemented anymore in Far East countries and the USA where this problem, which is new to Turkey have been experienced for a long time (Sharma and Palanichamy, 2018). Given the

increasing popularity of internet usage in recent years due to the surplus of young population in Turkey, examining the psychological variables that predict internet addiction in university students is important in terms of putting forward appropriate preventive treatment approaches. It is thought that the study would contribute to the elimination of this need and will lead the way for the future studies in the field.

2. MATERIALS AND METHODS

Type of study

This research aimed to examine the psychosocial variables that predict internet addiction in university students is a predictive study with a descriptive method and a relational screening model. The screening model is a research approach aimed at describing the past and present as they are (Karasar, 1998).

Population and Sample

The population of the study consisted of 16.371 students studying in the associate degree and undergraduate departments at central campus of Nevsehir Hacı Bektaş Veli University in the academic year of 2016-2017.The sample size of the study was calculated as 355 when considering that the size of the population was 16.371, the prevalence of the incident was 0.38 and the significance level was 0.05 (probability of 95%). Although this number was the minimum number to achieve the aimed hypothesis, it was decided to keep the sample size wider by taking the expert opinion and to include 500 students in the sample. In the study, stratified sampling method was used for sample selection. In the sample selection, each school was taken as a stratum, the number of students to be included in the sample from each school was determined by using the ratio cluster method depending on the stratum's weight. The study was completed with a total of 521 students.

Ethical Principles Of The Research

In order to conduct the study, permission was obtained from X University Non-invasive Clinical Trials Ethics Committee (30.03.2017 N:84902927), and verbal consent from the participants was obtained.

Data Collection

Introductory Information Form

In the introductory information form, there were questions about gender, age, educational status, department, the presence of chronic health problems, family structure, occupation of parents, income level, smoking-alcohol use, internet use, and spare time activities.

Internet Addiction Test

İt is a likert type scale including 20 questions prepared by Dr. Kimberly Young (Young, 1996) by adapting from "Pathological Gambling" criteria of DSM-IV. The Internet Addiction Centre was founded by Young in 1995. This test, which is also available through http://netaddiction.com, developed as a reference for research articles, books, blogs and tests, is a self-assessment test. In the Internet Addiction Test, the participants are asked to mark one of the following options: "continuously", "very often", "mostly", "occasionally", "rarely" and "never". These answer options are scored as 5, 4, 3, 2, 1, and 0, respectively. The lowest score is 0 and the highest one is 100 points. If the scores taken from the scale are between 80 and 100,

then the person is defined as internet addict. While those getting a score between 50-79 points are defined as showing limited symptoms between 50-79 points, those getting a score between 49-0 points are defined as not showing symptoms (Bayraktar, 2001). The reliability of the internet addiction test translated into Turkish was found as 0.91 in terms of standardized Alpha value and 0.87 in terms of Spearman-Brown value. These results suggest that the scale is reliable (Bayraktar, 2001). In this study, the Cronbach's alpha coefficient was found to be 0.91.

Symptom Distress Check List SCL-90-R

SCL-90-R was developed by Derogatis et al., (Derogatis, 1973) and its validity and reliability study was performed by Dağ (Dağ, 1991). Each of the symptoms expressed in the 90 items of the scale is evaluated by a Likert type rating of "none", "very little", "moderate", "quite" and "advanced" considering the situation in the last 15 days by the subject and the scale score is found by scoring each of them between 0 and 4 points. The scale consists of 10 subscales: Somatization, Obsessive-Compulsive Disorder (OCD), Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic anxiety, Paranoid Ideation, Psychoticism and additional items (Dağ, 1991; Dağ, 2000; Öner, 1997). The state of the individual for each subscale is determined by dividing the sum of the numerical response values given to the items into the number of items in that subscale. The "General Symptom Mean Score" is obtained by dividing the sum of the scores obtained from all subscales by 90. In the interpretation of each subscale score and general symptom score, it was accepted that the scores between 0-1.50 are normal, symptom level of those getting a score between 1.51-2.50 are "high", and symptom level of those getting a score between 2.50-4.00 are very high (Öner, 1997).

Exploratory factor analysis was conducted to measure the validity of the structures of the scales utilized for the purposes of the study. In the exploratory factor analysis conducted for the Symptom Distress Check List SCL-90-R, 10 factors with eigenvalues greater than 1 were identified. While the factor loadings of the items varied from .30 to.68, the dimensions accounted for 49.4% of the total variance. Since the factor loadings of 3 items in the scale were below .30, they were not included in the scope of the study. Cronbach's Alpha value was found as 0.97 in the reliability and validity study of the scale for university students (Dağ, 1991). In the exploratory factor analysis conducted on addictive scale, three dimensions with eigenvalues greater than 1 were determined. While the values of the scale varied between .-31 and.-80, it accounts for 55% of the total variance.

Data Analysis

In the data analysis; number, percentage, mean, chi square, Kruskal-Wallis, Mann Whitney U test, Spearman correlation and regression analysis were performed and p values less than 0.05 were considered as significant.

Study Limitations

One of the most important limitations of this study is that only the Symptom Distress Check List (SCL-90-R) was used as data collection tool for mental health in the study. The measurements were performed by evaluating reports by the students concerning the scale items. Therefore higher mean score of symptom distress level (GSI) than the based value does not indicate that mental problems of these students were at clinical level. Another limitation of the study is that the sample was limited only with a single university. This limitation of the study was tried to be eliminated by using proportional cluster sampling method in sample selection.

3. RESULTS

It was reported that the average age of the students included in the study was 21.00 ± 0.62(18-45.00),54.9% of them were female, 55.7% had bachelor's degree, 44.3% had associate's degree and 6.9% had mental illness. 62.2% of the students reported that their mothers were literate, 57.8% stated that their fathers were literate, 67.6% said that they had nuclear family type, and 69.9% stated that their family incomes were equivalent to their expenses. 35.5% of the students stated that they were smoker, 24% used alcohol, and 65.1% said that they did not do sports (N=521).

When the students' characteristics related to the internet usage were examined, 82.1% of the students reported that they always had internet connection, 58.7% among the internet connection places were mobile phones, 92.7% had social network accounts, and 57.2% had a daily internet usage duration of more than 3 hours. When the students' internet usage purposes were examined, it was determined that these aims are social network (79.8%), music (79.1%), movie (73.9%), chat (68.9%), class (64.3%), shopping (58%), news reading (55.7%), e-mail (51.6%), games (46.3%), and sports (39.3%). .
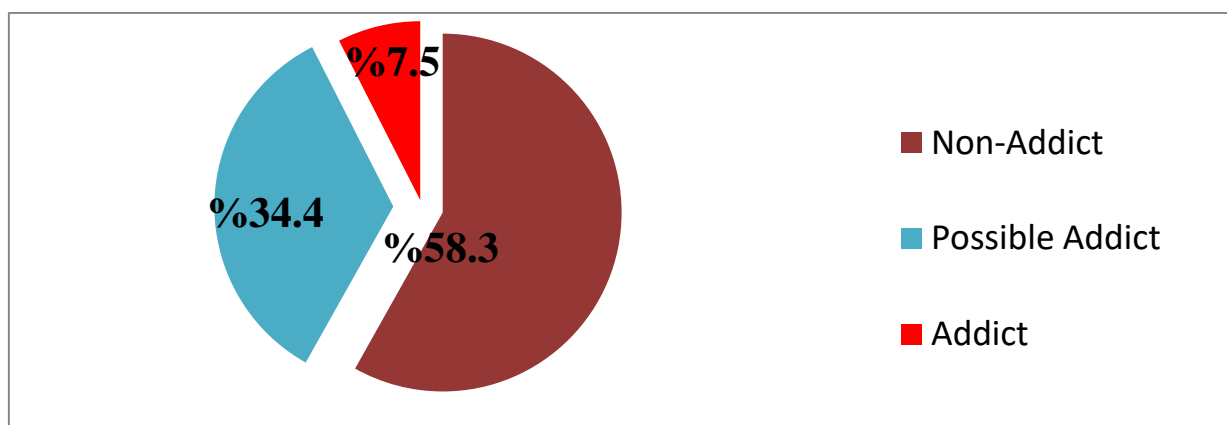
Figure 1. Distribution of Students by Internet Usage Purposes and Frequencies
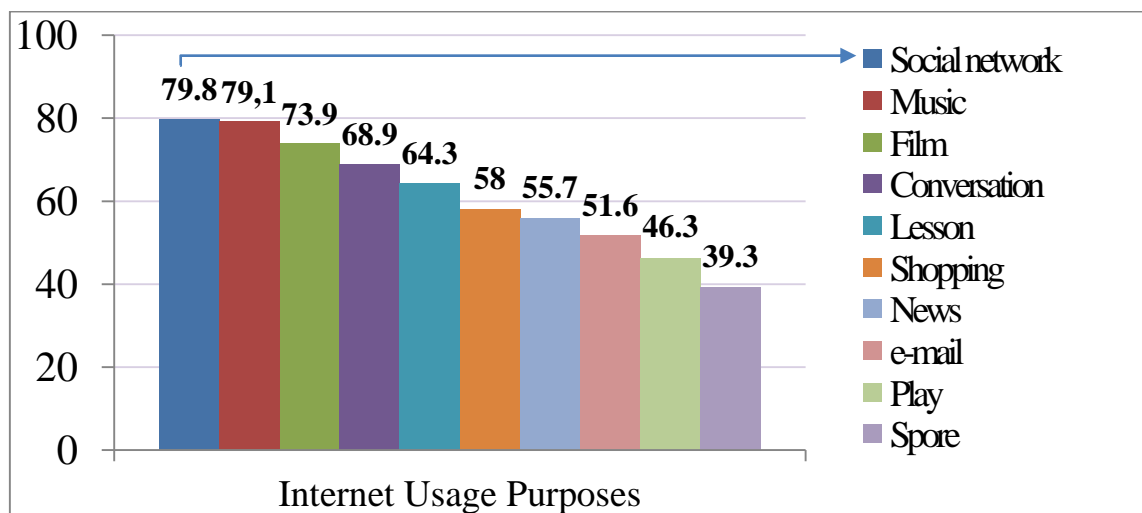
*** *84.1% (438) of the students answered more than one n(%)**

According to the total scores obtained by the students from the Internet Addiction Test, the addiction status is divided into three groups and the first group is defined as "non-addict", the second group as "Possible Addict", and the third group as "Addict". Of 521 students participating in the study, 303 (58.2%) were non-addict, 179 (34.4%) were possible addict and 39 (5.3%) were addict (Figure 2).

Figure 2. Distribution of Students According to the Scores Received by the Internet Addiction Scale

When the distribution of internet addiction over certain socio-demographic characteristics of students who had smoking habit was examined, the rate of addiction was found to be relatively high among the ones with a fragmented family (p = 0.030) and those whose income is higher than their expenses (p = 0.001).

The difference between the internet addiction levels of the students and their status' of owning a social network account, their places of internet access, their daily phone and internet use durations, and their status of internet use for sports- and course-related purposes is statistically significant (p <0.05)

The mean score of the students' General Psychiatric Pymptom Level (GSI) was found as 1.96±0.63(1.00-3.00).The highest mean score from the subscales of SCL 90-R scale was determined as 2.94 for Psychoticism, 2.19 for Obsessive-compulsive, 2.16 for Paranoid Ideation, 2.10 for Additional items, 2.05 for Anger-Hostility, 2.03 for Interpersonal Sensitivity, 2.02 for Depression, 1.88 for Anxiety, 1.87 for Somatization, and 1.62 for Phobic Anxiety (Table 1). As seen in Table 3, psychoticism symptom levels of the students from the subscales were very high, the overall mean score the symptom levels in and all of the other subscales were high. In terms of the overall test and all subscales, the students were seen to be at risk in terms of the mental health symptoms.

Table 1. Point Average Distribution of Students' Scale of SCL-90-R from General and Subscale Scale

	Mean	**SD**	**Min-Max**
Somatization	1.87	0.66	1.00-4.67
Obsessive-Compulsive	2.19	0.77	0.80-6.10
Interpersonal Sensitivity	2.03	0.80	0.89-5.00
Depression	2.02	0.77	0.77-4.85
Anxiety	1.88	0.71	0.70-5.00
Anger / hostility	2.05	0.88	0.67-5.00
Phobic Anxiety	1.62	0.63	0.57-5.00
Paranoid Thought	2.16	0.85	0.67-5.00
psychotism	2.94	1.09	1.17-8.33
Additional Materials	2.10	0.74	1.00-5.00
General (SCL-90-R)	1.96	0.63	0.90-4.91

According to the descriptive characteristics of the students, the relationship between their SCL-90-R Scale overall scores was shown. The difference between SCL-90-R scale total scores and

gender, educational levels, smoking status, status of doing sporting, the status of using internet for sports and games was found to be significant ($p < 0.05$) (Table 2).

Table 2. Distribution of the General Symptom Level Mean Score over   Certain Descriptive Characteristics of the Students

Descriptive characteristics		n	Mean rank	KW U	z	p
Gender	Female	286	283.45	27183.00**	-3.756	*0.000*
	Male	235	233.67			
Education statute	Pre-License	231	239.92	28624.50**	-2.853	*0.004*
	License	290	277.79			
Income Rate	Less than Income	117	297.22	8.767*	2	0.012
	Equivalent to Income	364	250.07			
	More than Income	40	254.54			
Cigaret use	Uses	185	254.93	6.77*	2	0.034
	Can Not Use	322	260.04			
	Left	14	363.29			
Exercising	Yes	182	232.82	25718.00**	-3.132	0.002
	No	339	276.14			
Internet use for sports	Yes	205	239.43	27968.00**	-2.634	0.008
	No	316	274.99			
Internet use for game	Yes	241	276.22	30071.500**	-2.141	0.032
	No	280	247.90			

According to the R^2 coefficient of determination in the simple linear regression analysis in Table 3, 4% ($R^2 = .040$) of the changes in internet addiction are explained by psychological symptoms which are independent variables. Accordingly, there was a significant positive interaction between psychological symptom and internet addiction ($\beta = .201$; $t = 4.67$; $p = .000$). The bilateral correlation between psychological symptom and internet addiction was found to be significant and positive at a weak level ($r = 0.346$, $p < 0.05$).

Table 3. Impact of Psychological Symptoms on Internet Addiction

Variables	Model Summary		Anova		Coefficient		
	R²	R	F	p	β p	t	
Independent Variables							
Psychological Symptoms	.040	.201	21.833	.00	.201 .00	4.67	

*p<0. **Internet Addiction**

According to the R² coefficient of determination in the equation of multiple linear regression analysis, 10.1% (R²= .101) of the changes in internet addiction are explained by Somatization, Obsessive-Compulsive Disorder, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Thought and Psychoticism sub-dimensions which are independent variables (Table 4). It is also seen that there are psychological symptoms that affect internet addiction based on β value. Psychoticism is an important independent variable affecting internet addiction (β=.229). However, apart from paranoid thought and psychoticism from psychological symptoms, there is no statistically significant interaction between the other sub-dimensions (interpersonal sensitivity, depression etc.) and internet addiction (β = - 137, t = - 1.501, p =.134, β = .024, t =.242, p =.809). There was a significant weak correlation between all the scores of the sub-dimensions of psychological symptom scale and internet addiction scale score (P <0.05) (Table 5).

Table 4. Impact of Psychological Symptom Sub-Dimensions on Internet Addiction

Variables	Model Summary			Anova	Coefficient	
Independent Variables	R²	R	F	p	B p	t
Somatization					-.059 .384	-872
Obsessive-Compulsive					-.144 .107	-1.613
Interpersonal Sensitivity	.101	.318	5.739	.000	-.137 .134	-1.501
Depression					.024 .809	.242
Anxiety					.012 .895	.132
Anger / hostility					.054 .421	.806
Phobic Anxiety					.058 .382	.875
Paranoid Thought					.183 .024	.2.270
Psychotism					.229 .004	2.867

Table 5. The Relationship Between SCL 90-R Subscales and General Scale of Students and Internet Addiction Scale

SCL-90-R Subscales (N=521)	Internet Addiction Scale	
	Rho	p*
Somatization	0.221	0.001
Obsessive-Compulsive	0.262	0.001
Interpersonal Sensitivity	0.263	0.001
Depression	0.308	0.001
Anxiety	0.327	0.001
Anger / hostility	0.292	0.001
Phobic Anxiety	0.292	0.001
Paranoid Thought	0.339	0.001
Psychotism	0.377	0.001
Additional Materials	0.297	0.001
General (SCL-90-R)	0.346	0.001

* Spearman

4. DISCUSSION

When the purposes of internet usage were examined in different studies, it was found that the internet use for education purpose was in the first place and the students also used internet for the purpose of reading newspapers and magazines, using social networks, downloading music, game-fun and spending time (Khang et al., 2013; Özdemir and Usta, 2007). It was reported in a previous study that 42% of the internet addicts used the internet for game, 30.3% for chatting, 9% for pornography, and 5.3% for sharing (Yen et al., 2007). In a study conducted in Germany with internet addict adolescents, it was stated that the internet was used to concentrate on school lessons (Grusser et al., 2005). In another study conducted in Turkey with university students, when they were asked for what purposes they used internet for a time period of 1 hour, 46.2% of the students stated that they used the internet for getting news, 41.8% for preparing homework, 30.8% for using social networks, and 31.8% for downloading music (Çalışkan et al., 2017). In a study, it was determined that 84.2% of the participants used internet for communication purpose, 67.7% for information, research and messaging purposes, 51.2% for purposes of entertainment, listening music, watching movies and playing games and 4.6% for other purposes (Hawi, 2012). In another study conducted with Turkish young people, it was determined that students mostly used internet for communication and research purposes and they reported their reasons for internet use as Facebook, Research/Homework, MSN, reading Newspaper/ Magazine, downloading music, e-mail, downloading video, playing games (Ak et al., 2013). In this study, it was found that the students used internet for social networking, music, movie, chat, studying, shopping, e-mail and game purposes. It was observed in the studies that while the purpose of internet use was changing, its use for social purposes was higher and it was similar to the result obtained from this study.

According to the results obtained from this study, it was found that 5.3% of the students were internet addict, 34.4% were possible addict, and 58.2% were non-addict. In different studies conducted with university students in Turkey, the rate of internet addict students varied between 0.6% and 23.2% (Aslıyürek Karagözlüoğlu, 2017; Balcı and Gülnar 2009; Esenyel, 2017; Şaşmaz et al., 2013). In a study conducted in Iran; it was reported that 0.9% of the students had

internet addiction of high level and 5.4% had internet addiction of moderate level (Naffise et al., 2013). In a study conducted with medical students in India, it was reported that 10% of the students were internet addicts, 30% were possible addict, and 60% were non-addict (Kumar et al., 2017). In another study, it was found as addict at the rate of 0.7% in collage population in India (Upadhyay et al., 2017). In a study conducted in UK, 3.2% of the students were stated to be internet addicts (Kuss et al., 2013). In a study investigating the prevalence of internet addiction among Chinese adolescents, the internet addiction rate of the adolescents was found to be 2.4% (Cao and Su, 2007). In another study investigating the prevalence of internet addiction among South Korean adolescents, 10.7% of them were found to be internet addicts (Park et al., 2008). Based on the results of the study, the difference between the internet addiction rates was thought to be associated with time, country, region, culture and the departments they were studying at.

In this study, the difference between the internet addiction levels and the family type, income level, frequency of book reading and smoking status was found to be statistically significant. In the literature, the results between the internet addiction and income level show differences. While a correlation was reported between the internet addiction and income level in some studies (Dağ, 1991), internet addiction did not vary based on the income level in the results of some other studies (Park et al., 2008). These differences in the study results can be associated with the measurement type of the economic level as well as the fact that the internet access has become easier and cheaper in recent years.

When the literature was examined, there are numerous studies investigating the correlation between the internet addiction and the internet usage duration. It was found in the study that 81.8% of the students had continuous internet connection, 88.5% had social network accounts, and 57.2% had daily duration of internet usage of more than 3 hours. In a previous study, it was determined that the participants spend averagely 3 hours on the internet per day and the addict users used the internet for 6.5 hours per day (Hawi, 2012). In different studies conducted in Turkey, the rate of those spending more than 3 hours on the internet was determined to vary between 26.1% and 70% (Bicen and Çavuş, 2010; Vural and Bat, 2010). The result obtained in this study is similar to other study results.

General Results for SCL-R

In this study, the mean score of the general psychiatric symptom level (GSI) of the students was found as 1.96±0.63. The highest mean scores of SCL 90-R Scale were found to be 2.94 for Psychoticism, 2.19 for Obsessive-Compulsive, 2.16 for Paranoid Ideation, 2.10 for Additional items, 2.05 for Anger-Hostility, 2.03 for Personality Sensitivity, 2.02 for Depression, 1.88 for Anxiety, 1.87 for Somatization, and 1.62 for Phobic Anxiety. As is seen in Table 3, the symptom level of the students in Psychoticism subscale was very high and the symptom level in the all other subscales was high. In the validity and reliability study of SCL-90-R scale by Dağ, it was suggested to base on normal value of GSI mean score as 1.00 for university students. In this study, GSI mean score was higher than the based value and the students were seen to be at risk in terms of mental health symptoms in terms of all subscales (Dağ, 1991).

According to the descriptive characteristics of the students, the relationship between the SCL-90-R Scale general scores was shown. The difference between SCL-90-R scale total scores and gender, education levels, income level, smoking status, status of doing sporting, internet connection place, status of using internet for sports and game purposes was found to be statistically significant.

In this study, a weak positive significant correlation was determined between the SCL-90-R scale total score and the internet addiction test score. A weak significant correlation was found

between the all subscale scores of SCL-90-R scale and the internet addiction test score. In a study where the young people using the internet showed high psychiatric symptoms, significant correlations were determined between the internet usage and degree of psychiatric symptoms such as depression, obsessive-compulsion and interpersonal sensitivity (Jang et al., 2008). In another study, it was found that 18.3% of the participants had pathological internet use and internet addicts experienced more problems in their social and interpersonal relationships (Niemz et al., 2005). It was reported in other studies conducted with young people that depression was associated with the internet addiction (Ha et al., 2006; Kim et al., 2006). Although the correlation between the İnternet Addiction and Attention Deficit Hyperactivity Disorder (ADHD) in young people was not directly assessed, the young people who were playing video-games on the internet were reported to have higher ADHD symptoms (Chan, 2006). It was reported that social phobia was positively associated with internet use in young people (Shepherd, 2005). It was reported in the study by Yen and Ko that the hostility level of the adolescents who had internet addiction was higher (Yen et al., 2007). In the study investigating the relationship of the high level of internet usage with the depression and social loneliness in adolescents, it was reported that the ability of establishing relationships was better in students with low level of internet usage (with parents and friends) (Pawlak, 2002; Sanders et al., 2000). In a study investigating the relationship between the internet addiction of the young people and various variables like loneliness, social support, personality type, gender, academic success, it was found that the loneliness and social support was associated with internet addiction, no correlation was found between the internet addiction and the personality type, academic success, romantic relationship and gender variables (Pawlak, 2002).

Simple linear regression analysis conducted for the   purposes of the research found that there is a significant and positive interaction between psychological symptom and internet addiction. Accordingly, as the psychological symptoms increase in students, so does internet addiction. It can be said that there is a two-way relationship between internet addiction and psychological problems; psychological problems can cause internet addiction or vice versa. In order to determine the effect of psychological symptom sub-dimensions on internet addiction in the research, multiple linear regression analysis was conducted. According to the analysis results, paranoid thought and psychoticism, which are sub-dimensions of psychological symptoms, have a significant effect on internet addiction; other sub-dimensions (interpersonal sensitivity, depression, etc.) did not seem to have a significant effect on internet addiction. On the other hand, the use of the internet can be supportive for the development of emotions such as excitement and happiness. While psychological problems contribute to internet addiction, internet addiction may also increase psychological problems in this process (Şaşmaz et al., 2013). In a study conducted with students in Iran, narcissistic personality disorder, obsessive-compulsive disorder, anxiety, bipolar disorders, depression and phobia also increased internet addiction 2.1, 1.1, 2.6, 1.1, 2.2, and 2.5 times, respectively (Farahani et al., 2018). Therefore, it can be said that students with psychological problems constitute a risk group for internet addiction

When the studies on internet addiction were examined, it was observed that the researchers used demographic characteristics such as age, gender and variables like depression, loneliness, impulse control, psychological well-being, social support, peer pressure, personality traits, and self- esteem in their studies (Bayraktar, 2001; Cao and Su, 2007; Günüç, 2009; Pawlak, 2002; Thatcher and Goolam, 2005). There are many studies indicating that loneliness scores of individuals with pathological internet use are significantly higher (Eijnden et al., 2008; Erdoğan, 2008). When the given information are considered, those who have internet addiction

have some problems in their living spaces and their physical and psychological health are affected negatively by being isolated from the social life (Esen, 2010).

5. CONCLUSION AND RECOMMENDATIONS

In this study, it was determined that the students used internet more for social purposes like social networks, music, movies, chat, studying, shopping, e-mail and game, 5.3% of the students were internet addicts, there was a difference between the internet usage duration and their internet addiction levels and there was a significant positive interaction between psychological symptom and internet addiction. It was observed that the most important predictor of addition is psychoticism variable from psychological variables, which was followed by paranoid ideation. Considering that increased internet usage may represent a risk for "internet addiction" and it may negatively affect the physical and psychological health of the students by creating various problems in living spaces, it is thought that all of these results can be useful for determining the risk group, preventing and treatment phases of the mental illnesses. It is recommended to provide training and consultancy to the students about the more conscious use of internet. Additionally, it can be recommended to conduct quantitative and qualitative studies investigating the relationships between the internet addiction and psychiatric symptoms. In addition, use of objective measures and prospective type studies may be suggested to assess the relationship between students' internet addiction and their psychological state.

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