

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, Bangkok, Thailand
utsara@swu.ac.th

Prapimparn Suvarnakuta,
Office of Welfare Promotion, Protection and Empowerment of Vulnerable Groups,
Bangkok, Thailand
prapimparn@opp.go.th

ABSTRACT

The purposes of the research were to study the behavior of the children and youth in using the internet. The samples consisted of 1,584 children and youths in Bangkok. The Canonical Correlation Analysis statistics was also applied to analyze the data. The research results revealed that using the internet for entertainment purpose had good effects on mental health at 25.0%, meanwhile it negatively affected mental health at 10.6%. Using internet for education and business had effects on physical health only at 1.2%. In the second part of research, section one using in-depth interview whose the samples were five children and youths, and section two was a personal interview that four executives and experts were specifically chosen. From all the research result, the children and the majority of youths got more benefits than bad effects. However, if using too much Internet either positively or negatively, it would cause some physical and mental health effects. The ways of organization involving the internet media controls were that; (1 the government must be part in blocking improper internet medias and promoting the good internet medias; (2 the communities must be part in monitoring internet bad media, both contents and images; (3 parents and family must take a good care and keep an eye on their children; and 4 (the mass communication organizations must promote the good medias and screen the bad media sites.

Keyword: Internet, Physical health and mental health, Children and Youth

INTRODUCTION

The current world is abundantly changing especially in communication technology. The national strategies on country's sustainable development promotion concentrate upon the importance of information technology and communication link and usage. It's believed that we are getting into the digital world that the internet is the important intermediary for communication among people in the world and for purposes of education, business, general knowledge, and entertainment. Over a billion of websites are presently found that they contain both good and bad contents. It is true that the contents displayed in the world of the internet are hard to be controlled and monitored before being sent to all receivers. In case that the receivers are underage children or youths unable to screen out the contents adequately, they would suffer from the effects on their both physical and mental health.

In this way, the researcher hopes that the research will be useful for every section of the society. Besides it is the study of effect on the children and youths' physical and mental health caused by internet using, it is expected to be a way for people and organizations, both private and government sections, to join hands for the 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 contents and information through the internet by categorizing purposes of internet using.
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 condition of children and youths.

4. To study and find ways to promote adequate internet using to avoid physical and mental health problems of children and youths.

RELATED CONCEPTS AND IDEAS

Having diagnosed internet addicts' symptoms and health problems, American Psychiatric Association [1] differentiated conditions of general users from the addicts. The discovered symptoms caused by the internet usage were compared to 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'. They seemed obsessed, moody, and fidget if they did not access to the internet. The causes of addiction were that they needed to run away from problems, to get relaxed and to release stresses when lonely.

Due to the similarities of causes and symptoms from both gambling and internet addiction, Young [2] was the pioneer of a principle brought to describe the internet addicts by using the principles of gambling addict description by mean of a test. The test was specially designed for the internet addicts to answer at least five 'yes' to all questions. It was a helpful tool to classify general internet users and the internet addicts because the addicts showed at least five symptoms that they themselves did not accept they were. The addicts thought that they used the internet as a part of work, and it was widely used (Young [3] [4]). You shared his website, www.netaddiction.com, for the interested to share and exchange ideas and information involving internet addiction. The website also contained the related papers and research reports.

Numbers of internet users were rising rapidly. Grohol [5] divided pathological internet use or PIU into two groups. The PIU was categorized into two levels by Davis [6] [7] as follows; Primary level-it was mainly from daily life like stresses, mental disorders, depressions, anxiety and drug addictions (Kraut, Lundmark, Kiesler, Mikhopadhyay & Scherlis [8], Kraut, Patterson, Lundmark, Kiesier, Mukopadhyay & Scherlis, [9]). People needed to get relaxed from doing activities on the internet; therefore, the users stimulated themselves to response for their needs through the internet activities. The users were also driven by the needs to use the internet next times. Secondary level-the internet addicts showed the physical and mental disorders whose results and effects were deviant behavior and recognition, pessimism, and social adaptation failure (Davis Smith, Rodrigue & Pulvers [10], Davis, Flett & Besser [11])

Using overmuch internet resulted in effects on activities of the following orders: 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 [12]). Furthermore, problems from the internet addiction were classified into five groups-physical problem, school and learning problem, interpersonal relationship problem, financial problem and job problem.

METHODOLOGY

The study was mixed with qualitative and quantitative research methods. Data was collected in form of questionnaire to total 1,584 of children and youths in Bangkok which was multistage sampling. The first group of the youths was the 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 totally six schools. The total numbers of samples were 851 students. The other group was 733 undergraduate students in Bangkok. The universities in Bangkok were classified into; government supported university, Rajabhat university and private university. The tools of the research comprised: four- aspect internet

using test of 27 questions, reliability .87; and three-aspect physical and mental health test of 22 questions, reliability .80, analyzed by 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 numbers of questions categorized by aspects. The question scores of the internet using test were ranged from 0 to 4. The number of questions in the test was composed as follows: five questions of education/general knowledge; eight questions of entertainment; seven question related to negative purposes; and seven questions of business/job. The question score in the test of physical and mental health was ranged from 1 to 5. The test contained ten questions of 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 result showed that the highest mean went to the behavior of using the internet for entertainment (M = 2.46). The purposes of education (M = 1.89) and business (M = 1.06) came after. The lowest mean belonged to negative purpose (M = 1.02). The internet using 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 the internet using effect on physical health and mental health.

Items	Mean	SD
The behavior 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 effect of internet using		
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-aspect internet using behavior had positive relationship with effects on negative physical health, positive and negative mental health significantly at the .001 level. The relationship between dependent and independent variables showed that using the internet for entertainment purpose was highest significant at .468 level. The follower was the internet using for negative purposes and 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 .107 level, as shown in table 2.

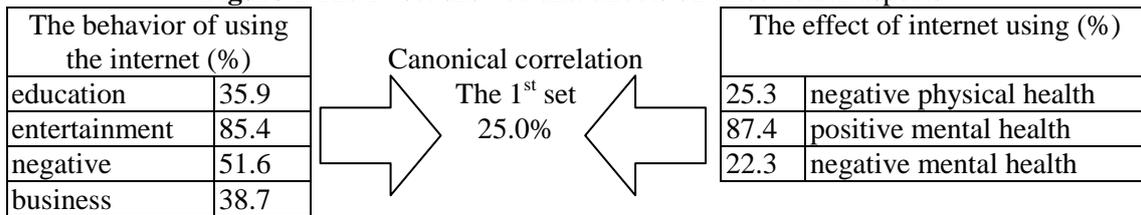
Table 2 The correlation coefficient of the four-aspect internet using behavior.

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

*** $p < .001$

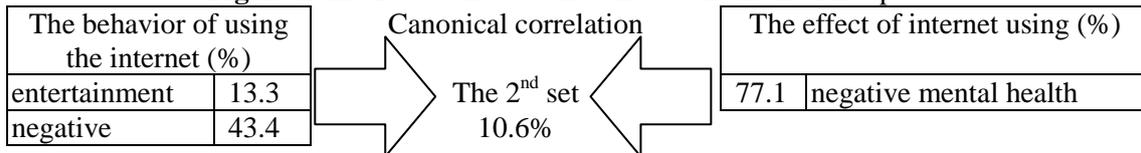
The canonical correlation between the set of independent variables of the internet using behavior and the set of variables of physical and mental health effects was significant .500, .325, and .108 level respectively, which all were statistically significant at .001 level. The variances of the three canonical correlation set were found that the independent variables of the four-aspect internet using behavior, with the dependent variables of physical and mental health were the 25.0, 10.6, and 1.2 percent respectively. Referring to the first set of relationship, the independent variables described the set of the dependent at 25.0 percent. It was also found that the four-aspect internet using behavior, together with the cumulative variables of the first predictable set, was 35.9, 85.4, 51.6, and 38.7 percent respectively. The set of the dependent variables showed that effects on three health aspects, along with the cumulative variables of the first criteria series, was 25.3, 87.4, and 22.3 percent respectively as shown in figure 1.

Figure 1 The 1st set showed that effects on three health aspects.



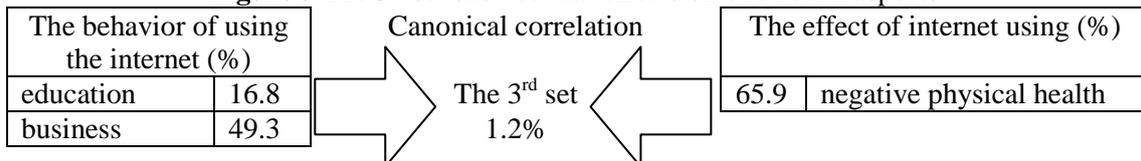
Referring to the second set of relationship, the independent variables described the set of the dependent at 10.6 percent. It was also found that internet using behavior for entertainment and negative purposes, together with the cumulative variables of the second predictable set, was 13.3 and 43.3 percent respectively. The set of the 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 2nd set showed that effects on one health aspects.



Referring to the third set of relationship, the independent variables described the set of the dependent at 1.2 percent. It was also found that internet using behavior for education and business, together with the cumulative variables of the third predictable set, was 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 3rd set showed that effects on one health aspects.



DISCUSSION AND SUMMARY

From the generalization analysis of the two research results, it was found that the main purpose of Thai children and youths' internet using behavior was for entertainment and game, followed by education purpose. For the effects from internet using, it showed that effects on mental health were the first rank, followed by negative physical health. The analysis result from correlation coefficient of the four-aspect internet using behavior indicated that the 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 purpose was highest significant at .468 levels. The lowest was the relationship between using the internet for education and negative mental health significant at .107 levels.

On top of that, the relationship of canonical correlation analysis pointed that children and youths' internet using behavior for entertainment purpose had a good effect on their mental health. They found new friends when they were in the internet world. They understood and got satisfied and happy with their life. They were able to cope with problems and concentrate upon every with fun and joy.

It matched with the second part of the research by mean of in-depth interview which showed that the samples using the internet for general entertainment, news updates, online chats and etc, would help them relieve stress and get more relaxed. The internet using behavior for inappropriate entertainment like violent game or condemnations affected mental health, according to the children and youths.

For website management, it showed that the studies from both quantitative research in the section 4 of the survey and qualitative research in the section 2 of the specialist interview were mutually accordant. The concerned organizations must get involved in monitoring and screening inappropriate websites. Furthermore, the bad website makers should found guilty. To improve websites, it was supposed to launch more website related to academic and general knowledge suitable for different ages. The well-designed and organized websites, together up-to-date contents, should be continually run. According to the children and youths, a wide variety of websites full of data of guidance, textbooks, career information, travel and sport, games and language corners should be provided for better learning. Lastly, it was necessary to make some adults clear understanding that the internet is not totally bad, but useful.

The two research results got along with a lot of foreign research reports on teenagers' internet using behavior (Pratarelli & Browne [13], Nalwa & Anand [14]). They showed that foreign teenagers' internet using behavior was much similar to Thai's such as China (Cao & Su [15]), Taiwan (Chou [16]). The internet was good for education, but it was not useful if the users were internet addict (Griffiths, Miller, Gillespie & Sparrow [17], Hansen [18]). It also had an effect on teenagers' mental health (Whang, Lee & Chang [19], Yen, Ko, Yen, Chen, Chung & Chen [20]).

From all of the results, purposes of using the internet were various, and most children and youths took good advantages. Using too much internet 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 got more negative effects namely worse academic achievement or health problem. Sometimes they got angry when they did not surf the internet as they needed. The best way was to have proper usage and to do other activities, for example, working out, reading book or enjoying hobbies for better physical and mental health.

RECOMMENDATIONS

Academic recommendations

1. The research was conducted only in 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, in-depth interview to internet cafes for qualitative research.
3. The comparative study between the point of view of general users and addicts, or cross cultural comparison.

Policy recommendations

1. The concerned organizations should get more aware of internet using problem amongst Thai children and youths. The related laws shall be tightened up. Monitoring and screening inappropriate websites, both contents and images, should be continually done by launching new policies for protection and controls on the internet.
2. The health care – related organizations should make a clear understanding to the public of advantages and disadvantages of the internet and promote proper internet using.

REFERENCES

- [1] American Psychiatric Association, *Diagnostic and statistical manual of mental disorders*. 4th ed. Washington, DC, 1994.
- [2] K. S. Young, Pathological Internet Use: A case that breaks the Stereotype. *Psychological Report*, 79, 1996.
- [3] K. S. Young, Internet addiction: the emergence of a new clinical disorder. *Cyberpsychology and Behavior*, 1, 237–244, 1998.
- [4] K. S. Young, *Internet addiction: symptoms, evaluation and treatment*. [Online]. Retrieved May, 1, 2008, from: <http://www.netaddiction.com>, 1999.
- [5] J. Grohol, *Internet addiction guide*. [Online]. Retrieved May, 1, 2008, from: <http://psychcentral.com/netaddiction/>, 1999.
- [6] R. A. Davis, *Internet addiction: is it real?* [Online]. Retrieved May, 1, 2008, from: <http://www.victoriapoint.com/internetaddiction.htm>, 1999.
- [7] R. A. Davis, *A cognitive-behavioral model of pathological Internet use, Computers in Human Behavior*. Retrieved May, 1, 2008, from: <http://www.victoriapoint.com/internetaddiction.htm>, 2001.
- [8] R. Kraut, V. Lundmark, S. Kiesler, T. Mukhopadhyay and W. Scherlis, *Why people use the internet*. Pittsburg, PA: Carnegie Mellon University. [Online]. Retrieved May, 1, 2008, from: <http://homenet.andrew.cmu.edu/progress/purpose.html>, 1997.
- [9] R. Kraut, M. Patterson, V. Lundmark, S. Kiesler, T. Mukhopadhyay and W. Scherlis, Internet paradox: a social technology that reduces social involvement and psychological well-being? *American Psychologist*, 9, 1017–1031, 1998.
- [10] S. F. Davis, B. Smith, K. Rodrigue and K. Pulvers, An examination of Internet usage in two college campuses. *College Student Journal*, 2, 257–260, 1999.
- [11] R. A. Davis, G. L. Flett and A. Besser, Validation of a new scale for measuring problematic internet use: implications for pre-employment screening. *Cyberpsychology Behavior*, 4, 331–345, 2002.
- [12] K. S. Young and C. J. Case, Internet abuse in the workplace: new trends in risk management. *Cyberpsychology and Behavior*, 7, 105–111, 2004.
- [13] M. E. Pratarelli and B. L. Browne, Confirmatory factor analysis of internet use and addiction. *Cyberpsychology and Behavior*, 5, 53–64, 2002.
- [14] K. Nalwa and A. P. Anand, Internet addiction in students: a cause of concern. *Cyberpsychology and Behavior*, 6, 653–656, 2003.
- [15] F. Cao and L. Su, Internet addiction among Chinese adolescents: prevalence and psychological features. *Child: Care, Health and Development*, 33, 275–281, 2007.
- [16] C. Chou, Internet heavy use and addiction among Taiwanese college students: an online interview study. *Cyberpsychology and Behavior*, 4, 573–585, 2001.
- [17] M. Griffiths, H. Miller, T. Gillespie and P. Sparrow, Internet usage and 'internet addiction' in students and its implications for learning. *Journal of Computer Assisted Learning*, 15, 85–90, 1999.
- [18] S. Hansen, Excessive Internet usage or 'Internet Addiction'? The implications of diagnostic categories for student users. *Journal of Computer Assisted Learning*, 18, 235–236, 2002.
- [19] L. S. Whang, S. Lee and G. Chang, Internet over-users' psychological profiles: a behavior sampling analysis on internet addiction. *Cyberpsychology and Behavior*, 6, 143–150, 2003.
- [20] J. Y. Yen, C. H. Ko, C. F. Yen, S. H. Chen, W. L. Chung & C. C. Chen, Psychiatric symptoms in adolescents with Internet addiction: Comparison with substance use. *Psychiatry and Clinical Neurosciences*, 62, 9–16, 2008.