

**Parental Involvement in
Students' Safe Use of the Internet¹**

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PURPOSE AND PERSPECTIVE EXCELLENT SECTION

The purpose of this study was to investigate if parental involvement in digital activities relates to middle school students' knowledge of appropriate use of the Internet and social networking sites. Parental involvement, measured using a three-item dimension on the 40 item instrument, asked students to report on their knowledge of their parent's involvement with their internet activity. The aggregate score on this dimension was used to measure the relationship among several dimensions. Furthermore, demographic items, such as grade level, having an older sibling, and getting in trouble at school, were also investigated.

Over 71% of adults in the United States use the Internet (Horigan, 2007). Research suggests that adolescence (namely teens), are heavier users than adults (Subrahmanyam, Kraut, Greenfield, & Gross, 2001). Actually, in the United States, it is estimated that 21 million teens use the Internet. This represents 87% of this age group (Lenhart, 2005). Student have access to the Internet readily available, be it school, home, or library. This ease of access may increase the potential for students to become victims of Internet sexual predators or other students who engage in inappropriate cyberbullying behaviors. Rainie (2008) found that 32% of teens reported being contacted on-line by a stranger. Furthermore, 23% (of the 32%) stated that the contact made them feel scared or uncomfortable.

There is a myriad of evidence to support the need for parental involvement in a child's internet activities, from filtering access to monitoring activity, supervision is paramount (Lenhardt, 2005; Raine, 2008; Shariff 2008). Aside from the fact that predators are seeking young predators, teens are also reporting inappropriate behaviors. In fact, Lenhardt found that 81% of parents and 79% of teens agreed that "teens are not careful enough when sharing personal information on-line" (pii). Furthermore, when asked if "teens do things online that they wouldn't want their parents to know about" (pii), 65% of the parents and 64% of the teens agreed with the statement. The knowledge of the issue is evident from both parties, so now what do we do with it?

This line of research aims to understand the status of behaviors and views of middle school students and the influence parents have on these behaviors. It is hoped that the results may assist schools in developing educational programs and safeguards to protect students.

METHODOLOGY

Sample

A total of $N=1366$ grade 6-8 male ($n=698$) and female ($n=666$) students in a New England State participated in the study. Students from an urban ($n=480$), suburban ($n=418$), and rural ($n=468$) school responded to the Survey of Internet Risk and Behavior during a regularly scheduled school activity period.

Instrumentation

Dimensions/Theoretical Rationale. The *Survey of Internet Risk and Behavior* is a self-administered questionnaire consisting of 47 items; 7 demographic items and 40 items composing six dimensions: Knowledge, Bully Victim, Bullying Behavior, Internet Use, Adult Notification, and Parental Involvement. The demographic questions sought to assist in the investigation of profiling the student at risk the most. This section contained questions on gender, grade level, achievement, views of popularity, and discipline. The response and scoring technique employed was designed to produce scores where high scoring students have higher levels of knowledge or more frequent self-disclosed or parental behaviors described by the statements used to measure each respective scale. The following scales are measured: Knowledge, Bully Victim, Behavior (Bullying and Internet Use), Adult Notification, Parental Involvement, and Internet Behavior.

The Knowledge dimension was composed of seven items describing the students' knowledge of appropriate behavior on social networks and potential risk of Internet predators (Franek, 2005/2006; McKenna, 2007). All seven items were scored a 1 for the Agree response. The Bully Victim dimension consisted of three items probing students' self-report of having been bullied through electronic means (Lenhart, 2007; Ma, 2001, Shariff, 2008). The Agree response was scored as a 1. The behavior items were categorized into two sub-dimensions: Bullying Behavior and Internet Use.

Bullying Behavior was composed of seven items that directly queried the students on their bullying behaviors on both MySpace and instant messenger sites (Lenhart; Ma). For all the items a response of Disagree was scored as a 1 so that a high score would reflect a low degree of participation in the bullying behavior. Internet Use was composed of three items with Agree scored with a 1, and was used to assess if the respondents use the Internet for instant messaging, e-mail, or MySpace on a daily basis (Horrigan, 2007; Subrahmanyam et al., 2001). Adult Notification was composed of three items with Agree scored with a 1 to assess if the student would contact a parent or adult if they were threatened by a peer or stranger (Shariff; Goodstein, 2007). Finally, a Parental Involvement dimension consisting of three items queried students on their parents' involvement with their Internet activities (Shariff; Goodstein). Scoring the Agree response as a 1 resulted in high scores indicating higher levels of parental involvement.

Response Format. Students were asked to "Agree" or "Disagree" with each statement. Responses were scored "1" or "0" to reflect a high level of the attribute measured by the scale (e.g., Knowledge) or higher levels of having experienced the attribute (e.g., Bully Victim, Parental Involvement) or exhibited the attribute (e.g., Bully Behavior; Internet Behavior).

Validity

Content validity of the survey items was supported through the literature (Franek, 2006; McKenna, 2007; Shariff, 2008; Weaver, 2007) and a judgmental review by $N = 5$ middle school teachers.

Construct validity was examined using two types of analyses. First, to test how adequately the specified item/dimension assignments fit the hypothesized model, a confirmatory factor analysis with categorical (dichotomous) factor indicators in MPLUS version 5 (Muthen & Muthen, 2007) was run. The standardized weights and fit statistics offered support for the model and thus score interpretations. Rasch model item response theory (IRT) analyses were also run for the sets of items defining each dimension to further examine construct validity by assessing how well each set of items was defined along each respective knowledge/behavior continuum (Gable, Ludlow, & Wolf, 1990; Wright & Linacre, 1998). Sufficient spread of the items across the dimensions supported the score interpretations for high and low scoring students.

Reliability

Cronbach's alpha internal consistency reliabilities of the data from the respective dimensions were as follows: Knowledge, .69; Bully Victim, .71; Bullying Behavior, .76; Internet Usage, .79; Adult Notification, .75; and Parental Involvement, .69. The use of the binary (Agree, Disagree) response format most likely contributed to the lower than desired reliability levels. While lower reliabilities can contribute to a lack of significant findings for

statistical procedures, several highly significant findings were present in these data.

Data Analysis

Descriptive data, using response percentages for the 1, 0 coded agree and disagree options, were calculated along with dimension and item-level mean percents. Dimension and item-level comparisons for gender, grade level, school demographics, grades, and popularity were run using t-tests, ANOVAs, and stepwise regression, where appropriate. Scored items were also ranked within each category to identify the high and low knowledge and behavior areas.

RESULTS

This section presents the results of the data analysis from the *Survey of Internet Risk and Behavior* questionnaire. The results are based on $N = 1366$ middle school students (grades 6, 7, & 8) in three districts (urban, urban-ring, and suburban).

Total Group: Differences

Only 72% of the students responded "yes" to *My parents know the content of my social networking site*. More startling, only 25% responded yes to *My parents have access to all of my passwords*, 35% responded "yes" to *My parents regularly check my activity on the Internet*, and less than 20% responded "yes" to *My parents frequently view my e-mails*.

The overall Knowledge dimension, regarding appropriate behaviors and risk of Internet predators, revealed that only 47% of the students offered appropriate responses. Some item-level questions of concern include: *With the contact information I put on MySpace or FaceBook, it would be easy for an Internet predator to contact me (27%); An Internet predator can easily use sites such as Google earth, MSN live or other programs to locate my school and house (52%)*. Finally, regarding Internet Usage, over 51% of the students reported they were frequent (daily, 3 times per week, once a day) users of social networking sites.

Regression Results

A stepwise multiple regression analysis was used to examine the relationship between the Knowledge dimension and the variables composing the Parental Involvement dimension, the Adult Notification dimension, and items removed from the aggregate scores due to lack of fit on Cronbach alpha scores. Table 1, Stepwise Regression for items composing Parental Involvement and Adult Notification, reveals a significant model ($p = .000$) explaining about 8% of the variance ($R = .289$; $r^2 = .084$; Effect Size medium/large) in Knowledge.

The first variable entered was *If I had mean or threatening things said about me on a site like MySpace or FaceBook, I would tell a teacher, parent, or another adult under the Adult Notification dimension* since it had the highest correlation ($r = .22$) with the dependent variable Knowledge. The

next variable to be entered was *My Parents would restrict my online access if they knew I was posting inappropriate things* question originally under the Parental Involvement dimension but removed from the aggregate score, which increased the multiple correlation to $R = .275$. The third variable entered, *If I were contacted by someone I didn't know on Instant Messenger, I would tell an adult* from the Adult Notification dimension, increased the multiple correlation to $R = .284$. Finally, *My parents regularly check my activity on the Internet* from the Parental Involvement dimension was added to bring the multiple correlation to $R = .289$.

Table 1. Stepwise Regression for items composing Parental Involvement and Adult Notification

	Variable	Dimension	R	R^2	Beta	t	p	d
37	If I had mean or threatening things said about me on a site like MySpace or FaceBook, I would tell a teacher, parent, or another adult	Adult Notification	.22	.059	.12	3.81	.000	Med
34	My Parents would restrict my online access if they knew I was posting inappropriate things	Parental Involvement (not included in the aggregate score)	.28	.08	.15	5.53	.000	Med/Ig
25	If I were contacted by someone I didn't know on Instant Messenger, I would tell an adult	Adult Notification	.284	.08	.08	3.39	.017	Med/Ig
20	My parents regularly check my activity on the Internet	Parental Involvement	.29	.08	.06	2.01	.045	Med/Ig

Note. Dependent Variable: Knowledge Dimension

Therefore, the four predictors from Parental Involvement and Adult Notification accounted for 8.4% of the variance in students' knowledge of appropriate behavior on social networks and potential risk of Internet predators, with item 34; *My parents would restrict my online access if they knew I was posting inappropriate things* being the most important variable (Beta = .15).

Sibling

When comparing the dimensions with respect to having an older sibling (See Table 2), students with older siblings reported lower Parental Involvement ($t = 3.13$, $p = .002$, yes, $M = .25$, no, $M = .31$), higher Internet usage under the Internet Behavior Dimension ($t = 3.35$, $p = .001$, yes, $M = .54$, no, $M = .46$), and a lower mean for Adult Notification ($t = 4.46$, $p = .001$, yes, $M = .50$, no, $M = .60$).

Table 2: Comparison of Dimensions with Respect to Having an Older Sibling solid line here

Dimension/Item	Sibling	M	t	P	d
Parental Involvement	Yes	.25	3.13	.002	.18 Small
	No	.31			
Internet Behavior	Yes	.54	3.35	.001	.19 Small
	No	.46			
Adult Notification	Yes	.50	4.46	.001	.26 Small
	No	.60			

Grades

Significant differences were found between grades and four of the six dimensions. Table 3, Comparison of Dimensions with respect to grades reveals that students who reported earning good grades had significantly higher means for Bullying Behaviors ($t = 5.45$, $p = .001$, $M = .89$), Parental Involvement ($t = 4.62$, $p = .000$, $M = .29$), and Adult Notification ($t = 7.70$, $p = .001$, $M = .57$) than those who did not report earning good grades (BB, $M = .81$; PI, $M = .17$; and AN, $M = .35$). Students who reported earning good grades also reported significantly lower Internet usage ($t = 3.94$, $p = .000$, $M = .49$) than those who reported they do not earn good grades ($M = .61$). solid line at top of table below

Table 3: Comparison of Dimensions with Respect to Grades

Dimension/Item	Grades	<i>M</i>	<i>t</i>	<i>P</i>	<i>d</i>
Bullying Behavior	Earn good grades	.89	5.45	.001	.37 Medium
	Do not earn good grades	.81			
Parental Involvement	Earn good grades	.29	4.62	.001	.37 Medium
	Do not earn good grades	.17			
Adult Notification	Earn good	.57	7.70	.001	.58

	grades Do not earn good grades	.35			Medium/Lg
Internet Behavior	Earn good grades	.49	3.94	.001	.30 Medium
	Do not earn good grades	.61			

Trouble

Table 4, Comparison of dimensions with respect to getting in trouble, reports interesting findings under the demographic “trouble”. Students who reported “yes” to getting into trouble at school also had higher means for Internet Behavior ($t = 5.75, p = .000, M = .58$) and lower means for Parental Involvement ($t = 7.60, p = .000, M = .19$) and Adult Notification ($t = 10.15, p = .000, M = .42$) than those who responded no (IB, $M = .45$; PI, $M = .33$; AN, $M = .64$).

Table 4: Comparison of Dimensions with respect to getting in trouble

Dimension/Item	Grades	<i>M</i>	<i>t</i>	<i>P</i>	<i>d</i>
Internet Behavior	Yes, get in trouble	.58	5.75	.001	.31 Medium
	No, do not get in trouble	.45			
Parental Involvement	Yes, get in trouble	.19	7.60	.001	.42 Medium
	No, do not get in trouble	.33			
Adult Notification	Yes, get in trouble	.42	10.15	.001	.55 Medium
	No, do not get in trouble	.64			

Grade Level

Significant differences were found among grade level in four of the six dimensions. Internet Behavior increases as grade level increases ($F = 15.36$, $p = .000$; 6th, $M = .41$; 7th, $M = .53$; 8th, $M = .56$). However, for the remaining three dimensions, the mean decreases as grade level increases. Parental Involvement is at its highest ($F = 25.80$, $M = .37$, $p = .000$) in the 6th grade and decreased in the 7th ($M = .24$) and 8th ($M = .22$) grade. Likewise, Adult Notification is at its highest in the 6th grade ($F = 49.17$, $p = .000$, $M = .71$) and decrease for 7th ($M = .47$), and 8th grades ($M = .47$). Finally, under the Knowledge dimension, 6th grade reported the highest mean ($F = 13.18$, $p = .000$, $M = .52$), followed by 7th grade ($M = .47$) and finally 8th grade ($M = .47$).

Table 5: Comparison of Internet Behavior, Parental Involvement, Adult Notification, and Knowledge with respect to grade level

Dimension/Item	School Demographic	M	F	p	η^2
Internet Behavior	6 th Grade	.41	15.36	.000	.022
	7 th Grade	.53			
	8 th Grade	.56			
Parental Involvement	6 th Grade	.37	25.80	.000	.037
	7 th Grade	.24			
	8 th Grade	.22			
Adult Notification	6 th Grade	.71	49.17	.000	.067
	7 th Grade	0.47			

	8 th Grade	0.47			
Knowledge	6 th Grade	0.52	13.18	.000	.019
	7 th Grade	0.47			
	8 th Grade	0.47			

SUMMARY OF MAJOR FINDINGS

The major findings from this study are as follows:

1. Knowledge was significantly related to several Adult Notification and Parental Involvement items. A model, explaining 8% of the variance, with a medium to large effect size, was found, composed of items regarding telling an adult of inappropriate behavior, knowledge of parental restriction if they were found participating in inappropriate behavior, and parents monitoring activities.
2. Middle school students with older siblings reported higher means on the Internet Use dimension and lower means on the Adult Notification and Parental Involvement dimensions.
3. Students who reported receiving good grades differed significantly on the Bullying Behavior dimension (lower negative activity), had higher reports on the Parental Involvement and Adult Notification dimensions, and reported lower usage of the Internet than those who reported not earning good grades.
4. Student who reported "yes" to *Do you get in trouble at school* had significantly higher Internet Use, lower reports of Parental Involvement, and Lower report to the Adult Notification dimension.
5. Although Internet Behavior increases as the grade level increases, the Parental Involvement, Adult Notification, and Knowledge of appropriate behavior all decrease as grade level increases.

EDUCATIONAL IMPLICATIONS

Protecting students from threatening behaviors, from both peers and strangers, is paramount. The World Wide Web affords us wonderful opportunities to explore and learn; however, it opens our world to be more public than ever before. Proper use, behavior, and knowledge can mean the difference. In fact, "in the majority of sex crimes against youth, offenders did not deceive the teens about the fact that they were older and were interested in sex. However, attackers seduced the youth by being understanding, sympathetic, and flattering, and by appealing to the teens' interest in romance, sex and adventure" (Rainie, 2008, p. 23). Monitoring internet activities are more important than ever before.

ISTE CEO, Don Knezek, stressed the importance of education of our youth in furthering Internet safety (2008). There have been improvements in this area. In 2005, Lenhart reported 62% of parents reported monitoring the activity online after their child had gone online. Conversely; however, only 33% of the teens believe that their parents actually monitor their activity. The knowledge of being monitored may prevent inappropriate and unsafe behaviors. Further study is needed from the parents views to determine where the disconnect lies. Additionally, education on the risks and prevention techniques is needed for both parents and students.

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