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Preservice Teachers' Internet Addiction in Terms of Gender, Internet Access, Loneliness and Life Satisfaction

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Abstract

The aim of this study is to investigate pre-service teachers' Internet addiction in terms of gender, Internet accessibility, loneliness and life satisfaction. Statistical analyses were completed on the data by the 247 pre-service teachers that filled the surveys completely. According to findings, pre-service teachers' level of loneliness and Internet addiction scores is low while their life satisfaction scores are high. Male participants are more addicted to the Internet than female participants. Also those, males and females, who had Internet access, had more tendencies to be addicted to the Internet. There is evidence to indicate a positive correlation between loneliness and Internet addiction, and negative correlation between life satisfaction and Internet addiction. Based on the results several different suggestions are made for continuing research in this field.

Key words: Internet addiction, Gender, Internet access, Loneliness, Life satisfaction.

Introduction

The 20th century became the century of information and communication technologies. But, the 21st century, an Internet age, through which information all over the world is connected and accessed. Anyhow we can solve almost all problems from banking to fun on the Internet. In other words, it has become an essential part of daily life (Amichai-Hamburger & Ben-Artzi, 2003). While the Internet has been a way of facilitating people's lives, some could not do without it; that is, they have developed an addiction to the Internet (Contarello & Sarrica, 2007).

Internet addiction appears to be a common disorder that merits inclusion in Diagnostic and Statistical Manual of Mental Disorders - Fifth Edition (Dell'Osso, Altamura, Allen, Marazziti, & Hollander, 2006). Conceptually, the diagnosis is a compulsive-impulsive spectrum disorder that involves online and/or offline computer usage and consists of at least three subtypes: excessive gaming, sexual preoccupations, and e-mail/text messaging. All of the variants share the following four components: 1) excessive use, often associated with a loss of sense of time or a neglect of basic drives, 2) withdrawal, including feelings of anger, tension, and/or depression when the computer is inaccessible, 3) tolerance, including the need for better computer equipment, more software, or more hours of use, and 4) negative repercussions, including arguments, lying, poor achievement, social isolation, and fatigue (Block, 2008). On the other hand, Ekinci (2002) describes the Internet addiction giving everyone around his/her e-mails address, ICQ number, chat room names, spending most of the time on the Internet, decreasing job satisfaction and productivity, shopping on the Internet, having less time for friends and family. Other researchers note that those who are addicted to the Internet are isolated from social activities and social contacts (Beard, 2002; McMuran, 2004; Weiser, 2001; Widyanto & Young, 1998).

As the Internet can dominate life, many researches and psychologists have focused on the subject of excessive net use (Amichai-Hamburger & Ben-Artzi, 2003). Internet addiction and its corresponding negative effects have been the subject of much research: social thinking, personal mental health and the Internet (Contarello & Sarrica, 2007), effects of the Internet on mental health (Donchi & Moore, 2004), loneliness and new technologies (Prezza, Pacilli, & Dinelli, 2004), social use of the Internet and loneliness (Hu, 2007), Internet, loneliness and life satisfaction (Vas & Gombor, 2009) and loneliness and Internet use (Amichai-Hamburger &

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Ben-Artzi, 2003). The other studies have focused on positive sides of the Internet and being a social person. They say that lonely individuals are drawn to some forms of interactive activities online because of the possibilities of connectedness, companionship, and communities they offer (Morahan-Martin, 1999).

Although Internet addiction is a fact that causes a person to spend time on it for a long time, its reasons may change depending on several factors such as age, income, education, gender and so on.

Internet Addiction and Gender

There are many studies that concern gender differences in the use of computers (Brosnan, 1998; Comber, Coley, Hargreaves, & Dorn, 1997; Kirkup, 1995; Scragg & Smith, 1998). When the studies so far are taken into consideration, it is seen that some studies found no relationship in terms of gender (Hall & Parsons, 2001; Usta, Bozdoğan, & Yıldırım, 2007; Zhang, 2005). While some of the studies support the idea that males are more addicted to the Internet than females (Jang, Hwang, & Choi, 2008; Ko, Yen, Chen, Chen, & Yen, 2005; Li & Kirkup, 2007; Scherer, 1997; Yang, 2001; Yang & Tung, 2007), there are other studies (Leung, 2004; Shaw & Gant, 2002b; Young, 1998) that oppose this idea.

Internet Addiction and Internet Access

Having an Internet access is another factor affecting Internet addiction. Some studies show that there is close connection between being addicted to the Internet and having one's own computer and Internet access (Akkoyunlu, 2002; Usta et al., 2007). In these studies indicate that those who have Internet access are more addicted to Internet than those who don't have access to the Internet. Despite of some of these studies, there are not many studies concerning the association between Internet addiction and access to the Internet while there are many studies concerning owning a computer and using the Internet (Akkoyunlu, 2002; Usta et al., 2007).

Internet Addiction and Loneliness

Although the Internet mostly used to interact with others, loneliness has long been associated with excessive use of the Internet addiction. Some of the researches (Brenner, 1997; Erdoğan, 2008; Kraut et al., 1998; Iacovelli & Valenti, 2009; Lavin, Marvin, McLarney, Nola, & Scott, 1999; Nie & Erbring, 2000; Sanders, Field, Diego, & Kaplan, 2000; Stoll, 1995; Turkle, 1996) demonstrated that there was close relationship between Internet addiction and loneliness. In the longitudinal study of Kraut et al. (1998), they indicated that Internet use leads to loneliness. Similarly, Griffiths (1999) found that people who are addicted to Internet was lonelier than others. The researches attribute the loneliness to decreases in family communication, social activities, well-being and happiness. In another study by O'Toole (2000), found that social isolation increases with Internet use. And, it was discovered that the participants who were using the Internet more than five hours a week believed their time online reduced their time with friends and family. Brenner (1997) suggested that Internet use hinders other activities and leads to addiction.

However, other researches show that there is not a close relationship between Internet addiction and loneliness (Amichai-Hamburger & Ben-Artzi, 2003; Chou & Hsiao, 2000; Morahan-Martin & Schumacher, 2003; Oldfield & Howitt, 2004; Shaw & Gant, 2002a). On the contrary, these studies indicate that using the Internet helps people to socialize and increases their life satisfaction and general well-being. Another study shows that lonely people use the Internet excessively, due to fact that the Internet provides a social environment for lonely people to interact with others (Whitty & McLaughlin, 2007). According to Amichai-Hamburger and Ben-Artzi (2003) use of the Internet could decrease loneliness. Similarly, use of the Internet reduces stress and lessened negative feelings associated with loneliness (Booth, 2000).

Internet Addiction and Life Satisfaction

While much research focuses on the relationship between Internet addiction and loneliness, there are few studies illustrating a relationship between Internet addiction and life satisfaction. Some studies show that having Internet access increases life satisfaction levels (Chou & Hsiao, 2000; Morahan-Martin & Schumacher, 2003; Sahin, Erdogan, & Akturk, 2007; Shaw & Gant, 2002a). In contrast, some researches indicate that those people

addicted to Internet are less happy or have less life satisfaction and overall well-being (Kraut et al., 1998; Moody, 2001).

The Current Study

Given the above background, this study examines the pre-service teachers' levels of Internet addiction in terms of gender, Internet access, loneliness and life satisfaction. This study aims to contribute to the ongoing discussion about whether males or females are addicted to internet and also to data concerning the relationship between internet access and internet addiction, which is a subject to be widened. Most often, in the western countries, the Internet is accepted as a way to socialize (Amichai-Hamburger & Ben-Artzi, 2003; Morahan-Martin & Schumacher, 2003; Oldfield & Howitt, 2004; Shaw & Gant, 2002a), but in the far east it is a reason to increase loneliness level (Erdoğan, 2008). With this study, it is aimed to find out if loneliness and life satisfaction increase or decrease when people use the internet taking the cultural context into consideration.

Method

Participants

The participants of the study are pre-service teachers (87 males and 160 females) that study in a faculty of education in Turkey and are between 18 and 24 years old. 247 pre-service teachers filled out the survey forms completely.

Data Collection Instruments

UCLA Loneliness Scale

This scale is developed by Russell, Peplau and Cutrona (1980), to determine the participants' perceived loneliness level. Validity and reliability of the Turkish version is established by Demir (1989). It is a Likert-type scale with four options and 20 items. A high score means that the loneliness level is high. The standardized UCLA lonelines scale is found to have a high internal consistency (coefficiant alpha 0.96) and high test-retest reliability 0.94. In the present study the Cronbach's alpha coefficient is 0.92.

Life Satisfaction Scale

The Life Satisfaction Scale is developed by Diener, Emmons, Larsen, and Griffin (1985). It is adapted to Turkish Language by Köker (1991). It is self-assessable Likert-type scale composed of seven options and 5 items. The test-retest reliability of the scale is found to be 0.85. In the present study, the Cronbach's alpha coefficient is calculated and internal reliability score of the scale is found to be 0.84.

Internet Addiction Scale

Internet addiction scale is adapted to Turkish Language by Kesici and Sahin (2010) consists of 26 items. This Likert- type scale has four options and includes 5 subscales: compulsive use, withdrawal, tolerance, time management problems, and interpersonal and health problems. The Cronbach's alpha internal reliability score of the scale is 0.94. The internal consistency scores for each subscale are 0.86 for compulsive use, 0.90 for withdraw, 0.91 for tolerance, 0.89 for time management problem, and 0.91 for interpersonal and health problems. In the present study the Cronbach's alpha internal reliability score of the scale is 0.94 and 0.88 for compulsive use, 0.88 for withdraw, 0.89 for tolerance, 0.89 for time management problem, and 0.90 for interpersonal and health problems for each subscale.

Data Analysis

The research data was analyzed using SPSS 15.0 (Statistical Package for the Social Science) program. The data concerning pre-service teachers' loneliness, Internet addiction and life satisfaction were interpreted considering

arithmetic mean ($\overline{X}$), percentage (%) and frequency (f) and a t-test was conducted to compare gender and internet access with Internet addiction scores. Also, correlation among loneliness, life satisfaction and Internet addiction was analyzed by Pearson Correlation Analyze.

Results

Pre-service Teachers' Internet Addiction, Loneliness and Life Satisfaction

As seen in Table 1, it is seen that pre-service teachers' Internet addiction level ($\overline{X}$ = 42.12) and loneliness level ($\overline{X}$ = 35.23) is low. However, pre-service teachers' life satisfaction level could be said to be high ($\overline{X}$ = 24.04).

Table 1.Pre-service teachers' Internet addiction, loneliness and Internet satisfaction

Variable	n	Mean	Std. Dev.
Internet Addiction		42.12	15.5
Loneliness	247	35.23	11.13
Life Satisfaction		24.04	6.11

Pre-service Teachers' Internet Addiction according to Gender

According to pre-service teachers' gender, the mean of Internet addiction scores is compared by sub dimensions and total mean using t-test.

Table 2.Internet addiction according to gender

	Group	n	Mean	Std. Dev.	t	p
Compulsive use	Male	87	9.00	4.06	2.53	0.012*
	Female	160	7.87	2.88		
Withdraw	Male	87	8.98	3.81	2.00	0.047*
	Female	160	8.04	3.35		
Tolerance	Male	87	7.99	3.20	2.09	0.038*
	Female	160	7.16	2.86		
Time management problem	Male	87	8.34	3.80	3.75	0.000*
	Female	160	6.76	2.75		
Interpersonal and health problem	Male	87	11.82	5.10	2.89	0.004*
	Female	160	10.12	3.96		
Total Internet Addiction	Male	87	46.13	18.23	3.04	0.003*
	Female	160	39.94	13.35		

*$p < 0.05$

As it is seen in Table 2, according to pre-service teachers' gender, a significant statistical difference is found between sub-dimensions and total Internet addiction scores. Considering sub-dimension and total mean scores, it can be seen that males are more addictive to the Internet than female participants.

Pre-service Teachers' Internet Addiction According to their Internet Access

According to pre-service teachers' Internet access, sub-dimensions and total scores were compared by t-test and are shown in Table 3. A significant statistical difference was found between pre-service teachers' Internet access and the total mean score of Internet addiction ($t = 3.15$, $p < 0.01$). Therefore, it can be that teachers with Internet access indicate higher level of Internet addiction. Considering sub dimensions of Internet addiction according to Internet access, except for interpersonal and health problem sub dimension, a significant difference was found in favor of those with Internet access.

Table 3.Internet addiction according to Internet access

	Group	n	Mean	Std. Dev.	t	p
Compulsive use	No	97	7.45	2.75	3.27	0.001*
	Yes	150	8.79	3.64		
Withdraw	No	97	7.59	3.05	2.94	0.004*
	Yes	150	8.87	3.76		
Tolerance	No	97	6.81	2.72	2.70	0.007*
	Yes	150	7.86	3.11		
Time management problem	No	97	6.59	2.76	3.03	0.003*
	Yes	150	7.79	3.44		
Interpersonal and health problem	No	97	10.08	3.88	1.80	0.073
	Yes	150	11.13	4.77		
Total Internet Addiction	No	97	38.53	12.74	3.15	0.002*
	Yes	150	44.45	16.68		

*$p < 0.05$

Correlation between Pre-service Teachers' Internet Addiction, Loneliness and Life Satisfaction

The correlation between pre-service teachers' Internet addiction, loneliness level and life satisfaction was analyzed using Pearson correlation analyze. The findings are given in Table 4.

Table 4.Correlation between loneliness, Internet addiction and life satisfaction

Scale	1	2	3
1. Loneliness	1		
2. Internet Addiction	0.309(**)	1	
3. Life Satisfaction	-0.387(**)	-0.128(*)	1

* $p < 0.05$, ** $p < 0.01$.

According to the findings, a correlation between pre-service teachers' loneliness, Internet addiction and their life satisfaction is evident. While, a significant positive correlation between loneliness and Internet addiction is seen, there is a significant negative correlation between life satisfaction level and Internet addiction.

Discussion and Conclusion

This study focuses mainly on Internet addiction among pre-service teachers. The findings included variables of gender, Internet access, loneliness and life satisfaction and showed inter-relationship of Internet addiction. Considering pre-service teachers' Internet addiction, it can be seen that they are not addicted to Internet in general. This finding coincides with Usta et al. (2007) in which they found that pre-service teachers used the Internet less than 6 hours in week and corresponds to findings of Akkoyunlu (2002).

A study concerning association between Internet addiction and gender showed that males were more likely than females to become Internet addicts (Griffiths, 1999). Scherer (1997) reported that Internet addicts included a significantly larger proportion of male (71%) to female (29%). Similarly, Morahan-Martin and Schumacher (2003) indicated that males were more likely than females to be pathological users (12% vs. 3%). In this study, it is seen that male pre-service teachers were more addicted to the Internet than females. This may be either because males have more freedom in Turkey or they are more access to Internet than female pre-service teachers. However, the finding in this study does not coincide with Hall and Parsons (2001), and Zhang (2005) in which they found no significant relationship between gender and Internet addiction. This may be due to the unlike samples or cultural differences. Another finding form this study is that males were more addicted to Internet in all areas of Internet addiction such as compulsive use, withdraw, tolerance, time management problem and Interpersonal and health problem than female pre-service teacher.

A significant statistical difference was found between pre-service teachers' Internet access and their total mean score of Internet addiction, which is supported by the findings by Johansson and Götestam (2004). Therefore, it ought to be mentioned that pre-service teachers with the Internet had higher levels of Internet addiction. Considering sub-dimensions of Internet addiction according to Internet access, except interpersonal and health

problem sub dimension, a significant difference was found in favor of those with, which coincides with Block (2008) and coincides with Akkoyunlu (2002) and Usta et al. (2007). In these studies, it was found that those who have Internet access tend to be more addicted to Internet than those who don't have access to Internet.

In the present study, there is positive correlation between pre-service teachers' level of loneliness and Internet addiction scores. This might be due to fact that a peculiar characteristic of Turks is to be sociable and to prefer to face-to-face communication (Erdoğan, 2008). The findings are also supported by the research of Bin (2006), Brenner (1997), Erdoğan (2008), Iacovelli and Valenti (2009), Kraut et al. (1998), Lavin et al. (1999), Nie and Erbring (2000), Sanders et al. (2000), Stoll (1995), and Turkle (1996). The authors attribute the loneliness to a decrease in family communication, social activities, well-being and happiness. Brenner (1997) suggested that Internet use hinder other activities and leads to addiction.

Another finding of this study is negative correlation between the pre-service teachers' Internet addiction and their life satisfaction level. In other words, Internet addiction affects life satisfaction in a negative way, this coincides with Kraut et al. (1998) and Moody (2001) who found that overall people addicted to the Internet were less happy or had less life satisfaction and well-being. However, the findings of this study do not support Morahan-Martin and Schumacher (2003), Sahin et al. (2007), Shaw and Gant (2002) or Chou and Hsiao (2000) found that using Internet had increased life satisfaction levels.

The participants of the study are limited to a small sample of the pre-service teachers in Turkey. Therefore, it might limit the generalizability of the findings to a wider population. Future researches could include other variables such as social support (family, friend or teacher support) and parenting styles as they are important factors effecting internet use and addiction.

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