

Examining Characteristics and Associated Distress Related to Internet Harassment: Findings From the Second Youth Internet Safety Survey

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ABSTRACT

OBJECTIVE. We sought to identify the characteristics of youth who are targets of Internet harassment and characteristics related to reporting distress as a result of the incident.

PARTICIPANTS AND METHODS. The Second Youth Internet Safety Survey is a national telephone survey of a random sample of 1500 Internet users between the ages of 10 and 17 years conducted between March and June 2005. Participants had used the Internet at least once a month for the previous 6 months.

RESULTS. Nine percent of the youth who used the Internet were targets of online harassment in the previous year. Thirty-two percent of the targets reported chronic harassment (ie, harassment ≥ 3 times in the previous year). In specific incidents, almost half (45%) knew the harasser in person before the incident. Half of the harassers (50%) were reportedly male, and half (51%) were adolescents. One in 4 targets reported an aggressive offline contact (eg, the harasser telephoned, came to the youth's home, or sent gifts); 2 in 3 disclosed the incident to another person. Among otherwise similar youth, the odds of being a target of Internet harassment were higher for those youth who harassed others online, reported borderline/clinically significant social problems, and were victimized in other contexts. Likewise, using the Internet for instant messaging, blogging, and chat room use each elevated the odds of being a target of Internet harassment versus those who did not engage in these online activities. All other demographic, Internet-use, and psychosocial characteristics were not related to reports of online harassment. Thirty-eight percent of the harassed youth reported distress as a result of the incident. Those who were targeted by adults, asked to send a picture of themselves, received an aggressive offline contact (eg, the harasser telephoned or came to the youth's home), and were preadolescents were each significantly more likely to report distress because of the experience. Conversely, the youth who visited chat rooms were significantly less likely to be distressed by the harassment.

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Key Words

Internet, harassment, bullying, behavior problems, psychosocial problems

Abbreviations

YISS-1—First Youth Internet Safety Survey
YISS-2—Second Youth Internet Safety Survey

OR—odds ratio

AOR—adjusted odds ratio

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CONCLUSIONS. Internet harassment can be a serious event for some youth. Because there has been a significant increase in the prevalence of Internet harassment from 2000 to 2005, adolescent health professionals should continue to be vigilant about such experiences in the lives of young people with whom they interact. Social problems and online aggressive behavior are each associated with elevated odds of being the target of harassment. Thus, prevention efforts may be best aimed at improving the interpersonal skills of young people who choose to communicate with others using these online tools. Adolescent health professionals should be especially aware of events that include aggressive offline contacts by adult harassers or asking the child or adolescent to send a picture of themselves, because each of these scenarios increase the odds of reporting distress by more than threefold. Findings further support the call for the inclusion of Internet-harassment prevention in conventional antibullying programs empowering schools to address Internet bullying situations that occur between students. This will not solve all situations, however. We also must encourage Internet service providers to partner with consumers to be proactive in serious harassment episodes that violate criminal laws and service-provider codes of conduct.

RECENT REPORTS SUGGEST that ~9 in 10 children and adolescents use the Internet.^{1,2} This increased exposure to the online environment has been mirrored by a growing responsibility of pediatric health professionals to counsel parents who ask them about ways to keep their children safe while online. Professionals are aware of the benefits of the Internet, including access to important and sometimes sensitive health information and increased communication with friends and family.²⁻⁴ They also have heard reports about some of the dangers of the Internet, including Internet harassment (sometimes called cyberbullying). As is true with other child welfare concerns, competing factors exist concerning who is most vulnerable to such online experiences. On the one hand are images of youth who are naive and inexperienced in using the Internet; on the other hand are images of youth who engage in risk-taking behavior while online. Both of these images likely play a role in risk for online harassment, but each has different implications for prevention and intervention.

Correlates of traditional bullying can be a useful guide to understanding youth Internet harassment, because this field of inquiry is much more established. Just over 15% of children and adolescents are bullied "sometimes" or more frequently,^{5,6} with negative health and social challenges consistently reported.⁵⁻⁹ Data from 28 countries participating in the World Health Organization-sponsored Health Behavior in School-Aged Children study revealed that targets report significantly more con-

current health problems, emotional-adjustment problems, school-adjustment problems, and poorer relationships with classmates when compared with nonbullying-involved youth.⁹ Due et al⁵ report that boys who are bullied weekly are almost 4 times as likely also to report ≥ 5 somatic or mental health problems as nonbullied boys; a similar finding is noted among girls. Depression is perhaps the most frequently cited correlate of bullying.^{7,8,10,11} In a 23-country meta-analysis, Hawker and Boulton⁷ report that being the target of bullying is most strongly related to depression compared with all other outcomes. Sourander et al⁸ report that children who report clinical features of depression at age 8 are almost 3 times as likely to be bullied at age 16 even after adjusting for other influential characteristics. In addition, adolescents with internalizing problems as measured by the Youth Self-Report are almost 8 times as likely as their peers to be targets of bullying.

Data from the First Youth Internet Safety Survey (YISS-1) suggested that 6% of Internet users between the ages of 10 and 17 years had been targets of Internet harassment in the previous year, one third of whom reported feeling emotionally distressed because of the incident.¹²

Several similarities with traditional bullying have been noted. Online harassment is concurrently related to reporting clinical features of major depression.¹³ Targets are significantly more likely to also report harassing others online as compared with their same-sex peers, even after adjusting for all other influential factors. Furthermore, male targets are more likely to report concurrent interpersonal victimization (eg, being physically assaulted by a peer) as compared with otherwise similar male nontargets.¹³ Together, these findings suggest that Internet harassment may be associated with concurrent psychological challenge for some youth.

Findings from the YISS-1 in combination with findings from the traditional bullying field speak to the need for more investigation of characteristics associated with being a target of online harassment. In addition, one third of targets report feeling very or extremely distressed by the harassment, and there is a dearth of information about characteristics associated with an increased likelihood of feeling distressed by the incident. This is an important area of inquiry that is necessary to drive future targeted prevention and intervention efforts. Using data from the Second Youth Internet Safety Survey (YISS-2), a nationally representative sample of children and adolescents who use the Internet, we report here (1) the 1-year prevalence rate of harassment among youth Internet users, (2) the personal and Internet-use characteristics that are significantly associated with being harassed online, and (3) the personal and event characteristics that are significantly associated with a distressing experience.

PARTICIPANTS AND METHODS

The YISS-2 was a nationally representative telephone survey of youth Internet users ($n = 1500$) conducted between March and June of 2005. The methodology and questions were based on the YISS-1,¹² which was conducted in 2000. The research was approved and supervised by the University of New Hampshire Institutional Review Board and conformed to the rules mandated for research projects funded by the US Department of Justice.

Households were identified via random-digit dial, and all data were collected in telephone interviews. A final target sample size of 1500 households was predetermined on the basis of a desired maximum expected sampling error of $\pm 2.5\%$ at the .05 significance level. Of the 54 842 numbers dialed, 24 363 were not active residential telephone numbers and 3626 numbers were undeterminable (eg, busy on all attempts; no answer). Among the 26 853 eligible households that were able to be contacted for household screening, 14 316 cooperating households were identified, yielding 3956 eligible households. On the basis of calculations set forth by the American Association for Public Opinion Research, the response rate was 45%.¹⁴ This rate is reflective of the general decline in response rates that has been seen in national telephone surveys,^{15,16} which are challenged by the do-not-call list, caller ID, and households that have replaced landlines with cell phones exclusively. Characteristics of the final sample were similar to those reported by recent national studies of the online population in terms of race, ethnicity, and household income.^{1,2,17}

Study Respondents

One youth and one caregiver were surveyed in each participating household. Eligibility criteria for inclusion in the YISS-2 required the youth to be between the ages of 10 and 17 years, to have used the Internet at least once a month for the previous 6 months, and to be English speaking. Location of Internet access was left intentionally broad to include youth who accessed the Internet outside of the home (eg, school, library, etc). Caregivers provided verbal informed consent for their and the youth's participation. The youth provided verbal informed assent.

Survey Methodology

Interviews were conducted with the adult who knew the most about the youth's Internet use. Youth surveys were conducted when the youth felt they could talk freely; interviews were rescheduled if necessary. All questions were answered over the telephone. On average, the adult survey lasted 10 minutes and the youth survey lasted 30 minutes. Youth who participated received \$10. More details about the YISS-2 methodology can be found elsewhere.¹⁸

Measures

On the basis of the YISS-1,^{13,18,19} youth who responded positively to at least 1 of the following 2 questions were classified as being the target of Internet harassment: (1) "In the past year did you ever feel worried or threatened because someone was bothering or harassing you online?"; and (2) "In the past year did anyone ever use the Internet to threaten or embarrass you by *posting* or *sending* messages about you for other people to see?" Of the 1500 youth respondents, 167 responded positively to at least 1 of the 2 Internet-harassment questions. These respondents then were asked more detailed information including characteristics of the harasser and the event. If youth experienced harassment more than once in the past year, they were asked to provide details for the event that was most bothersome. If no event was more bothersome than another, they were asked to provide details for the most recent event. The primary study investigators reviewed the respondents' account of the incident. On the basis of verbatim accounts, 38 incidents were excluded and 1 was added on the basis of an account provided in another section of the questionnaire. In total, 130 youth were classified as having experienced an Internet-harassment incident. In total, 130 youth reported an Internet-harassment incident. Respondents who reported feeling very or extremely upset or afraid because of a harassment incident were characterized as being emotionally distressed. Also, youth who reported at least 1 instance of using the Internet to harass or embarrass someone they were mad at in the past year were classified as engaging in harassing behavior online.

Children were asked about their Internet use. A composite variable was created on the basis of responses about the average number of hours per day and days per week the child went online, their self-rated Internet expertise, and importance of the Internet to themselves. In the current investigation, those whose composite score was 1 SD above the mean or higher were compared with all others as an indication of "high Internet use." In addition, participants were asked whether they had ever in the previous year engaged in several specific online activities. We examined the influence of 3 specific activities that involved self-expression: instant messaging, chat room visitation, and blogging.

Borderline or clinically significant behavior problems were assessed by using the Youth Self-Report of the Child Behavior Checklist.²⁰ This instrument is one of the most widely used instruments to assess problem behavior from the youth perspective. We examined the following subscales: social problems, rule breaking, aggression, attention problems, and withdrawn/depressed behavior. Scores were dichotomized to reflect those with indications of borderline or clinical problems versus lesser challenge based on established guidelines.²⁰

As an indication of the parent-child relationship,

youth were asked how frequently their caregiver nagged them, yelled at them, and took away their privileges; answers were given on a 5-point Likert scale. A composite variable measuring overall parent conflict was created on the basis of these 3 variables. In the current analysis, we dichotomized the factor scores to compare those who reported high conflict (ie, 1 SD above the mean) versus all other youth.

Two measures of conventional victimization were included: reports of physical or sexual victimization and reports of more global interpersonal victimization (ie, attacked by 1 person or by a group of people, being hit by someone, or being picked on by peers) in the previous year.

Adults reported the child's gender, age, the highest household education, and the previous year's household (2004) income. Youth reported their race and Hispanic ethnicity.

Statistical Methods

Respondents were required to have valid data (ie, not "missing," "refused," or "don't know") for at least 85% of the variables assessed (ie, 21 of 25; those detailing the harassment experience were not included) to protect against imputing nonresponsive data. On the basis of this criterion, 3 respondents, all who were uninvolved in online harassment, were dropped, reducing the sample to 1497. Missing data and "refused" responses were then imputed using best-set regression¹⁹ on the basis of youth age, gender, race, household income, household education, and Internet use. In most cases, this affected <1% of data. Income was the exception, with 7.4% ($n = 111$) imputed. Those with imputed income data were similar to participants with valid income data in terms of gender, age, race, and household education. They reported high Internet use more frequently (35% vs 27%, respectively; $P = .05$) and Hispanic ethnicity less frequently (4% vs 9%; $P = .04$). Finally, "don't know" answers were conservatively coded as the sample mode, which in most cases was equivalent to "symptom absent." This affected <1% of the cases in all affected variables.

First, we estimated the 1-year prevalence rate and examined associated characteristics of the Internet-harassment experience reported by youth. Second, a parsimonious logistic-regression model, as defined by that which includes the fewest number of variables necessary to explain the odds of Internet harassment, was estimated. To do so, a saturated model was initially identified by including all potential explanatory variables, specifically Internet usage (total usage; specific activities: instant messaging, blogging, and visiting chat rooms; and harassing behavior), high parental conflict, behavior problems, and demographic characteristics (age, gender, race, ethnicity, household income, and highest household education). Next, variables were assessed individually for significant contribution to the overall model (P

< .05) via backward stepwise modeling and were dropped if nonsignificant. Results were confirmed via forward stepwise modeling. Third, we reported estimates of odds of distress given the report of specific event characteristics. To identify the most influential factors among these characteristics in predicting the odds of distress, a parsimonious model was identified by using the techniques described above.

RESULTS

Demographic Characteristics

Half of the YISS-2 respondents in this investigation were female (51% [$n = 760$]). Seventy-seven percent ($n = 1153$) were adolescents (defined in this study as 13–17 years old) and 23% ($n = 344$) were preadolescents (defined as 10–12 years old). Seventy-six percent of the respondents ($n = 1140$) self-identified as being of white race and 9% ($n = 133$) were of Hispanic ethnicity. Eight percent ($n = 122$) of caregivers reported an annual household income of less than \$20 000, whereas 40% ($n = 603$) reported an income of \$75 000 or greater. One in 5 (22% [$n = 334$]) caregivers reported an adult high school education or less, and 1 in 5 (22% [$n = 331$]) households reported a postgraduate college education.

Characteristics of Youth Targets of Internet Harassment

Nine percent ($n = 130$) of all respondents ($n = 1497$) reported being the target of Internet harassment at least once in the previous year. Targets were slightly older in age than nontargets (14.6 vs 14.2 years, respectively; $t = -2.2$; $P = .03$). Fifty-eight percent ($n = 75$) of targets versus 50% ($n = 685$) of the nontargets were female [$\chi^2(1) = 2.7$; $P = .10$]. Eighty-three percent ($n = 108$) of the targets were white, and 7% ($n = 9$) were Hispanic as compared with the nontargets, of whom 75% ($n = 1032$) were white [$\chi^2(1) = 3.8$; $P = .05$] and 9% ($n = 124$) were Hispanic [$\chi^2(1) = 0.7$; $P = .41$]. Targets and nontargets were similarly likely to come from lower-income households [32% ($n = 42$) vs 35% ($n = 485$), respectively; $\chi^2(1) = 0.5$; $P = .47$], with an adult education of high school or lower (17% [$n = 22$] vs 23% [$n = 312$], respectively; $\chi^2(1) = 2.4$; $P = .12$).

As shown in Table 1, one third (35% [$n = 46$]) of the youth who reported being the target of harassment said they felt threatened or embarrassed because of information that was posted or sent to someone else about themselves, indicating that many harassment episodes were not direct peer-to-peer exchanges. Fifty percent ($n = 74$) were harassed more than once and 32% ($n = 42$) reported chronic harassment (ie, harassment ≥ 3 times in the previous year). In specific incidents, almost half (45% [$n = 58$]) of the targets knew the harasser in person before the incident. Almost 2 in 5 youth (38% [$n = 50$]) were distressed by the incident. Half of the harassers (50% [$n = 65$]) were reportedly male, and half

TABLE 1 Characteristics of Targets of Internet Harassment and Their Harassment Experience (*n* = 130)

Characteristics	% (<i>n</i>)
Harassment characteristics	
Harassment type	
Felt worried or threatened because was being harassed or bothered	65 (85)
Threatened or embarrassed by information that was posted or sent about youth	35 (46)
Distressed by the incident	38 (50)
Chronic (≥ 3 times)	32 (42)
Disclosed the incident to someone	68 (88)
Friend	44 (57)
Parent	32 (41)
Authority	12 (15)
Harasser characteristics	
Known in person before event	
Age ^a	
Preadolescent (10–12 y)	8 (10)
Adolescent (13–17 y)	51 (66)
Young adult (18–25 y)	21 (27)
Adult (26–40 y)	2 (3)
Don't know	18 (24)
Gender ^a	
Female	28 (37)
Male	50 (65)
Don't know	22 (28)
Harasser actions	
Aggressive offline contact	25 (33)
Asked target to send picture online	23 (30)
Demographic characteristics of youth who are targets of Internet harassment	
Age ^b	14.6 (1.8)
White race	83 (108)
Female	58 (75)
Lower income (less than \$50 000 annual income)	32 (42)
Household high school education or less	17 (22)
Hispanic ethnicity	7 (9)

Values shown are % (*n*) except where noted.

^a Categorical variable. Subcategories are mutually exclusive.

^b Values shown are the mean (SD).

(51% [*n* = 66]) were adolescents. One in 4 youth who experienced an Internet-harassment incident (25% [*n* = 33]) reported an aggressive offline contact (ie, the harasser telephoned), came to the youth's home, or sent gifts. Two in 3 (68% [*n* = 88]) disclosed the incident to another person (32% to a parent, 12% to another authority).

Characteristics Associated With Targets of Internet Harassment

To identify the characteristics that were most influential in explaining the odds of reporting Internet harassment, a parsimonious logistic-regression model was identified (*n* = 1497). To maximize power, age was entered as a continuous variable; findings were similar with a dichotomous definition. Acceptable model fit was observed [Hosmer-Lemeshow $\chi^2(7) = 9.0$; *P* = .25]. As shown in Table 2, harassing others online, interpersonal victimization and borderline/clinically significant social problems,

and were each associated with elevated odds of being the target of Internet harassment among otherwise similar youth. Likewise, using the Internet for instant messaging, blogging, and chat rooms each elevated the odds of being a target of Internet harassment versus those who did not engage in these online activities. All other demographic, Internet-use, and psychosocial characteristics were not related to the report of online harassment.

Risk Factors Associated With Distressing Harassment Episodes

Among youth who reported incidents of Internet harassment (*n* = 130), 38% (*n* = 50) reported emotional distress, indicating they felt very or extremely upset or afraid because of the incident. As shown in Table 3, several characteristics of the harassment incident were related to the likelihood of reporting subsequent distress. Repeated harassment (≥ 3 times) was reported by 44% (*n* = 22) of distressed youth versus 25% (*n* = 20) of nondistressed youth (odds ratio [OR]: 2.4; *P* = .03). In specific incidents, aggressive contact made offline (eg, going to the target's house) was associated with a two-fold increase in likelihood of reporting emotional distress (OR: 2.4; *P* = .03), and asking the target to send a picture was associated with an almost fourfold increase in likelihood of reporting distress because of the harassment incident (OR: 3.8; *P* = .002). Twenty percent (*n* = 10) of distressed youth were preadolescents, compared with 8% (*n* = 6) of nondistressed youth (OR: 3.1; *P* = .04).

To identify the most influential correlates of emotional distress, a parsimonious logistic-regression model was identified on the basis of all the characteristics listed in Table 3. Age of the harasser was dichotomized to reflect those ≥ 18 years of age versus younger for cell stability. Acceptable model fit was observed [Pearson $\chi^2(17) = 14.3$; *P* = .65]. Five influential characteristics were identified. Four were positively associated with emotional distress: preadolescence (adjusted OR [AOR]: 5.5; 95% CI: 1.5–19.3; *P* = .009), adult harasser (AOR: 4.1; 95% CI: 1.4–11.6; *P* = .008), being asked to send a picture of oneself (AOR: 3.2; 95% CI: 1.2–8.4; *P* = .02), and an aggressive offline contact (AOR: 3.9; 95% CI: 1.5–10.1; *P* = .005). Conversely, visiting chat rooms was negatively associated with emotional distress (AOR: 0.3; 95% CI: 0.1–0.6; *P* = .003). These characteristics are indicated in Table 3 by the "b" footnote symbol.

DISCUSSION

Nine percent of YISS-2 respondents report being the target of Internet harassment in the previous year. This is a 50% increase since the YISS-1, conducted in 2000, revealed a national 1-year prevalence rate of 6% among youth Internet users.¹² Continued attention among child health professionals is warranted. Characteristics significantly related to the report of Internet harassment among Internet users include harassing others online, interpersonal victimization, and social problems. Among

TABLE 2 Multivariate Logistic-Regression Models Estimating the Odds of Reporting Internet Harassment (*n* = 1497)

Youth Characteristic	Saturated Model		Parsimonious Model	
	AOR (95% CI)	<i>P</i>	AOR (95% CI)	<i>P</i>
Psychosocial characteristics				
Parent-child conflict	1.6 (1.0–2.6)	.08		
Peer interaction				
Harasser of others online	3.4 (2.1–5.6)	<.001	3.6 (2.3–5.7)	<.001
Interpersonal victimization	1.4 (0.9–2.1)	.10	1.5 (1.0–2.2)	.04
Physical or sexual abuse	1.3 (0.6–3.2)	.52		
Borderline/clinical behavior problems (Child Behavior Checklist)				
Social problems	2.2 (1.1–4.4)	.03	2.4 (1.2–4.4)	.008
Withdrawn/depressed	1.7 (0.8–3.9)	.18		
Aggression	1.4 (0.7–2.9)	.40		
Rule breaking	1.0 (0.5–2.0)	.99		
Attention problems	0.3 (0.1–1.4)	.13		
Online characteristics				
Online activities				
Instant messaging	3.5 (1.8–6.7)	<.001	3.4 (1.9–6.3)	<.001
Blogging	1.9 (1.2–3.0)	.004	2.1 (1.4–3.2)	.001
Chat room use	1.7 (1.1–2.5)	.009	1.7 (1.1–2.4)	.009
High total use	1.2 (0.8–1.9)	.33		
Demographic characteristics				
White race	1.4 (0.8–2.3)	.26		
Lower income (less than \$50 000 annual income)	1.2 (0.8–1.9)	.35		
Female	1.1 (0.8–1.7)	.57		
Age	1.0 (0.9–1.1)	.42		
Household education high school or less	0.7 (0.4–1.1)	.15		
Hispanic ethnicity	0.7 (0.3–1.6)	.44		

All variables listed are adjusted for each other. The parsimonious model represents those characteristics that, together, are most influential in explaining the odds of harassment among Internet users.

youth who are harassed, those who are targeted by adults, are asked to send a picture of themselves, receive an aggressive offline target, and are preadolescents are significantly more likely to report distress because of the experience.

Findings from the YISS-2 highlight both encouraging and concerning aspects of Internet harassment. On one hand, data suggest that the majority of Internet users are not harassed, and among those who are, the majority are not impacted emotionally by the event. Furthermore, many of the incidents are disclosed to either a peer or an adult, suggesting that young people are reaching out and not experiencing the harassment in isolation. On the other hand, our findings reveal that Internet harassment can be a serious event for some youth. One in 3 targets of Internet harassment report being harassed ≥ 3 times either by the same person or different people. In specific incidents, one in 4 targets of Internet harassment report an aggressive offline contact by the harasser, such as being called on the telephone or visited at their home. Two in 5 youth targeted report feeling upset or afraid by the incident. Together, these data suggest that for an important minority, Internet harassment can be an upsetting experience. On the basis of a significant increase in the report of Internet harassment from 2000

to 2005,²¹ adolescent health professionals should continue to be vigilant about such experiences in the lives of young people with whom they interact.

Findings suggest that some notions of Internet harassment might need to be modified. Almost 1 in 4 Internet harassers are reportedly ≥ 18 years of age, and only half are known to the youth in person before the event. Both of these characteristics point to asymmetrical power that could make some incidents of Internet harassment different in form than that experienced by victims of more conventional forms of bullying, in which the youth typically knows and can see the aggressor.²² Approximately half of targets report the harassment involves information being posted or sent to someone else about the respondent. Thus, intervention messages encouraging young people to simply log off do not necessarily acknowledge the challenge that many youth face in managing their harassment. Adolescent health professionals should partner with parents and young people to identify strategies to minimize the impact of each harassment episode tailored to its specific characteristics.

Online activities that typically involve self-expression, specifically instant messaging, blogging, and visiting chat rooms, are associated with increased odds of reporting Internet harassment after adjusting for other

TABLE 3 Bivariate Comparisons of Characteristics Associated With Emotional Distress Among Targets of Harassment Incident (n = 130)

Characteristic	Not Distressed (61.5% [n = 80]), % (n)	Emotionally Distressed (38.5% [n = 50]), % (n)	Statistical Comparison	
			OR (95% CI)	P
Harassment characteristics				
Chronic (≥ 3 times)	25 (20)	44 (22)	2.4 (1.1–5.0)	.03
Disclosed the incident to someone	66 (53)	70 (35)	1.2 (0.6–2.5)	.66
Harasser characteristics				
Known in person before event	48 (38)	40 (20)	0.7 (0.4–1.5)	.40
Age ^a				
Preadolescent (10–12 y)	5 (4)	12 (6)	3.2 (0.8–12.6)	.09
Adult (≥ 18 y)	16 (13) ^b	34 (17) ^b	2.8 (1.2–6.8) ^b	.02 ^b
Adolescent (13–17 y)	56 (45)	42 (21)	1.0 (reference)	
Unknown to respondent	23 (18)	12 (6)	0.7 (0.2–2.1)	.53
Gender ^a				
Male	48 (38)	54 (27)	1.5 (0.6–3.5)	.36
Unknown to respondent	21 (17)	22 (11)	1.3 (0.5–3.8)	.57
Female	31 (25)	24 (12)	1.0 (reference)	
Harasser actions				
Asked target to send picture online	14 (11) ^b	38 (19) ^b	3.8 (1.6–9.0) ^b	.002 ^b
Aggressive offline contact	19 (15) ^b	36 (18) ^b	2.4 (1.1–5.5) ^b	.03 ^b
Internet use				
High use	49 (39)	34 (17)	0.5 (0.3–1.1)	.10
Activities				
Blogging	30 (24)	36 (18)	1.3 (0.6–2.8)	.48
Instant messaging	94 (75)	84 (42)	0.4 (0.1–1.1)	.08
Chat room	58 (46) ^b	34 (17) ^b	0.4 (0.2–0.8) ^b	.01 ^b
Personal characteristics				
Preadolescent (10–12 y old)	8 (6) ^b	20 (10) ^b	3.1 (1.0–9.1) ^b	.04 ^b
Female	51 (41)	68 (34)	2.0 (1.0–4.2)	.06
Hispanic ethnicity	6 (5)	8 (4)	1.3 (0.3–5.1)	.70
Lower income (less than \$50 000 annual income)	33 (26)	32 (16)	1.0 (0.5–2.1)	.95
High school education or less	18 (14)	16 (8)	0.9 (0.3–2.3)	.82
White race	88 (70)	76 (38)	0.5 (0.2–1.1)	.09

^a Categorical variable. Subcategories are mutually exclusive.

^b Characteristics retained in the final parsimonious logistic-regression model. Resulting AORs from the multivariate model are slightly different in magnitude (see text).

influential characteristics. This is not particularly surprising, because by definition, Internet harassment is a type of online self-expression. To engage in it, the harasser must choose some form of online communication. Today's young people have grown up with the Internet, and for many it is one of a handful of communication tools on which they rely to keep in touch with friends and family. The suggestion that young people not engage in these interactive activities is likely to be ineffective, because it fails to recognize the importance of these communication tools in the lives of young people and its broad-stroke approach fails to acknowledge that both positive and negative communications can occur during these activities. Indeed, the content and tone of the communication rather than the mode of transmission likely influences whether an interaction is perceived as harassing. This is supported by the parallel findings that social problems and online aggressive behavior are each associated with elevated odds of being the target of harassment, even after adjusting for all other significant characteristics. Thus, those who have trouble communicating are significantly more likely to be involved in Internet harassment. Instead of trying to reduce the

number of youth who use instant messaging, blogs, or chat rooms, prevention efforts may be best aimed at improving interpersonal skills of young people who choose to communicate with others using these online tools.

The majority of youth who are targeted by Internet harassment are not upset by the experience. Nonetheless, almost 2 in 5 (39%) youth who are targets of Internet harassment report resulting emotional distress. Distressed youth are significantly more likely to be preadolescents as opposed to adolescents and to have less experience with chat room use. This is in opposition to the general profile of targets of Internet harassment, which is of older adolescents who use instant messaging and visit chat rooms. It is possible that preadolescents are more vulnerable to distress because they lack the coping skills developed by older youth. These children also may be more naive and therefore likely to believe threats received or, in general, lack the skills to effectively evaluate the true threat that a harassment event poses, thereby leading to greater distress. In contrast, it is possible that users of chat rooms are more savvy Internet users. The general tone of chat room conversations may

be coarser, so that frequent visitors may develop a higher threshold for what they find upsetting. If true, the increased likelihood of being harassed in chat rooms may serve as a protective effect for subsequent distress because users have a higher exposure to this type of interaction.

Findings reveal aspects of the harassment event that are significantly related to the report of emotional distress. Adolescent health professionals should be especially aware of events that include aggressive offline contacts or asking the child or adolescent to send a picture of themselves, because each of these increase the odds of reporting distress by more than threefold among otherwise similar youth who report Internet harassment. Perhaps because the majority of harassers are reported to be peers <18 years old, being targeted by someone \geq 18 years of age is related to a fourfold increase in the likelihood of distress after adjusting for all other influential characteristics. People who are confided in by these young people should pay special attention to the characteristics of the event and monitor the youth accordingly.

Some directions for Internet-safety efforts are indicated. Findings further support the call for the inclusion of Internet-harassment prevention in conventional antibullying programs.²² In addition, one third of events are reported to adults. It is important, therefore, for adults to be educated about Internet harassment and ready to discuss with youth what their online experiences are. They must assess the relative severity of the incident and work in partnership with the youth to identify ways to prevent future incidents. This includes not overreacting or restricting youth from the Internet; we should encourage youth to disclose harassment without fear of consequences or restrictions on their behaviors as a result. In addition, the majority of harassers are under the age of 18 years. It is important to continue empowering schools to address Internet bullying situations that occur between students. This will not solve all situations, however. We must also encourage Internet service providers to partner with consumers to be proactive in serious harassment episodes that involve harassers who are adults.

LIMITATIONS

There are several limitations that should be kept in mind when interpreting these results. First, the data are cross-sectional. Temporal inferences cannot be made. We cannot say, for example, that social problems caused harassment or that harassment led to a decrease in social problems. Second, the current analyses reflect the respondent's self-identified most bothersome event. The data do not allow the assessment of distress over multiple incidents and multiple harassers. This may have led to an overestimation of overall distress associated with Internet harassment; perhaps youth who were harassed

multiple times were not upset by the other experiences. On the other hand, it may be an underestimation of overall distress if youth who were harassed multiple times were upset by many or all of the incidents. Future studies should investigate further the role that multiple harassers may have on one's mental health. Finally, the response rate is reflective of a general decline in response rates that has been seen in national telephone surveys,^{15,16} which are challenged by the do-not-call list, caller ID, and cell phone-only households. National telephone surveys continue to obtain representative samples of the public, however, and provide accurate data about the views and experiences of Americans.¹³

CONCLUSIONS

Our findings reveal both encouraging and concerning aspects of Internet harassment. The majority of targets are not upset by the experience, and the incidents tend to be isolated episodes between peers. An important minority, however, reports harassment experiences that are repeated, distressing, and include harassers who are adults and aggressive offline contacts. These details reinforce the seriousness of some harassment episodes occurring on the Internet by young people. Service providers and professionals interacting with youth should be mindful of the circumstances surrounding the incident to aid in early identification and provide support to those who experience distress because of the incident. Future studies should examine potential differences in youth characteristics and experiences according to youth gender and age.

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