

Parental Mediation, Online Activities and Cyberbullying

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INTRODUCTION

For youth, the most frequent use of the Internet is for communication purposes with known and unknown individuals that are met in electronic spaces of activity such as interactive games, social networking sites, forums and chat rooms. According to a recent U.S. survey 87 percent send or receive emails, 68 percent send or receive instant messages, 55 percent use an online social networking site, 57 percent participate in video-sharing spaces and 18 percent visit chat rooms (Lenhart and Madden, 2007). While the Internet can be a critical tool for searching information and being connected to the peer group, it can be misused as a tool for offensive and harmful behavior.

Adolescence is a period in which social relationships outside the family expand and their quality has been linked to various behavioral outcomes (Giordano, 2003). Social interaction with peers provides a forum for learning and refining socio-emotional skills needed for enduring relationships. Through interactions with peers, adolescents learn how to cooperate, to take different perspectives, and to satisfy growing needs for intimacy (Rubin, Bukowsky and Parker, 1998; Crosnoe, 2000). Youth who report having close friends are more confident, more altruistic, and less aggressive, and demonstrate greater school involvement and work orientation (Hartup, 1997).

At the same time, the search for association with known friends and the possibility of expanding the peer group to unknown individuals, expose adolescents to risks. Adolescents are susceptible to negative social interactions and frequent use of the Internet might expose them to bullying, harassment and sexual solicitation (Berson, Berson and Ferron, 2002).

Bullying has been historically a common form of aggression that affects children and teenagers mostly while at school, or while traveling to or from school, or in public places such as playgrounds and bus stops (Patchin and Hinduja, 2006). In recent years, more and more empirical evidence is available suggesting that bullying is also present online, and as more and more youth are using the internet for interpersonal relationships the risk of being bullied for children and youth is increasing (Mitchell, Wollak and

Finkelhor, 2007; Rosen, 2007; Patchin & Hinduja, 2006) As a result, a growing number of studies have been directed to the understanding the prevalence and correlates of cyberbullying. Yet, there is paucity of studies that have been directed to the investigation of the association between online behaviors and parental mediation on the risk of cyberbullying. While studies indicated that the higher the frequency of Internet use the higher the risk of cyberbullying, it is not clear what kinds of uses expose teens to this risks and what uses do not. As to potential protective factors, parental mediation, refers to the activities carried out by parents to protect their children from exposure to online dangers (Livingstone, 2007; Eastin, Greenberg & Hofschire, 2006). There is evidence of such an effect as some studies have reported children whose parents that monitored their online activities were less likely to disclose personal information (Rosen, Cheever & Carrier, 2008), less likely to seek out inappropriate sites and less likely to conduct chat conversations with strangers (Rosen, Cheever & Carrier, 2008, Media Awareness Network, 2005). Yet, the findings of these studies are limited as they have been conducted with small samples and the analysis is descriptive. The purpose of the current study is to investigate which online behaviors are associated with increased risks of being bullied and what kind of parental mediation techniques decrease this risk.

Cyberbullying

Cyber bullying has been defined as willful and repeated harm inflicted through the use of e-mail, cell phone, instant messenger, and defamatory websites (Patchin & Hinduja, 2006). It is an act of aggression that can take the form of purposeful harassment, making unwanted derogative, nasty or threatening comments through email, Instant messaging and text messages, spreading rumors and short clips, altering photos and posting them in a website, that are offensive or embarrassing the victim (Ybarra, Mitchell, 2004; Rosen, 2007).

As to the extent of cyber bullying, an early survey conducted in Canada showed that one-quarter of young Canadian internet users reported they had experienced getting messages saying hateful things about others (Mnet, 2001). Ybarra and Mitchel (2004) conducted a large study of youth internet users in the U.S. and found that 19 percent of the adolescents reported being bullied. Victims of online bullying were more likely than non victims to be the target of offline bullying as well but the correlation was far from

perfect. A more recent online study of youth internet users, found that 29% were a victim of online bullying (Patchin and Hinduja, 2006). Online bullying seems to be increasing through the years as a study by the Crimes against children research center that compared the results from two U.S. national Youth Internet surveys in 2000 and 2005, found that self-reported online victimization from bullying increased from 6 to 9 percent. In addition, this report found that the percentage of children reporting harassing others online increased from 14 to 28 %. Harassment in this study was defined as being sent mean, nasty messages, being threatened with bodily harms, name calling, and having others tell lies about you on the internet.

As to the effects of online aggression there a number of reasons to expect that the effects of cyber bullying might be more pronounced than the ones of traditional bullying. An important characteristic of cyber-bullying is that when moving from the physical to the virtual space, its intensity increases. While in traditional bullying exists the possibility of physical separation between the aggressor and the victim, in cyber bullying physical separation does not guarantee cessation of acts as text messages, e-mails are being sent to the victim. Second, when using the Internet the abuser has a sense of anonymity and often believes that there is only a slim chance of detecting the misconduct. Third, when bullying is technologically supported, the aggressor is not aware of the consequences of the aggression. The screen does not allow seeing the emotional expression of the victim. Thus, anonymity and lack of interactive interaction may increase aggressor lack of inhibition increasing the frequency and power of cyber bullying (Heirman & Walrave, 2008).

There is more and more evidence that victimization has negative effects on adolescents' well being. Victims of online bullying displayed low school commitment, engaged in alcohol and cigarette consumption, and about one-third of the harassed feel at least one symptom of psychological stress following the incident (Finkelhor, Mitchell & Wollak, 2000). Another study of cyber bullying, found that 40 percent reported being angry, 27 percent being sad, 32 percent reported a drop in school grades and having difficulty to concentrate on school work, 27 percent reported that bullying also affected their relationships with parents and in 20 percent of the cases in affected the relations with friends (Patchin and Hinduja, 2006).

Conceptualizing Cyber-bullying

This study relies on the routine-activities theory of victimization (Felson and Cohen, 1979). The basic assumption underlying the lifestyle exposure theory is that

differences in the likelihood of victimization are attributed to differences in personal lifestyles of the victims. Variations in lifestyles are important because they are related to exposure to dangerous spaces where there are high risks of victimization. From this perspective, lifestyle are routine daily activities, both vocational (study, work) and leisure. An individual's lifestyle is the critical factor that determines risks of victimization. In victimization studies, space is a critical element. Cohen and Felson (1979), contend that exposure to personal victimization is more likely when there is a convergence in space of motivated offenders, suitable targets, and absence of effective guardianship. This argument implies that there is considerable variation in exposure to risk of personal victimization, and that exposure varies as a function of activities.

In order to apply this perspective to Internet studies, the internet should be considered as a new space of activity of youth. The innovative aspect of the Internet is to provide opportunities for activities that induce social interaction resulting in providing a space for meeting new individuals, and in that sense the social use represents more than a communication channel, in many cases a space of social activity (Mesch, 2007). Feld (1981) uses the concept of foci of activity, defining them as "social, psychological, legal or physical objects around which joint activities are organized." Whether they are formal (school) or informal (regular hangouts), large (neighborhood) or small (household), foci of activity systematically constrain choices of friends. From this perspective, foci of activity place individuals in proximity (for example, they provide opportunities for frequent meetings), which causes individuals to reveal themselves to each other. The Internet bring individuals to perform many regular activities and social interaction develops.

As it has been documented in different surveys youth are using the Internet as a space of activity: searching for information through web pages, moderated and unmoderated forums, searching and posting pictures and clips, playing online games, and interacting with known and unknown individuals (Lenhart & Madden, 2007; Livingstone, 2007; Mesch, 2007). As youth use the Internet for their daily routine activities it can be argued that online activities differ in the extent that they expose youth to risks of being bullied. Consistent with this argument there is some evidence that Internet frequent use and high level of Internet skills increase the risk of being online

bullied (Ybarra and Mitchell, 2004) . A more recent online study of youth internet users, found that 29% were a victim of online bullying and the most frequent spaces were in chat rooms (Patchin and Hinduja, 2006). It can be expected, that youth that participate in Internet activities in which there is a high likelihood of providing contact and personal information are at a higher risk than youth that use the Internet mainly to search for information provided in web pages. Thus in this study is expected that having a profile in a social networking site and participating in a clip sharing site increase the risk of being bullied online. In these sites teenagers' provide personal information (personal picture, city of residence) and built-in is the ability to communicate through emails with the user. Participation in chat rooms and playing online games increase the exposure of adolescents' to unknown others and therefore the risk of being bullied or harrassed online.

Online bullying requires some knowledge about the victim. When conducting online activities, individuals differ in the extent that they are willing to share personal information. Some are less willing to provide contact and personal information than others. Providing personal communication can be considered to be a risk factor for victimization in particular when it is provided to strangers. Thus, it is expected that individuals that express more willingness to provide personal information are at a higher risk of being bullied than the ones that are express more reservations in sharing this information.

Parental mediation

An additional concept in routine activity theories is guardianship that refers to the use of protective activities to decrease the risk of victimization and refers to actions or people whose presence would discourage a crime from taking place. Guardianship may have a 'human element', that is usually a person that by their mere presence would deter potential offenders from perpetrating an act. A capable guardian could also be an electronic device such as a closed capture camera providing that someone is monitoring it at the other end of the camera.

This concept has been used slightly different in the media literature. *Parental mediation* is a concept that has been used in media research to understand the process of television influence on audience attitudes and behaviors. According to the parental

mediation model individuals are exposed to media content that may affect their attitudes and behaviors (Rothfuss-Buerkel, & Buerkel. 2001) The model assumes that this effect is mediated by intervening variables in a way that the extent that some viewers may adopt attitudes and behaviors presented in the media is dependent on parent activities that affects how the information is received, processed and acted on by the audiences(Bybee, Robinson and Turow (1982). According to the literature there are various types of mediation, but we restrict our discussion to only two techniques: 1 Restrictive mediation involves limiting the child amount of viewing time and the programs watched. It is restrictive as does not involve the active participation of the child and is a decision of the parent. In this study it will be measured by the use of electronic devices that restrict the content and web sites that the youth is exposed to. 2. Evaluative mediation represents the open discussion on issues related to Internet use, evaluation of content and subsequently the joint creation of rules regarding amount of time for Internet use, websites that are allowed and not allowed and placing the computer in a common space that allows parents to co-use the internet with their children and to be available for questions (Eastin, Bradley, Greenberg & Hofschire, 2006; Bybee, Robinson & Turow (1982).

Previous studies have found that parental mediation has influence in the type of children's internet use. A study in of 222 children in Korea investigated the effect of four parental mediation techniques. Evaluative mediation measured as parents recommendation of web sites and co-use of the internet were related to children's use of the Internet of educational purposes. Restrictive mediation, such as time limits and web site restrictions was not related to the type of Internet use (Lee & Chae, 2007; Hoan & Cheon, 2005). A study in the U.K found that computer location was critical for the understanding the amount of daily time using the Internet. When the computer was located in a shared space like the living room, children daily computer use is lower than when it was located in the teen bedroom (Livingstone, 2007). A study that investigated a sample of parents and adolescents behavior online in the U.S. found that teens whose parents monitored their online activities were less likely to disclose personal information such as their full name, email address, IM name, school name and social event information (Rosen, Cheever and Carrier, 2008). A large study of young adolescents in Canada (Media Awareness Network, 2005) investigated the rules that families have set

out and the propensity of youth to seek out inappropriate sites. The survey asked about four rules: Sites you should not visit, meeting people whom you got to know online, giving personal information and time spent online. The results found that the extent of visiting inappropriate sites, meeting strangers, giving personal information and the amount of time spent online was lower for the youth whose parents had a specific rule limiting their activities. This study provides support for the expectation that family rules decrease the exposure to risks. Thus, while there is evidence that parental involvement through restriction and evaluation might have an effect on online behavior, none of the studies on cyberbullying have considered the role of parents in reducing the exposure to the risk of being bullied online.

Age and gender should be considered as well. Studies have found that the risk of being bullied is higher for older adolescents and lower for younger adolescents (Patchin and Hinduja, 2006; Mitchell et al, 2007). This age difference may be the result of developmental factors that affect the extent and type of Internet use. It is very likely that as youth grow older they engage in more activities with unknown others that result in an increased risk for being bullied online. The evidence regarding gender differences in exposure to cyberbullying is mixed. Some studies did not find gender differences, and boys and girls did not differ in the extent of self reported cyber bullying (Li, 2006; Mitchell, et. al, 2007; Patchin and Hinduja, 2006; Hinduja and Patchin, 2008). Yet there is some evidence that boys and girls use the Internet differently and are exposed to different types of parental mediation. A higher percentage of boys are involved in conversations in chat rooms and girls more involved in email communication. This two different uses may expose differently boys and girls to the risk being bullied online (Beebe, Asche, Harrison, and Quinlan, 2004).

In sum, the purpose of this paper is to investigate the effect of exposure to online risks and parental mediation on the likelihood of cyberbullying in a large and representative sample of the youth population of the U.S.

METHOD

Participants

Participants comprised 935 teens aged 12 to 17 years old and their parents living in continental US. Participants were recruited by means of a representative sample of the

youth population of the U.S. The survey was conducted by Princeton Survey Research Associates int. Interviews were conducted during the October-November 2006. The response rate for the survey was 46 percent.

Procedure

The sample was designed to represent all teens ages 12 to 17 living in continental U.S. telephone households. The telephone sample was pulled from previous Pew Internet and American Life projects conducted in 2004, 2005 and 2006. Households with a child age 18 or younger were called back and screened to find 12 to 17 years old. As many as 10 attempts were made to contact every sampled telephone number. Calls were conducted at different times of the day and days of the week. Interviewers first determined if a child age 12 to 17 lived in the household. In households' with more than one adolescent in the age category, interviewers conducted the interview with a child selected at random. This research is based on a secondary analysis of the data that is available on request online.

Instruments

The dependent variable of the study is the likelihood of cyberbullying. In the survey adolescents were asked to indicate if they had experienced one of the following things online "someone spreading rumors online about you", "someone posting an embarrassing picture online without your permission", "someone sending a threatening email, instant message or text to you" , "someone taking a private email, IM or text message you sent them and forwarding it to someone else or posting it" and "having been contacted by a stranger". The dependent variable was a dummy variable that was coded 1 if the respondent has experienced at least one of the events and 0 if did not experienced any.

Exposure to risk was measured using a number of variables that inquired on the type of online activities conducted. Respondents were asked to indicate whether they have an active profile in a social network site, participate in clip sharing social networking sites (such as youtube), participate in conversations in chat rooms and participate in online games. Each item was coded as a dummy variable when "yes" responses were coded one and a "no" response as zero. Each variable was introduced in the multivariate analysis as a dummy variable.

A second measure of exposure to risk was frequency of online communication with friends. Three items inquired the frequency that the adolescent send instant

messages, an email and text messages. The items were measured in a five point Likert scale when higher values indicate higher frequency of communication. The items were combined into a single scale adding the values of the responses.

Willingness to share personal information was measured using 9 items that inquired the extent that the youth believes if it is okay to share with a person you just met your last name, your school name, your cell phone number, your home number, IM screen name, email address, a link to a blog, the city and state of residence. The answers to the questions were combined into a single scale with scores from 0 to 9 with higher values indicating a higher likelihood of sharing personal information.

In order to measure parental mediation a number of variables were used. Restrictive mediation was measured with three items that asked the parents whether they have installed "a filter that keeps youth from going to some types of web sites", "a monitoring software that records what a person does online" and "if the parent check the web sites that her/his child goes to". Each item was coded as a dummy variable when positive responses were coded as 1 and negative responses as zero. Evaluative mediation was measured by means of two different sets of variables. The first measured the existence of internet rules. Parents were asked the extent that they have rules at home for "internet sites your child can or cannot visit", "the kinds of personal information you child can share with people they talk on the internet" and "how much time your child can spend time online". Each item was coded "1" for a positive response and "0" for a negative response. The three items were introduced as dummy variables in the multivariate analysis. The second set was an item that asked about the location of the computer in the house. The possible responses were "a common area such as the living room" or " a private area such as the youth bedroom". The measure was coded 1 when the computer was in a common area and 0 for bedroom location.

Family and youth social characteristics were included in the analysis. Race was measured with a dummy variable when "1" indicates Caucasian origin and "0" belonging to a visible minority. Parent age and children age was measured in years, parental marital status was measured as a dummy variable when 1 indicates that the parents are married and else was coded as "0". Adolescent age was introduced as a continuous variable and gender as a dummy variable when males was coded as 1 and female as 0.

RESULTS

The average age of parents was 44.96 years old (S.D. 7.75) and the average age of children was 14.71 years old (S.D. 1.68), 51 percent were boys and 49 percent girls. In terms of race, 88.7 percent were Caucasian and 11.3% were African Americans. Overall, 79 percent of the children were living with parents that were currently married. In terms of socio-economic status 4.7 percent has less than high school education, 27 percent high school education, 27 percent some college and 40 percent college and graduate education. In the analysis was found that 12 percent reported that rumors about them were spread over the net, 6.1 percent had their picture taken and forwarded without their permission, 12 percent received an online threat, the same percentage had an email forwarded without their consent and 32.8 percent have been contacted by strangers. Overall, 40 percent of the youth reported having being a victim of at least one type of bullying behavior.

The results on regulation of Internet use at the household, confirm the perception that a relative high percentage of parents exert some type of regulation. In 73 percent of the cases, the computer is located in a common area of the house such as the living room, 86 percent of the parents reported that they have rules regarding web sites that youth can visit and the ones they are not allowed. As to online time, 66 percent indicated there are rules on the amount of time that children are allowed to use the Internet and the same percentage regularly check the sites their children visit. Only 56 percent have installed a filter and the same percent have rules on the type of information that children are allowed to provide over the Internet.

In the next step we compared youth that have reported being a victim of cyber bullying with the ones that have not.

[INSERT TABLE 1 ABOUT HERE]

Victims and non victims did differ in terms of their family social background. Youth reporting having been victim of online bullying, their parents report on average a higher education than youth that report not have been a victim of bullying ($M=5.02$, $SD= 1.53$ and $M=4.09$, $SD= 1.52$, $p<.001$). Online victims of bullying are on average older than non-victims. While the average age of victims of online bullying is 15.11 the average age of the non victims is 14.43 ($p<.01$). Gender is associated with bullying and it was found

that while only 39 percent of the males were victims, 61 percent of the girls reported being bullied at least once.

Regarding the existence of parental rules, parents of non-victims are more likely to have rules on Internet use. The percentage of youth reporting that the computer is in a shared space is higher for non-victim than the victims. Consistent with this finding, the percentage of non victims of bullying reporting the existence of parental rules on web sites that are allowed to visit, time that they are allowed to be online, is higher among non-victims than among victims. It was also found that teens in families in which parents have installed a filter that restricts youth activities, are less likely to be victims that when parents did not installed a filter.

Online activities were found associated with online bullying. When inspecting the association of reporting being bullied and online activities a significant association was found between victimization and having an active profile in social network site (Chi=93.68 $p<.001$), participation in public chat rooms (Chi=16.78 $p<.001$) and participation in youtube (Chi=27.70 $p<.001$). Online bullying was not found to be associated with playing online games (Chi=2.91 $p>.06$). Adolescents that have reported being victims of cyberbullying report on average a higher use of the Internet and cell phones for communication with their peers (M=9.73 vs. M=7.54; $p<.01$).

In the next step a multivariate analysis using logistic regression modeling was conducted because the dependent variable victimization is a dummy variable.

[INSERT TABLE 2 ABOUT HERE]

We present two models. In the first measures of restrictive parental mediation were introduced and in the second measures of evaluative parental mediation. The results indicate that the odds of online victimization are higher for girls than boys. Some of the measures of online activity are statistically significant as well. Having a profile in a social networking site, watching clips in you tube and participation in chat rooms are conducive to a higher risk of online bullying. Note that playing online games was not found associated with the odds of online bullying victimization. Youth that frequently send text messages, IM messages and emails to their friends are at a higher risk of victimization. Furthermore, independently of online activities youth that are willing to disclose more

personal information are at a higher risk of victimization than children that are less willing to disclose personal information.

Regarding the potential protective effect of parental mediation, the results are mixed. From all the restrictive mediation techniques, only monitoring web sites visited by the youth decreases the risk of victimization. In model two we replaced measures of restrictive parental mediation for measures reflecting evaluative parental mediation. The existence of rules on sites that the children are allowed to visit is statistically significant indicating that the existence of this rule decreases the odds of online cyber bullying victimization. However, other rules such as computer location, rule on time allowed to be online and rules on information share were not found to have a statistically significant effect.. The results indicate that online participation in online communication of any type is an increased risk of victimization and that parental monitoring providing guidance and restriction to web sites is effective as a protective mechanism.

In the next step, the goal of the analysis was to investigate if there are differences according to gender. Previous studies have shown that there are differences in the use of the internet by boys and girls as well as differences in the type of parental mediation that they are exposed.

[INSERT TABLE 3 ABOUT HERE]

The first two models present results when measures of restrictive mediation and online activities are introduced. For boys the odds of victimization from bullying increase when they when they keep an active profile in a social networking site and participate in youtube activities. For girls the online activities that increase their risk of victimization are participation in social network sites and chat rooms. For both boys and girls, the more information they disclose and the more they use the internet and cell phones to communicate with friends the higher the risk of being targeted for online bullying. In terms of family monitoring our results indicated that few measures of parental monitoring are effective but only for boys. Monitoring internet sites that were visited and rules on information share decrease the risk of online victimization for boys but not for girls.

DISCUSSION

The purpose of the current study was to investigate risk factors for cyberbullying and if parental mediation is a protective factor. Consistent with routine activities theory

of victimization, the results indicate that some types of Internet activities increase the odds of victimization. Participation in social networking sites were found to represent a risk for being bullied online. Having an online profile in these sites, apparently provides information both on personal characteristics and contact information and expose the adolescent to potential contact with motivated offenders, probably unknown to the teen. This private information is the raw material that might be used by potential offenders to call them by names, threaten them and make fun of them. A recent study of youth public profiles in MySpace indicates that these profiles include personal information such as pictures of themselves, with friends or family. A number of youth included pictures of themselves posing in swimsuits and underwear. Information on habits such as smoking and alcohol use can be found. Some of them even included their contact information such as the school they attend and phone numbers. Providing in a public available site such information increase the risk of cyberbullying (Hinduja and Patchin, 2008), It is not surprising that participation in chat rooms increase the risk of cyberbullying, as participants are likely to engage in conversations with strangers that some of them may be offenders. Studies have already found that online conversations tend to develop intimacy and individuals are more likely to share private and personal information online because of the relative anonymity of the medium (McKenna, Green & Gleason, 2002). Interestingly enough, playing online games was not associated with risk of cyberbullying. It is very likely that individuals that engage in this activity are oriented to a less expressive and more instrumental form of communication, focused not on personal characteristics but characteristics of the game.

An important risk factor was the willingness of the adolescent to provide personal information both offline and online. This result indicates that adolescents' differ in the extent of trustworthiness and that these differences explain partially the risk of being bullied online. While trust is an important component of interpersonal relationships, it is very likely that young adolescents are still going through the process of developing a mature conception of trust as a process where disclosure is gradual. For this reason, it seems that young adolescents that did not developed still a mature conception of trust tend to disclose their information without discrimination and this disclosure increase the risk of cyberbullying.

In this study 6 different parental mediation techniques or guardianship were investigated. It was found that the location of the computer, in contradiction to expectations, does not have an effect on the risk of being bullied online. This finding might indicate that the location of the computer with Internet access in an open space, might affect the time that is being used and even the content that youth are exposed but not the kind of people. Even when it is located in a shared space, youth might be able to multitask hiding some of the programs being running. Thus even when it is in a shared space still youth might be using it for participation in social networking sites, chat rooms and online communication activities that increase the risk of online victimization. It is important to note that two technologically based measures of restrictive parental mediation, namely, use of software to block access to websites and software that records online activities were not statistically significant. Checking on what children have done did have an effect on cyberbullying. The lack of statistical significance might be the result of two different processes. One that online bullying occurs in spaces that are considered as safe by parents such as social networking sites, YouTube and chat rooms. At the same time, it is possible that some of these sites are not considered safe but youth use their skills to make sure the hidden activities are not recorded. Future studies should attempt to use data that is recorded in servers to evaluate these alternative explanations.

An important finding is that one of the measures of evaluative mediation, namely rules on websites that adolescents are allowed to visit, was statistically significant decreasing the risk of exposure to online bullying. This result, while modest, informs us on the important role of parents engaging in conversations on the nature of websites, their content and their possible risks. Some of these sites might be related directly to the risk of victimization if parents discussing online risks are able to create awareness in youth of the potential risks of engaging in discussions in chat rooms and participating in social network sites.

Study limitations and directions for future research

In this study an attempt has been made to expand the routine activities theory approach to the understanding of cyberbullying. The model proved to be more useful in the explanation of the factors associated with increased risks than guardianship or parental monitoring. Supporting the perspective, participation in specific online activities

explained the odds of being bullied online. At the same time a clear limitation was in the lack of statistical significance of the measures of parental monitoring conceptualized as the guardianship component of the perspective. It is early to dismiss the extent that this perspective may be useful for a more comprehensive explanation of cyberbullying. Future studies should expand this perspective to the empirical test of a wider range of victimization experiences including the spread of computer viruses and computer hackers. At the same time to develop more specific measures of parental mediation and protective actions that are specific to the Internet media.

Table 1. T-Test for Mean Differences According to Online Bullying

	<i>No victim</i>		<i>Victim</i>	
	<i>Mean</i>	<i>Standard deviation</i>	<i>Mean</i>	<i>Standard deviation</i>
Parental age	44.67	7.47	45.37	8.14
Parent education	4.09	1.52	5.02	1.53**
Family Income	5.93	1.85	5.96	1.84
Marital Status (1=married0	.81	.35	.77	.39**
Children age	14.43	1.68	15.11	1.60**
Children sex (1=male)	.56	.49	.39	.48**
Extent of information sharing	4.08	2.241	4.77	2.11**
Extent of communication use	7.54	3.50	9.73	3.11**
Computer in shared space	.78	.41	.67	.46**
Rules on web site	.89	.30	.81	.39**
Rules on information sharing	.59	.49	.52	.50**
Rules on time online	.70	.45	.61	.48**
Parents monitor sites	.70	.45	.61	.48**
Parent checking web sites	.66	.47	.64	.57
Filter software	.60	.48	.56	.49*

Table 2 Logistic Regression Predicting Online bullying

	<i>Model 1</i>			<i>Model 2</i>		
	<i>Parameter Estimate</i>	<i>Standard Error</i>	<i>Odds</i>	<i>Parameter Estimate</i>	<i>Standard Error</i>	<i>Odds</i>
Parental Age	-.008	.013	.992	-.019	.012	.98
Parental Education	.110	.072	1.11	.10	.06	1.10
Race (1=white)	-.04	.31	.96	-.20	.28	.813
Income	-.056	.063	.94	-.05	.05	.94
Children gender (1=male)	-.88	.21	.41**	-.72	.19	.48**
Children age	.090	.063	1.09	.10	.06	1.10
Social network site	.73	.21	2.08**	.80	.20	2.23**
Youtube	.49	.21	1.63*	.47	.20	1.60**
Chat rooms	.54	.25	1.72*	.54	.23	1.72*
Online games	-.17	.20	.83	-.11	.19	.89
Communication	.07	.03	1.08*	.06	.03	1.06*
Children privacy disclosure	.131	.049	1.140**	.07	.04	1.08*
Computer in Common Space	-.19	.21	.82			
Software monitoring sites visited	-.30	.20	.73			
Parents checking sites visited	.07	.20	1.07			
Filter installed in the computer	-.06	.19	.93			
Rules of time online				-.27	.20	.76
Rules on sites visited				-.57	.26	.56**
Rules on information share				-.23	.18	.78
Constant	-3.71	1.30	.02**			
-2 LL	671.63			771.60		
Naglerke R2	.234			.23		

**p<.01 *p<.05

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