

A Conceptual Framework of Risk-Taking Behaviors of Adolescents while using the Internet in Bangladesh

Abdul Wohab

PhD Student

School of Communication, International Studies and
Language
University of South Australia, SA 5001

A.R. Mubarak

Senior Lecturer

Department of Social Work and Social Planning
Flinders University
South Australia SA 5042

ABSTRACT

The main objective of this study is to justify the necessity of developing a conceptual framework on risk-taking behaviours of adolescents while using the Internet in Bangladesh. In all, 507 adolescents participated in a survey on risk-taking behaviours using the Internet. The risks were classified into three categories, namely, risk-taking behaviours in general, risk-taking behaviours due to curiosity and other types of risk-taking behaviours. The results demonstrated that adolescents who received parental guidance and supervision were less likely to take risks while using the Internet than the adolescents without parental support and supervision. Based on the findings of the study, it is argued that proactive roles played by parents, such as parental guidance on safe use of Internet, monitoring, education about safe Internet use, installation of filtering software etc., could reduce the risk-taking behaviours of the younger generation.

General Terms

Social networking, Internet safety, Internet addiction, family support.

Keywords

Risk-taking behaviour, adolescents, family, parental role.

1. INTRODUCTION

The Internet is a medium of communication which has become extremely powerful in recent years. It brings people into a world of ever evolving communication, wide-ranging information and knowledge, global entertainment, high-tech media, modern education, health and medicine. The internet also helps to create a virtual identity among youths [1] by exchanging ideas and information from one hemisphere to another. For youths who have been using the Internet for a long time, making friends or sharing similar stories online may help develop their own positive ideas towards changing the nature of society and culture [2]. Maczewski argues that both the real and the virtual world have an enormous potentiality of knowledge that contributes more to changing the nature of society and culture [3]. However, Internet use does not always guarantee positive outcomes. There are some challenges related to the use of the Internet if used without sufficient precautions. Specifically, adolescents have been reported to be facing a few serious challenges due to this autonomy. For example, irresponsible use of the Internet such as longer hours of Internet use, watching pornography, communicating with strangers and sharing sensitive personal information like contact details, photos etc. have been reported to be exposing adolescents to many dangers both in developed and developing countries. In the developed world, particularly in the West, children are being exposed to pornography, sexually explicit materials and abuse frequently [4]. In Sweden, more than 80 percent of children watch pornography on the Internet regularly [5]. A major source of

sexual entertainment of youths in Asia is the Internet, particularly in China and India, and this rate is gradually increasing [6] [7].

Developing countries, and particularly countries in the Asian region, are not an exception to this trend of risk-taking behaviours. In this region, teenagers with access to the Internet have been reported to be engaging in many risky behaviours such as involving themselves in criminal activities, drug trafficking, exposure to materials which are not suitable for teenagers such as pornography, online bullying and abuse, forceful involvement in the sex trade to name a few [8] [9]. With the rapidly growing cyber world, many people have been reported to be using the Internet for social gathering purposes, and those gatherings sometimes involve drug use, alcohol consumption, smoking and various kinds of risky behaviour [10] [11]. Some recent studies have argued that excessive Internet use by adolescents is resulting in young people becoming socially isolated and cut off from genuine social relationships [12] [13].

Dual career parents, particularly in urban areas, leave their children alone at home for longer periods of time due to work pressure and financial difficulties resulting in children using the Internet without sufficient parental guidance and supervision [14]. However, Mitchell et al., argues that Internet use helps in building better social relationships by freeing people from the 'constraints of geography' [9]. They argue that the Internet allows people to join in online social groups on the basis of common interests rather than convenience [9].

Although Internet use by children in both developing and developed countries has both advantages and disadvantages, Mitchell et al., observes that children in the developed world have been enjoying better safeguards and protection from exposing themselves to unwanted aspects of the Internet, than the children growing up in the developing world [9]. This is mainly due to the leadership shown by developed countries in policy formulation, and resulting increased awareness among parents. Through timely policy making such as installation of filtering software some developed countries have reduced the incidence of access to inappropriate Internet sites by children [15] [16] [17] [18]. However, it should be noted that even though filtering software is available for use in these countries still many families in developed countries have not shown much interest in using them [19]. Unfortunately, Asian countries in general, and specifically Bangladesh, are yet to take the initiative of formulating public policies to protect their children from the harms of Internet use.

Bangladesh started expanding its telecommunications network in the mid-1990s and it launched its Internet connections to households in 1996 [20]. Recent figures show that more than 90 million people in Bangladesh use mobile phones, 6 million people are connected with the Internet and more than 2

million people are an active member of social networking [21] [22]. Although no reliable statistics are available on adolescent use of the Internet in Bangladesh, it is highly likely that Bangladeshi adolescents have embraced the Internet technology popularly. This is evidenced by the figures released by Bangladesh Institute of Development Studies (BIDS). Approximately 6.9 million children and youths in Bangladesh, 12.9 per cent of the total population, have reportedly engaged in some form of risk-taking behaviours while using the Internet, and this rate of risk-taking behaviours among adolescents is significantly higher in metropolitan areas [23]. However, Bangladesh is lacking in its policy formulation to protect its population from the harms of the Internet. A specific institutional body within the Bangladeshi Government is yet to be formed to create programs to raise awareness among families and children regarding safe use of telecommunications tools such as the Internet. The role of families in adolescent development in Bangladesh differs widely between rural and urban families. In rural areas parents, especially mothers, are more likely to have more time at home to look after children than their urban counterparts. This difference is due to the increasing number of dual career families in urban Bangladesh [24] [25] [26]. A combination of lack of guidance and information available to families and adolescents regarding safe use of the Internet, and the gradual reduction in parental involvement in child upbringing as a result of dual career families could increase the risk-taking behaviours of adolescents [11].

There are some anecdotal evidences suggesting that Bangladeshi teenagers engage in risky behaviours while using the Internet. The theoretical position is challenged by the excessive use of Internet using mobile phone technology. On one side an appropriate education, social learning and independent decision-making process helped children to realise the possible impacts of Internet use; on the other side children take risks without appropriate support from their parents [27]. For example, in 2012 a private television channel conducted a small survey on 100 school going children and reported that 82% of children watched pornography on their mobile phones; among them 62% of students watched it while sitting in the classroom [28]. Further, respondents of this study also reported that they shared pornography videos and images with other friends [28]. A significant number of school and university going students are reported to be using hidden cameras to capture inappropriate videos of their girlfriends and publish them on the Internet [9]. In a study conducted by the Population Council and BIDS in 2009 it was found that 72 % of girls and 51 % of boys at the age of 13-15 years reported having been beaten by an older member of the family due to problematic behaviours related to Internet use [23]. However, to the knowledge of the researcher's online behaviour of Bangladeshi teenagers are yet to be researched in spite of spiraling increase in the number of young people accessing the Internet in Bangladesh. Keeping this in view, the present research was undertaken which aimed to study the risk-taking behaviours of teenagers living in Dhaka who are regular users of the Internet and level of parental support these teenagers received.

2. METHODS

Data for this study were collected from adolescents of the age-group 13-17 years living in Dhaka City through a structured questionnaire prepared for the study purpose. The respondents were selected by using purposive sampling method. Data were

collected from 504 teenagers who consisted of 64% males and 36% of females.

2.1 DATA COLLECTION

The samples for the present study were selected from secondary schools, pre-university colleges and cyber cafés located in Dhaka city. In all, 222 respondents were selected from secondary schools, 105 from higher secondary colleges and 180 from cyber cafés. According to Bangladesh Government statistics, in Dhaka City (metropolitan area) there were 370 schools and 173 higher secondary colleges, either government or privately owned [29]. Students aged between 13 and 17 fall into both school and higher secondary college-age, which is why both types of educational institutions were selected for the study. No official information was available regarding the exact number of cybercafés operating in Dhaka City and a manual count indicated around 300 were operating at the time of this research. For the present study purpose 10% of the total number of educational institutions and cyber cafés were selected for inclusion in this study using purposive sampling method which was 84 institutions in total. Six respondents were randomly selected from each of the 84 institutions and a total number of 507 respondents were selected for the present study purpose (Table 1). Parental consents were obtained prior to the participation of adolescents in this research.

Table 1. Sampling for collecting data

Institution/Place	Number of institutions	10% of institutions	Number of respondents
Secondary school	370	37	222
Higher secondary college	173	17	102+3
Cyber cafe	300	30	180
Total	843	84	507

2.2 MESURE

The researchers prepared a structured questionnaire, which collected information regarding demographic characteristics, online activities, risk-taking behaviours while using the Internet and parental involvement in relation to online activities of the study respondents. This instrument collected information such as age, gender, current study situation, educational background and household details. Information regarding online activities such as hours spent using Internet per day, purposes of Internet use, locations from where Internet is accessed, etc., were also collected. In terms of risk-taking behaviours, the questionnaire consisted of three categories of risk-taking behaviours, namely, general, risk-taking behaviours due to curiosity and other related risk-taking behaviours. Risk-taking behaviours - general consisted of sending and receiving photos from strangers, sending and receiving bullying mails, displaying personal information in social networking sites and receiving weird responses from strangers. Risk-taking due to curiosity included questions on browsing Internet sites consisted information pertaining to Internet hacking, how to damage public properties, terrorism, money laundering and other anti-social activities. Questions

on other risk-taking behaviours included: pretending online as someone else and online experiences not being shared with parents and others. Questions related to role of parents included: use of parental filters and parents assisting teenagers to understand the importance of safety while using the Internet.

3. RESULTS

Table 1 (all tables are presented at the appendix) describes background characteristics of study respondents. The average age of the respondents was 15 years. Out of total respondents, 64 % were males and 36% were females. All respondents of the present study were full time students studying either at secondary (high school) or higher secondary school (college). Respondents' parents' occupation indicated that 27.2% were doctors, 11% were in business and 2.6 were engineers. The background information related to online activities revealed that on average, respondents started using the Internet at the age of 11 years, and more than half (68%) of the respondents used the Internet for up to 16 hours per week and 26% of respondents used the Internet more than 16 hours per week. Only 6% of respondents used the Internet more than 41 hours per week. A majority of respondents (85%) ranked online social interaction as the number one reason for using the Internet, followed by only 15% generally browsing. A significant number of respondents (82%) indicated home as their primary location for Internet use, followed by 15% at a friend's house and only 3% in cyber café.

The risk-taking behaviours of adolescents were categorized into three types: Risk-taking behaviours-General, Risk-taking behaviours due to curiosity and Other risk-taking behaviours. Risk-taking behaviours-General (Table 2) indicated that a significant number of respondents (85%) displayed their personal information in social networking sites followed by 74% who received strange responses from the Internet and 45% who receiving photos from strangers. The table also showed that 7% - 21% of respondents engaged in other types of risky behaviours, which indicated risk-taking behaviours of teenagers as significantly widespread among the study samples. In the second category, risk taken due to curiosity included browsing websites on Internet hacking (20%), anti-social activities (16%) followed by 7% of respondents who browsed websites on how to damage public property and money laundering. Only 5% of the respondent's browsed websites on how to make weapons and websites linked to terrorism. The final category of risk-taking behaviours indicated that more than one third of the respondents did not like their parents to know about their online experiences and nearly 23% of the respondents reported that they did not tell others after bad experiences online followed by 20% who agreed that online experiences scared them and only 17% indicated that they always hid their real identity online.

Table 3 represents the role played by parents in safe use of Internet by study samples. The data presented in this table observes that only 44% of the respondents agreed that their parents randomly checked their computer screen while they were online and only 15% of the study subjects agreed that their home computers were installed with parental filters or blocking software. Information related to parents talking about safe Internet use revealed that only one third of the parents had a chat regarding safe internet use and one fourth of the study sample reported that they had arguments with their parents regarding their Internet use.

The cross tabulation between risk-taking behaviour of the study sample and parental interference in the form of parents having arguments with their adolescent children regarding Internet use (Table 4 and the cross tabulation Table 7) showed possible link between parental intervention and risk-taking behaviours of adolescent sample of the present study. Lesser number of adolescents whose parents intervened in their Internet use through an argument over Internet use had engaged in risk-taking behaviours online. Table 5 and Table 8 is a cross tabulation between risk-taking behaviours of respondents and their parents/caregivers who randomly checked their computer screens while they were online. The results indicated mixed trends wherein the parental check managed to reduce the teenagers' risk-taking behaviours in some areas and in other areas it didn't for example Risk-taking behaviours due to curiosity.

Table 6 and Table 9 is the cross tabulation between parent/caregiver engaging in conversation with teenagers regarding safe Internet use and the risk-taking behaviours of adolescents. This cross tabulation revealed that parents/caregivers who engaged in conversation about safe Internet use with their teenaged children managed to reduce the online risk-taking behaviours of their teenage children.

4. DISCUSSION

The main purpose of the present research was to explore online risk-taking behaviours of adolescents living in Dhaka City, Bangladesh. In addition, the research also explored the ways in which families as traditional sources of support to teenagers in Bangladesh can reduce the risk-taking behaviours of adolescents. The risk-taking behaviours of adolescents were classified into three categories, namely, Risk-taking behaviours-General, Risk-taking behaviours due to curiosity and Other risk-taking behaviours. The result of the present study indicated that nearly half of the samples (44.6%) had engaged in frequent online risk-taking behaviours such as sending and receiving photographs from strangers, being bullied by receiving weird responses from strangers and frequent sharing of sensitive personal information in social networking sites. Risk-taking behaviours due to curiosity indicated that respondents curiously visited risky websites such as websites on the Internet hacking, how to make weapons and websites on anti-social activities. The other risk-taking behaviours are hiding real identity and pretending to be someone else online and hiding negative experiences online from parents/caregivers. The present study revealed that approximately one fourth of the study samples hid their own identity and pretended to be someone else. The respondents also indicated that they had experienced unpleasant experiences online but preferred to keep their experiences within themselves and did not want to share with or seek help from others. This means that Bangladeshi families as the traditional institution with the responsibility of protecting their teenagers from dangers have a serious responsibility of taking a lead in guiding and assisting teenagers on ways in which they can use the Internet safely.

The cross tabulation between teenagers online risk-taking behaviours and intervention by their parents/caregivers revealed the possibility of parents/caregivers' intervention and interest regarding the Internet use of their teenage children managed to reduce the frequency of teen risk-taking behaviours online. Tables 4-6 divided the teenagers into two categories, namely, those who received some intervention by their parents about the Internet use and those who did not receive any intervention. The results of these tables clearly indicated that teenagers whose parents took the initiatives

such as questioning the Internet use of teenagers which might have resulted in arguments, randomly checking the computer screen when the teenager used the Internet and took the initiative to talk to their teenage children about safe use of Internet, managed to reduce the frequency of risk-taking behaviours by the teenagers in Bangladesh. The tables 4-6 clearly demonstrate that in almost all the categories of risk-taking behaviours, the respondents who had received parental intervention of some kinds had shown restraint in their risk-taking behaviours while using the Internet. Possibly, these tables imply that teenagers were willing to share and disclose their problems and challenges they faced in cyberspace with their parents if parents were interested to assist. Traditionally families have been providing all necessary support and resources for the development of young people in Bangladesh but in recent years this valuable family support is not available in relation to newly emerging areas such as Internet use. In this regard Ball and Wahedi argue that in Bangladeshi traditional families children were more closely monitored by parents but this trend is fast changing due to the emerging issues such families unable to monitor adolescent activities and experiences in cyberspace [30].

The anonymity facilitated by electronic technology may place children and youths at heightened risk of victimization [31]. Kanani and Regher claimed that long-standing threats such as abuse have evolved within these new technologies, allowing children and youths to be victimised by people of all ages who are both known and unknown to them and regardless of geographic proximity [32]. The possible solutions were outlined by Chibnall, Wallace, Leicht, & Lunghofer [33] which included discouraging adolescents from accessing inappropriate and unapproved websites and providing awareness regarding risks posed by cyberworld. Results of the present study highlighted significant association between Bangladeshi parental intervention and reduced risk-taking behaviours by their adolescent children. Findings of this research are in line with the findings of many researchers [33] [34] [35] [36] who observed that adolescents who had access to information related to Internet safety exhibited more knowledge and awareness about online safety strategies and the dangers associated with Internet use. However, Chibnall et al., and Crombie and Trinneer [33] [35] argue that mere one-off awareness creation among adolescents regarding online risks may have little to no change in their online risk-taking behaviours. This highlights the need for ongoing support and education by members of family, parents and caregivers and others such as teachers.

Moreover, several studies reported links between family characteristics and Internet use. For example, quality of the parent-child relationship was negatively associated with the level of Internet use among students [37] parent-adolescent conflict and lower satisfaction with family functioning [37] [38] were positively related to adolescent Internet use. However, to the knowledge of the researchers very few studies have addressed the direct link between actual parenting practices and children's Internet use. In this regard, Lee and Chae [39] observed that restrictive parental techniques such as setting time limits and website restrictions were not related to children's actual Internet use. Reliable data is unavailable to examine whether Internet-specific parenting practices may affect the level of risk-taking behaviours of adolescents. Keeping this in view the present study explored the association between Internet-specific parenting practices and risk-taking behaviours among adolescents. Since prior research lends some support to the importance of parental rule enforcement and parental reactions to adolescents' substance

use [40] [41] [42], the present study argues that parental rule enforcement regarding Internet use and parental reactions to excessive Internet use might be negatively related to online risk-taking behaviours of adolescents.

The cross tabulation between parents/caregivers spending their time talking about safe Internet use and risk-taking behaviours (Table 6 and Table 9) clearly demonstrated that parental guidance helped Bangladeshi adolescents to be aware of behaviour which are risky in cyberspace. Interestingly, the children who had arguments with parents were more likely to involve themselves in risky behaviour than others. This means that frequent arguments between adolescents and their parents in relation to Internet use could possibly be an indication that their teenage child might need help or guidance in safe Internet use. Parents who frequently experience arguments with their children regarding the Internet use need to reflect on these incidents and start engaging with their teenage children and open up friendly conversation on experiences of teenagers online and advise them of the ways in which Internet can be used safely to achieve maximum benefit.

5. CONCLUSION

The conceptual framework developed by the present study demonstrates that families in Bangladesh might play a key role in the risk-taking behaviours of teenagers in the cyber world. Risk-taking behaviours are most likely occurring in the home environment in Bangladesh as the study samples indicated that 82% of respondents preferred home as their location of Internet access. This means that Bangladeshi parents may be unaware of their children engaging in risky behaviour online while being present at home. It is evident from the present study finding that Bangladeshi families need to be prepared to educate their children about online security similar to their education regarding real world safety issues. Bangladesh families as key agencies of socialization playing a primary role in socialising their children need to be helped to include online safety issues also in their family's socialisation process. The present study highlights the urgent need for Bangladeshi families to monitor their teenage children and restrict them from accessing inappropriate websites and educate them about the implications of risky online behaviour by allocating time for their teenage children and through building strong and healthy relationships with their teen family members. The results of the present study need to be generalized with caution because of its small sample size and limitations in sample selection process using convenient sampling technique. Similar studies based on larger samples and using random sample selection process are needed urgently because increasing number of Bangladesh teenagers are accessing internet through easily and widely available devices such as smartphones.)

6. ACKNOWLEDGMENTS

Data collection of this research was supported by the Department of Economics and Social Science, BRAC University, Dhaka, Bangladesh. Our sincere thanks go to BRAC University and all the young persons who were willingly participated in this research as respondents. Our thanks also go to Fahima and Tahira for assisting us for coding and data entry.

7. REFERENCES

- [1] Papacharissi, Z., 2002. The virtual sphere The internet as a public sphere. *New media & society*, (4), 9-27.

- [2] Guan S-S A., Subrahmanyam. K., 2009. Youth Internet use: risks and opportunities. *Current Opinion in Psychiatr*, (22),351-356.
- [3] Maczewski. M., 2002. Exploring identities through the Internet: Youth experiences online. *Child & Youth Care Forum*, (31), 111-129.
- [4] Thornburgh. D., Herbert. L., 2004. Youth, Pornography, and the Internet. *Issues in Science and Technology*, (20), 43-48.
- [5] Wallmyr. G., Welin. C., 2006. Young People, Pornography, and Sexuality: Sources and Attitudes. *The Journal of School Nursing*, (22), 290-295.
- [6] Hong. Y., Li. X., Mao. R., Stanton. B., 2006. Internet use among Chinese college students: implications for sex education and HIV prevention, *CyberPsychology & Behaviour*, (10),161-169.
- [7] Verma. A., 2012. Cyber pornography in India and its implication on cyber café operators, *Computer Law & Security Review*, (28),69-76.
- [8] Leung. L., Lee. P.S., 2012. The influences of information literacy, internet addiction and parenting styles on internet risks, *New media & society*,(14),117-136.
- [9] Mitchell. K.J., Jones. L.M., Finkelhor. D., Wolak. J., 2013. Understanding the decline in unwanted online sexual solicitations for US youth 2000–2010: Findings from three Youth Internet Safety Surveys. *Child Abuse & Neglect*, (37), 1225-36..
- [10] Dunne. M. P., Zolotor. A. J., Runyan. D. K., Andrevamiller. I., Choo. W. Y., Dunne. S. K., Gerbaka. B., Isaeva. O., Jain. D., Kasim. M.S., 2009. ISPCAN child abuse screening tools retrospective version (ICAST-R): Delphi study and field testing in seven countries, *Child Abuse & Neglect*, (33), 815-825.
- [11] Islam. Z., 2013. Victims of 'nothing to do' syndrome. *The Daily Star*. August 21, <http://archive.thedailystar.net/beta2/news/victims-of-nothing-to-do-syndrome/>.
- [12] Bargh. J.A., McKenna. K.Y., 2004. The Internet and social life. *Annu. Rev. Psychol*, (55), 573-590.
- [13] Kraut. R., Patterson. M., Lundmark. V., Kiesler. S., Mukophadhyay. T., Scherlis. W., 1998. Internet paradox: A social technology that reduces social involvement and psychological well-being?. *American psychologist* (53), 1017-31.
- [14] Bianchi. S., Cohen. P., Raley. S., Nomaguchi. K., 2004. Inequality in parental investment in child-rearing. In: Neckerman K, ed. *Social Inequality*, New York: Russell Sage; 189-219.
- [15] Bambauer. D.E., 2009. Filtering in Oz: Australia's foray into internet censorship, *University of Pennsylvania Journal of International Law* (31), 493-531.
- [16] Hunter. C.D., 2000. Social Impacts Internet Filter Effectiveness—Testing Over-and Underinclusive Blocking Decisions of Four Popular Web Filters, *Social Science Computer Review*, (18), 214-222.
- [17] Richardson. C.R., Resnick. P.J., Hansen. D.L., Derry. H.A., Rideout. V.J., 2002. Does pornography-blocking software block access to health information on the Internet? *JAMA: the journal of the American Medical Association*, (288), 2887-2894.
- [18] Ybarra. M.L., Mitchell. K.J., 2005. Exposure to Internet pornography among children and adolescents: A national survey, *CyberPsychology & Behavior*, (8), 473-486.
- [19] Humphreys. C., Thiara. R.K., Skamballis. A., 2011. Readiness to change: mother child relationship and domestic violence intervention', *British Journal of Social Work*, (41), 166-184.
- [20] BRTA report 2010
- [21] BTRC report 2012
- [22] ITU report 2012
- [23] Bangladesh Institute of Development Studies (BIDS) report 1998/2006
- [24] Amin. S., 1998. Family structure and change in rural Bangladesh. *Population Studies*, (52), 201-213.
- [25] Chowdhury. A., 1995. Families in Bangladesh. *Journal of Comparative Family Studies*, (26), 27-41.
- [26] Razzaque. A., Streatfield. P.K., Evans. A., 2007. Family size and children's education in Matlab, Bangladesh', *Journal of biosocial science*, (39), 245-256.
- [27] UNICEF report 2011
- [28] Somoy TV report 2012
- [29] BANBEIS report on Bangladesh 2010.
- [30] Ball. J., Wahedi. M.O.K., 2010. Exploring Fatherhood in Bangladesh, *Childhood Education: International Focus Issue*, 366-370.
- [31] Ybarra. M. L., Linkages between depressive symptomatology and Internet harassment among young regular Internet users, *Cyber Psychology & Behavior*, (7), 247–257.
- [32] Kanani. K., Regehr. C., 2003. Clinical, ethical, and legal issues in e-therapy, *Families in Society*, (84), 155–162.
- [33] Chibnall. S., Wallace. M., Leicht. C., Lunghofer. L., 2006. I-SAFE evaluation: Final report. 2006; July 5. <http://www.ncjrs.gov/pdffiles1/nij/grants/213715.pdf>, 2006. Accessed December1, 2013.
- [34] Rahamathulla. M., 2013. A theoretical framework on adolescents' risk-taking behaviours while using the internet in Australia. *International Journal of Technology, Knowledge and Society*, (8), 27-37.
- [35] Crombie. G., Trinneer. A., 2003. Children and Internetsafety: An evaluation of the Missing Program, Report to the Research and Evaluation Section of the National Crime Prevention Centre of Justice Canada, Ottawa, University of Ottawa.
- [36] Davidson. J., Martellozzo. E., 2004. Educating children about sexual abuse and evaluating the Metropolitan police safer surfing programme project report, <http://www.saferschoolpartnerships.org/ssptopics/evaluations/documents/ssfindingsreport.pdf>, Accessed December 8, 2008,
- [37] Liu. C. Y., Kuo. F. Y., 2007. A study of Internet addiction through the lens of the interpersonal theory. *Cyber Psychology & Behavior*, (10), 799–804.

- [38] Yen. J. Y., Yen. C. F., Chen. C. C., Chen. S. H., Ko. C. H., 2007. Family factors of Internet addiction and substance use experience in Taiwanese adolescents, *Cyber Psychology & Behavior*, (10), 323–329.
- [39] Lee. S. J., Chae. Y. G., 2007. Children’s Internet use in a family context: influence on family relationships and parental mediation. *Cyber Psychology & Behaviour*, (10), 640–644.
- [40] Luthar. S. S., Goldstein. A. S., 2008. Substance use and related behaviors among suburban late adolescents: the importance of perceived parent containment, *Developmental Psychopathology*, (20), 591–614.
- [41] Otten. R., Harakeh. Z., Vermulst. A. A., Van. Den. Eijnden., Regina. J. J. M., Engels. Rutger. C .M .E., 2007. Frequency and quality of parental communication as antecedents of adolescent smoking cognitions of abnormal child psychology and smoking onset, *Psychology of Addictive Behaviors*, (21), 77–90.
- [42] Van. Der. Vorst. H., Engels., Rutger. C .M .E., Meeus. W., Dekovic. M., 2006. Parental attachment, parental control, and early development of alcohol use: a longitudinal study, *Psychology of Addictive Behaviors*, (20), 107–116.

8. APPENDIX

Table 01: Background characteristics

Sl. No.	Background characteristics	N	%	Mean	SD
1	Age			14.90	1.34
2	Gender				
	Male	325	64.1%		
	Female	182	35.9%		
3	Current Situation Study full time	507	100%		
4	Educational Qualification				
5	Occupation-parents/caregivers				
	Business	53	10.5%		
	Teacher	06	1.2%		
	Govt. officer	04	0.8%		
	Doctor	138	27.2%		
	Engineer	02	0.4%		
	Banker	13	2.6%		
	Missing	291	57.4%		
6	What age started using the Internet			11.4	2.05

	(years)			6	
7	Weekly hours of Internet use				
	0 hours	05	1.0		
	1-8 hours	141	27.8		
	9-16 hours	203	40.0		
	17-24 hours	88	17.4		
	25-32 hours	30	5.9		
	33-40 hours	11	2.2		
	41+ hours	29	5.7		
8	Ranking the Internet use-First Rank				
	Online social interaction	430	84.8		
	General browsing	76	15.0		
	Home work	01	0.2		
9	Ranking the location of Internet access – first rank				
	Home	417	82.2		
	Friend’s House	69	13.6		
	Cyber café	14	2.8		
	Library	04	0.8		
	Others	03	0.6		

Table 2: Risk-taking behaviours

Type of risk	Response	N	%
1.Risk-taking behaviours-General			
1.1 Respondent receiving photo from a stranger	Yes	226	44.6
	No	243	47.9
1.2 Respondents sent photo to stranger	Yes	104	21.1
	No	388	78.7
1.3 Respondent received bullying mails	Yes	73	14.9
	No	401	81.8

1.4 Respondent sent bullying mails	Yes	34	6.9
	No	457	92.5
1.5 Personal details displayed in social networking sites	Yes	420	85.2
	No	64	13.00
1.6 Received weird responses from strangers	Yes	316	73.7
	No	113	26.3
2. Risk-taking behaviour due to curiosity			
2.1 Browsed websites on Internet hacking	Yes	105	20.8
	No	401	79.2
2.2 Browsed websites on how to damage public properties	Yes	37	7.3
	No	468	92.7
2.3 Browsed illegal websites such as terrorism	Yes	27	5.3
	No	479	94.7
2.4 Browsed websites related to money laundering	Yes	35	6.9
	No	471	93.1
2.5 Browsed websites how to make weapon	Yes	27	5.3
	No	479	94.7
2.6 Browsed websites on antisocial activities	Yes	83	16.4
	No	424	83.6
3. Other risk-taking behaviour			
3.1 Pretend to be someone else online	Yes	84	16.6
	No	423	83.4
3.2 Bad experiences online won't tell others	Yes	116	22.9
	No	391	77.1
3.3 Online experiences won't like parents to know	Yes	175	34.16
	No	331	65.4
3.4 Online experience scared the respondent	Yes	99	19.6
	No	406	80.4

Table 3: Role of parents/caregivers

Type of risk	Response	N	%
Had arguments with parents regarding Internet use	Yes	129	25.4
	No	313	61.7

Is there a parental filter or blocking software installed in home computer?	Yes	69	14.6
	No	322	67.9
How often parents/caregivers randomly checked computer screen when respondent online?	Yes	162	44.1
	No	205	55.9
How often parents/caregivers talked about safe Internet use?	Yes	125	36.9
	No	214	63.1

Table 4: Arguments with parents/caregivers over Internet use vs Teen risk-taking behaviour

Type of risk	Argument with parent/carer	N	%
1. Risk-taking behaviour-General			
1.1 Respondent receiving photo from a stranger	Yes	68	13.9
	No	131	26.8
1.2 Respondents sent photo to stranger	Yes	35	7.1
	No	60	12.2
1.3 Respondent received bullying mails	Yes	28	5.7
	No	39	8.00
1.4 Respondent sent bullying mails	Yes	10	2.00
	No	24	4.9
1.5 Personal details displayed in social networking sites	Yes	112	22.7
	No	263	53.3
1.6 Received weird responses from strangers	Yes	97	22.6
	No	188	43.8
2. Risk-taking behaviours due to curiosity			
2.1 Browsed websites on Internet hacking	Yes	32	6.3
	No	60	11.9
2.2 Browsed websites on how to damage public properties	Yes	17	3.4
	No	19	3.8
2.3 Browsed illegal websites such as terrorism	Yes	16	3.2
	No	21	4.2
2.4 Browsed websites	Yes	10	2.0

related to money laundering	No	25	4.9
2.5 Browsed websites how to make weapon	Yes	10	2.0
	No	16	3.2
2.6 Browsed websites on anti-social activities	Yes	42	8.3
	No	40	7.9
3. Other risk-taking behaviour			
3.1 Pretend to be someone else online	Yes	29	5.7
	No	47	9.3
3.2 Bad experiences online won't tell others	Yes	37	7.3
	No	70	13.8
3.3 Online experiences won't like parents/caregivers to know	Yes	60	11.9
	No	104	20.6
3.4 Online experience scared the respondent	Yes	40	7.9
	No	51	10.1

Table 5: Frequency of parents/carers randomly checked computer screen vs. Risk-taking behaviours of adolescents

Type of risk	Parents/caregivers checked computer screen	N	%
1.Risk-taking behaviours-General			
1.1 Respondent receiving photo from a stranger	Yes	93	25.8
	No	80	22.2
1.2 Respondents sent photo to stranger	Yes	35	9.7
	No	41	11.4
1.3 Respondent received bullying mails	Yes	24	6.7
	No	29	8.1
1.4 Respondent sent bullying mails	Yes	14	3.8
	No	14	3.9
1.5 Personal details displayed in social networking sites	Yes	134	36.5
	No	171	47.5
1.6 Received weird responses from strangers	Yes	241	75.5
	No	139	40.5
1.6 Received weird	Yes	241	75.5

responses from strangers	No	139	40.5
2. Risk-taking behaviours due to curiosity			
2.1 Browsed websites on Internet hacking	Yes	52	14.2
	No	32	8.7
2.2 Browsed websites on how to damage public properties	Yes	22	6.0
	No	10	2.7
2.3 Browsed illegal websites such as terrorism	Yes	22	6.0
	No	11	3.0
2.4 Browsed websites related to money laundering	Yes	12	3.3
	No	13	3.5
2.5 Browsed websites how to make weapon	Yes	10	2.7
	No	11	3.0
2.6 Browsed websites on antisocial activities	Yes	29	7.9
	No	32	8.7
3. Other risk-taking behaviours			
3.1 Pretend to be someone else online	Yes	19	5.2
	No	39	10.6
3.2 Bad experiences online won't tell others	Yes	39	10.6
	No	45	12.3
3.3 Online experiences won't like parents to know	Yes	55	15.0
	No	73	19.9
3.4 Online experience scared the respondent	Yes	53	14.5
	No	28	7.7

Table 6: Frequency of parents/caregivers talked about safe Internet use vs. Adolescents risk-taking behaviour

Type of risk	Parents/caregivers talked about safe internet use	N	%
1.Risk-taking behaviours-General			
1.1 Respondent receiving photo from a stranger	Yes	66	19.8
	No	90	27.0
1.2 Respondents sent photo to stranger	Yes	31	9.3
	No	33	9.9

1.3 Respondent received bullying mails	Yes	19	5.7
	No	30	9.0
1.4 Respondent sent bullying mails	Yes	5	1.5
	No	14	4.2
1.5 Personal details displayed in social networking sites	Yes	102	8.0
	No	179	54.1
1.6 Received weird responses from strangers	Yes	71	24.2
	No	139	47.3
2. Risk-taking behaviours due to curiosity			
2.1 Browsed websites on Internet hacking	Yes	25	7.4
	No	48	14.2
2.2 Browsed websites on how to damage public properties	Yes	16	4.7
	No	8	2.4
2.3 Browsed illegal websites such as terrorism	Yes	10	3.0
	No	21	6.2
2.4 Browsed websites related to money laundering	Yes	8	2.4
	No	13	3.8
2.5 Browsed websites how to make weapon	Yes	5	1.5
	No	16	4.7
2.6 Browsed websites on antisocial activities	Yes	14	4.1
	No	39	11.5
3. Other risk-taking behaviours			
3.1 Pretend to be someone else online	Yes	16	4.7
	No	33	9.7
3.2 Bad experiences online won't tell others	Yes	25	7.4
	No	53	15.6
3.3 Online experiences won't like parents to know	Yes	39	11.5
	No	71	21.0
3.4 Online experience scared the respondent	Yes	22	6.5
	No	48	14.2

Table 7: Frequency of arguments with parents/caregivers about using Internet vs. Adolescents risk-taking behaviours

Type of Risks	Had no argument with parents/care rs	%	Did have argument with parents/care rs	%	Chi-square
1.Risk-taking behaviours- General					
1.1 Respondent receiving phot from a stranger	131	26.8	68	13.9	Chi-Square value :5.07 df: 5
1.2 Respondents sent phot to stranger	60	12.2	35	7.1	
1.3 Respondents received bulling mails	39	8.00	28	5.7	Not significant 0.407
1.4 Respondents sent bulling mails	24	4.9	10	2.0	
1.5 Personal details displayed in social networking sites	263	53.3	112	22.7	
1.6 Received weird responses from strangers	188	43.8	97	22.6	
2.Risk-taking behaviours due to curiosity					
2.1 Browsed websites on Internet hacking	60	11.9	32	6.3	Chi-square value: 7.95 df: 5
2.2 Browsed websites on how to damage public properties	19	3.8	17	3.4	
2.3 Browsed illegal websites such as terrorism	21	4.2	16	3.2	Not significant 0.159
2.4 Browsed websites related to money laundering	25	4.9	10	2.0	
2.5 Browsed websites how to make weapon	16	3.2	10	2.0	

2.6 Browsed websites on antisocial activities	40	7.9	42	8.3	
3. Other risk-taking behaviours					
3.1 Pretend to be someone else online	47	9.3	29	5.7	Chi-square value: 2.04 df: 3 Not significant 0.564
3.2 Bad experiences online won't tell others	70	13.8	37	7.3	
3.3 Online experiences won't like parents/carers to know	104	20.6	60	11.9	
3.4 Online experience scared the respondent	51	10.1	40	7.9	

Table 8: Frequency of parent/caregivers randomly checking computer screen vs. Teen risk-taking behaviours

Parents/carers didn't check computer screen	%	Parents/carers checked computer screen	%	Chi-Square	Parents/carers didn't check computer screen
1.Risk-taking behaviours- General					
1.1 Respondent receiving phot from a stranger	80	22.2	93	25.8	Chi-square value: 29.5 Df:5
1.2 Respondents sent phot to stranger	41	11.4	35	9.7	
1.3 Respondents received bullying mails	29	8.1	24	6.7	Significant 0.000
1.4 Respondents sent bullying mails	14	3.9	14	3.8	
1.5 Personal details displayed in social networking sites	171	47.5	134	36.5	

1.6 Received weird responses from strangers	139	40.5	241	75.5		
2.Risk-taking behaviours due to curiosity						
2.1 Browsed websites on Internet hacking	32	8.7	52	14.2	Chi-square value: 7.69 Df:5 Not significant 0.174	
2.2 Browsed websites on how to damage public properties	10	2.7	22	6.0		
2.3 Browsed illegal websites such as terrorism	11	3.0	22	6.0		
2.4 Browsed websites related to money laundering	13	3.5	12	3.3		
2.5 Browsed websites how to make weapon	11	3.0	10	2.7		
2.6 Browsed websites on antisocial activities	32	8.7	29	7.9		
3. Other risk-taking behaviours						
3.1 Pretend to be someone else online	39	10.6	19	5.2		Chi-square value: 16.6 Df:3, significant at 0.001
3.2 Bad experiences online won't tell others	45	12.3	39	10.6		
3.3 Online experiences won't like parents/carers to know	73	19.9	55	15.0		
3.4 Online experience scared the respondent	28	7.7	53	14.5		

Table 9: Frequency of Parents/caregivers talked about safe Internet use VS Teen risk-taking behaviour

Number of risks taken	Parents/carers didn't talk about Internet use	%	Parents/carers talked about Internet use	%	Chi-sq
1.Risk-taking behaviour- General					
1.1 Respondent receiving phot from a stranger	90	27.0	66	19.8	Chi-squa re valu e: 7.21 Df: 5 Not signi fica nt 0.20 6
1.2 Respondents sent phot to stranger	33	9.9	31	9.3	
1.3 Respondents received bulling mails	30	9.0	19	5.7	
1.4 Respondents sent bulling mails	14	4.2	5	1.5	
1.5 Personal details displayed in social networking sites	179	54.1	102	30.8	
1.6 Received weird responses from strangers	139	47.3	71	24.2	
2.Risk-taking behaviour due to curiosity					
2.1 Browsed websites on Internet hacking	48	14.2	25	7.4	Chi-squa re valu

2.2 Browsed websites on how to damage public properties	8	2.4	16	4.7	e:13 .7 Df:5 Sign ifica nt at 0.01 6
2.3 Browsed illegal websites such as terrorism	21	6.2	10	3.0	
2.4 Browsed websites related to money laundering	13	3.8	8	2.4	
2.5 Browsed websites how to make weapon	16	4.7	5	1.5	
2.6 Browsed websites on antisocial activities	39	11.5	14	4.1	
3. Other risk-taking behaviours					
3.1 Pretend to be someone else online	33	9.7	16	4.7	Chi-squa re valu e:0. 404 Df:3 not signi fica nt at 0.93 9
3.2 Bad experiences online won't tell others	53	15.6	25	7.4	
3.3 Online experiences won't like parents/carers to know	71	21.0	39	11.5	
3.4 Online experience scared the respondent	48	14.2	22	6.5	