

THE EFFECT OF INTERNET USING BEHAVIORS UPON THE PHYSICAL AND MENTAL HEALTH OF THAI CHILDREN AND YOUTHS: CASE STUDY IN BANGKOK

Ujsara Prasertsin
Srinakharinwirot University
E-Mail: utsara@swu.ac.th

Prapimparn Suvarnakuta
Office of Welfare Promotion, Protection and Empowerment of Vulnerable Groups
E-Mail: prapimparn@opp.go.th

ABSTRACT

The purpose of the research was to study the behavior of children and youth related to using the internet. The sample consisted of 1,584 children and youths in Bangkok. The Canonical Correlation Analysis statistics method was applied to analyze the data. The research results revealed that using the internet for entertainment purposes exerted good effects on mental health at 25.0%; meanwhile, it negatively affected mental health at 10.6%. Using the internet for education and business displayed effects on physical health only at 1.2%. In the second part of the research, section one used in-depth interviews with five children and youths, and section two used a personal interview of four executives and experts specifically chosen. From all of the research results, the children and the majority of youths derived more benefits than bad effects. However, using too much internet either positively or negatively would cause some physical and mental health effects. Recommended internet media controls include the following: 1) the government must be part in blocking improper internet and promoting the good internet media; 2) the communities must take part in monitoring bad internet media, both content and images; 3) parents and families must take care and keep an eye on their children; and 4) the mass communication organizations must promote good media and screen the bad media sites.

Keywords: Internet, Physical Health and Mental Health, Children and Youth

INTRODUCTION

The current world is abundantly changing, especially in communication technology. The national strategies for the country's sustainable development concentrate upon the importance of information technology and communication links and usage. It is believed that we are entering the digital world; thus, the internet is the important intermediary for communication among people in the world for purposes of education, business, general knowledge, and entertainment. Over a billion websites are presently found, and they contain both good and bad content. It is true that the contents displayed are difficult to control and monitor before they transmit to all receivers. If the receivers are underage children or youths unable to screen out the contents adequately, they suffer from the effects on their both physical and mental health.

In this way, the researcher hopes to provide data useful for every section of society. Studying the effect on children and youths' physical and mental health caused by internet use is expected to help people and organizations, in both private and government sections, join hands for problem resolution and protection. It also can help generate new knowledge for society in the future.

RESEARCH OBJECTIVES

1. To study the behavior of children and youths in receiving content and information through the internet by categorizing purposes of internet use.
2. To study the relationship between the children and youths' behavior of using the internet and effects on physical and mental health generated from using the internet.
3. To study both positive and negative effects upon physical and mental conditions of children and youths.
4. To study and find ways to promote adequate internet use to avoid physical and mental health problems in children and youths.

RELATED CONCEPTS AND IDEAS

Having diagnosed internet addicts' symptoms and health problems, the American Psychiatric Association differentiated conditions of general users from addicts. The symptoms caused by internet usage were compared to the DSM-IV (*Diagnostic and Statistical Manual of Mental Disorders 4th ed.*). It declared that the symptoms of the internet addicts were similar to the gambling addicts'. Addicts seemed obsessed, moody, and fidgety if they did not access the internet. The causes of addiction were the need to

run away from problems, find relaxation, and release stresses when lonely.

Due to the similarities of causes and symptoms from both gambling and internet addiction, Young was the pioneer of a principle brought to describe internet addicts by using the principles of gambling addiction described by means of a test. The test was specially designed for the internet addicts to answer “yes” to at least five questions. It was a helpful tool to classify general internet users and internet addicts because the addicts showed at least five symptoms that they themselves did not accept. The addicts thought that they used the internet as a part of work, and internet was widely used. Young shared his website, www.netaddiction.com, for the interested to share and exchange ideas and information involving internet addiction. The website contains related papers and research reports.

Numbers of internet users are rising rapidly. Grohol divided pathological internet use (PIU) into two groups. PIU was categorized into two levels by Davis. The primary prompt was mainly daily life like stresses, mental disorders, depressions, anxiety, and drug addictions (Kraut, Lundmark, Kiesler, Mikhopadhyay, & Scherlis, Kraut, Patterson, Lundmark, Kiesler, Mukopadhyay, & Scherlis). People sought relaxation from activities on the internet; therefore, users stimulated themselves to respond to their needs through internet activities. The users were also driven by the need to use the internet. On the secondary level, the internet addicts showed physical and mental disorders linked to deviant behavior and recognition, pessimism, and social adaptation failure (Davis, Smith, Rodrigue, & Pulvers, Davis, Flett, & Besser).

Using too much internet resulted in effects upon activities in the following order: 1) time with family or lover, 2) self: daily jobs and responsibility, 3) rest time, 4) studying, 5) news and information updates, 6) time with friends, 7) physical exercises, 8) special activity or hobby, 9) sexual intercourse with lover, and 10) social activities (Young and Case). Furthermore, problems with internet addiction were classified into five groups: physical problems, school and learning problems, interpersonal relationship problems, financial problems, and job problems.

METHODOLOGY

The study mixed with qualitative and quantitative research methods. Data were collected in the form of a questionnaire surveying a total of 1,584 children and youths in Bangkok through multistage sampling. There were 518 men and 1,067 women. There were 431 subjects in the range of 12–14 years, 391 in the range of 15–17 years, 546 in the

range of 18–20 years, and 159 in the range of 21–25 years. The first group was composed of students of Bangkok high schools chosen whimsically from three Bangkok educational service area offices. One government school and one private school were selected by each office. Two students from Matthayom 2 and two from Matthayom 5 were selected as representatives of lower and upper high school, respectively. Consequently, there were four classrooms as samples from one school. One classroom consisted of 50 students, and there were six schools in total. There were 851 students total. The other group was composed of 733 undergraduate students in Bangkok. The universities in Bangkok were classified as a government-supported university, Rajabhat university, and private university. There were four tools for the research: 27 questions created from items based on an integrated literature review, reliability .87, and three aspects of physical and mental health tests of 22 questions, reliability .80, analyzed by the canonical correlation analysis method.

Content analysis was applied for qualitative research. The researcher selected five child and youth samples of 16–22 years old or 19 in average, three males and two females, for in-depth interview. Four samples of executives or specialists were specifically chosen for informal interview.

RESEARCH RESULTS

The data evaluation of the research started from marking each question score. The two tests contained different questions categorized by aspects. The question scores of the internet using tests ranged from 0 to 4. There were five questions of education/general knowledge, eight questions of entertainment, seven questions related to negative purposes, and seven questions about business/job. The question scores for physical and mental health ranged from 1 to 5. The test contained ten questions about negative physical health, six questions of positive mental health, and six questions of negative mental health. The total scores were divided by the number of questions in each aspect to make an equal unit score.

The results showed that the highest mean was for the behavior of using the internet for entertainment ($M = 2.46$). The purposes of education ($M = 1.89$) and business ($M = 1.06$) followed. The lowest mean belonged to negative purpose ($M = 1.02$). Internet use effect on positive mental health came highest ($M = 3.40$). It was followed by negative physical health ($M = 2.68$) and negative mental health ($M = 2.04$), respectively, as shown in table 1.

Table 1 The mean of using the internet and internet use effect on physical health and mental health

Items	Mean	SD
The behaviors of using the internet		
education (X1)	1.89	0.71
entertainment (X2)	2.46	0.68
negative (X3)	1.02	0.75
business (X4)	1.06	0.75
The effects of internet use		
negative physical health (Y1)	2.68	0.75
positive mental health (Y2)	3.40	0.67
negative mental health (Y3)	2.04	0.74

The correlation coefficient of the four aspects showed a positive relationship with effects on negative physical health and positive and negative mental health significantly at the .001 level. The relationship between dependent and independent variables showed that using the internet for entertainment purposes was at highest significance at the .468 level. The following was internet use for negative purposes and a negative mental health relationship, significant at .355 levels. The lowest was the relationship between using the internet for education and negative mental health, significant at the .107 level, as shown in table 2.

Table 2 The correlation coefficients of the four aspects of internet use behaviour

Variables	X1	X2	X3	X4	Y1	Y2	Y3
X1	1.00	.519***	.224***	.500***	.174***	.285***	.107***
X2		1.00	.432***	.475***	.196***	.468***	.114***
X3			1.00	.493***	.224***	.276***	.355***
X4				1.00	.246***	.248***	.237***
Y1					1.00	.229***	.564***
Y2						1.00	.164***
Y3							1.00

Note: *** $p < .001$

The canonical correlation between the set of independent variables of the internet using behavior and the set of variables of physical and mental health effects was significant at the .500, .325, and .108 levels, respectively, which all were statistically significant at the .001 level. The variances of the three canonical correlation sets found that the independent variables of the four aspects of internet use behavior, with the dependent variables of physical and mental health, were 25.0, 10.6, and 1.2 percent, respectively. Referring to the first set of relationships, the independent variables

described the set of the dependent variables at 25.0 percent. It was also found that the four aspects of internet using behavior, together with the cumulative variables of the first predictable set, were 35.9, 85.4, 51.6, and 38.7 percent, respectively. The set of dependent variables showed that effects on three health aspects, along with the cumulative variables of the first criteria series, were 25.3, 87.4, and 22.3 percent, respectively, as shown in figure 1.

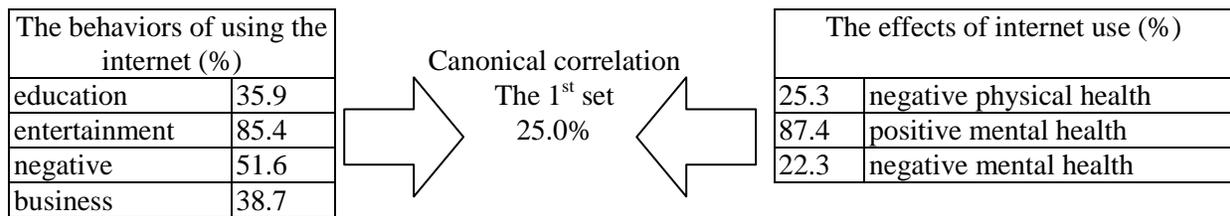


Figure 1 The first set showed effects on three health aspects

Referring to the second set of relationships, the independent variables described the set of the dependent variables at 10.6 percent. It was also found that internet use behavior for entertainment and negative purposes, together with the cumulative variables of the second predictable set, were 13.3 and 43.3 percent, respectively. The set of dependent variables showed that effects on negative mental health, along with the cumulative variables of the second criteria series, were 77.1 percent, as shown in figure 2.

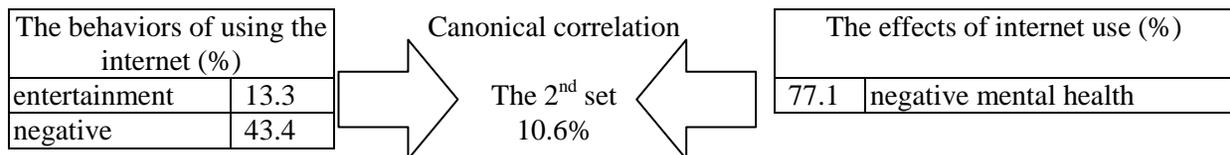


Figure 2 The second set showed effects on one health aspect

Referring to the third set of relationships, the independent variables described the set of the dependent variables at 1.2 percent. It was also found that internet use behaviors for education and business, together with the cumulative variables of the third predictable set, were 16.8 and 49.3 percent, respectively. The set of the dependent variables showed that effects on negative physical health, along with the cumulative variables of the third criteria series, were 65.9 percent, as shown in figure 3.

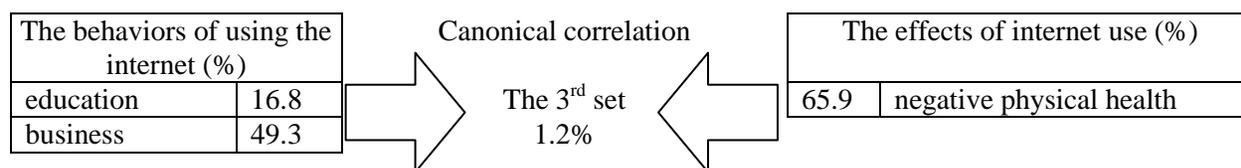


Figure 3 The third set showed effects on one health aspect

DISCUSSION AND SUMMARY

From the generalization analysis of the two research results, it was found that the main purpose for Thai children and youths' internet use behavior was for entertainment and games followed by education purposes. Effects on mental health were the first to appear, followed by negative physical health. The analysis resulted from correlation coefficients of the four aspects of internet using behavior, indicating a positive relationship with effects on negative physical health; positive and negative mental health was significant at the .001 level. The relationship between dependent and independent variables showed that using the internet for entertainment purposes held highest significance at .468 levels. The lowest was the relationship between using the internet for education and negative mental health, significant at .107 levels.

Moreover, the relationship of canonical correlation analysis pointed that children and youths' internet use behavior for entertainment purposes exerted a good effect on their mental health. They found new friends when they were in the internet world. They understood and gained satisfaction and happiness from their life. They were able to cope with problems and concentrate upon every activity with fun and joy.

These findings matched the second part of the research by means of in-depth interviews, which showed that the samples using the internet for general entertainment, news updates, online chats, etc. could relieve stress and grow relaxed. The internet using behavior for inappropriate entertainment like violent games affected mental health, according to the children and youths.

For website management, quantitative research in section 4 of the survey and qualitative research in section 2 of the specialist interview agreed. The concerned organizations must be involved in monitoring and screening inappropriate websites. Furthermore, the bad website makers should found guilty. More websites related to academic and general knowledge suitable for different ages should be launched. The well-designed and organized websites with up-to-date content should continue. According to children and youths, a wide variety of websites full of data for guidance,

textbooks, career information, travel and sport, games, and language corners should be provided for better learning. Last, adults should gain a clear understanding that the internet is not totally bad but useful.

The two research results were compatible with many foreign research reports on teenagers' internet use behavior (Pratarelli & Browne, Nalwa & Anand). They showed that foreign teenagers' internet use behavior was much similar to teenagers' use in China (Cao & Su) and Taiwan (Chou). The internet is good for education, but it is not useful if the users were internet addicts (Griffiths, Miller, Gillespie, & Sparrow, Hansen). It also exerts an effect on teenagers' mental health (Whang, Lee, & Chang, Yen, Ko, Yen, Chen, Chung, & Chen).

From all of the results, the purposes for using the internet were various, and most children and youths took good advantage of the internet. Using it too much for any purposes caused physical effects like eye pain and body aches. Most of the samples used the internet for entertainment to relieve stress, but they sometimes derived negative effects, namely worse academic achievement or health problems. Sometimes they became angry when they did not surf the internet as they needed. The best method is to employ proper usage and enjoy other activities—for example, working out, reading books, or enjoying hobbies—for better physical and mental health.

RESEARCH LIMITATION

This paper studied only students in Bangkok. Because of differences among children and youths in comparison with other regions, this study can be generalized only to children and youths in Bangkok, as the title indicates.

RECOMMENDATIONS

Academic recommendations

1. The research was conducted only in the Bangkok area. Therefore, the study should focus on other areas and samples to further the study.
2. Other aspects should be added like psychological factors and in-depth interviews in internet cafes for qualitative research.
3. A comparative study should be done between the points of view of general users and addicts or a cross-cultural comparison.

Policy recommendations

Concerned organizations should become more aware of internet use problems among Thai children and youths. The related laws should be tightened up. Monitoring and screening inappropriate websites, both content and images, should be continually done by launching new policies for protection and controls on the internet.

The health care-related organizations should provide a clear understanding to the public of advantages and disadvantages of the internet and promote proper internet use.

REFERENCES

- American Psychiatric Association (1994). *Diagnostic and statistical manual of mental disorders. 4th ed.* Washington, DC: American Psychiatric Association.
- Cao, F., & Su, L. (2007). Internet addiction among Chinese adolescents: prevalence and psychological features. *Child: Care, Health and Development, 33*(3), 275-281.
- Chou, C. (2001). Internet heavy use and addiction among Taiwanese college students: an online interview study. *CyberPsychology and Behavior, 4*(5), 573-585.
- Davis, R.A. (1999). *Internet addiction: is it real?* Retrieved May 1, 2008, from <http://www.victoriapoint.com/internetaddiction.htm>
- Davis, S.F., Smith, B., Rodrigue, K., & Pulvers, K. (1999). An examination of Internet usage in two college campuses. *College Student Journal, 33*(2), 257-260.
- Davis, R.A. (2001). *A cognitive-behavioral model of pathological Internet use, Computers in Human Behavior.* Retrieved May 1, 2008, from <http://www.victoriapoint.com/internetaddiction.htm>
- Davis, R.A., Flett, G.L., & Besser, A. (2002). Validation of a new scale for measuring problematic internet use: implications for pre-employment screening. *CyberPsychology Behavior, 5*(4), 331-345.
- Griffiths, M., Miller, H., Gillespie, T., & Sparrow, P. (1999). Internet usage and 'internet addiction' in students and its implications for learning. *Journal of Computer Assisted Learning, 15*(1), 85-90.
- Grohol, J. (1999). *Internet addiction guide.* Retrieved May 1, 2008, from <http://psychcentral.com/netaddiction/>
- Hansen, S. (2002). Excessive Internet usage or 'Internet Addiction'? The implications of diagnostic categories for student users. *Journal of Computer Assisted Learning, 18*(2), 235-236.

- Kraut, R., Lundmark, V., Kiesler, S., Mukhopadhyay, T., & Scherlis, W. (1997). *Why people use the internet*. Pittsburg, PA: Carnegie Mellon University.
- Kraut, R., Lundmark, V., Kiesler, S., Mukhopadhyay, T., and Scherlis, W. (1998). Internet paradox: a social technology that reduces social involvement and psychological well-being? *American Psychologist*, 53(9), 1017-1031.
- Nalwa, K., & Anand, A.P. (2003). Internet addiction in students: a cause of concern. *CyberPsychology and Behavior*, 6(6), 653-656.
- Pratarelli, M.E., & Browne, B.L. (2002). Confirmatory factor analysis of internet use and addiction. *CyberPsychology and Behavior*, 5(1), 53-64.
- Whang, L.S., Lee, S., & Chang, G. (2003). Internet over-users' psychological profiles: a behavior sampling analysis on internet addiction. *CyberPsychology and Behavior*, 6(2), 143-150.
- Yen, J.Y., Ko, C.H., Yen, C.F., Chen, S.H., Chung, W.L., & Chen, C.C. (2008). Psychiatric symptoms in adolescents with Internet addiction: Comparison with substance use. *Psychiatry and Clinical Neurosciences*, 62(1), 9-16.
- Young, K.S. (1996). Pathological Internet Use: A case that breaks the Stereotype. *Psychological Report*, 79, 899-902.
- Young, K.S. (1998). Internet addiction: the emergence of a new clinical disorder. *CyberPsychology and Behavior*, 1(3), 237-244.
- Young, K.S. (1999). Internet addiction: symptoms, evaluation and treatment. *Innovations in Clinical Practice*, 17, 1-17
- Young, K.S., & Case, C.J. (2004). Internet abuse in the workplace: new trends in risk management. *CyberPsychology and Behavior*, 7(1), 105-111.