Internet Addiction in Students: A Cause of Concern

KANWAL NALWA, Ph.D., and ARCHANA PREET ANAND, Ph.D.

ABSTRACT

The Internet was originally designed to facilitate communication and research activities. However, the dramatic increase in the use of the Internet in recent years has led to pathological use (Internet addiction). This study is a preliminary investigation of the extent of Internet addiction in school children 16–18 years old in India. The Davis Online Cognition Scale (DOCS) was used to assess pathological Internet use. On the basis of total scores obtained (N = 100) on the DOCS, two groups were identified—dependents (18) and non-dependents (21), using mean ± &half; SD as the criterion for selection. The UCLA loneliness scale was also administered to the subjects. Significant behavioral and functional usage differences were revealed between the two groups. Dependents were found to delay other work to spend time online, lose sleep due to late-night logons, and feel life would be boring without the Internet. The hours spent on the Internet by dependents were greater than those of non-dependents. On the loneliness measure, significant differences were found between the two groups, with the dependents scoring higher than the non-dependents.

INTRODUCTION

The Internet is an exciting new medium that is evolving into an essential part of everyday life all over the world. It has opened a new domain in social interactivity with the promise of increasing efficiency and worldwide understanding. Though devised primarily to facilitate research, information seeking, interpersonal communication, and business transactions, for some Internet users it has become the central focus of their lives and a temptation that is hard to resist. With the increasing importance of the Internet and online usage increasing dramatically, pathological Internet use (Internet addiction) is becoming more common in society. There is an urgent need to recognize and respond to the reality of Internet addiction and the threat of its rapid expansion.

The term "Internet addiction" was proposed by Dr. Ivan Goldberg for pathological compulsive Internet usage. The proper detection and diagnosis of Internet addiction is difficult, as there is no accepted set of criteria for Internet addiction listed in the DSM-IV. Of all the diagnoses referenced in the DSM-IV, pathological gambling was seen as most akin to the pathological nature of Internet use. Using pathological gambling as a model, Young defined pathological Internet use (PIU) as an impulse control disorder which does not involve an intoxicant. Internet addiction is defined as a psychological dependence on the Internet and is characterized by an increasing investment of resources on Internet-related activities, unpleasant feelings when off-line, an increasing tolerance to the effects of being on-line, and denial of the problematic behaviors.

Students appear to be most vulnerable to developing a dependence on the Internet. The Internet promises to result in improvement in student proficiency, and it becoming essential in certain courses of study has led to the use of the Internet on campuses; this is instrumental in making students susceptible to pathological Internet use. The computer-driven...
society demands that students develop the ability to operate in a technological environment. However, increasing reports on the psychologically addictive characteristics of Internet use have led to a growing concern amongst educators and psychologists about the impact of the Internet on children's well-being. Young found that 58% of students reported a decline in study habits, a significant drop in grades, missed classes, or being placed on probation due to excessive Internet use. Research has revealed that addictive use of the Internet is associated with significant social, psychological, and occupational impairment. However, further research is required to increase understanding of this disorder.

MATERIALS AND METHODS

Design

The present study was designed to ascertain the extent of Internet addiction in students. On the basis of the total scores of 100 students on the DOCS, two groups were identified—dependents and non-dependents, using mean ± 0.5 SD as the criterion for selection.

Participants

The participants were 100 randomly selected public school children in the age group of 16–18 years old. From this initial sample, a selection of dependents was made on the basis of the total scores on the DOCS. The selected sample contained 18 dependents and 21 non-dependents.

Tools used

The tools used in this study were as follows:

1. The Davis Online Cognition Scale (DOCS). This is a 36-item self-report inventory measured on a 7-point Likert type scale. It was used to identify dependents and non-dependents.
2. The UCLA Loneliness Scale. This is a 20-item self-report inventory measured on a 4-point scale.
3. A Semi-Structured Questionnaire. A questionnaire was developed to seek information regarding (a) length of time spent using the Internet; (b) hours spent per day; (c) application used; (d) delay of work to spend time online; (e) loss of sleep due to late-night logons; (f) feeling that life without the Internet would be boring; (g) failing to control online time; and (h) feeling upset/irritated when cannot login at the predetermined time.

RESULTS

The present study is a preliminary attempt to explore the issue of Internet addiction in school children in India. A major limitation is the small sample size, and hence generalizability of results must be interpreted with caution.

Significant behavioral and functional usage differences emerged between dependents and non-dependents, the implications of which are quite grim. These differences may result in personal, familial, and occupational problems in the future.

Dependents often delayed work to spend time online (Table 1, t = 2.28, p < 0.05). Poor time management and lack of control may be the reasons for this. A survey at the University of Texas at Austin by counselors found that, of 531 valid responses, 14% met the criteria for Internet addiction. A campus seminar called "It's 4 a.m. and I can't—Uh, won't log off" was held to increase awareness about the risk factors of Internet misuse among students.

<table>
<thead>
<tr>
<th></th>
<th>Dependents</th>
<th>Non-dependents</th>
<th>t-ratio</th>
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<tbody>
<tr>
<td>Delay work to spend time online</td>
<td>2.66</td>
<td>1.90</td>
<td>2.28*</td>
</tr>
<tr>
<td>Loose sleep due to late night logons</td>
<td>2.66</td>
<td>1.47</td>
<td>3.5**</td>
</tr>
<tr>
<td>Life without Internet would be boring</td>
<td>3.66</td>
<td>2.61</td>
<td>2.54*</td>
</tr>
<tr>
<td>Fail to check/control online time</td>
<td>2.88</td>
<td>2.61</td>
<td>8.0</td>
</tr>
<tr>
<td>Feel upset/irritated when fail to logon at predetermined time</td>
<td>3.1</td>
<td>4.1</td>
<td>2.55*</td>
</tr>
<tr>
<td>Loneliness</td>
<td>47.5</td>
<td>37.7</td>
<td>2.99**</td>
</tr>
</tbody>
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*p < 0.05.

**p < 0.01.

Table 1. MEANS, SDs, AND T-RATIOS OF DEPENDENTS AND NON-DEPENDENTS ON INTERNET USAGE AND LONELINESS
Dependents also reported losing sleep due to late-night logons (Table 1, \( t = 3.5, p < 0.01 \)). Sleep patterns are disrupted due to late-night logons. This can cause excessive fatigue, which would impair one's functioning in the academic and occupational realm. An investigation by the Alfred University Provost as to why students with SATs of 1200–1300 had recently been dismissed revealed that 43% of these students failed due to extensive patterns of late-night logons on the university computer system.°

Dependents also reported that life would be boring without the Internet (Table 1, \( t = 2.94, p < 0.05 \)). On the loneliness scale, significant differences emerged, with the dependents scoring higher than the non-dependents (Table 1, \( t = 2.99, p < 0.01 \)). Morahan and Schumaker found that pathological users reported significantly more loneliness as measured by the UCLA loneliness scale. Loytsker and Aiello found that higher levels of proneness to boredom, loneliness, social anxiety, and private self-consciousness all predict Internet addiction. Research has revealed that addictive use of the Internet directly leads to social isolation, increased depression, familial discord, divorce, academic failure, financial debt, and job loss. Young and Rodgers found that dependents ranked high in terms of being self-reliant, having a strong preference for solitary activities, tending to restrict their social outlets, and being more private individuals. It is possible that those who suffer from Internet addiction do not experience the same feelings of alienation others feel when spending long periods of time sitting alone. Also, the Internet's interactive capabilities may help the online user to feel a sense of connectedness among other users despite being physically alone. The director of computer addiction services at McLean Hospital of Harvard Medical School asserted that the problem of Internet addiction centers around using the computer "as a tool to evade, procrastinate and escape." Among the most vulnerable are children who are lonely and bored or who are from families where nobody is at home to relate to after school.

**Table 2. Length of Usage of Internet of Dependents and Non-Dependents in Percentage**

<table>
<thead>
<tr>
<th>Length of usage</th>
<th>Dependents</th>
<th>Non-dependents</th>
</tr>
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<tbody>
<tr>
<td>6 months</td>
<td>16.6%</td>
<td>19.04%</td>
</tr>
<tr>
<td>6 months to 1 year</td>
<td>22.2%</td>
<td>14.28%</td>
</tr>
<tr>
<td>1–2 years</td>
<td>38.8%</td>
<td>61.9%</td>
</tr>
<tr>
<td>&lt;2 years</td>
<td>22.2%</td>
<td>4.76%</td>
</tr>
</tbody>
</table>

spent 1–2 h per day, 28% spent 2–4 h, and 5.5% spent more than 4 h. Amongst the non-dependents, 29% spent less than 30 min per day online, 62% spent 1–2 h, and 9% spent 2–4 h. This does suggest that excessive usage may be a characteristic of those who develop dependence on the Internet.

Applications used. No major differences emerged in the applications being used by dependents and non-dependents. The main applications being used by both dependents and non-dependents are Email, Chat Rooms, Search Engines, Games, Online Gambling, E-Cards and Jokes, and Auction or shopping sites. The main difference remains in the length and time of usage between dependents and non-dependents.

**DISCUSSION**

The advantages of the Internet make it an excellent research tool; however, students captivated by the opportunities afforded by the Internet surf irrelevant websites, engage in chat-room gossip, and play games at the cost of healthy productive activities. Increase in academic impairment, poor integration in extracurricular activities, and other problems due to excessive Internet use require that strategies be developed and implemented to treat pathological Internet usage. The computer and the Internet must be viewed as a valuable supplemental tool, rather than an end-all solution.

**Table 3. Hours per Day Spent on Internet by Dependents and Non-Dependents in Percentage**

<table>
<thead>
<tr>
<th>Hours per day</th>
<th>Dependents</th>
<th>Non-dependents</th>
</tr>
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<tbody>
<tr>
<td>Less than 30 min</td>
<td>16.6%</td>
<td>28.57%</td>
</tr>
<tr>
<td>1–2 h</td>
<td>50%</td>
<td>61.9%</td>
</tr>
<tr>
<td>2–4 h</td>
<td>27.7%</td>
<td>9.5%</td>
</tr>
<tr>
<td>&gt;4 h</td>
<td>5.5%</td>
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REFERENCES


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