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Parents and Children's Perceptions of the

Dangers of the Internet

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by

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Introduction and Aims of the Study

Singapore has one of the world's highest rates of home computer ownership of 59% and Internet penetration of 47.7% (Singapore Broadcasting Authority). With the Ministry of Education's IT Masterplan, where "school-wide networks will enable the Internet to become the medium for communication, collaboration and sharing of ideas and resources between pupils and teachers locally and with schools abroad" (Ministry of Education, Singapore), children in Singapore are highly "wired". Recent changes in education of which interdisciplinary project work, children more than ever are surfing the Net. They are the new Net-Generation (Tapscott, 2000). This is the generation of children who are learning, playing and communicating in ways very different from their parents. While the Net has limitless opportunities for education, entertainment & enterprise, there are potential dangers, which include misinformation, violent games, pornography, cybersex, sexual predators and Internet addiction.

How many parents, especially those who are not so Internet-savvy, are fully aware what their children are surfing for? And how many are concerned about these potential problems and dangers?

It is not surprising that a Lycos Asia survey of surfing habits of teens in Singapore found that "sex" topped the list of search words in Singapore (Chan, 2000). A research study also found that one in two teenagers were tricked into accessing pornographic sites (Oo, 2001). There is evidence that heavy Internet users in adult and pornographic sites tend to demonstrate more pathological sexual expressions (Cooper, Scherer, Boies & Gordon, 1999; Toomey & Rothenberg, 2000). What is a worrying trend in Singapore is the rise in the cases of teenagers being raped by people they have met in chatrooms (Lee, 2001; Kaur, 2001).

A proactive approach has been taken by a group of volunteer parents who formed the Parents' Advisory Group for the Internet (PAGi), in November 1999 with the aim of educating and supporting parents who are facing the challenge of raising children in an online world. To date, PAGi has helped train over 10,000 parents on Internet dangers and online safety.

This paper presents a summary of findings from a study funded project by PAGi to examine the profile of parents and children regarding their awareness of Internet problems and dangers, their concerns about these problems and dangers, and how they perceive the effectiveness of some safety strategies. Such information would not only be of help to PAGi in tailoring training programmes for parents but also to teachers in schools who advise their children on their surfing habits and online activities.

Research questions

1. Awareness of Internet problems and dangers

- What is the profile of parents who are more aware of Internet problems and dangers?

- What is the profile of children who are more aware of Internet problems and dangers?

1. Concerns about Internet problems and dangers

- What is the profile of parents who are more concerned about of Internet problems and dangers?

- What is the profile of children who are more concerned of Internet problems and dangers?

1. Effectiveness of safety strategies

- How do parents and children perceive the effectiveness of safety strategies?

Sample and Methodology

A total of 552 children from 2 primary schools, 2 secondary schools, and 2 Junior colleges in Singapore, and 621 parents participated in the study. Children responded to the questionnaires online from a website designed by a research company. Parents of children who did not participate in the study were asked to respond to pen-and-paper questionnaires.

Both the online questionnaire for children and the printed questionnaire for parents contained similar items with subsections for awareness of Internet problems and dangers, concerns about these problems and dangers and perceptions of the effectiveness of safety strategies. Parents and children responded to the items on a four-point Likert scale, with higher values indicating higher awareness, concerns and agreement to the effectiveness of safety measures.

Two vignettes, one involving a teenager whose parents discovered a pornographic picture on his computer screen, and the other, a primary school girl who thinks it's "cool" to have a "cyber-pal" were presented with safety strategies to deal with these issues. Parents and children responded to items on a scale of 1 to 4 (4 for "very good idea" and 1 for "very bad idea").

Results

Results are analysed using ANOVAs from SPSS Statistical Package. For analysis purposes, the significance level is held at .01. This is to address the problem of increased Type 1 error that is associated with multiple F-tests on a single sample.

1. <u>Awareness of Internet problems and dangers</u>

    <u>Profile of parents who are aware of Internet problems and dangers</u>

    Results showed that parents who speak English at home compared to parents who speak other languages are more aware of Internet problems and dangers of pornography ($F(2) = 18.49$, $p < .001$), sexual predators ($F(2) = 11.34$, $p < .001$), Internet addiction ($F(2) = 12.70$, $p < .001$), misinformation ($F(2) = 12.21$, $p < .001$) and

violent games ($F_{(2)}$ = 12.31, p < .001) Means and standard deviations are presented in Table 1.

Table 1: Parents' awareness of Internet dangers

	Pornography		Sexual predators		Internet addiction		Misinformation		Violent games	
	Means	s.d	Means	s.d	Means	s.d	Means	s.d	Means	s.d
English-speaking	2.39	0.85	2.22	0.97	2.38	0.93	2.08	0.97	2.24	0.92
Chinese-speaking	1.94	0.85	1.82	0.84	1.98	0.86	1.71	0.75	1.84	0.83
Others	2.17	0.85	1.97	0.86	2.09	0.86	1.97	0.86	1.94	0.94

Parents who are graduates are also more aware of pornography compared with those are not graduates ($F_{(3)}$ = 7.1, p <.01). Those who have younger children below 12 years are also more aware of pornography issues (F92) = 5.44, p <.01). Table 2 presents means and standard deviations.

Table 2: Parents' awareness of Pornography issues

Educational Level of parents	Means	s.d
Primary/secondary	1.56	0.89
Pre-university, A-level or Poly	1.87	0.99
Graduate	2.06	1.08
Postgraduate	2.33	1.11
Age of children	Means	s.d
12 years or younger	2.24	0.92
13 to 15 years	2.15	0.82
16 and older	2.02	0.78

Profile of children who are aware about Internet problems and dangers

Results showed that there is a steady (but non-statistically significant) increase in means of boys' awareness of pornography problems with age. For girls, awareness of pornography problems tend to peak at the ages of 13 to 15. Similar non-statistically significant results are obtained with regard to misinformation for boys (see Figures 1

and 2).

Figure 1: Awareness of pornography problems by age of children
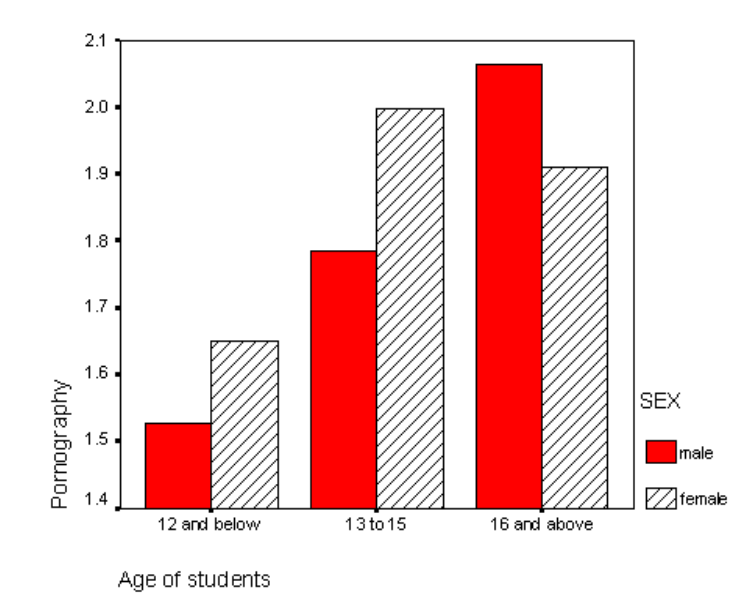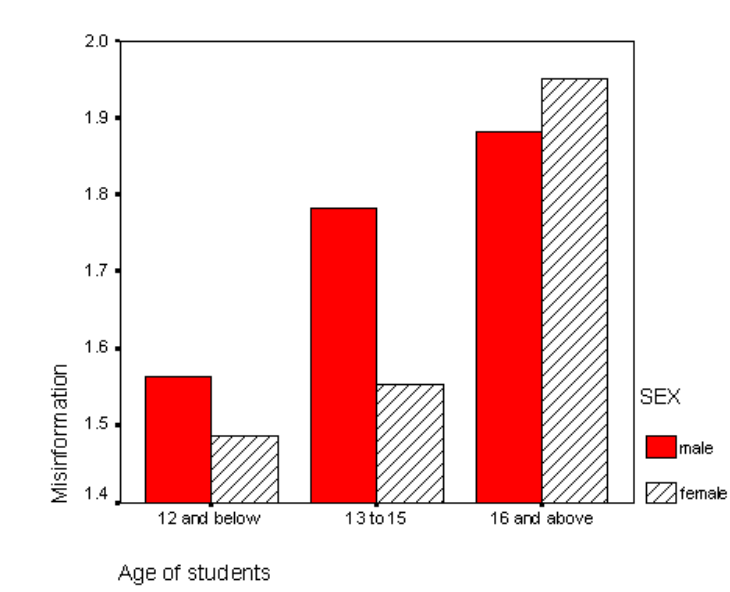

Figure 2: Awareness of misinformation by age of children

2. <u>Concerns about Internet problems and dangers</u>

<u>Profile of parents who are concerned about Internet problems and dangers</u>

Results showed that English-speaking parents compared to parents speaking other languages at home were more concerned about Internet problems and dangers in general ($F(2) = 13.59$, $p < .01$). Means and standard deviations are presented in Table 3.

Table 3: Parents' concerns about Internet problems and dangers

Language spoken at home	Misinformation	Internet Addiction	Violent Games	Loss of privacy	Concerns in general

	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
English	3.24	1.01	3.27	0.93	3.07	1.05	3.07	1.01	3.08	0.81
Chinese	2.67	1.25	2.84	1.22	2.56	1.28	2.50	1.25	2.63	1.09
Malay, Indian & others	2.90	1.25	2.89	1.12	2.67	1.24	2.57	1.22	2.74	1.03

<u>Profile of children who are concerned about Internet problems and dangers</u>

With regard to pornography, differences in concern are not statistically different between boys and girls. The average mean for both boys and girls is 2.24. However, with misinformation, there is a statistically significant difference between teenagers between the ages of 13 to 15 and those of other groups ($F(2) = 9.88$, $p < .01$) . Teenagers between 13 and 15 years old are least concerned (mean = 1.97, s.d. = 1.14) compared to teenagers of who are 12 and younger (mean = 2.35. s.d. = 1.22) and those 16 and older (mean = 2.62. s.d. = 1.19).

Results ($F(2) = 9.99$, $p < .001$) also show teenagers 16 years and older are most concerned about Internet addiction (mean 2.62, s.d. = 1311) compared to those 12 and younger and those between 13 and 15 years (means = 2.14 and 2.09, s.d. = 1315 and 1.00 respectively).

Teenagers generally are rather neutral about loss of privacy (mean = 2.07. s.d. = 1.12) but those 12 years and younger are more concerned about hacking. Consistent with other findings, results show that teenagers between ages of 13 and 15 are least concerned about dangers in chat rooms ($F(2) = 12.50$, $p < .001$) and making online purchases ($F(2) = 17.42$, $p < .001$) See Table 4 for means and standard deviations.

Table 4: Children's concerns about chatroom dangers and making online purchases

	Chatroom dangers		Online purchases	
Age of children	Means	s.d.	Means	s.d.
12 and below	2.52	1.27	2.78	1.36
13 to 15	2.01	1.23	2.03	1.30
16 and above	2.76	1.17	2.90	1.36

3. <u>Perception of safety strategies</u>

Strategies are grouped into educational and control measures. Control strategies are measures that restrict Internet access and punitive measures. These include installing filters, removing chat software, forbidding use of the Internet, moving the computer to the living room, complaining to the Internet Service Providers, and warning and threatening the child with punishment. Educational strategies are measures that allow the child to learn more about Internet safety. These include talking to and discussing with the child about the problems or dangers, learning more about the Internet, and getting schools to provide education on Internet safety.

<u>Parents' perception of effectiveness of safety strategies</u>

In general, parents preferred educational to control strategies in dealing with issues presented by the two vignettes.

Results also showed that English-speaking parents compared to parents speaking other languages are more in favour of both educational ($F(2) = 31.76$, $p < .001$) and control strategies ($F(2) = 15.41$, $p < .001$). Means and standard deviations are presented in Table 5 below.

Table 5: Parents' perception of educational and control strategies

Language spoken at home	Educational strategies		Control strategies	
	Mean	s.d.	Mean	s.d.
English	31.79	4.33	25.95	4.96
Chinese	27.05	7.01	22.73	6.46
Malay, Indian & others	29.18	6.44	24.33	6.32

Children's perception of effectiveness of safety strategies

In general, children like parents, preferred educational to control strategies in dealing with issues presented by the two vignettes. Teenagers between the ages of 13 to 15 are least favourable of educational ($F(2)$ 39.69, $p < .001$) and control ($F(2)$ 24.95, $p < .001$) strategies. Posthoc comparisons showed that this is the age group with the lowest means for the strategies in dealing with issues presented by the two vignettes (see Table 6).

Table 6: Children's perceptions of educational and control strategies

Age group	Educational strategies		Control strategies	
	Mean	s.d.	Mean	s.d.
12 years and below	25.00	6.81	22.29	6.27
13 to 15 years	19.11	9.06	17.25	8.24
16 years and above	29.85	5.66	20.07	5.14

Discussion and Recommendations

Findings of this study showed a clear pattern with regard to parents' awareness and concerns of Internet dangers. It is not surprising that it the English-speaking parents who showed more awareness of the problems and dangers, and are also more concerned about them. Parents, especially those who are non-English speaking but have children who are on the Internet, need to be aware of the potential problems and dangers that their children may face. They should take a more active role in their children's Internet activities and learn more about the Internet, surf with their children and discuss Internet issues with them. It is this group of parents that training on Internet safety programmes should target. There is therefore a need to increase and customize Internet safety workshop materials for this group of parents. Schools can play a role in their parent-teachers' associations by inviting parents to parenting talks that incorporate

elements of Internet use and safety.

Another consistent pattern of findings is that teenagers between the ages of 13 and 15 are least concerned about Internet problems and dangers. Research on adolescent development and delinquency (e.g. Braithwaite, 1989; Rice, 1996) has also found that this is also the age group that is more likely to face more "storms and stresses" of growing up and also tend to be most rebellious and prone to delinquent behaviour. Hence, online safety education should complement Internet skills training for children before they reach this difficult stage. In other words, there is need to start online safety education in Primary schools. Teachers need to be trained on Internet safety and also to recognize symptoms of Internet addiction. They need to be aware of their students' surfing and chat habits in order to be in a better position to advise parents.

Insights on how parents and children perceive Internet problems and dangers will contribute to a better Internet safety training and education. Both parents and teachers would need to work closely together to ensure that our Net-generation children are safe in cyberspace.

References

Braithwaite, J. (1989) Crime, shame and reintegration. Melbourne: Cambridge University Press.

Chan, K. (2000) Frequently seeking sex. Streats, October 9, p. 1.

Cooper, A., Schere, C.R., Boies, S.C. & Gordon, B.L. (1999) Sexuality on the Internet: From sexual exploration to pathological expression. Professional Psychology: Research and Practice. Apr Vol 30(2) pp 154-164.

Kaur, K. (2001) More Internet date rapes. The Straits Times, February 28, p. 3.

Lee, A. (2001) Girl, 15, vanishes after going to meet Net pal. The Straits Times, February 13, p. 9.

Ministry of Education, Singapore. IT in Education Masterplan: Summary. Retrieved 24 November, 2001 from http://www1.moe.edu.sg/iteducation/resources/itresources.htm

Oo, G.L. (2001) One in tow teens 'tricked' into porn websites. The Straits Times, February 22, p. 3.

Rice, F.P. (1996) The Adolescent: Development, Relationships and Culture. Singapore: Allyn and Bacon

Singapore Broadcasting Authority. SBA's Approach to the Internet. Retrieved 24 November, 2001 from http://www.sba.gov.sg/sitemap.htm

Tapscott, D. (1998). Growing Up Digital: The Rise of the Net;/ Generation. New York: McGraw-Hill.

Toomey, K. & Rothenberg, R.B. (2000) Sex and cyberspace – virtual networks leading to high-risk sex. Journal of the American Medical Association, July, Vol.284, Issue No. 4, pp. 485-487.