ABSTRACT
The need for information regarding the effects of computers on their users has also increased. The Internet has a significant potential for providing children and youth with access to educational information. However, it can become an escape from reality that appears to be safe, intimate and anonymous.

First, we directed our attention toward computer behaviors among Romanian adolescents. The second focus of this study was to explore both the beneficial as well as the harmful effects of computer use on the adolescents’ psychological and social life. The studied group of samples was comprised of 650 subjects, aged between 11 and 18 years, who answered to a 36 question questionnaire related to computer activities. These were aimed at highlighting: 1. The frequency of computer use by the students; 2. The interference of excessive use with academic performance, psychological aspects and social life; 3. The identification of a possible pathological use.

The results were obtained about computers use and identification pathological use. Some of the teenagers spend a lot of time on the computer, 6% more than five hours/day. We find approximately 6.5% of cases with pathological use.

Key-words: computer, beneficial, harmful effects, teenagers, psychological, social life.

1. INTRODUCTION

The increased role of home computers in children’s lives has raised concern about how children may be affected. Time spent on home computers may replace other activities that have more developmental value, making many question the benefits of the computer-based activities. Initial research suggests, for example, that access to computers increases the total amount of time children spend in front of a television or computer screen at the expense of other activities, thereby putting them at risk for obesity. At the same time, cognitive research suggests that playing computer games can be an important building block to computer literacy because it enhances children’s ability to read and visualize images in three-dimensional space and track multiple images simultaneously (Suler, 2005).

British psychologist, Mark Griffiths is studying „Internet addiction“ by comparing clinical examples with established definitions of addiction. He defines „technological addictions“ as „non-chemical (behavioral) addictions which involve human-machine interactions“ (Griffiths, 1997).

Maressa Hecht Orzack is a Massachusetts clinician and researcher who estimates that between 5% and 10% of American computer users are experiencing some level of addiction (Orzack, 2003).

Victor Brenner studied Internet use through a World Wide Web survey. His preliminary results were published in Psychological Reports in 1997. He presented further results at APA that were consistent with the earlier results. Brenner’s subjects reported an average of 19 hours per week of Internet use. Many reported up to 10 signs of interference in role functioning (primarily failure to manage time, missing sleep, missing meals, etc.) (Brenner, 1997).

Recent survey data show that increased use of the Internet may be linked to increases in loneliness and depression. Of most concern are the findings that playing violent computer games may increase aggressiveness and desensitize a child to suffering, and that the use of computers may blur a child’s ability to distinguish real life from simulation (Attewell et al, 2003).

Other studies suggest that the effects of computer use on children’s activities and development affect four broad areas: 1) physical well-being; 2) cognitive and academic skill development; 3) social development and relationships, and 4) perception of reality (Subrahmanyam et al, 2001).
In addition, research focusing on the physical risk of extended computer use may be linked to an increased risk of obesity, seizures, and hand injuries (Hill & Peter, 1998). Surveys of parents suggest that they buy home computers and subscribe to Internet access to provide educational opportunities for their children and to prepare them for future (Greenfield, 2000).

2. METHODS

2.1. Design

This is a one phase transversal study. 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. The data were processed using the SPSS statistics software, 13.0 version.

2.2. Participants

The researchers recruited all 7th grade students, all 9th and 11th grade students in 8 gymnasium schools and 9 high schools in Iasi, Romania. 650 school students participated in the study. Among the 11 to 18 years old students, 58.3% were boys and 41.7% were girls (N=650).

2.3. Materials and procedure

The students answered to a questionnaire comprising of 36 questions about computer related activities.

Most questions were supposed to rate the frequency of occurrence of a certain event or issue on a scale; some questions solicited an open-answer or choosing an answer from a list.

The questions addressed self-appreciation behavior, cognition, opinions, and the respondents’ attitude toward social life. The topics were chosen according to the objectives of the study and were based on the previous research concerning students’ interests and needs at this age.

3. RESULTS

More than 72% of the students have a computer at home, and, out of those, over 65% are connected to the Internet (see Fig. 1).

Students were divided into three group users: minimal users (53%), moderate users (32.5%) and excessive users (6.5%). We evaluated differences among the three group users using the chi-square test for categorical data, analysis of variance for continuous data (see Fig.2).

Compared to time spent in using the computer, the overall results show that adolescents spend a considerable amount of time on the computer, on average more than three hours per day (Fig. 3).

![Fig. 1: Students having a computer and being connected to the Internet](image1)

![Fig. 2: Group's computer users.](image2)

![Fig. 3: Time spent on computer per day](image3)
Regarding the favorite leisure activities, computer use ranks at the top, while sport activities, are favored to a smaller extent.

The preferred leisure activities are computer use, meeting friends, sports, films, and other activities.

More than 82% of the subjects admit they do not or only occasionally discuss computer use with their parents. This indicates the fact that, although they bought a computer for their children, the parents do not supervise the way it is used.

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 Fig. 3) 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 11 to 14 year-olds and 15 to 18 year-olds use their computers, but this is a rather passive presence, vaguely responsible and lacking involvement.

Students aged between 11 and 14 prefer to use their computer between 6 pm and 9 pm (62.3% of the girls and 68.8% of the boys). Students aged between 15 and 18, prefer to use the computer very late, after 11 pm.

The subject’s perception is that early computer use is related to better academic performance. Home computer use has been linked to improvements in general academic performance as well.

This survey also tried to identify aspects of computer addiction in gymnasium and high school students. Empirical research into ‘Internet addiction’ can roughly be divided into five areas: (1) survey studies that compare excessive Internet users with non-excessive users, (2) survey studies that have examined vulnerable groups of excessive Internet use, most notably students, (3) studies that examine the psychometric properties of excessive Internet use, (4) case studies of excessive Internet users and treatment case studies, and (5) correlational studies examining the relationship of excessive Internet use with other behaviors (e.g., psychiatric problems, depression, self-esteem, etc.) (Subrahmanyam et al, 2000), (DeBell & Chapman, 2001).

Results show a high tendency from the students to spend more time alone on their computer, giving up their social or family duties; the survey also identified some situations close to school abandonment by students.

Overall, 56% of subjects report that often and very often they happen to stay longer in front of the computer than initially expected, while 23% state this occurs occasionally; 21.9% consider that they rarely lose control of the time spent on computer. The results within the groups show a tendency of the 15-18 year old students to lose control of the time spent on the computer more often (see Fig.4).

The feeling of being often and very often preoccupied by computer related tasks when not using it is reported by 37% from subjects. There are no significant differences between the two age groups (11-14 and 15-18 years old); the overall results are presented in the Fig.5.

A total of 29.6% of student’s state that they are often and very often using the computer in order to avoid unpleasant moods or feeling (Fig. 6).
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, 46.7% consider that this did not affect personal relationships and only 4.3% consider they refused important opportunities for staying longer on computer.

4. DISCUSSION

Technology can influence psychological and social processes (Young K. et al, 1999). Technical advances might be related to developing, maintaining or limiting addiction. The continuing rise in popularity of the Internet for communication, education, and entertainment provides an opportunity to explore the relationship between addiction and technology (Jackson et al).

The limited evidence available also indicates that home computer use is linked to slightly better academic performance. In addition, studies of the effects of one computer-based after-school program show that children who participated in the program had greater advances in reading, mathematics, computer knowledge, grammar and had high scores on school achievement tests compared with children who did not participate (Blanton et al, 2000).

Although little evidence indicates that the moderate use of computers to play games has a negative impact on children’s friendships and family relationships, recent survey data show that increased use of the Internet may be linked to increases in loneliness and depression (Pew Internet and American Life Project).

Like addiction to drugs, alcohol, cigarettes, or caffeine, computer addiction is marked by symptoms of increasing tolerance, withdrawal, mood changes, and interruption of social relationships. Children and adolescents who have become addicted to the computer will require increasing amounts of time in order to feel satisfied. When they do not have access to the computer, they may have symptoms of withdrawal, which include anxiety, depression, irritability, trembling hands, restlessness and obsessive thinking or fantasizing about the Internet. Relationships in the real world may be neglected as those in the virtual world increase in importance. Academic performance is likely to suffer (Roscelle et al, 2000).

The DSM-IV TR and the ICD-10 (the diagnostic manuals used to diagnose mental and substance abuse disorders) may contribute to the problem. They diagnose substance abuse and dependence based on the chemical family that one is addicted to. They do not consider non-chemical disorders to be addictions (Young, et al 1996).

Time alone cannot be an indicator of whether someone is addicted or engaged in compulsive behavior. Time must be taken in context with other factors, such as whether the subject is a school student (who, as a whole, proportionally spend a greater amount of time online), whether he/she has any pre-existing conditions (such as another mental disorder; a person with depression is more likely to spend more time online than someone who doesn’t, for instance, often in a virtual support group environment), whether the subject has problems or issues in his/her life which may be causing them to spend more time online (e.g., using it to “get away” from life’s problems, a bad relationship, difficult social relations), etc. So talking about whether children or teenagers spend too much time online without this important context is useless.

It would appear that socialization is what makes the Internet so “addicting” (Alexander, 2004).

Socializing in cyberspace is just a novelty, a phase that people go through. The critics say it can’t compare to real relationships - and if some people prefer communicating with others via wires and circuits, there must be something wrong with them. They must be addicted. They must fear the challenging intimacy of real relationships (Valentine & Holloway, 2001).

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 (Affonso, 2002).

5. CONCLUSION

There is little doubt that children can at times become captivated by the intrinsic opportunities provided by the computer technology and the Internet. This may sometimes come at the expense of other activities such as homework or normal social interchange. Today, there are no differences between the sexes in overall computer use rates. One interesting finding of this study is that 6.5% of those participants have pathological computer use. One of the most attracting things about the internet is the opportunity if offers people to present themselves in a variety of different ways.

This study is just a preliminary examination of many questions connected to children and computer use. The research findings are more mixed, however, regarding the effects on children’s social and psychological development, academic performance.

But overall, technology can be considered a positive enhancement to growth.

REFERENCES:


