

DEPRESSION AND INTERNET ADDICTION IN IASI ADOLESCENTS

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Abstract:

Different scientific research studies confirm that increasing level of depression is strongly associated with Internet addiction. The aim of the study was to evaluate the relationship between depression and Internet addiction among adolescents. Method: A total of 243 Romanian adolescents were studied. All of the students came from 5 high schools of Iasi. First, they were evaluated for their severity of Internet addiction with consideration of their behavioural characteristics and their primary purpose for computer use. Second, we investigated correlations between Internet addiction and depression symptoms. Results: Internet addiction was significantly associated with depressive symptoms. Results show that the school students prefer to spend a considerable amount of time with their computers, over 5 hours/day. This study tried to identify aspects of computer addiction in gymnasium and high school students, as well. Conclusions: This study reveals a significant association between Internet addiction and depressive symptoms in adolescents. The data suggest the necessity of the evaluation of the potential underlying depression in the treatment of Internet-addicted adolescents.

Keywords: computer use, addiction, children, parents, physicians.

1. INTRODUCTION

Prior research has utilized scales for depression and found that moderate to severe rates of depression coexist with Internet addiction [1]. Therefore, this study utilized HAMD (17 items) which has more accurate norms and frequent usage among dual diagnostic patient populations. This article discusses relationship between depression and internet addiction in adolescents. Effective management of depression symptoms may indirectly correct pathological Internet use. Prior research has identified the existence of addictive Internet use, which has been associated with significant social, psychological, and occupational impairment [2].

Addicts in this study used the Internet an average of 5 hr per day for nonacademic purposes, which caused detrimental effects such as poor grade performance among students and reduced work performance among teenagers. This is compared to non-addicts who used the Internet an average of < 5 hr per day with no significant consequences reported. Predominantly, the interactive capabilities of the Internet such as chat rooms or on-line games were seen to be the most addictive.

Research in the addictions field has shown that psychiatric illnesses such as depression are often associated with alcoholism and drug addiction. Further, research has shown that other addictive behaviours overlap with depression-for example, eating disorders and pathological gambling. Although the concept of Internet addiction has gained credibility among mental health professionals both in academic and clinical realms, little research has been conducted to examine if similar underlying psychiatric illnesses may contribute to such Internet abuse [1], [2].

2. METHODS

2.1. Design

For collecting the data concerning this issue we used one questionnaire for the students. These were aimed at highlighting: 1. Frequency of computer use by the students; 2. Interference of excessive use with school performance and social life; 3. Identification of a possible computer addiction. 4. Identification the correlations between Internet addiction and depression symptoms. The data were processed using the SPSS statistics software, 13.0 version.

2.2. Participants

The survey included a representative sample of 243 school students. All the students come from the schools in Iasi, Romania. Among the 15 to 18 years old students, 52.4% were boys.

2.3. Materials and procedure

All 243 school students were asked to answer a questionnaire. The students answered to a questionnaire comprising 34 questions about computer related activities. Most questions supposed to rate on a scale the frequency of occurrence of a certain event or issue; some questions solicited an open-answer or to choose an answer from a list. The questioner survey administered a structured diagnostic questionnaire that modified the *DSM-IV* criteria for pathological gambling to classify subjects as addicted or non-addicted, followed by administration of the HAMD (17 items). Finally, demographic information was also gathered. The questions addressed self appreciation behaviour, cognition, opinions, and the attitude toward social life of the respondents.

3. Results

Both the boys and the girls think that the computers are absolutely essential in today's society (90%). More than 89% of the students have a computer at home, and, of those, over 75% are connected to the Internet (see Fig. 1).

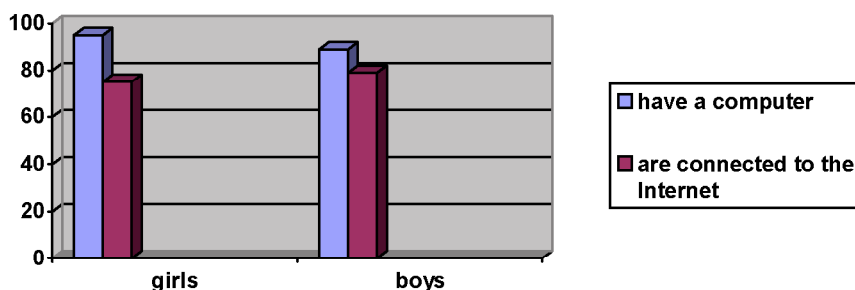


Fig. 1: Students having a computer and being connected to the Internet

Concerning the time spent in using the computer, the overall results show that children spend a considerable amount of time with the computer, on average more than three hours per day (Fig. 2).

15 – 18 years old

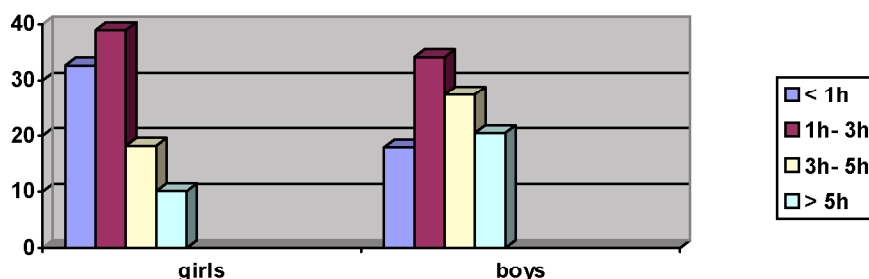


Fig. 2: Time spent on computer per day

Regarding the location where the students access the Internet, results show that over 75% of

the prestigious high school students have home computers, while others go to Internet Cafés. Only few of them, less than 10%, report they use computers at school. Regarding favourite spare time activities, computer use ranks at the top, while sport activities, are favoured to a smaller extent.

Table 1: Preferred free-time activities (ranks)

	15 to 18 years old	
	Boys	Girls
Meeting friends	V	I
Computer use	I	II
Sports	II	IV
Films	III	III
Other activities	IV	V

More than 70% of the students admit they do *not* or only *occasionally* discuss computer use with their parent. This indicates the fact that, although the parents bought a computer for their children, they do not supervise the way it is used. There are significant correlations between answers for equivalent items regarding parents-children communication and the frequency of their talks ($p < 0.05$). In addition, they admit that their parents do not even try to reduce the time they spend in front of the computer, although the results (see table 2) indicate a considerable percentage of students use their computer for more than three hours every day.

We could not say that the family is not present when students 15 to 18 year-olds use their computers, but this is rather *a passive presence, vaguely responsible and lacking involvement*. Students aged between 15 and 18, prefer to use the computer very late, after 11 pm. The international literature provides similar results.

This survey tried also to identify aspects of computer addiction in high school students.

Results show a slight tendency of students to spend more time alone with their computer, giving up their social or family duties; the survey also identified some situations close to school abandonment by students. Overall, 58,50% of subjects report that often and very often it happens to stay longer in front of the computer than initially expected, while 19,5% state this occurs occasionally; 22% consider that they rarely lose control of the time spent on computer. The results within the groups show a tendency of the 15 – 18 years old students to lose control more often of the time spent on the computer (see Fig. 3).

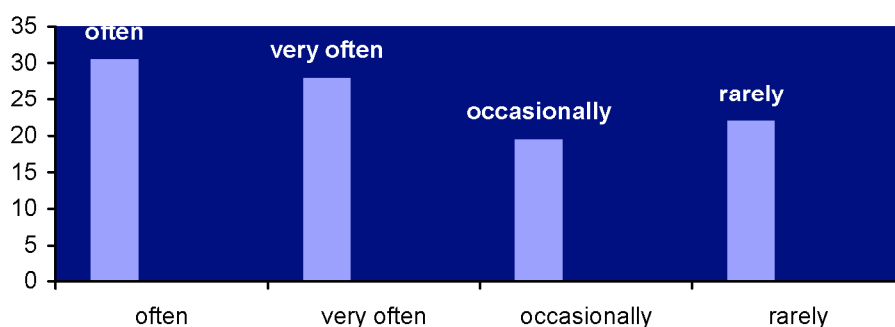


Fig. 3. Percentage of students by 15 – 18 years old reporting that they stay longer than expected in front of their computer

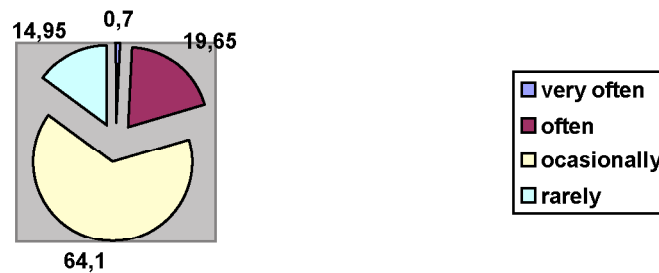


Fig.4. Preoccupation for computer when they are not using the computer

The feeling of being often and very often preoccupied by computer related tasks when not using it is reported by 20.3% from subjects.

A total of 24.9% of students state that they are often and very often using the computer in order to avoid unpleasant moods or feeling (Fig. 5).

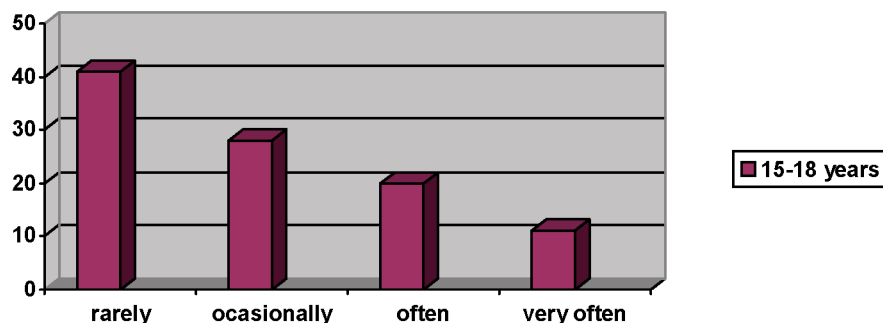


Fig. 5. Computer use reported as avoiding unpleasant moods

In order to use the computer, they easily cancel a meeting with friends or other activities including time spent with family, time for learning and for fun; still, 57.7% consider that this did not affect personal relationships and only 3% consider they refused important opportunities for staying longer on computer. However, most of the pupils from survey consider that the academic performance is not affected when they are staying longer on computer. This result is consistent with parents' opinion.

Considering the criteria's established by K. Young (1996), we find that only 5.2% from the pupils are fulfilling at least 6 from 8 issues indicating computer addiction [3].

Results from the HAMD (17 items) were a mean of 15.2 (SD = 16.42), indicating mild to moderate levels of depression compared to normative data. Therefore, the HAMD (17 items) suggesting that depression is a significant factor in the development of PIU. Depression leads the adolescents to become more preoccupied with Internet than adolescents without depression. It is mainly because they find their fulfilments from Internet. But the time they spend over Internet make them isolated from others while increasing their level of anxiety and depression itself, eventually leads the adolescent experience a never-ending cycle of depression and anxiety [1].

4. Discussion

So what is healthy and what is unhealthy Internet use? There's no easy answer because each person's Internet use is so different. Using time-diary data, social researchers explored the impact of home computer use on school-age children. Students with home computers spent about three hours each week playing computer games and merely thirty minutes a week on instructional computer activities [2]. We find that more than 25% of high school students spent over 5 hours per day.

In another study — a three-year project known as HomeNetToo — University of Michigan

researchers investigated the impact of providing home computer access to low-income families. As in the study described above, computer-using youth did not suffer any of the feared social effects, such as diminished family communication or lack of participation in social groups [4]. In children's interactions with parents and other adult authority figures, one obvious effect has been the frequent reversal of the traditional parent-child relationship with the computer-savvy child taking on the role of teacher to the parent. With respect to interactions with peers, the effects of computer use again appears to depend as much on the type of activity engaged in while on the computer as on the amount of time spent in front of the screen. Because of the importance of interacting with others to gain social competence, concerns have been raised that children who form "electronic friendships" with others through computers, instead of direct friendships with their peers, might be hindered in the development of their interpersonal skills [5].

In our study we found that, among high school students, more than 60% of all their computer time is spent alone. However, much of children's "alone time" on the computer appears actually to be spent extending social relationships by connecting with others through interpersonal communication applications via the Internet. There is ample research examining the social effects of children's use of computers — from the impact of game playing on friendships and aggressive behaviour to the impact of the computer on relationships and psychological well-being [6]. Most of the pupils surveyed consider that the school performance is not affected when they are staying longer on computer. However, reviews of this literature indicate that the results are inconclusive [7]. Although benefits of computer use have been observed, they typically depend on a variety of factors (e.g., subject matter) [7], [8].

As yet, there is no official psychological or psychiatric diagnosis of an „Internet“ or „Computer“ addiction. The most recent (4th) edition of Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) – which sets the standards for classifying types of mental illness – does not include any such category. In general, non-chemical disorders are not considered addictions [8]. But, Internet Addiction or Computer Addiction is a growing concern in the Information Age. The symptoms heavy computer users, of increasing tolerance, withdrawal, mood changes, and interruption of social relationships, are similar to the symptoms of addiction to drugs, alcohol, cigarettes, or caffeine. This is why "internet or computer addiction" is more often used in the recent past to describe such conditions. There are authors who indicate that children and adolescents who became "addicted" to the Internet or computers will require increasing amounts of time online in order to feel satisfied. When they do not have access to the Internet, they may have symptoms of withdrawal, which include anxiety, depression, irritability, trembling hands, restlessness and obsessive thinking or fantasizing [9]. There is, in many cases, a need for parents to learn a new range of skills, to be able to control the environment and use of the computer. If parents understand how to use the computer and the Internet then they will be better placed to protect the children in their care from the more unpleasant aspects of the Internet or the computer. As with other aspects of controlling the development of children, it may be necessary to develop a set of rules regarding the use of the computer and the access to the internet. For example: the parent may need to set a certain time, duration, content, sharing, etc. of computer use that the child should „sign up to“ at the onset. Depending on the age of the child, it may be necessary for the parent to monitor the child while he is online [3], [10].

Different scientific research studies confirm that increasing level of depression is strongly associated with Internet addiction. However, studies suggest that accuracy of the evaluation of personal Internet usage and clinical symptoms of depression can be improved if detected at the earlier phases. Several studies have actually affirmed Internet addiction is directly correlated with intense sense of anxiety and acute depression. Internet dependents show their anxiety by various modes of operation such as checking emails in mid-night after suddenly waking from sleep or the first early morning craving is connecting to the Internet. The perceived detachment from reality, inadequate sleep, and persistent anxiety of not being online for hours, social isolation, and occupational dysfunctional condition all leads the individual to experience a sense of extreme de-

pression. The irony of this problem is, similar to other sort of depression that the individual will depend on the Internet itself to get a relief from this stress, anxiety and depression, resulting in more depression as well, the vicious cycle continues. In recent days, many researchers believe Internet addiction may act as a mask for teenage depression. These results, however, do not clearly indicate whether depression preceded the development of such Internet abuse or if it was a consequence. It is likely that low self-esteem, poor motivation, fear of rejection, and the need for approval associated with depressives contribute to increased Internet use, as prior research indicated that the interactive capabilities available on the Internet were found to be most addictive [1], [11].

REFERENCES:

- [1] Young, K.S. Levels of depression and addiction underlying pathological Internet use. Poster presented at the annual meeting of the Eastern Psychological Association, Washington, DC, 1999.
- [2] Attewell, P., Suazo-Garcia, B., & Battle, K. "Computers and young children: Social benefit or social problem?", *Social Forces*, 82(1), 277-296, 2003; HomeNetToo Project Web site.
- [3] Young, K.S. Internet addiction: The emergence of a new clinical disorder. Paper presented at the 104th annual meeting of the American Psycho-logical Association, Toronto, 1996.
- [4] Young K. et al.: *Cyber-Disorders: The mental Health Concern for the New Millennium: CyberPsychology and Behavior*, vol. 3, nr. 1, 1999
- [5] Greenfield D.N.: *The Net Effect: Internet Addiction and Compulsive Internet Use*, 2000. Available: <http://www.virtual-addiction.com>
- [6] Subrahmanyam, K., Greenfield, P., Kraut, R., & Gross, E. The impact of computer use on children's and adolescents' development. *Applied Developmental Psychology*, 22, 7-30, 2001.
- [7] Pew Internet and American Life Project: *Tracking online life: How women use the Internet to cultivate relationships with family and friends*, 2001. Available: <http://www.pewinternet.org>
- [8] American Psychiatric Association. *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: 2004.
- [9] Linda A. Jackson, Alexander von Eye, Frank Biocca: *Children and Internet Use: Social, Psychological and Academic Consequences for Low-income Children*. Available: <http://www.apa.org/science/psa/sb-jackson.html>
- [10] Roschelle, J. M., Pea, R. D., Hoadley, C. M., Gordon, D. N., & Means, B. M.: *Changing how and what children learn in school with computer-based technologies*. *Children and Computer Technology*, 10(2), Fall/Winter, 76-101, 2000. Available: <http://www.futureofchildren.org>
- [11] Subrahmanyam, K., Kraut, R. E., Greenfield, P. M., & Gross, E. F.: *The impact of home computer use on children's activities and development*. *The Future of Children*, Vol. 10, pp.123-144. 2000. Children and computer technology. Los Altos, CA: The David and Lucille Packard Foundation. Journals/Publications Department. Available: <http://www.futureofchildren.org>

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