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Examination of High School Students' Internet Addiction In Terms Of Some Variables

Abstract

Developing technology and science bring about many of the problems in individual and social life as a result of wrong perception and usage, while they significantly make human life easier. Internet addiction is one of the problems dealt at scientific researches and needing to be solved. Addiction is a psychological-based problem and causes lots of problems such as social, economical and physical. Education is the first to struggle with this problem. It is important for the struggle to be effective to diagnose the problem and determine what level the problem is and which variables it is related to. This study is about the analysis of high school students' internet addiction in terms of some variables. The study is a descriptive and quantitative research carried out in survey model. It was researched on 969 students who are at high school in the city center of Kırşehir, Turkey. 490 of the students are female while 479 of them are male. 536 of the students are at Vocational High School, 244 of them are at Anatolian High School and 189 of them are at General High School. "Personal Information Form" and "Internet Addiction Scale", which was developed by Young (1998) and adapted to Turkish by Bayraktar (2001), were used as data collection tools. The scale consists of 20 items and a single dimension. For reliability of the scale, Cronbach's Alpha was determined as 0,91. Arithmetic mean, standard deviation, t test, one-way analysis of variance (ANOVA) test, Scheffé/Tamhane test and correlation test were used for data analysis. The results were summarized in tables form and explained under the tables.

At the end of the research, these results were mainly reached: (1) Students are "potential internet addicts". (2) Males compared to females, Anatolian High School students compared to Vocational and General High Schools students, 9th grade students compared to 11th grade students, the ones having internet at home compared to the ones who don't, the students attending a computer course compared to the students who didn't, the students using internet for fun and communication compared to the others are more addicted to internet with a meaningful difference. On the other hand, while there is a positive and meaningful relation between internet addiction level and internet usage frequency and experience, there is no relation between internet addiction level and academic standings of students. In other words, as long as students' Internet usage frequency and experience increases, their addiction level increases, too. Within these results, some suggestions were made to struggle with internet addiction at high schools.

Key words: Internet addiction, high school, different variables

1- Introduction

Developing science and technology cause lots of problems due to the fact that technology is misperceived and misused, while it has a lot of effects easing the life. On the one hand technology provides effective solutions for time and space problems; on the other hand it facilitates occurring and spreading of a number of threatening problems in some areas such as physical, social, psychological, economic, political, security, and so on (Balay & Erses, 2005). With respect to the use of modern technology, one of the problems tackled especially in scientific studies in recent years and considered necessary to be solved is the misapplication and its results relating to the internet use. Some problems being as an illness called internet addiction, cyber bullying, hacking, etc. can be given as examples for this misapplication (Young, 2004; Göregenli, 2005). It is observed that while some people restrict the use of the internet in accordance with their requirements, because of the fact that the others couldn't place this restriction they have physical, psychological, social, economic losses and so on in their business and social life (Murali & George, 2007).

As a consequence of this situation posing problem viewed much more with the passing of time, the term "Internet addiction" is added to the current addiction terms. Addiction of internet use is described as an impulse control disorder without an intoxicant intake and it is likened to "compulsive gambling" (Young, 2004; American Psychiatric Association, 2005). According to a research in USA, it was determined that the use of internet increases by 40 percent annually (Yolaç, 2001). While the number of internet users increase rapidly all over the world, it is also seemed that the demographic structures of the users change rapidly (Özcan, 2005). Although it drew attention in developed countries such as USA and Western Europe early on, there are publications on this subject almost all over the world at the present time; and this is worried that the rapid spread of the internet accelerates the abuse and addiction. This newly described addiction type which can be seen among almost every age has started to be risky especially for the group of age between 12 and 18. When the young population density in our country is taken into consideration, the internet addiction has become a health problem that should be known and described by the clinician studying on addiction (Bayhan, 2011).

It is seen that there are lots of researches in the literature that evaluate the penetration, the use frequency and aim of information and communication technologies of children and adolescents according to gender and age. In this context, it was found in an extensive research including the children and adolescents between 6-16 in Canada that the 86% of the children used the internet regularly (NCES, 2003; Topçu & Erdur-Baker, 2007).

According to the research report entitled Pew Internet and American Life Project, the 87 percent of adolescents between the group of age 12 and 17 (21 million adolescents) spend time on the internet and the better part of them connect to the internet everyday (Lenhart, Madden & Hitlin, 2005). In the research done with adolescents between 11 and 18 by Chele, Stefanescu, Macarie and Ilinca (2005), it was seen that the 90 percent of males and females used computer and adolescents spent time more than three hours a day in front of the computer.

Smith et al (2008) stated in a research they did with adolescents between 11 and 16 that almost all of the adolescents were internet users and the 46.4 percent of them spent 0-5 hours a week and the 25.6 percent of them spent between 5 and 10 hours a week on the internet. It was also seen in the research that the adolescents used the internet mostly for playing game, doing homework, instant messaging, e-mail and chat rooms. As it is seen, the main theme of many problems is related to spending over much time on the internet. It is a known subject that spending over much time on the internet is directly related to the internet addiction. Addiction is basically a psychological disorder and it also causes social, economic and physical problem in individual and society. Education is one of the primary ways to tackle with this problem. But it is essential that it should be determined correctly for an effective struggle; at which level the problem is and to which variables it is related. This study is about examination of high school students' internet addiction in terms of some variables.

a-Purpose of the Research

The general purpose of this research is the examination of high school students' internet addiction in terms of some variables. Within this general purpose, these questions were mainly looked for answers:

1. What are the levels of the high school students' internet addiction?
2. Do the internet addiction levels of high school students differentiate according to;
 - a. Gender?
 - b. The kind of school they received education?
 - c. Class level?
 - d. Having internet at home?
 - e. The level of computer use?
 - f. Attending a computer course?
3. Is there a relation between the internet addiction levels of high school students and the frequency and experience of the internet use of them?

2-Method

1-Research Model

This study is a descriptive and quantitative research in survey model. The internet addiction level of high school students was tried to be described in terms of different variables.

2-Population and Sample

The population of the research consists of 9th, 10th and 11th grade students in the city center of Kırşehir. The sample of the research consists of totally 969 students randomly chosen from each class of these schools' 9th, 10th and 11th grade. 490 of these students are female and 479 of them are male. 536 of the students are from Vocational High School, 244 of them are from Anatolian High School and 189 of them are from General High School.

3-Data Collection, Analysis and Interpretation

The data of research was collected by "Personal Information Form" and "Internet Addiction Scale", developed by Young (1998) and adapted to Turkish by Bayraktar

(2001). The scale was composed of 20 items and one dimension. While the Cronbach' Alpha reliability of the scale was determined as 0,87 in the study of Bayraktar (2001), it was determined as 0,91 in this study.

For analyzing of the data, the analysis of arithmetic mean, standard deviation, t test, one-way analysis of variance (ANOVA) test, Scheffe / Tamhane test and correlation test was mainly used. According to the arithmetic mean values, it was called as "nonaddict group" for the values between 0,00 and 1,99; "potential addict group" for the values between 2,00 and 3,49; "addict group" for the values between 3,50 and 5,00. For determining the significance level of the tests, $p < ,05$ level was found sufficient.

3-Results

1.The Internet Addiction Level of the Students

Table 1 shows that the internet addiction level of the high school students is $\bar{x}=2,10$. Therefore, it can be said that the high school students are in potential addict group. This situation can be interpreted that the high school students will have problem about internet addiction both physically, socially and academically later on.

2.The Internet Addiction Levels of the Students According to Their Gender

Table 2 shows that both the female and male students are in the potential addict group; however, it is seen that the male students are significantly differently more addicted than the female students ($p < ,05$). Therefore, it can be said that the male students are under a more serious threat about becoming internet addict.

3.The Internet Addiction Levels of the Students According to the School Type They Study

Table 3 shows that the internet addiction levels of the high school students according to their school type change between $\bar{x}=2,05$ and 2,24; the students of Anatolian High School are the most potential internet addict and the students of General and Vocational High Schools are the least potential internet addict. It was determined that the internet addiction levels of the students according to high school type differentiate significantly ($p < ,05$). It was determined by Scheffe test that the student of Anatolian High School are significantly differently more internet addicted than the students of Vocational and General High Schools.

4.The Internet Addiction Levels of the Students According to Their Class Levels

Table 4 shows that the addiction levels of high school students according to their class levels change between $\bar{x}=2,00$ and 2,19 and the students in each groups are potential internet addicts. However, there is a significant differentiation among groups ($p < ,05$). It was determined by Scheffe test that 9th grade students are significantly differently more internet addicted than 11th grade students. Therefore, it can be said that as long as the class level increases, the internet addiction level of the students decreases.

5. The Internet Addiction Levels of the Students According to Having Internet at Their Homes

Table 5 shows that according to the variable having internet at home, the internet addiction levels differentiate significantly ($p < ,05$); the students having internet at home are significantly differently more internet addicted than the ones not having. Therefore, it can be said that the students who have internet at their home are under a more serious threat about being internet addicts.

6. The Internet Addiction Levels of the Students According to Their Computer Use Levels

Table 6 shows that the internet addiction levels of the students according to their computer use levels change between $\bar{x} = 1,86$ and $2,44$; and there is a significant differentiation between them ($p < ,05$). The differentiation was determined by Tamhane test between the students whose computer use levels are “advanced” and the ones whose computer use levels are “intermediate” and “basic”; and between the students whose computer use levels are “basic” and the ones whose computer use levels are “intermediate”. It is seen that as long as the students’ computer use skills develop, their internet addiction levels increase. Therefore, it can be said that computer use skill provides a basis to internet addiction for the students.

7. The Internet Addiction Level of the Students According to Attending a Computer Course

Table 7 shows that there is a significant differentiation for the internet addiction level of the high school students according to attending a course ($p < ,05$); and the students attending a computer course are significantly differently more internet addict than the ones not attending. Therefore, it can be said that the students who become skilful at using computer by attending a computer course are under a more serious threat.

8. The Relation between Students’ Internet Addiction Level, Frequency and Experience of Internet Use and Academic Success

Table 8 shows that there is a positive and significant relation between the high school students’ frequency and experience of internet use and internet addiction level ($p < ,05$); on the other hand, there isn’t any relation between their academic success and internet addiction level ($p > ,05$). Therefore, it can be said that as long as the students’ frequency and experience of internet use increase, their internet addiction increases, too.

4- Conclusion and Discussion

The results reached after the research about examination of high school students’ internet addiction level in terms of different variables are discussed below.

1. High school students are in potential internet addict group. This situation can be interpreted that high school students will have a number of psychological, social and academic problems about their internet addiction later on. Thus, it is stated that internet addiction results in many physical, psychological and social problems; and it causes a decline in academic success because of these problems

(Young, 2004, Göregenli, 2005). The situations that the internet becomes an easily accessible and usable technology and students interact with the internet easily and extremely could increase their internet addiction level. Thus, researches show that students use the internet in social surroundings such as home, school or internet café; and there isn't almost any surrounding without the internet (Murali & George, 2007; Çelen, Çelik & Seferoğlu, 2011). Therefore, it is suggested that the surroundings in which the internet is accessed and used should be under control and restricted; especially teachers, parents and students should be educated to raise the awareness of them.

2. Both female and male students are potential internet addicts, besides, male students are more internet addicted than female students. Therefore, it can be said that male students are under a more serious threat about being an internet addict. That the male students have more opportunity to use internet in different surroundings out of home and school especially internet cafés; and there is a restrictive socio-cultural structure for females could cause this situation. There are researches confirming this situation in the literature (Balta & Horzum, 2008) there are also researches showing that there is no gender difference about this situation (Young, 1998). The reason of the differentiation between researches can be that sample groups of the researches are different; and it was researched in different societies having different socio-cultural and economic levels. There are findings and interpretations in the literature showing that there is a relation between socio-cultural and economic texture and technology use behaviors (Topçu & Erdur-Baker, 2007). The internet and computer use can be decreased in the societies being socio-culturally more closed and having a low economic condition.

3. Anatolian High School students are significantly differently more internet addicted than Vocational and General High Schools students. The reason of this situation can be that Anatolian High School students, having a better academic standing than the others, both use the internet more for researching and have lots of free times because of pulling their weights about school and learning quicker. On the contrary, a research by Yang and Tung (2007) stated that vocational high school students have more potential than the other high school students about being an addicted. Nevertheless, if educational study and interest fields are determined and students are encouraged to attend these, better results can be obtained by decreasing the potential of being an internet addict.

4. As long as the class level increases, the internet addiction level decreases. Therefore, it can be said that lower divisions are under more threat about being an internet addict. This can result from the fact that while 9th grade students turn to have fun and rest after the stressful exam they had at the end of the elementary school, they cannot often use the internet or find time to use the internet because of studying for the university entrance exam. So, if the fields of interest or activities especially for lower divisions are prepared and students are encouraged to attend this fields and activities, the potential of being an internet addict can be decreased.

5. The students having the internet at their home are significantly differently more internet addicted than the ones not having. This can be interpreted that the students having the internet at their home are under a more serious threat about being an internet addict. Thus, there are similar results in the literature like this (Gençer, 2011; Simkova & Cincera, 2004; Esen, 2007; Ateş Özdemir & Karabaş, 2007). It can be said that this situation results from the fact that the students always have an opportunity to use the internet. Therefore, if there isn't an internet connection at home or parents restrict children about their duration and aim of internet use, the children can be protected from this risk.

6. As long as students have a better computer use skill, their internet addiction levels increase. Therefore, it can be said that computer use skill causes the internet addiction for students. This situation can result from the fact that they can benefit from the internet differently in parallel with their computer use skill and they interact with the internet more because of their curiosity. There are research results supporting this interpretation (Ateş, Özdemir & Karabaş, 2007). If students are informed of the internet or computer addiction and how and for which reasons the internet and computer should be used, their potential of being an internet addict can be decreased.

7. As long as the internet use frequency and experience of students increases, their internet addiction increases, too. So, it can be said that the students who have a better frequency and proficiency in the internet use have more risk to be an internet addict. The researches show that there is a relation between the addiction and the time people spend on the internet (Simkova, & Cincera, 2004). Therefore, there is a consistent result with the literature. On the other hand, there is no relation between the internet addiction level and academic success. This can be interpreted that the internet is not just or mostly used for academic studies or educational purposes. Hence, it can be said that students need to be informed and guided about the aim of internet use; in this context, teachers and parents should get children under control.

References:

- American Psychiatric Association, (2005). EDSM-IV-TR Tanı Ölçüleri. (Çev: E. Köroğlu). Ankara: Hekimler Yayın Birliği
- Ateş A., Özdemir Y. & Karabaş T. (2007). Sınıf öğretmeni adaylarının öğrenme biçimleri ile internet kullanımına yönelik tutumları. 16. Ulusal Eğitim Bilimleri Kongresi Bildiriler Kitabı, 3, 58-65
- Balay, M. & Erses, N. (2005). Bilgisayar Kullanımı ve İnternet. (Ed. A. Şentürk). Bursa: Ekin Kitabevi
- Balta, Ö.Ç. & Horzum, M.B. (2008), Web tabanlı öğretim ortamındaki öğrencilerin internet bağımlılığını etkileyen faktörler. Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi, 41(1), 187-205
- Bayhan V.,(2011), Lise öğrencilerinde internet kullanma alışkanlığı ve internet bağımlılığı (Malatya uygulaması). Akademik Bilişim'11 - XIII. Akademik Bilişim Konferansı Bildirileri, Malatya: İnönü Üniversitesi, 917-924

Bayraktar, F. (2001). İnternet kullanımının ergen gelişimindeki rolü. (Yayınlanmamış Yüksek Lisans Tezi). İzmir: Ege Üniversitesi, Sosyal Bilimler Enstitüsü

Çelen, F.K, Çelik, A. & Seferoğlu, S.S.(2011), Çocukların internet kullanımları ve onları bekleyen çevrim-içi riskler, Akademik Bilişim'11 - XIII. Akademik Bilişim Konferansı Bildirileri, Malatya: İnönü Üniversitesi, 691-698

Esen, B. K. (2007). Akran baskısı ve algılanan sosyal destek değişkenlerine göre ergenlerde internet bağımlılığının yordanması. I. Uluslararası Bağımlılık Kongresi Bildirileri. İstanbul

Gençer, S.Z., (2011), Ortaöğretim öğrencilerinin internet bağımlılık durumlarının internet kullanım profilleri ve demografik özelliklere göre farklılıklarının incelenmesi. (Yayınlanmamış Yüksek Lisans Tezi), Isparta: Süleyman Demirel Üniversitesi

Göregenli, M. (2005). Gençlerde internet kullanımı. 9. Lise öğrencisi Psikiyatrisi Sempozyum Bildirileri ve Notları. (26-28 Kasım 2005), İstanbul

Lenhart, A., Madden, M., & Hitlin, P. (2005). Teensand technology: Youth are leading the transition to a fully wired and mobile nation. tarihinde <http://www.pewinternet.orgadresinden alınmıştır>

Murali, V. & George, S. (2007). Lost online: an overview of internet addiction. *Advances in Psychiatric Treatment*, 13, 24-30

NCES [National Center for Educational Statistics], (2003). Computer and Internet use by children and adolescents in 2001. Statistical Analysis Report, US Department of Education, Jessup, MD. 14.12.2012 tarihinde <http://nces.ed.gov/pubs2004/2004014.pdf> adresinden alınmıştır

Özcan N.K. (2005). Problemlı internet kullanımını belirlemede yardımcı bir araç: 'İnternette bilişsel durum ölçeđi'nin üniversite öğrencilerinde geçerlik ve güvenilirliđi., *Bağımlılık Dergisi*, 2005;6:19-26

Simkova, B., Cincera & J., (2004). Internet addiction disorder and chating in the Czech Republic. *CyberPsychology & Behavior*, 7(5), 536-539

Smith, P.K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S. & Tippett, N. (2008). Cyberbullying, its forms and impact in secondary school pupils. *The Journal of Child Psychology and Psychiatry*, 49, 376-385

Topçu, Ç. & Erdur-Baker, Ö. (2007). Geleneksel akran zorbalığının, siber zorbalığının ve bu iki tip zorbalık türü arasındaki ilişkinin toplumsal cinsiyet açısından incelenmesi. 16. Ulusal Eğitim Bilimleri Kongre Kitabı.Tokat

Yang, S. C. & Tung, C. J., 2007. Comparison of internet addicts and non-addicts in taiwanese high school. *Computers in Human Behavior*, 23, 79-96

Young, K. (1998). Caught in the Net□ <http://www.netaddiction.com/> adresinden 01.02.2013 tarihinde erişilmiştir

Young, K.S. & Case, C.J. (2004) Internet abuse in the workplace: new trends in risk management. *Cyberpsychology and Behavior*. 7(1), 105-111.

Tables

Table 1. The Internet Addiction Level of the High School Students

	N	\bar{x}	Sd
Internet addiction level	815	2,10	,79

Table 2. The internet addiction levels of the high school students according to their gender

Variables	Gender	N	\bar{x}	Sd	Levene		t	df	p
					F	p			
Internet addiction level	Male	403	2,16	,78	,126	,722	2,224	810	,026
	Female	409	2,04	,80					

Table 3. The internet addiction levels of the high school students according to the school type they study

Gruplar	N	\bar{x}	Ss	Levene (p)	K T	df	KO	F	p	Scheffe
(1) Voc. H.S.	438	2,05	,76	0,140	Between gr	5,903	2	2,951	4,733	,009
(2) Anatolian H.S.	221	2,24	,83		Within groups	506,359	812	,624		
(3) Gen. H.S.	156	2,06	,83		Total	512,262	814	2,951		
Total	815	2,10	,80							2-3

Table 4. The internet addiction levels of the high school students according to their class levels

Groups	N	\bar{x}	Sd	Levene (p)	K T	df	KO	F	p	Tamh
(1) 9 th grade	273	2,19	,95	,006	Between gr	5,163	2	2,581	4,143	,016
(2) 10 th grade	244	2,14	,86		Within groups	504,657	810	,623		
(3) 11 th grade	296	2,00	,82		Total	509,820	812			
Total	813	2,10	,89							1-3

Table 5. The internet addiction levels of the high school students according to having internet at their homes

Variables	Having internet at home	N	\bar{x}	Sd	Levene		t	df	p
					F	p			
Internet addiction level	Yes	394	2,27	,82	3,122	,054	5,981	811	,000
	No	419	1,95	,74					

Table 6. The internet addiction levels of the high school students according to their computer use levels

Groups	N	\bar{x}	Sd	Levene (p)	K T	df	KO	F	p	Tamh
(1) Basic	122	1,86	,75	,015	Between gr	28,238	2	14,119	23,701	,000
(2) Intermediate	515	2,05	,72		Within groups	481,336	808	,596		
(3) Advanced	174	2,44	,92		Total	509,575	810			
Total	811	2,11	,79							2-3

Table 7. The internet addiction level of the high school students according to attending a computer course before

Variables	Attending a course	N	\bar{x}	Sd	Levene		t	df	p
					F	p			
Internet addiction level	Yes	70	2,28	,85	,432	,511	1,996	801	,046
	No	733	2,08	,78					

Table 8. The relation between the high school students' internet addiction level, frequency and experience of internet use and academic success

	Frequency of internet use	Experience of internet use	Academic Success
Internet addiction	r	,281	,236
	p	,000	,000
	N	695	760