

Internet Addiction of Adolescents in Taiwan: An Interview Study

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ABSTRACT

This study presented a follow-up investigation of a series of studies about Taiwanese adolescents' Internet addiction. Through analyzing a series of questionnaires, 10 Taiwanese adolescents with Internet addiction were selected for in-depth interviews. Adolescents' interview data revealed the following: First, almost all of the interviewed adolescents exhibited most of the symptoms of Internet addiction as identified by previous studies, including compulsive use and withdrawal, tolerance, and related problems of school, health, family, finance, and time management. Moreover, almost all of the interviewed adolescents stated that messages on the Internet became the primary source of their information and knowledge. Many of them were addicted to the messages and activity on the Internet, but not by the Internet as a medium per se. Also, the world of the Internet seemed to become a place to relieve adolescents' depression. Most of the interviewed adolescents self-declared that they were Internet addicts, but none of them could clearly state what to do with such an addiction. Psychologists and educators should pay more attention to this and then propose possible solutions for adolescents.

INTRODUCTION

THE INTERNET has introduced society to quite a different lifestyle than previously. People can effectively acquire information and solve many daily problems through the Internet, such as taking online courses and making hotel reservations. In spite of the widely perceived merits of the Internet, policy makers, psychologists, and educators have been aware of the negative impacts of its use, especially the excessive use and the related physical and psychological problems.¹⁻⁴ Studies have utilized methods to identify Internet addicts, and have used terms such as "Internet dependents," "problematic Internet users," or "pathological Internet users."^{5,6} Most of the studies utilized quantitative methods, such as questionnaires, to assess Internet addic-

tion,⁷⁻¹⁰ though few of them have explored this issue through in-depth interviews. It is suggested that the qualitative data gathered from interviews may not only help researchers interpret the findings revealed by quantitative methods, but also produce a more detailed picture about Internet addiction.

Adolescents have gradually become a major population of Internet users. However, there are few studies on adolescent Internet addiction; most of the relevant studies have explored college students' or adults' Internet addiction.^{7-9,11,12} This study, a follow-up study of a series of related research conducted in Taiwan,^{5,13} was intended to explore Internet addiction in Taiwanese adolescents by interviewing 10 Taiwanese high school adolescents who showed Internet addiction.

METHODS

Subjects

The initial sample of this study included more than 700 Taiwanese high school adolescents (16–17 years old) having experiences of using the Internet. The sample was selected across different demographic areas in Taiwan. These adolescents were asked to finish two questionnaires about Internet addiction, the scale developed by Young,¹⁰ and one developed by the authors,^{5,13} called the "Internet Addiction Scale for High School Students in Taiwan" (IAST).

By Young's definition,¹⁰ those having a score of 5 or higher on Young's questionnaire are Internet addicts. By this definition, a total of ninety students were viewed as Internet addicts in this study. For the IAST scale, four factors were extracted and accounted for 53.7% of total variance explained: (1) tolerance (10 items), (2) compulsive use and withdrawal (seven items), (3) related problems: family, school, and health (eight items), and (4) related problems: interpersonal and financial (four items). It was found that the reliability and validity index of IAST were both satisfactory.¹³ Subjects who scored more than 80 on the IASR ($n = 88$) were categorized as the Internet addicts. Consequently, about 60 students in the sample were identified as Internet addicts by both the Young's scale¹⁰ and IAST.^{5,13} Among these adolescents, 10 were selected for an in-depth interview, two of them female. This selected sample also confirmed the stereotype of Internet addicts that addicts are more likely to be male.^{2,14} The selected subjects also came from different regions of Taiwan. Even as high school students in Taiwan who were supposed to have high academic pressures from schools, these subjects spent at least more than 20 h on the Internet per week.

Data collection—interview

The interview was conducted individually by a trained researcher. The interview was conducted in a semi-structured format. The main issues of the interview included: the subject's experiences of using the Internet, what change, in any aspect, after contacting the Internet, his or her symptoms and possible sources of Internet addiction, and his or her friends' and parents' views about his or her Internet addiction. Upon the request of the interviewees, six of them were interviewed on-line, while the rest of them were interviewed face to face.

RESULTS

Adolescents' interview results are summarized as follows. First, most of the interviewed adolescents (eight among the 10) exhibited almost all of the symptoms and related problems of Internet addiction as identified by IAST.^{5,13} IAST revealed that "Tolerance" as well as "Compulsive Use and Withdrawal" were major factors for the symptoms of pathological Internet use. Meanwhile, Internet addicts encountered related problems about family, school, and health, as well as about interpersonal and finance. The IAST factor structure resembled the diagnoses of compulsive gambling referenced in the DSM-IV by American Psychiatric Association.¹⁵ This finding is consistent with the framework proposed recently by psychologists.¹⁶ The interview data gathered in the study reconfirmed the existence of the aforementioned symptoms and problems. For example, the Internet addiction adolescents showed compulsive use of the Internet, even though they actually did nothing but "hang around" on the Internet. They showed an uncontrollable urge to increase the amount of time spent on-line and had difficulty decreasing excessive Internet use. One subject stated that "For me, Internet is not a tool; it is a kind of habit or everyday routine." One student claimed that he once used a regular cell phone to get on-line when taking a train, as he had compulsive use of the Internet.

Almost all of the interviewed adolescents once tried to withdraw from the Internet but then felt depressed, and the withdrawal was usually not successful. They found that, in order to fulfill their original satisfaction, their on-line time was increased considerably. Consequently, they often concealed their length of on-line time from their parents. Moreover, Internet addiction caused some problems of school, family, health, and finance. That is, their excessive use of the Internet may impair social or personal functions, such as losing sleep and study time, and increasing on-line expenses. One subject claimed that he needed to pay more than \$300 (U.S. dollars) for on-line expense. All of the addicts' parents tried to limit their on-line time or even cut down their use of computer networks at home, and two of the addicts tried to find part-time job (usually related to web technology) to afford the on-line expense.

All of these interviewed adolescents expressed a notable symptom that the use of Internet had caused problems in time management, and that they believed that these problems influenced their academic performance in schools. One subject claimed that he was once on-line for 11 consecutive days with-

out sleeping. One could imagine how on-line activities influenced his health, school performance, and regular life. However, based on these adolescents' interview data, Internet addiction did not seem to cause serious problems on their peer interactions (actual, not virtual) in schools. It was also interesting to find that all of these adolescents self-reported that their parents were negative toward their Internet addiction, but their peers held positive or at least neutral attitudes toward their Internet addiction. The use of the Internet or getting on-line was still a fascinating activity for adolescents. One subject even claimed that his peers admired him for breaking family rules and ignoring school discipline. This admiration may have enhanced his confidence that had been damaged when failing to achieve the expectations of teachers and parents.

Moreover, almost all of the interviewed adolescents (nine among the 10) stated that messages on the Internet became the dominant source of their information and knowledge. It is recognized that the world of the Internet provides rich information for users, but not all of the information is correct or appropriate for adolescents. Educators as well as parents should note this and advise adolescents to properly deal with the information delivered on the Internet. Also, these adolescents were addicted to various modes of Internet use. Six of these adolescents were addicted to the BBS (Bulletin Board System, an important application of using the Internet in Taiwan); two of them were addicted by on-line role-play games; two were on-line talk (e.g., icq) addicts; one was a www addict; and still one was addicted by ftp. The www addict heavily viewed web pages, while the ftp addict unmanageably downloaded files for unclear purposes. (Note: Two of them claimed more than one mode of using the Internet caused addiction.) An important research question for psychologists and educators is to explore whether the message and activity on the Internet or the medium of the Internet per se is the major cause contributing to adolescents' Internet addiction. Contemporary psychologists have a similar distinction for pathological Internet use (PIU), including specific PIU and generalized PIU.⁶ Specific PIU indicates the condition in which an individual has pathological use of the Internet for particular purpose, such as online gambling or on-line sex,¹⁷ whereas generalized PIU refers to a more global set of behaviors. The specific PIU may mainly come from the message and activity on the Internet, while the generalized PIU may possibly stem from the unique features of the Internet as a medium per se. According to the interview data in

this study, six of the students were clearly the specific PIU (e.g., on-line games) users, and two of them were more oriented to generalized PIU (e.g., simply navigating web sites and downloading all kinds of files without any particular purpose).

Six of the interviewed adolescents said that, if they were moody or felt depressed, they would get on the Internet to remedy their depression. They tried to talk to someone on-line, play on-line games, or do "something crazy" on the Internet (e.g., kill people in games, post deceptive messages). The world of the Internet seemed to become a place to relieve adolescents' depression. Many of these adolescents (five of them) claimed that the Internet enlarged their social life by introducing them to more people (on the Internet). Finally, eight of the adolescents self-recognized that they were Internet addicts, but none of them could clearly state what to do with such an addiction. Psychologists and educators should pay more attention to this and propose possible solutions for adolescents.

CONCLUSION

Currently, Internet addiction is an important issue for psychologists and educators. Adolescents, who are often frequent Internet users but have not yet developed high mental maturity, are viewed as a group of potential Internet addicts. This study described an initial attempt to explore adolescents' Internet addiction through interviews. Adolescents' interview responses revealed symptoms of Internet addiction similar to those revealed by college students and adults.⁷⁻¹⁰ Many of the adolescents in this study were addicted by the messages and activity on the Internet, but not by the Internet as a medium per se. The world of the Internet became the principal information source and place of relief for these adolescents. When adolescents become a major population of Internet users, more research is required to explore the causes and solutions of adolescents' Internet addiction.

There are some recommendations for future research derived from this study. First, researchers can interview a much larger group of adolescents to obtain more information and research insights about adolescents' Internet addiction. Also, researchers can interview Internet addicts' parents and their peers to explore how Internet addiction may influence the addicts' life in different aspects. In addition to interviews, researchers can conduct in-depth observations and collect more on-line activities related to the Internet addicts. As the sample in this study only

involved a group of Taiwanese adolescents showing Internet addiction, researchers may interview a similar group of adolescents in other countries. Some cultural differences in Internet addiction may be revealed in such cross-cultural research.

Many subjects in this study were interviewed on-line. Based on the authors' experiences, these adolescents felt it was easy to freely express their thoughts in the Internet environment. These subjects were used to talking on the Internet; therefore, for this particular topic (i.e., Internet addiction), the on-line interview is adequate for research data gathering, and perhaps, it is even better than face-to-face interviews. The on-line interview can be conducted without the limitations of time and locations, and it can easily record each interviewee's responses in digital format. Recent research about college students' Internet addiction has begun to utilize this approach for interview data gathering.¹⁸ It is hoped that the findings of this study will stimulate more research and in-depth explorations into adolescents' Internet addiction.

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