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Preferred computer activities during school age: Indicators of internet addiction

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Abstract

Dramatic increase in the use of the internet in recent years has led to pathological use. This study is a preliminary investigation of the extent of internet addiction in 6th, 7th and 8th grade school children in Ankara, Turkey. 106 boys and 110 girls participated in the study. Computer use subtest of the Turkish adaptation of the Computer Attitudes Questionnaire was applied. Results showed that boys are more into computer and internet use for various purposes. As children grow old, their internet use purposes seem to change as well as their daily computer use amounts increase. 6th graders are more into online gaming and using internet for studying whereas 8th graders mainly use internet for chatting. Vast majority of the 8th graders spend more than 5 hours on internet each day.
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1. Introduction

Internet was originally designed to conduct research among academic and military agencies. However, dramatic increase in the use of internet in recent years, particulary in educational settings, has created a stir among the mental health community by great discussion of Internet addiction. Internet addiction is a new and rapidly growing issue of concern. A study by the Computer Industry Almanac, Inc. (2009) stated that 1.59 billion users go online by the end of 2008 with a projected 2 billion online users by 2012. Following this fast development, researchers are more interested in the impact of internet on people's lives regarding to its advantages and disadvantages (Mumtaz, 2001).

Internet is highly promoted in educational and work settings thus, it makes detection and diagnosis of addiction difficult. Therefore, it is important to understand the criteria that differentiate normal from pathological internet use. Young (2004) in her study, described addiction and abuse;

"*Addiction of any kind is traditionally associated with an uncontrollable urge, often accompanied by a loss of control, a preoccupation with use, and continued use despite problems the behavior causes. Abuse is considered a milder form of addiction that can also preoccupy and create problems for the user, but the user has more control over the behavior and is better able to set limits and regulate use. Both addiction and abuse of the internet can*

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result in consequences. For example, a student who obsessively chats with friends at school takes away from valuable study time resulting in poor academic performance. Or an employee who looks at online pornography duringwork hours takes away from overall job productivity and his or her actions can even lead to job loss".

Internet has been considered as an important educational tool driving schools to integrate internet in their classroom environments. However, a study by Barber (1997) reported that 86% of teachers, librarians, and computer coordinators believe that internet usage by children does not improve school performance; they argued that online information is far too much disorganized and mostly unrelated to school curriculum to help students and generally serve as a distraction. Young (1998) found 58% of students suffered from poor study habits, poor grades, or failed school due to excessive internet use. Increasingly, school administrators are recognizing that they have put all this money in an educational tool that can easily be abused.

Schools and colleges are starting to see the potential impact of student internet use. Brady (1996), investigated why successfull college students are dismissed from school. The findings showed that, 43% of these students failed school due to extensive patterns of late night logins to the university computer system. Counselors at the University of Texas–Austin began seeing students whose primary problem was an inability to control their Internet use, and in one of the first campus studies on student Internet abuse, they found that of the 531 valid responses, 14% met criteria for Internet addiction (Scherer, 1997). School counselors have argued that students are the most at-risk population to develop an addiction to the internet because of encouraged use encountered on classrooms as well as access made possible anytime day or night via computer labs, and mobile internet devices. In one such instance, the University of Maryland even started an internet addiction support group to help students who abused (Murphey, 1996), and gradually, more such support groups are developing across shools and universities. With such widespread access to the internet, what are the factors that contribute to student internet abuse?

Free and unlimited Internet access. Schools provide free internet access to all their students which is generally unlimited to their time logged on. It is an internet user's dream.

Huge blocks of unstructured time. Most students attend classes for 28 to 32 hours per week. The rest of the time is their own to read, study, or make new friends, girl/boyfriends in real life. Many forget all those other activities and concentrate on one thing: the Internet.

Newly experienced freedom from parental control. Students experince a new kind of freedom just besides but also totally away from their parent'swatchful eyes with internet. They can experince all the things that their parents do not approve and hang out in chat rooms and instant messaging friends at all hours of night with no parent to complain about their refusal to get off the computer.

No monitoring or censoring of what they say or do online. When they move on to the job world, college students may find suspicious bosses peeking over their shoulders or even monitoring their online time and usage. Even e-mail to coworkers could be intercepted by the wrong party. In college, no one is watching. Computer lab monitors tend to be student volunteers whose only responsibility is to assist anyone who needs help understanding howto use the Internet— not to tell them what they can or cannot do on it.

Full encouragement from school and pricciplas. Students understand that their school's principle want them to make full use of the Internet's vast resources. Abstaining from all online use is seldom an option—in some large classes, teachers place required course materials solely on the internet and engage in their only one-on-one contact with students through email. Principles, of course, want to see their major investments in computers and internet access justified.

Social intimidation and alienation. Students easily can get lost in the crowd of the schools. When they try to reach out, they often run into tight clicks. Maybe they do not dress right or look right. But when they join the faceless community of the Internet, they find that with little effort, they can become popular with new "friends" across the globe. They instantly turn to online companions to hide from difficult feelings of fear, anxiety, and depression and to escape the pressures of making top grades, fulfilling parental expectations, and on graduating.

A higher legal drinking age.With the drinking age at 18 in Turkey, students cannot openly drink alcohol and socialize in bars. So the Internet becomes their substitute drug of choice: no ID required and no closing hour.

In the light of the information given above, purpose of this study is to investigate the differences in computer use amounts and purposes of adolescents in terms of age and gender. Increased amounts of time spent online might be a strong predictor of internet addiction. Therefore, 216 adolescents from public schools were included in the study in order to clarify their internet (ab)use.

2. Method:

Participants

Participants of the study were 216 children from 6 different schools, serving around the metropolitan area of Ankara, the capital city of Turkey. Sample included 106 boys and 110 girls between 13-15 ages with a mean age of 13.45 (s=1.44) from schools in 6 neighbourhoods representing 3 different socio-economic levels. Eligibility criterion for participation in the study was not having a disability. Eligible students whose parents agreed and signed the informed consent forms were included in the study. Ethical approval for the study was given by Ministry of Education research ethics committee.

Instruments

Demographic information form: Children were asked to fill in a form to obtain demographic information. The form included questions about family structure, neighbourhood, and socio-economic status.

Computer attitudes questionnaire: The Turkish version of computer attitudes questionnaire (Bayhan & Sipal, 2008) was used to identify the gender differences in attitudes toward computers. One section concerned computer use and experience and the second one computer attitudes. The questions in computer use and experience section (section 1) concerned access to, ownership of and frequency of use of home computers, use of friends' computers and use of computers at school. Frequency for use of computers for different applications, i.e. writing (word processing), music, programming, math's, drawings, computer games, the internet, e-mail was also included. Items about attitudes to computers (section 2) have three subscales: self-confidence, general attitude (liking) and sex bias (in attitudes toward computer use). In addition to the attitude scales, as an additional measure of self-confidence in relation to male and female peers, the participants were asked to rate how good they are at computers compared with first girls, then boys of their own age, on a five point scale labelled as; "much better", "better", "same", worse" and "much worse". Internal consistency of the questionnaire yielded r= 0.88 for computer use and experience, and r= 0.74 for computer attitudes.

Procedure

Computer use subtest of the questionnaire was administered under the supervision of teachers in school time. Children were first informed about the purpose of the study. Confidentiality and the voluntary nature of the participation were explained. Then the research team introduced the children with the questionnaire. Even though participation was entirely voluntary, all the children agreed to participate.

Questionnaire administration took 25-30 minutes. The researchers distributed the demographic information form and after collecting all completed forms, computer use subtest of the questionnaire was introduced. Researchers were ready to answer children's questions if there were any as well as encouraging them to completely fill in the questionnaire completely for avoiding data loss.

Results:

Table 1 shows the daily internet use amounts of participants regarding to their ages in percentages. According to the results as the children mature, amount of internet usege increases. 39.72% of 8th graders reported that they spend 5-9 hours online as 27.71 of the 6th graders reported that they spend 5-9 hours online.

Table 1. Age differences in the amount of internet use of the participants (%).

Grade	Time spent online				
	Not going online	1 hour	2-4 hours	5-9 hours	More than 10
6	10.41	25	31.25	27.71	0
7	4.81	21.68	45.78	33.35	3.61
8	1.36	1.36	57.53	39.72	9.58

Table 2 shows the preferred computer activities of the participants. Results show that online gaming is the most popular computer activity for 6th graders followed by internet use for studying. Online gaming is also the most popular online activity for 7th graders, followed by online chatting and internet use for studying. Reports of 8th graders reveal that, online chatting is the most popular activity with a rating of 34.24% followed by internet use for studying and internet use for free surfing.

Table 2. Age differences in preferred computer activities of the participants (%).

Grade	Activity							
	Writing	Music	Drawing	Gaming	Internet for fun	Internet for studying	E-mail	chat
6	0	10.41	2.08	72.91	6.25	31.25	10.41	14.58
7	1.2	8.43	2.4	26.5	14.45	14.45	1.2	19.27
8	0	0	2.73	2.73	8.21	20.54	2.73	34.24

Gender differences in daily internet use amounts of participants are shown in Table 3. According to the results, boys spend more time online than girls. 36.36% of the boys report that they go online for 5-9 hours each day as well as 7.27% percent of them are online more than 10 hours a day. 8.62% of the girls report that they do not go online and a vast majority of the girls (40.51%) report that they are online 2-4 hours each day.

Table 3. Amount of internet use of participants according to gender (%).

Gender	Time spent online				
	Not going online	1 hour	2-4 hours	5-9 hours	More than 10
Boy	1.81	7.27	47.27	36.36	7.27
Girl	8.62	25	40.51	24.13	1.72

Table 4 shows gender differences in preferred computer activities of the participants. According to the table, the most popular internet activity reported by boys is online chatting followed by internet use for fun and internet use for studying. Among girls internet use for studying is the most popular activity followed by online chatting and listening to music.

Table 4. Preferred computer activities of participants according to gender.

Gender	Activity							
	Writing	Music	Drawing	Gaming	Internet for fun	Internet for studying	E-mail	chat
Boy	0.9	11.81	1.81	39.09	30	20	10	31.81
Girl	0	17.24	8.62	18.1	19.82	34.48	16.37	21.55

Discussion and Conclusion:

Findings of the study show that there is a dramatic increase in internet usage amounts of children by age. As children mature, they stay online longer up to more than 10 hours per day. Besides, preferred computer activities of children seem to change by age. As 6th graders prefer gaming, older children prefer to use internet for chatting and surfing. These findings should be considered as indicators of future internet addiction. School settings and having a personal computers and internet access at home lead children to spend more time online.

School age children commonly involve in online activities such as games, surfing adult sites and unnecessary – sometimes inappropriate- chatting. These activities lead to fatigue, less amounts of sleep, attention problems, social withdrawal and loss of interest to real life. School – family collaboration is essential in those cases. Seminars and meetings informing families and students about appropriate use of internet will be helpful.

With little restrictions, students must exercise self-control and in cases of internet addiction, students risk failing out of school, relationship breakups, or their parents'wrath when they discover that their investment in their child's

education is going to support all-night internet sessions. Students can tumble into major depression when their online steady blips off the screen forever or they experience withdrawal when they try to quit their online habit—even if their only motivation is to stay in school to keep their free internet access. At that
point, addicted students may decide to seek help, but in many instances, school counselors may know little or nothing about the ways of the Internet and its special allure for students.

Families should be aware of symptoms of internet addiction listed below:

a. Going online more than 5 hours everyday
b. Distributing e-mail address, messenger, chat room names etc. to everyone they know
c. Loss of interest in activities other than internet
d. Weak social interaction
e. Weak family relationships
f. Fatigue
g. Less amount of sleep due to late night logins

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