RELATION BETWEEN DEPRESSION, LONELINESS, SELF-ESTEEM AND INTERNET ADDICTION

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Problem: Internet addiction has been emerged as a result of excessive internet misuse. In this study, analyzing the effects of depression, loneliness and self-esteem has been aimed in the prediction of the internet addiction levels of secondary education students.

Method: The research is conducted according to the cross-sectional model as one of the survey models. The sample of the research is comprised of 292 students who continue their education in the first term of 2009-2010 academic year in Trabzon. Internet addiction, Beck depression, UCLA loneliness and Rosenberg self-esteem scale have been used as data collection tool in the research. Result: In consequence of the research a positive, mid-level and significant relation with internet addiction has come out when depression, loneliness and self-esteem variables are considered together. These variables explain 14 % of internet addiction's total variance.

Conclusions: The relative order of importance of the variables on internet addiction is depression, loneliness and self-esteem. While depression and loneliness variables are significant predictors on internet addiction, self-esteem is not a significant predictor.

Keywords: Internet addiction; Depression; Loneliness; Self-esteem.

Introduction

Today people use internet more and more commonly than 10-15 years before and rate of internet users is increasing rapidly. In 2008 World Internet Project scanning which was carried out in 13 countries, it was found out that internet use rate among teenagers aged between 12-14 is 88% in US, 100% in UK, 95% in Canada and above 70% in Singapore (Reuters, 2008). Internet use rate in Turkey is 45% (TWS, 2010). The fact that youth population rate in Turkey is high is likely to show that internet use is higher among this age range.

While increase in internet use implies a positive situation, every use does not necessarily mean that it is right and conscious. Increase in internet use causes increase in unconscious internet users. Unconscious internet use results in excessive internet misuse. For excessive internet misuse, Young (1996) prefers to use "internet addiction" concept; Morahan-Martin, Schumacher (2000) prefer to use "pathological internet use" concept; Davis, Flett and Besser (2002) prefer to use "problematic internet use" concept (Caplan, 2002; Özcan and Buzlu, 2005). In this article internet addiction concept has been preferred, which is used in literature commonly. The fact that there are different concepts about excessive internet misuse brings along different perspectives and causes differences in definition of internet addiction.

Morahan-Martin and Schumacher (2000) have defined internet addiction as intensive internet use and according to them not being

able to control this usage harms individual's life seriously. Davis (2001) defines internet addiction as a psychiatric state comprising of maladaptive thoughts and pathological behaviors. Young (2007) has defined internet addiction as a new and generally unknown clinical disorder that is able to affect user's control aptitude of online usage so that it causes relational, professional and social problems. When these three definitions have been examined it shows that internet addiction is a psychiatric state which harms individual's social and professional life.

Since internet addiction has a structure that affects individual's social and professional life negatively, research of internet addiction has become more of an issue. When researches about internet use rates in different countries have been examined, it shows that addiction rates vary between 4-14% (Chien Chou, Ming-Chun Hsiao, 2000; Chou and Hsiao, 2000; Greenfield, 1999; Kraut et al, 1998, Morahan, Martin and Schumacher, 2000; Petrie and Gunn,1998; Young and Rogers 1998; Young, 1996, 1998).

It has been identified in Young's (1996) study that internet addiction affects individuals' family, social and professional life negatively. Individuals using internet excessively try to keep it as a secret from their families and therefore deterioration in family relations rises. Internet addicted individuals spend little time with those who are around them and this affects interpersonal relations negatively, even causes conflicts and the termination of relations (Kim et al, 2006). It has been indicated in Nie and Erbring's (2000) study that 25% of those who use internet for over 5 hours weekly spend less time with their friends and families and 10% is not interested in what is happening outside.

Chou and Hsiao (2000) indicate that internet snatches away individual from social life and limits real social relations, therefore people are lonelier. It has been identified in

a study that internet use causes youngsters to experience difficulties in interpersonal relations (Suhail and Bargees, 2006).

There are also findings about negative effects of internet addiction on academic (decreasing in grades), physical health (sleep deprivation related to internet use for many hours), mental health (depression) (Chou et al, 2005; Tsai and Lin, 2003).

When literature has been examined it is found that internet addiction affects individuals' family, social and professional life negatively and has influence on individuals' showing psychological symptoms; such as loneliness, depression and lower self-esteem.

It has been discovered that children and youngsters using internet much are becoming lonelier and experience difficulties in making contact face-to-face (Kraut et al, 1998). It is also emphasized that communication through internet is quite important for today's youngsters and computer games and internet may cause social isolation replacing the friend of child or youngster (Gross, 2004). While it has been indicated in several studies that there is a relation between internet addiction and loneliness (Caplan, 2002; Morahan-Martin and Schumacher, 2000; Özcan and Buzlu, 2007; Park and Song; 2002) it is shown in another study that there is not any relation between loneliness and internet addiction (Hills and Argyle, 2003).

Although there are many studies (Cho ve Lee, 2004; Jang et al, 2008; Kim et al, 2006; Kraut et al, 2002; Morgan and Cotten,2003; Reynolds and Mazza 1999; Yang and Tung, 2007; Young and Rogers, 1998; Whang, Lee and Chang, 2003) showing that there is a relation between internet addiction and depression; there is not any relation between internet addiction and depression according to several studies (Sanders et al, 2000; Niemz, Griffiths and Banyard, 2005).

According to Shotton (1991) internet addiction tendency of individuals with lower

self-esteem is higher. Greenberg, Lewis and Dodd, (1999), Murali and George (2007), Young, (1999) mention that lower self-esteem triggers excessive internet use.

When studies are examined it is seen that internet addiction affects individuals from social and psychological aspects negatively. It is discovered in the studies related to internet addiction that loneliness, depression and self-esteem are important variables. In these studies it is found that there are different findings between loneliness, depression and internet addiction and self-esteem has not been studied much.

Internet use has become an important necessity today. However identifying the effects of this technological advancement on youngsters' and children's mental health, taking necessary measures and developing strategies in this case have been a crucial obligation. When appropriate studies related to this case are examined, it is found that studies like those are increasing worldwide rapidly. However there is no study in Turkey about how internet use influences children's and teenagers' psychological states. So this study has been carried out in order to identify the relation between depression, loneliness, self-esteem and internet use.

Method

Model

The research is conducted according to the cross-sectional model as one of the survey models. The survey models are interested in the opinion of a large group of people about a particular topic or issue. Cross-sectional survey models collect information form a sample that has been drawn from a predetermined population. The information is collected at just one point in time (Fraenkel and Wallen, 2006). In the study, the relation between internet addiction and depression, loneliness and self-esteem has been researched.

Sample

The sample of the research is comprised of 292 students who continue their education in the first term of 2009-2010 academic year in Trabzon and who have been chosen with simple random sampling method. In this group there are 158 (54.1%) girls and 134 (45.9%) boys. 74 (25.3%) of the students are ninth grade, 80 (27.4%) of the students are tenth grade, 72 (24.7%) of the students are eleventh grade and 66 (22.6%) of the students are twelfth grade.

Data Collecting Instruments

Four instruments have been used to collect data in the research. These are internet addiction, Beck Depression, UCLA Loneliness and Rosenberg Self-esteem Scale. A data collecting form composing of two questions (gender and grade) has been used besides these scales. Internet Addiction Scale for Teenagers developed by Ayas, Balta and Horzum (2008) has been used to identify the internet addiction of the students in the research. A 5 point Likert type scaling has been used for opinions related to internet addiction scale. This scaling is "Always (5), Usually (4), Often (3), Sometimes (2) and Seldom (1). There are 28 items in the scale. The load values of these items in factor vary between .512 and .795. This factor explaining 29.49% of the scale's total variance has been called "internet use addiction". Cronbach Alfa internal consistency coefficient has been calculated for the reliability of the scale. The internal consistency coefficient of the factor known as internet use addiction is .96 in the results of the internal consistency tests.

The second scale used in the research is UCLA Loneliness Scale. "UCLA Loneliness Scale" developed originally by Russel, Peplau and Fergusan (1978) and adapted to Turkish by Demir (1989) has been used to measure the students' loneliness levels. Analyses related to scale's internal consistency has been calcu-

lated on 72 people and Cronbach Alfa internal consistency coefficient has been calculated as .96 in Demir's (1989) study. Scale's reliability coefficient of retest in every five weeks is .94. It is seen that UCLA Loneliness Scale is used in many studies about loneliness in Turkey and the rest of the world.

The third scale used in the research is Beck Depression Scale (BDS). It was developed by Beck et al. (1961); validity and reliability study was carried out in Turkey by Hisli (1989). It measures somatic, sentimental, cognitive and motivational symptoms seen in depression. The scale aims to identify the level of depression symptoms objectively. There are four options in each of 21 items and each item is graded between 0-3. Depression point is calculated with these points added. Highness of total points shows intensity of depression.

The fourth scale used in the research is Roseberg Self-esteem Scale. This scale is composed of 10 items answered according to the 4-point Likert scale that includes 5 positive and 5 negative expressions. Points are between 0-40. High points show high self-esteem. Çuhadaroğlu (1985) adapted this scale into Turkish.

Data Collecting and Analysis

Although they are available in the briefing of the scale, measuring instruments have been handed to the students and information about the nature of internet addiction, depression, loneliness and self-esteem has been explained to the students by the researcher. Measuring instruments have been photocopied and stapled so that the students could receive them in different orders. It has been checked whether points obtained from internet addiction, depression, loneliness and self-esteem scales correspond multi linear regression analysis assumption. After the correspondence of the assumptions, standard approach has been preferred among linear multi regression methods. Standard approach has been preferred because it reveals the effect of all variables on dependent variable. SPSS 13.0 pocket program has been used in data analysis.

Findings And Comment

Regression analysis results regarding the prediction of internet addiction according to depression, loneliness and self-esteem variables are in Table 1.

First of all dual and partial correlation results between dependent variable of internet addiction and variables predicting the dependent variable will be examined. It seems that there is a positive and mid-level dual relation (r=.35) between internet addiction and depression but partial correlation between the two variables is a positive and low relation (r=.27) when loneliness and self-esteem variables are checked.

It seems that there is a positive and low-level dual relation (r=.22) between internet addiction and loneliness variables but

Table 1. **Multiple regression analysis results regarding the prediction of internet addiction**

Variable	B	Standard error	β	T	p	Dual r	Partial r
Constant	39.53	4.65	-	8.50	.00	-	-
Depression	.36	.13	.19	2.88	.00	.35	.27
Loneliness	.20	.10	.13	2.07	.04	.22	.12
Self-esteem	.23	.68	.02	.33	.74	-.06	.02

R= .37,   R2= .14,   F(3-288)= 7.75,   p.= .00

partial correlation between the two variables is a positive and low relation (r=.12) when loneliness and self-esteem variables are checked. It also seems that there is a negative and low-level dual relation (r=.06) between the two variables when relations between internet addiction and loneliness variable are analyzed but partial correlation between the two variables turns into a positive and low relation (r=.12) when loneliness and self-esteem variables are checked.

A positive, mid-level and significant relation with internet addiction has come out when depression, loneliness and self-esteem variables are considered together (R=.37,p<.01). When depression, loneliness and self-esteem variables are considered together, it explains 14% of total variance of internet addiction. Predictor variables' relative order of importance on internet addiction is depression, loneliness and self-esteem according to the standardized regression coefficient (β). When t-test results regarding the significance of the regression coefficients are examined, it is found that depression and loneliness variables are significant predictors on internet addiction. However self-esteem is not a significant predictor on internet addiction.

According to regression analysis results, the regression equality regarding the prediction of internet addiction with depression, loneliness and self-esteem has been found as:

INTERNET ADDICTION = 39.35 + 0.36DEPRESSION + 0.20LONELINESS+ 0.22SELF-ESTEEM.

Discussion

Internet addiction has begun to be an important problem with youngsters starting to misuse internet. Although studies about internet addiction are common in the world, they have just started to become widespread in Turkey. Studies in Turkey remain limited to scale development (Özcan and Buzlu, 2005; Horzum, Ayas and Balta, 2008), adaptation

(Balta and Horzum, 2008a) and descriptive level (Balta and Hotzum, 2008b; Kelleci et al, 2009) and there are few researches (Kıran Esen, 2009) related to psychological effects of internet addiction. Researches in the rest of the world are also about psychological effects of internet addiction and emphasize variables such as depression, loneliness and self-esteem. (Caplan, 2002; Morahan-Martin and Schumacher, 2000; Cho and Lee, 2004; Jang, 2008; Kim et al, 2006; Greenberg, Lewis and Dodd, 1999, Young, 1999). It has been considered important to research these variables and since there is no research about these variables they have been used as this research's variables.

It has been found in the study that there is a positive oriented and mid-level relation between internet addiction and depression. This finding coincides with findings of Cho and Lee, 2004; Jang, 2008; Kim et al, 2006; Kraut et al, 2002; Morgan and Cotten,2003; Reynolds and Mazza 1999; Yang and Tung, 2007; Young and Rogers, 1998; Whang, Lee and Chang, 2003. However findings of Sanders et al, 2000; Niemz, Griffiths and Banyard, 2005; have shown that there is no relation between internet addiction and depression. Grohol (1999) attribute the reason why findings of Sanders et al, 2000; Niemz, Griffiths and Banyard are different to the people who admit their internet addiction, preferring to use internet much more than facing the depression. From this aspect individuals may not have preferred to face their depression states in these two researches.

It has been found in the study that there is a positive oriented and low-level relation between internet addiction and loneliness. This finding coincides with findings of Caplan, 2002; Morahan-Martin and Schumacher, 2000; Özcan and Buzlu, 2007; Park and Song; 2002. A positive relation between internet addiction and loneliness stems from the necessity of humans that are social beings

to communicate with other humans and to go on their lives continuing this communication. Individuals who cannot communicate may be abstracted from the society and experience problems. Individuals who are shy and who choose to be alone try to communicate and convey their feelings and thoughts to other people through internet because they experience difficulties in communicating face-to-face. This situation may have been effective in the existence of the relation between internet addiction and loneliness.

It has been found in the study that there is an insignificant negative oriented and low level relation between internet addiction and self-esteem. This finding coincides with the findings of Shotton (1991), Greenberg, Lewis and Dodd (1999), Young (1999) Murali and George (2007). A relation between internet addiction and low self-esteem has been found in this research. However this relation is not significant. The reason of this can be that internet addicted individuals accept and do not make an effort to change this situation.

Social welfare for individuals has been effective in the decrease of internet addiction (Nalwa and Anand, 2003). Social support has a positive importance on individuals' not sinking into depression and not feeling lonely. Since internet addicts usually abstract themselves from the social environment and their social relations have turned out to be negative, they cannot benefit from the social support. Individual will spend more time on internet and expect more from internet as a consequence of looking for the help that can be obtained from the face-to-face relations on internet. This situation will increase the internet addiction of the individual.

Today, the use of web 2.0 instruments on internet is likely to increase internet addiction. Instruments such as Facebook, wiki, weblog, twitter make individuals interact and increase their sharing on internet more. This situation make individuals spend more time on internet.

From this aspect, technological advancement is likely to increase internet addiction day by day. So not only internet addicts but also all individuals must be informed about internet addiction and preventive programs must be developed. Internet addition is an important problem for the schools, too. Ignoring this problem and not developing solution offers mean standing by bigger troubles that will rise in future. School staff and parents should know the psychological effects of internet addiction on students in order to fight against it.

The fact that internet addiction affects individuals psychologically in a bad way is found in the literature analysis and consequence of this research. So psychological consultants at schools should provide psychological assistance to the internet addicts and those who have potential for internet addiction.

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