An Investigation Of High School Students' Online Game Addiction With Respect To Gender

Emre Müezzin
Assist. Prof. Dr.
Cyprus International University, Faculty of Education, Nicosia-North Cyprus
emuezzin@ciu.edu.tr

ABSTRACT
The aim of this study is to investigate high school students' online game addiction with respect to gender. The sample which was selected through the criterion sampling method, consists of 81 female (61.8 %) female, and 50 male (38.2 %), total 131 high school students. The "Online Game Addiction Scale" which was developed by Kaya and Başol (2013) and the Biographic-Demographic Information Form were utilized as data collection instruments. Percentage documentation average and independent sample T-test were used for data analysis in this study. The result of this study showed that there is a significant difference between female and male students in terms of the online game addiction subscales of trouble, success and economic profit.
Keywords: Online game, internet, online game addiction.

INTRODUCTION

Recently, internet use has become one of the most important habits of our daily lives. Previously, obtaining information from a resource was a great problem. Yet, internet made it easier for us to receive information. This internet era is continuously developing and affecting us. Day after day internet became a medium through which we share knowledge, communicate, make shopping, chat and play games. The development of computers and faster network accelerated the advancement of internet technology. Internet became cheaper for people to reach information on the internet, and yet caused inevitable changes in their habits (Akınoğlu, 2002)

According to Young (1996), computer and internet addiction has negative influences on the people's family, academic and business lives. It is known that Internet also causes problems in interpersonal relationships. The research showed that internet addicts have relationship problems and spend limited time with others around them. In 1996 Young used the term "internet addiction" for the first time.

Cengizhan (2003) and Young (2005) also mentioned the symptoms of internet addiction as follows:

1. Excessive mental effort on internet
2. Spending hours even though being intended to spend couple of minutes
3. Exposure to health problems due to spending hours in front of the screen each time
4. Continuously waiting for the next connection time
5. Feeling more comfortable contacting people over internet than talking face-to-face
6. Decrease in meals, lessons or work efficiency due to using internet or staying connecting
7. Trying to give or spread the mail address, chat room names etc to everybody
8. Continuously feeling sleepless and tired because of staying connected to the internet until late
9. Having failure in attempts to decrease the internet usage
10. Withdrawal syndrome due to increase in the internet usage
11. Telling lies to family members, therapist or others to be able to stay connected to the internet
12. Having affection changes in the duration of internet connection (Young, 1999; cited in, Öztürk *et. al.*, 2007; cited in, Balta & Horzum, 2008).

Looking at the history of digital games, we can see that a new internet culture has emerged. Although game activities can be practiced individually, when computers came into our lives they turned into an interactive zone. Previously, the interaction was between only the player and the producer, but later it turned into a game with multiple participants. With the widespread of the internet, unlimited number of participants became involved in games (Tabanlı, 2010).

According to Kim and Park (2006, 2007), some conditions motivated individuals to play online games. For example the need for escapism, leisure, achievement, satisfaction, entertainment and the need to kill time. The findings showed that players' motivation was significantly associated with online game addiction (cited in, Khang, Kim & Kim, 2013)

Several researches have studied the behavioral characteristics of severe online game players and factors associated with online game addiction. They found that "entertainment and leisure", "emotional coping", "excitement and challenge seeking" and "escape from reality" may be the major factors that motivate people to play online games (cited in, Tone, Zhao & Yan, 2014)

According to Hyun et.al. (2015) there are risk factors such as sex and age, cognitive factors, psychopathological conditions such as attention deficit hyperactivity disorder (ADHD), depression, anxiety, impulsivity and social interaction such as family environment, social anxiety, self-esteem which are associated with online game addiction. Psychopathological factors especially ADHD and depression were the strongest risk factors for the online game addiction.

Computer and internet usage habit, which is defined as a new type of addiction, became an important study area that attracted the interest of different disciplines including psychology, sociology and communication (Balcı, Gülnar, 2009).

The results of the current research are expected to shed light on the future studies in the field.

The Aim of the Study
The aim of this study is to investigate high school students' online game addiction with respect to gender.

The Problem Statement of the Study
The main problem statement of the study:

"Is there any statistical difference between the online game addiction in high school students and gender?"

The following sub questions also guided the study.

1. Is there any statistical difference between online game addiction and gender?
2. Is there any statistical meaningful correlation between online game addiction and experience of computer use?
3. Is there any statistical meaningful correlation between online game addiction and experience of internet use?
4. Is there any statistical meaningful correlation between online game addiction and online gaming?
5. Is there any statistical meaningful correlation between online game addiction and daily duration of playing online gaming?

RESEARCH METHODOLOGY

Research Design

Descriptive associational research method has been used for this study. The aim of the descriptive perspective is to determine related cases. This type of research is used to demonstrate associations and relations between two and more variables (Karasar, 2009).

The Population and Sample of the Study

The population of this research involves all high school students in North Cyprus. The sample for the research consists of 61.8 % (n=81) female, 38.2 % (n=50) male, total 131 high school students. The sample was selected through criterion sampling method of the purposive sampling. Students who had their own personal computers were set as a criteria.

Instruments

"Online Game Addiction Scale" and Biographic-Demographic Information Forms were used to collect data. Biographic and Demographic Information Form was prepared by the researcher. It consisted of 12 questions. In this form the participants were asked to answer questions related to (gender, which class he/she attends etc.) as well as computer-internet related questions. "Online Game Addiction Scale" was developed by Kaya and Başol (2013). The Cronbach's alpha reliability coefficient score of the scale is .91. In Online Game Addiction Scale there are three subscales. These subscales are troubles, success and economic profit. Troubles subscale reflects the level of the trouble experienced because of the habit of playing online games. High scores meant having high level of troubles and low score meant avoiding troubles. Success subscale indicated the level of one's "continuously

playing in order to satisfy oneself and the player's gaining a sense of achievement that depends on playing online games. High success score implies high level of sense of success, while low scores mean no sense of success. Economic profit subscale refers that to the level of achieving economic gains and the effects of these gains by playing online games. The high score shows high level of economic profit and low scores show that player does not have any economic profit from online games. "Online Game Addiction Scale" has a reliability score. Reliability scores of subscales are .70 for the trouble subscale, .70 for the success subscale and .76 for the economic profit subscale respectively.

Data Analysis

All analysis were performed by using the SPSS for Windows. Considering purposes of the study percentage documentation average, independent samples T-test and Pearson moment's correlation were figured out in data analysis. The statistical significance level was accepted as .05 in the study.

RESULTS

In this study, 131 students were selected using the personal computer criteria. It was applied to the high school students. The group included 61.8 % (n=81) female, 38.2 % (n=50) male students. The results of the study are presented as follows:

The first sub-question of the research: "Is there any statistical difference between online game addiction and gender?"

Table 1. Comparing Students' Gender with Online Game Addiction Scale Scores

Subscales	Gender	N	$\bar{X}$	Sd	df	F	p
Troubles	**Female**	81	1.57	.64	129	25.11	.000**
	Male	50	2.28	1.06	71.79		
Success	**Female**	81	2.38	1,15	129	.773	.000**
	Male	50	3.26	1.12	105.63		
Economic profit	**Female**	81	1.42	.59	129	50.60	.000**
	Male	50	2.38	1.34	61.28		
OGA General Scores	**Female**	81	1.85	.71	129	1.50	.000**
	Male	50	2.67	.88	87.88		

** p<.001 statistically meaningful difference

The relationship between gender and the Online Game Addiction subscales was examined through independent samples T-test.

It was determined that there was a statistical significant difference between, female ($\bar{X}$=1.57 ± .64) and male students ($\bar{X}$=2.28 ± 1.06) and trouble subscale scores (p=.000). There was a statistical significant difference between female ($\bar{X}$=2.38 ± 1.15) and male ($\bar{X}$=3.26 ± 1.12) students and success subscale scores (p=.000). There was a statistical significant difference between female ($\bar{X}$=1.42 ± .59) and male ($\bar{X}$=2.38 ± 1.34) students and economic profit subscale scores (p=.000). There was a statistical significant difference between female ($\bar{X}$=1.85 ± .71) and male ($\bar{X}$=2.67 ± .88) students and OGA general scores (p=.000).

The other sub-questions of the research are "Is there any statistical meaningful correlation between online game addiction and experience of computer use?", "Is there any statistical meaningful correlation between online game addiction and experience of internet use?", "Is there any statistical meaningful correlation online game addiction between playing online games?" and "Is there any statistical meaningful correlation between online game addiction and daily duration of online gaming?"

Table 2. Correlation of Online Game Addiction Subscales Test Scores with Experience of Computer – Internet Usage, Playing Online games and Duration Scores

	Experience of computer usage	Experience of internet usage	Playing online games	Daily duration of playing online games
OGA Trouble Subscale				
r	.237**	.174*	.451**	-.304**
n	131	131	131	131
p	.006	.046	.000	.000
OGA Success Subscale				
r	.241**	.175*	,597**	-.485**
n	131	131	131	131
p	.006	.045	.000	.000
OGA Economic Profit Subscale				
r	.273**	.194*	.457**	-.348**
n	131	131	131	131
p	.002	.027	.000	.000

** p<.001 statistically meaningful correlation
* p<.05 statistically meaningful correlation

The aim was to investigate the correlation between Online Game Addiction subscales and the experience of computer usage, experience of internet usage, playing online games, daily duration of playing online games of the students with the scores of these scales with Pearson Moment's Correlation Test applied and these results were determined.

Statistically meaningful mild positive correlation was found between trouble subscale score and experience of computer usage (r=.237), experience of internet usage (r=.174). Statistically meaningful moderate positive correlation was found between trouble subscale score and playing online games (r=.451). Statistically meaningful mild negative correlation was found between trouble subscale scores and daily duration of playing online games (r=-.308).

Statistically meaningful mild positive correlation was found between success subscale and experience of computer usage (r=.241), experience of internet usage (r=.175). Statistically meaningful moderate positive correlation was found between success subscale score and playing online games (r=.597). Statistically meaningful moderate negative correlation was found between success subscale scores and daily duration of playing online games (r=-.485).

Statistically meaningful mild positive correlation was found between economic profit subscale score and the experience of computer usage (r=.273), experience of internet usage (r=.144). Statistically meaningful moderate positive correlation was found between economic profit subscale score and playing online games (r=.457). Statistically meaningful mild negative correlation was found between economic profit subscale scores and daily duration of playing online games (r=-.348).

CONCLUSIONS AND DISCUSSION

The present study examined high school students' online game addiction with regard to gender differences. The gender differences were found in terms of online game addiction. The males were found having higher average than females in terms of living troubles, having feelings of success and playing economic profits related to playing

online games. In addition, the experience of computer and internet usage, playing online games were found to be effective factors on online game addiction.

Chou et al. examined the possible predictors of internet use of Turkish adolescents. They found that female students used internet mostly for communication but male students used mostly for playing online games and reading newspapers and magazines (cited in, Ak, Koruklu & Yılmaz, 2013). Chou et.al (2005) also studied the key factors of the internet addiction. These factors were reported as "time spent on the internet," "internet use", "identified problems" gender differences, psychosocial variables and computer attitudes. In this study it was found that men had more the internet addiction than women. Especially, Morahan, Martin & Shumacker (2000) found that men were more likely pathological users than females (cited in, Chou *et. al*., 2005). Also in this study statistically meaningful difference was found between male and female users and online game addiction. The results also showed that men used online games more than women.

On the other hand negative correlation was found between the daily duration of playing online games and online game addiction. Especially the fact of duration of daily online playing games was exactly inversely related to troubles faced by the students. This result shows that the students may not accept disruptions or ignore the experienced troubles. At the same time negative relations were found between online gaming with the satisfying feelings of success, achieve economic gains and online game addiction. Wan and Chiou (2006) have done a qualitative research of why adolescents in Taiwan are addicted to internet games. Most of the interviewees mentioned that life without online games was "dark" and "boring". The interviewees stated that playing online games was only for "sense of relief", "leisure activities", "whiling away from current time", "escape from reality", "to be relaxed", "to feel like he was still studying" and "the need for interpersonal relations". Also adolescents refer that playing online games was the focus of their life. These results somehow support the findings of the current study.

The present study focused on the high school students that use their own personal computer for playing online games and develop game addiction. As related with the findings, we are aware of the effects of online game addiction on gender differences. Only adolescents, who attend private high school and come from the families with higher socio-economic status and education, have participated in the study. Having a large sample of students with different backgrounds may enable to generalize the results to the population. The further studies could be applied to other age groups such as secondary or university students in order to obtain a variety of views on the issue.

Considering the results of this online gaming habits or addiction it is recommended to provide training to the students about the positive and negative aspects of online games. In addition, students having online gaming habits are suggested to develop awareness about troubles that come with addiction.

References

Ak, Ş., Koruklu, N & Yılmaz, Y. (2013). A study of Turkish adolescent's Internet use: Possible predictors of Internet addiction. *Cyberpsychology, Behavior and Networking*, 16(3), 205-209.

Akınoğlu, O. (2002). Eğitim ve sosyalleşme açısından internet kullanımı (İstanbul örneği). Unpublished Phd's Thesis, University of Sakarya, Sakarya, Turkey.

Balcı, Ş. & Gülnar, B. (2009). Üniversite öğrencileri arasında internet bağımlılığı ve internet bağımlılarının profili. *Journal of Selçuk Communication*, 6(1), 5-22.

Balta, Ö. Ç. & Horzum, M. B. (2008). The factors that affect internet addiction of students in a web based learning environment. *Journal of Faculty of Educational Science*, 41(1), 187-205.

Chou, C., Condron, L. & Belland, J., C. (2005). A review of the research on Internet addiction. *Educational Psychology Review,* 17(4), 363-388.

Hyun, G., J, Han, D., H., Lee, Y., S., Kang K., D., Yoo, S., K., Chung, U. & Renshaw, P., F. (2015). Risk factors associated with online game addiction: A hierarchical model. *Computer in Human Behaviour,* 48, 706-713.

Karasar, N. (2009). *Bilimsel araştırma yöntemi.* Ankara: Nobel Yayın Dağıtım.

Kaya, A., B. (2013). *Çevirimiçi oyun bağımlılığı ölçeğinin geliştirilmesi: Geçerlilik ve güvenilirlik çalışması.* Unpublished Master's Thesis, University of Gaziosmanpaşa, Tokat, Turkey.

Khang, H., Kim, J., K. & Kim, Y. (2013). Self-traits and motivations as antecedents of digital media flow and addiction: The internet, mobile phone and video games. *Computer in Human Behaviour,* 29, 2416-2424.

Öztürk, Ö., Odabaşıoğlu, G., Eraslan, D., Genç, Y. & Kalyoncu, Ö. A. (2007). İnternet bağımlılığı: Kliniği ve tedavisi. *Journal of Dependence*, 8(1), 36-41.

Tabanlı, K. (2010). *Çok kullanıcılı çevirimiçi oyunlar ve Simmel'in yanancı kavramı*. Unpublished Master's Thesis, University of Kadir Has, İstanbul, Turkey.
Tone, H., Zhao, H. & Yan, W. (2014). The attraction of online games: An important factor for Internet addiction. *Computer in Human Behaviour*, 30, 321-327.
Wan, C., S. & Chiou, W., B. (2006). Why are adolescents addicted to online gaming? A interview study in Taiwan. *CyperPsychology & Behavior*, 9(6), 762-766.
Young K., S. (1996). Internet addıctıon: The emergence of a new clınıcal disorder. *Cyberpsychology and Behavior*, 1(3), 237-244
Young, K. S. (1999). *Innovations in clinical practice*. USA: Professional Resource Exchange Inc.