Evaluation of Internet Child Safety Materials Used by ICAC Task Forces in School and Community Settings (PROJECT NUMBER 2009-SN-B9-0004)

NIJ EVALUATION FINAL TECHNICAL REPORT

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ABSTRACT

Research Goals and Objectives: This project involves content and process evaluations of current internet safety education (ISE) program materials and their use by law enforcement presenters and schools. Despite a proliferation of internet safety programs over the last decade, there is little information that can guide law enforcement, policy makers or the public in determining which materials or delivery methods are most likely to increase children's online safety. The design of the proposed content and process evaluation is based on the perspective that, despite widespread dissemination, internet safety education is still in a formative stage. It is not clear that ISE messages have been formulated around a careful analysis of the risk and the ways that youth experience problems online, or that they have applied research-based prevention strategies. While outcome evaluation will be critical to determining the effectiveness of internet safety programs in the future, it is important to identify problems in ISE delivery and create guidelines for developing more promising programs.

Research Design and Methodology: The study was divided into four subprojects. First, a systematic review or "meta-synthesis" was conducted to identify effective elements of prevention identified by the research across different youth problem areas such as drug abuse, sex education, smoking prevention, suicide, youth violence, and school failure. The process resulted in the development of a KEEP (Known Elements of Effective Prevention) Checklist. Second, a content analysis was conducted on four of the most well-developed and long-standing youth internet safety curricula: i-SAFE, iKeepSafe, Netsmartz, and Web Wise Kids. Third, we conducted a process evaluation to better understand how internet safety education programs are being implemented. The process evaluation was conducted via national surveys with three different groups of respondents: Internet Crimes Against Children (ICAC) Task Force commanders (N=43), ICAC Task Force presenters (N=91), and a sample of school professionals (N=139). Finally, we developed an internet safety education outcome survey focused on online harassment and digital citizenship. The intention for creating and piloting this survey was to provide the field with a research-based tool that can be used in future evaluation and program monitoring efforts. This tool, along with other research and evaluation information on internet safety will be placed in an Internet Safety Education Resource Center on the ICAC Task Force website.

Research Results and Conclusions: The internet safety education (ISE) content and process evaluation results indicated that the educational approach and messages of current ISE fail to incorporate critical elements of effective prevention education, including: 1) research-based messages; 2) skill-based learning objectives; 3) opportunities for youth to practice new skills; and 4) sufficient time for learning. Our analyses indicate that the ISE field has been slow to include research-based information on internet predators and online harassment and there is no research to support the assumption that many of the popular educational slogans messages around privacy and digital reputation concerns (e.g., "Think Before You Click") will lead to improved youth online behavior. The failure to define research-supported program logic means that most ISE is a highly speculative and experimental undertaking, whose success cannot be assumed. Recommendations are made for re-conceptualizing ISE and developing a more effective approach to helping protect youth.

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EXECUTIVE SUMMARY

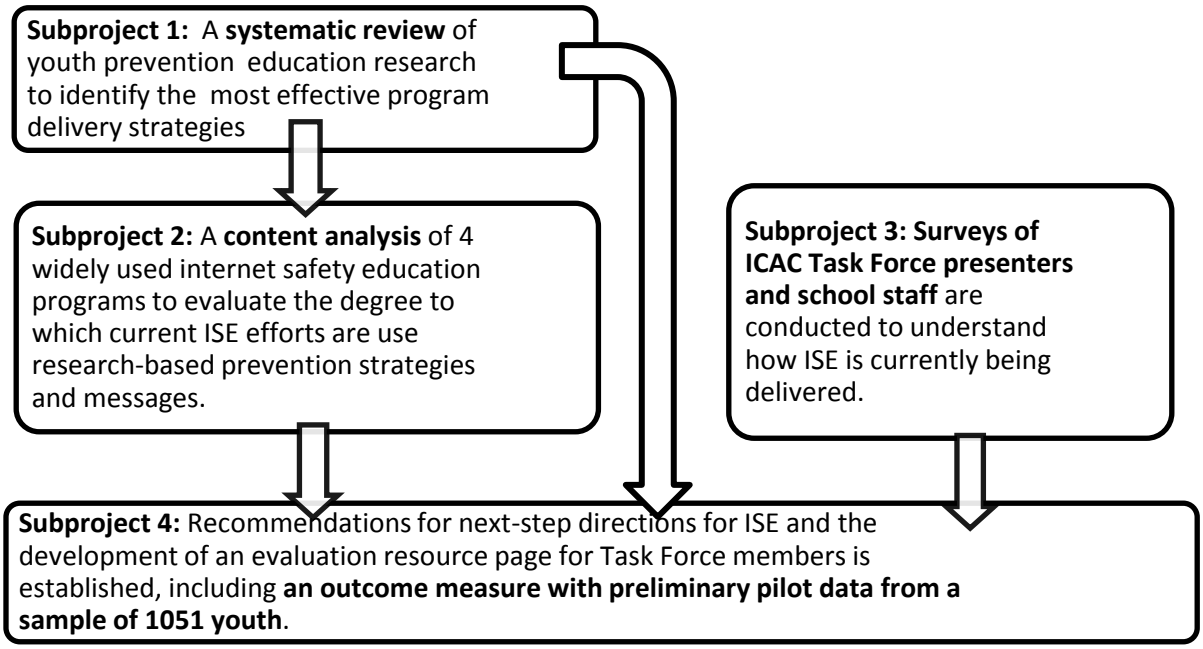
The rapid development of new technology over the past two decades is likely to be considered a hallmark of our times, but publicity about online predators and cyberbullying has raised alarms about risks for youth. Law enforcement has been active in delivering materials to communities and dissemination efforts have been very successful. A recent national survey of youth internet users found that in 2010, 47% of youth reported attending an internet safety program hosted by law enforcement in the previous year (Mitchell et al., 2012a). This is up from 21% of youth who reported ISE exposure from law enforcement in 2005. Unfortunately, the broad dissemination of ISE prevention programs and materials happened so quickly that much of it has been put into place before substantial research was available on the nature of the problems youth were experiencing online and their causes.

To prepare for outcome evaluation, it is important to first understand how the field is currently delivering ISE. The current study was designed to: 1) create checklists to help policy-makers, program developers and consumers better identify programs that use proven methods and incorporate research; 2) evaluate how well a sample of ISE programs meet these criteria, looking at lessons from four long-standing and well-established ISE programs: IKeepSafe, I-SAFE, Netsmartz, and Web Wise Kids; 3) understand how ISE program materials are being used by educators and law enforcement presenters; and 4) provide pilot data on an ISE outcome measure that can be used in future evaluation.

METHODOLOGY

To achieve these project aims, our study was divided into **four subprojects** (see Figure 1).

Figure 1. Study subprojects



First, a systematic review was conducted to identify effective elements of prevention across different youth problem areas such as drug abuse, sex education, and youth violence. We coded 31 meta-analyses that looked at whether particular program characteristics (e.g., theoretical approach, type of program leader, length of program) were related to the effectiveness of the reviewed prevention programs. Based on the review, a KEEP (Known Elements of Effective Prevention) Checklist was developed for use as a guidance tool by ISE program developers and consumers, listing the program delivery elements shown to be most effective.

Second, we conducted a content analysis of 33 lessons from four well-developed and long-standing youth ISE curricula: i-SAFE, iKeepSafe, Netsmartz, and Web Wise Kids. Lessons were coded by identifying key program messages, and rating curriculum materials using the KEEP Checklist and ISE Fact Checking Sheets, developed for this project.

The third subproject involved a process evaluation to better understand how internet safety education programs are being disseminated. The process evaluation was conducted via national surveys with three groups: 1) 43 ICAC Task Force commanders; 2) 91 law enforcement

professionals from 34 states who present ISE for ICAC Task Force; and 3) 139 school representatives from 32 states who were recruited by posting about the survey on several educational listservs, including three email forums serving school librarians.

For our fourth subproject, we piloted an internet safety education outcome survey focused on online harassment and digital citizenship and administered it to 1051 students in the 6th through 10th grades at 5 middle schools and 1 high school in New Hampshire. Our goal was to provide the field with a research-based tool that can be used in future evaluation and program monitoring outcomes.

KEY FINDINGS

A description of the results is provided for each of the subprojects separately below.

Subproject 1: Development of the KEEP Checklist (Known Elements of Effective Prevention).

The meta-synthesis systematically identified prevention program strategies that can be considered "evidence-based" across a wide range of youth problems. The key markers of successful prevention education found across the reviewed meta-analyses were:

1) A structured curriculum: activities and presentation materials that are manual-based in order to ensure consistent quality delivery.

2) Skill-based learning objectives that target established risk and protective-factors: the review identified a benefit to focusing on a) skill-based learning objectives that are b) supported by research on risk and protective factors.

3) Active learning strategies: a) role-playing, in which students had an opportunity to practice the skills they had been taught; and b) active discussion periods, including open-ended questions and debate.

4) Adequate dose: while lengthy, long-term programs were not necessary, single-session lessons were not enough. Research suggested that several lessons are needed, with each lesson building on the previous.

5) Additional learning opportunities: homework, and by booster sessions provided after the initial program is administered.

Findings for other prevention elements or characteristics studied by the meta-analyses were less conclusive and more research will be needed to understand their role in effective prevention. For example, while including youth as presenters did not result in improved effectiveness for many studies; one meta-analysis found a strong effect for the involvement of peers (Gottfredson & Wilson, 2003). It is a prevention education strategy that deserves more attention from evaluation researchers.

Subproject 2: A content analysis of four ISE programs

We coded 16 selected lessons from four ISE programs (I-Safe, IKeepSafe, Web Wise Kids, and Netsmartz) using the KEEP Checklist and identified that most failed to incorporate basic standards of effective prevention education. While all of the reviewed programs provided "structured lessons," most did not list skill-based learning objectives, none specified the research behind what was being taught and the expected outcomes, and none of the programs provided an adequate dose for learning. Each program had clearly spent a lot of time creating multiple lessons across a range of different ISE topics, but the lessons were typically offered as stand-alone topics.

Most of the reviewed ISE programs had integrated active discussion sessions into their lessons, in which time was set aside for youth to respond to open-ended questions. However, only one of the reviewed lessons included role-playing. While many of the programs had developed creative activities to accompany their materials, the activities were designed to reinforce educational messages versus provide opportunities for the youth to practice skills.

The ISE Fact-Checking Sheets indicated that the reviewed ISE programs were also not incorporating research-based messages consistently. The materials on sexual solicitations and internet predators included an average of 2 out of 7 research-based messages. Materials on sexting

included an average of 2 out of 5 research-based messages we coded. And the ten lessons focused on cyber-bullying included an average of 3 out of 8 research-based messages.

Finally, a larger sample of 33 ISE program lessons was coded for key educational messages. The most common educational messages were: "Tell an adult if something happens online that makes you uncomfortable" and "Don't share or post personal information online." For elementary-aged youth, a common ISE message was to "Be wary of people you meet online." The digital literacy materials showed slightly different emphases. The most typical messages were: "Think before you click or post," "Check your social network privacy settings and be careful who you friend" and "Consider what the information you put online says about you." There are potential logical flaws in the assumption that these educational messages will result in improved safety, and evaluation is needed if such messages are going to be further disseminated.

Subproject 3: Surveys of ICAC Task Force presenters and school professionals on ISE delivery.

A survey administered to a sample of ICAC Task Force presenters (N=91) found that 66% percent of the sample reported presenting on ISE 6 or more times in the previous year (See Table 1). Sixty-two percent reported that they regularly update their materials with research findings, with 22% of that group (10% of whole sample) using publications or website material from established research centers. When asked about their most recent ISE presentation, respondents indicated that the majority of presentations were done in one session (86%). ISE presentation topics covered a wide range of concerns but internet predators and cyberbullying were the most common topics of respondents' recent presentations.

Table 1. ICAC ISE Presenter Survey Results (N=91)

Presentation Characteristics	ICAC Task Force Respondents n (%)
# of ISE presentations in the past year:	
1-10	49 (54)
1-25	21 (23)
26 or more	21 (23)
Groups presented with ISE in past year: [a]	
Schools	86 (95)
Religious organizations	41 (45)
Community groups	65 (71)
Other organizations	24 (26)
Presentation length (last presentation):	
One session	78 (86)
Multiple sessions	11 (12)
Primary topic of last ISE presentation:	
Online harassment/cyberbullying	24 (28)
Internet predators	32 (38)
Other or no primary topic	29 (35)
Materials used in last presentation: [a]	
Netsmartz	51 (56)
Web Wise Kids	1 (1)
i-SAFE	5 (6)
iKeepSafe	3 (3)
Self-created materials	74 (81)
Other	42 (46)
Presentation included discussion period?	79 (87)
Interactive discussion with open-ended questions asked by presenter?	31 (34)
Presentation included activities w/ participants?	22 (24)
Role-playing?	6 (7)

[a]Multiple responses possible.

The majority of ICAC Task Force presenters described using self-created materials (81%), and over half of the sample used materials by Netsmartz. Most ICAC Task Force respondents included a discussion session as part of the presentation (87%), with 34% using questions to generate active discussion with the audience (versus only taking questions). The minority of ISE presentations conducted by Task Force respondents included some kind of additional learning related activity (24%) although only 7% used role-plays.

In our survey of school professionals (N=139), 29% of respondents reported that ISE was provided by an outside speaker coming into the school and 19% reported that the ISE speaker had a criminal justice background (See Table 2). Fifty-six percent of school respondents reported that teachers informally include ISE in the classroom, while 36% reported the use of specific ISE curricula or programs. Respondents indicated that their primary ISE concerns are cyberbullying (39%), privacy (21%), and online reputation (18%). Only 7% cited internet predators as most important for ISE focus and no respondent cited sexting as the most important topic.

Table 2. School Professional ISE Survey Results (N=139)

ISE Characteristics	School Respondents n (%)
Types of ISE implemented: [a]	
ISE presentation by outside speaker	40 (29)
Speaker had law enforcement background	26 (19)
Teachers informally include ISE in classrooms	78 (56)
Teachers or school staff use specific ISE	50 (36)
Most important topic for ISE:	
Sexting	0 (0)
Privacy	24 (21)
Online reputation	22 (18)
Online harassment/cyberbullying	47 (39)
Internet predators	9 (7)
Other	19 (16)
ISE programs or materials used: [a]	
I-SAFE	28 (20)
IKeepSafe	8 (6)
Web Wise Kids	6 (4)
Netsmartz	48 (35)
Common Sense Media Digital Literacy	48 (35)
Other	
Open-ended questions used to generate discussion of ISE?	82 (64)
Role-playing activities included?	50 (39)

The most commonly used curricula by the schools in our sample were Netstmartz (35%); Common Sense Media Digital Literacy curriculum (35%); and i-SAFE (20%). Sixty-four percent reported their program included open-ended discussion sessions and 39% reported that their ISE program included role-playing to reinforce new skills and learning.

Subproject 4: ISE outcome survey development and piloting.

Our administration of the ISE Outcome Measurement Survey found that results for the pilot sample of 1051 youth were similar to the findings of national surveys of online harassment. Thirty-five percent of youth reported that they had been the target of at least one of five negative harassment experiences in the last 3 months (See Table 3). Nine percent of youth reported that they were significantly distressed or embarrassed as a result of online harassment.

Table 3 . Pilot Internet Safety Outcome Survey Results (N=1051)

Online Experiences and Behaviors	Students n (%)
In the past 3 months, did someone:	
Make rude or mean comments to you on the internet?	315 (30)
Use the internet to harass or embarrass you?	143 (14)
Spread rumors about you through the internet?	159 (16)
Share something about you with others online that was meant to be private	160 (16)
Post or forward a video or pictured of you online when they knew it would hurt your feelings or upset you?	89 (9)
Any of the above	371 (35)
In the past 3 months, did you:	
Make rude or nasty comments to someone on the internet?	242 (24)
Use the internet to harass or embarrass someone that you were mad at?	111 (11)
Spread rumors about someone through the internet?	60 (6)
Share something about someone with others online that was mean to be private?	90 (9)
Post or forward a video or picture of someone online when you knew it might hurt or upset them?	49 (5)
Participate in an online group or social networking site where the focus was making fun of someone you know?	59 (6)

The outcome measure also included a measure of "digital citizenship" with Online Kindness and Online Helpfulness subscales. The digital citizenship subscales show good initial psychometric results and will provide ISE programs with a way to measure positive effects of a program on kind and helpful behavior online.

The pilot survey and a user's manual will be placed in an ISE Resource Center on the Fox Valley Technical College's Internet Crimes Against Children Training and Technical Assistance Program (FVTC/ICAC T&TA) for easy accessibility by law enforcement presenters and others.

CONCLUSIONS

Our study found that that the educational approach and messages of most current ISE fail to incorporate critical elements of effective prevention education. Our analysis of four leading ISE programs and survey of ICAC Task Force ISE presenters found that the current approaches to ISE lack: 1) research-based messages; 2) skill-based learning objectives; 3) opportunities for youth to practice new skills; and 4) sufficient time for learning. As a whole, the ISE field has been slow to include research. This failure to establish research-supported program theory means that most ISE is a highly speculative and experimental undertaking, whose success cannot be assumed. Policy-makers, consumers, and communities need to demand ISE programs increase their efforts meet basic standards of effective prevention.

What is the best role for law enforcement?

The criminal justice field deserves praise for highlighting potential internet problems and for mobilizing so quickly. But having law enforcement as the lead professionals in the ISE mobilization also has some drawbacks. First, law enforcement personnel are not generally trained in teaching and curriculum development. Second, it is not clear that it is a sustainable model. It is difficult for law enforcement personnel, who have extensive additional responsibilities, to commit to curricula that require skill-based lessons to be taught over multiple sessions. Finally, law enforcement may not bring the most successful message or tone to ISE. Because of their experience and professional orientation, they tend to emphasize crime and danger, and punishment and sanctions. It is not clear that these themes help to advance many of the skills and behavioral changes that ISE is trying to achieve.

The answer is not necessarily to exclude law enforcement, but to clarify through study and evaluation the roles in which they can be most effective. There are likely creative ways to maintain the potential benefits of law enforcement involvement, even if their role shifts. For example, law enforcement presenters could be brought into talk about very specific law-based issues as a part of a larger ISE school-based curriculum. Or, school resource officers, located in schools might be trained to provide evidence-based curricula over a longer period of time.

POLICY AND PRACTICE IMPLICATIONS

Below we highlight additional implications of our review for the ISE field and outline our key recommendations.

1. **ISE education must move beyond a reliance on stock safety messages and the use of single lessons when addressing complex social-emotional behaviors.**

The assumption behind the current approach to ISE is that youth suffer from a lack of knowledge. However, telling youth to not cyber-bully or share sexual pictures with a boyfriend will have little effect on behavior, according to prevention research: Most youth already know these behaviors are wrong or risky, and either see the benefits outweighing the risks, or perhaps see no other options to handle strong emotions. The more difficult job for ISE program developers is to get youth to actually use this knowledge. Research has provided some guidelines on how to do this including skill-building, better use of research, active learning strategies, and adequate time for youth to learn and practice the skills. Complex problems like peer harassment, risky sexual decisions, and unhealthy romantic relationships (online or off-line) require more time than one 45-minute lesson can offer.

2. **ISE program developers need to reduce their reliance on dramatic statements and scare tactics even further.**

While none of the ISE program materials used the most egregious examples of scare tactics, there were still more subtle examples such as defining sexting broadly (e.g., sending sexual text

messages) and then mentioning that youth are put on sex offender registries for sexting. A second type of scare tactic is using the highest victim rates available to impress on youth, schools and parents the degree of danger. Research shows that most youth do not cyber-bully, do not send sexual pictures, and internet predator abductions are rare. Youth are either going to discount the inflated numbers, be confused by them, or the messages could back-fire by providing youth with negative social norms.

3. **The ISE field needs to re-consider ISE for young children.**

The ISE materials developed for younger children relied much more often on stereotypes and vague messages than the materials for older youth. And the problems that they targeted represented situations that very few children under ten years old have come across. Young children are not interacting with peers online very much, have limited to no interactions with "strangers" online, and have extremely low rates of unwanted experiences online. The idea behind developing ISE materials for young children is probably the hope that important prevention messages will be conveyed before problems begin. But there is no research to suggest that these vague messages will be remembered once the youth reaches the age in which the scenarios might apply.

4. **"Internet safety" goals are very disparate—different educational strategies are going to be needed for different ISE topics.**

ISE programs combine messages about cyberbullying, problematic content (e.g., videos of fights, inappropriate pictures), internet predators, sexting, spam, e-theft, and illegal downloading. But the program logic should look very different for these different ISE concerns. What a youth needs to know to avoid being groomed by an adult online offender (e.g., how to avoid risky relationships) is very different from what they may need to know to avoid cyber-bullying (e.g., how to de-escalate peer conflict). And the skills needed to navigate either of these complex social-emotional concerns are quite different from the fairly straight-forward knowledge they need to

avoid spam and malware. There is not a generic "skill set" or "knowledge set" that is a core to an internet safety "curriculum." We recommend that ISE programs create full, evidence-based programs around specific educational topics.

The field also may need to consider the possibility that stand-alone prevention programs focused on technology-based problems is inefficient given the extensive overlap between online and offline problems. Schools are overwhelmed already by the numerous social and safety problems they are expected to address. It might make more sense to roll existing knowledge about new technology-related problems into proven prevention education focused on broader problem areas.

5. **The field needs to use research more when developing educational messages: ISE messages have critical problematic assumptions and under-developed program logic.**

As an example, the thought behind the common ISE message "Think before you click" appears to be that impulsivity is causing a lot of online problems for youth. But we have no data that this is the case. It may be that even if there were a way to get them to pause and "think," youth would still choose to send the mocking text or post or send the sexy picture. Youth decision-making in these contexts may have more to do with anger, or attention seeking, or sexual expression than impulsive actions.

Even the common ISE recommendation for youth to "Tell an adult" has questionable protective logic. Probably most youth in difficult situations consider it, but hold off for a variety of understandable reasons. And a youth would have to overcome strong natural inhibitions to talk to an adult about sexual conversations, even if that talk had turned disturbing or uncomfortable. Making the issue of "telling" even more complex, the youth running into particular troubles online are often the very youth who have communication problems with adults or parents.

Below we briefly review some of the logic errors that need to be resolved around specific ISE topics:

Internet predators. Research shows that the vast majorities of cases do not involve deceit, but rather teens agreeing to meet individuals that they know are adults for sexual encounters because they believe they are in love or in pursuit of romantic adventure or excitement. Rather than naïve youth, the victims are often at-risk youth with family conflict and abuse histories. This is a complex dynamic that warnings about adults posing as teens and exhortations about parental supervision may not be adequate to address.

Sexting. The "sexting" problem has been conceptualized as young people making and sending sexual images of themselves. But there is an enormous amount about the dynamics and motives of sexual image production and exchange among youth that is not yet understood. Available research suggests that this behavior is complicated and diverse, and ranges from cases of blatant exploitation at the hands of adults to romantic sharing among youth who are old enough to have legal sexual relationships. Will warnings about legal prosecution and effects on one's reputation increase responsible behavior? It is not a simple proposition.

Cyber-bullying. The cyberbullying lessons typically exhort youth to refrain from nastiness and meanness in online communications, and to tell parents and school authorities when they are targeted. But the challenges of bullying prevention are large and have befuddled educators for generations, and they almost certainly apply to cyberbullying as well.

Privacy. Privacy instructions are one of the most common messages we found across all ISE topics that we reviewed--cautions not to give out personal information, not to share passwords, not to use their real name and address. But can such generic messages actually be much of a guide? What do young people hear when educational programs give them messages like "don't give out personal information" that are at odds with the real world and fail to account for its obvious complexity? At best, one would hope that they think about the problem a bit and derive some rough personal rules. But more likely they just ignore it. Worse, however, is the possibility that

such information adds to youth cynicism that adults and educators don't know what they're talking about, and then feel free to ignore everything else they say.

Our review suggests that ISE program developers must do a better job defining their program logic and becoming familiar with the growing research on internet safety, and the more extensive literature on prevention in related problem areas (e.g., bullying, sexual risk taking, dating violence). As an example of what this might look like, a program for middle-school youth targeting cyberbullying might begin by researching risk and causal factors related to bullying and cyberbullying (e.g. anger management problems, social pressure or positive feedback experienced by peers when engaging in bullying behaviors) and develop a program that uses evidence-supported strategies to improve these factors (teaching youth anger-management skills or ways to handle social pressure to "join in" with negative peer behaviors; or increasing social norms around support for students who promote positive bystander behaviors), with the expectation that these strategies will reduce cyber-bullying behaviors and increase positive bystander behaviors.

6. **Outcome evaluation is a critical next-step.**

We hope that this study will encourage ISE program developers, consumers and policy-makers to replicate our review process themselves and consider the degree that existing and new curricula incorporate research and define program logic. Once an ISE program has defined their problem and goals well, clarified their program logic based on the best available research, and incorporated proven educational and prevention evaluation strategies, rigorous outcome evaluation is the next step to making sure that these efforts work in the expected ways.

NIJ EVALUATION DRAFT FINAL TECHNICAL REPORT

Evaluation of Internet Child Safety Materials Used by ICAC Task Forces in School and Community Settings

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The rapid development of new technology over the past two decades is likely to be considered a hallmark of our times, but publicity about online predators and cyberbullying has also raised considerable alarm about the extent that internet use puts children and adolescents at risk. Numerous internet safety education (ISE) website, presentation and classroom materials have been created in order to educate youth and the public about online safety issues (The Online Safety and Technology Working Group, 2010). Law enforcement has been active in disseminating materials to communities (Jones, 2012; Mitchell, Jones, Finkelhor, & Wolak, 2012b) and schools are increasingly integrating internet safety and prevention messages into health and computer education curricula (Berson, Berson, & Ferron, 2002; Berson & Berson, 2003; Valcke, Schellens, Van Keer, & Gerarts, 2007; Wishart, 2004).

Efforts to expose youth to ISE messages and materials appear to have been very successful. A recent national survey of youth internet users found that in 2010, 47% of youth reported attending an internet safety program hosted by law enforcement in the previous year (Mitchell et al., 2012b). This is up from 21% of youth who reported ISE exposure from law enforcement in 2005. Similarly, the percentage of youth who reported receiving information on internet predators and online sexual solicitations from teachers and school staff increased from 30% in 2005 to 45% in 2010. There are likely to be further increases over the next five years. The Children's Internet Protection Act (CIPA) ("Protecting Children in the 21st Century Act;" 2008, Public Law 110-385) is a newly enacted law mandating that elementary and secondary schools that receive discounted internet access rates must certify with the Federal Communications Commission (FCC) that they are "educating minors about appropriate online behavior, including interacting with other individuals on social networking websites and in chat rooms and cyber bullying awareness and response." No specific guidance for schools has been provided by the FCC on what form that education should take, or how to determine which materials are most likely to help their students.

Unfortunately, the broad dissemination of ISE prevention programs and materials happened so quickly that much of it was put into place before substantial research was available on the nature of the problems youth were experiencing online and their causes. While a great deal of funding has supported new ISE program development, almost no resources have been directed at testing their effectiveness through evaluation. A few small evaluations of ISE programs have been undertaken (Branch Associates, 2002; Brookshire & Maulhardt, 2005; Chibnall, Wallace, Leicht, & Lunghofer, 2006; Mrazek, Hutton, & Cupit, 2006; Pruitt-Mentle, Pusey, & Grahek, 2009) but they lack rigor and do not provide evidence that programs alter youth behavior or reduce risk.

The earliest approaches to ISE prevention were not promising—single presentations using fear-based tactics appeared to be common (Jones, 2012) despite decades of prevention research showing that this approach is ineffective (Jones & Finkelhor, 2011). And many ISE messages and slogans have become disseminated without consideration of the logic or research behind the

messages. The situation is unfortunately reminiscent of drug abuse education mobilization of the 1970s (Jones, 2010). In that era, anxiety about growing use of illegal drugs spawned an array of drug education programs aimed at warning youth about the dangers (Gorman, 1997, 1998). The programs ballooned in popularity, but did little to stem the tide, and were eventually judged by evaluation studies to be largely ineffective (Clayton, Cattarello, & Johnstone, 1996; Ringwalt et al., 2009). Drug prevention education was then completely retooled, and a second generation of programs were developed, this time with the aid of evaluation research, and proved to be more successful (Botvin, 2000; Norman & Turner, 1993; Pentz, 2003). But millions of dollars and thousands of hours were almost certainly squandered in the process.

Outcome evaluation will be needed soon to make sure that internet safety education does not follow a similar path, but it also does not make sense to dedicate extensive funds to rigorous outcome evaluation unless we have some confidence that the interventions have a good chance at success. Given that ISE efforts are already widespread, it is important to first understand how the field is currently delivering ISE and ensure that it is moving in a direction that supports the likelihood of effectiveness. Below we discuss four important formative tasks for the ISE field: 1) better defining prevention goals and linking them to specific education messages; 2) increasing the extent that educational programs include procedures that have been demonstrably effective in other areas of prevention; 3) reviewing how program materials are being used by educators and law enforcement presenters; and 4) developing quality measurement tools in order to prepare for evaluation.

Defining prevention goals. Prevention science tells us that a number of fairly straightforward requirements are necessary for a program to reduce or prevent a problem. First, there needs to be a clear understanding of what problem or behavior is to be prevented. Second, the dynamics of the problem have to be relatively well understood and used as a foundation for educational strategies and messages. Third, prevention strategies must be developed that provide new information or correct misperceptions related to the problem, reduce causal factors, or increase protective behaviors (e.g, skills) that will directly reduce the problem. This is known as defining one's "program logic." Once these steps have been followed, a prevention approach or program can be considered well-designed and is ready for outcome evaluation--the final critical piece to ensuring that a program or approach delivers the expected results.

Looking back over problems in prior efforts to increase youth health or safety behaviors, one can identify a lapse in one of these three foundational pieces. For example, early child sexual abuse prevention efforts failed to understand the real dynamics of the problem. When people thought that child sexual abusers were primarily strangers in public places using lures and abductions, it led to misguided education that was not rectified until the dynamics of the predominant problem -- acquaintance child molesting -- were analyzed (Finkelhor, 1979). Similarly, initial thinking about cigarette smoking was that young people simply did not realize that there were risks, and once they understood the dangers, they would avoid the habit. But educational approaches based on this "information deficit" model showed little effect. It wasn't until educators recognized the importance of peer influence and designed programs to help youth resist this influence that it was possible to design successful prevention programs (Lantz et al., 2000). Unfortunately, given that so much prevention education has been put in place ahead of research, internet safety education programs may be making many of these same mistakes.

Incorporating effective prevention strategies. The ISE field is lucky to be able to draw from a large body of prevention program evaluation that has already been conducted across a wide range of problem behaviors. Research in areas prevention such as drug use, mental health and youth

violence are finding that similar educational strategies are related to effectiveness (Bond & Carmola Hauf, 2004; Durlak & Wells, 1997; Kirby & Coyle, 1997; Luna & Finkelhor, 1998; Nation et al., 2003; Stice, Shaw, Bohon, Marti, & Rohde, 2009). While most of the research summarizing effective components across different areas of prevention has done so informally, some common themes emerge.

The most successful programs seem to be **grounded in theory**, meaning that program developers explicitly define why and how they think the program is effective, and use behavioral, social and communication theories to shape the intervention (Bond & Carmola Hauf, 2004; Botvin, 2000; Dusenbury & Falco, 1995; Haney & Joseph A. Durlak, 1998; Kirby & Coyle, 1997; Nation et al., 2003; Norman & Turner, 1993). Research across different areas has also found that **interactive programs with skills training offered over multiple sessions** outperform non-interactive, lecture-based, one-shot programs (Bond & Carmola Hauf, 2004; Ennett, Tobler, Ringwalt, & Flewelling, 1994). And homework and booster sessions appear to increase positive outcomes even further (Bond & Carmola Hauf, 2004; Botvin, 2000; Dusenbury & Falco, 1995; Norman & Turner, 1993). Third, good prevention programs **target actual versus perceived risk factors** and programs are most effective when they are **integrated into school curricula, implemented consistently, and delivered by trained educators.** Programs should be standardized with curricula that are structured and include manuals and handouts (Bond & Carmola Hauf, 2004; D.C Gottfredson & Gottfredson, 2002; Payne & Eckert, 2009). It is not clear how much current ISE has incorporated these elements or which programs have made the most advances.

Understanding how ISE is being conducted by law enforcement and schools. While we know that ISE dissemination is wide-spread, it is not clear how it is currently being delivered As we describe above, a recent national survey has found that youth cite law enforcement as one of their key sources of information on ISE (Mitchell, Jones, Finkelhor, & Wolak, 2012a). The Internet Crimes Against Children (ICAC) Task Forces are the primary law enforcement group involved in organizing this work. Even as early as 2002, one of the key roles of the ICAC Task Forces was to reach "children, teenagers, parents, educators, and other individuals through publications, presentations, and public service announcements about safe internet practices for young people" (Medaris & Girouard, 2002). Schools are also increasingly involved in administering ISE, particularly with the enactment of CIPA and media attention to tragic cases of youth suicide that have included in-school and cyberbullying elements.

Yet, there is little data on what information is being provided and how it is being delivered. Little information is available on how structured ISE curriculums are even being used, if at all. There is a substantial literature suggesting that dissemination of program materials rarely occurs as recommended or as designed by program developers (Fixsen, Naoom, Blase, & Friedman, 2005; Goodman, 2000; Julian, Ross, & Patridge, 2008; Proctor et al., 2007). While individualizing prevention messages to audiences or particular communities may be necessary and even advisable, widespread adaptation of materials and curricula presents a challenge for evidence-based prevention. A necessary first step is to understand the nature of current ICAC Task Force prevention efforts, their fidelity to program materials when used, and to understand how law enforcement internet safety presentations are occurring in the context of other educational initiatives or programs provided by school personnel.

Developing quality measurement tools in order to prepare for evaluation. Finally, ongoing program monitoring and outcome evaluation will be critical to ensuring that resources are directed at the most effective internet safety education efforts. Quality measurement tools are needed with strong psychometric properties. Badly designed evaluation questions result in problematic

information. As an example, in one previous ISE program evaluation (Chibnall et al., 2006) students were queried: "How likely is it that someone you meet online would try to hurt or scare you?" A higher rating (e.g., "very likely") was taken as representing improved knowledge. However, this runs directly counter to research evidence and likely also to students' own experiences. Such problems with existing measurement tools reflect not only the need for better evaluation of internet safety curricula, but the need for more carefully constructed evaluation tools.

THE CURRENT STUDY

Although rigorous outcome evaluation will ultimately be necessary for understanding the impact of internet safety education, the first steps involve better defining ISE program logic, improving the use of effective educational strategies, understanding implementation, and preparing sound evaluation tools. The current study was designed with these goals in mind. The ISE content and process evaluations presented below provide important foundational information about the quality of internet safety curricula and how ISE is being delivered by ICAC Task Forces. To achieve these project aims, the study was divided into **four subprojects**:

1) A systematic review or "meta-synthesis" was conducted to identify effective elements of prevention across different youth problem areas such as drug abuse, sex education, smoking prevention, suicide, youth violence, and school failure. The synthesis aimed to quantitatively define the specific elements of prevention education that have been shown to be effective across the substantial evaluation research done in the youth prevention field over the last few decades. The process resulted in the development of a KEEP (Known Elements of Effective Prevention) Checklist, which we used in our content analysis of ISE curricula.

2) The ISE content analysis was conducted on four of the most well-developed and long-standing youth internet safety curricula: i-SAFE, iKeepSafe, Netsmartz, and Web Wise Kids. From each of these four programs, we collated sets of written and electronic material covering the content of prevention and educational messages for youth, and instructions for delivering the materials (e.g., recommendations for instructors, time spent on materials, audiences, etc.). We also conducted multiple key informant interviews for each of the programs being reviewed. Selected materials were coded by 1) identifying key program messages; 2) reviewing curriculum materials using the KEEP Checklist; and 3) comparing the content of program materials using a series of ISE Fact Checking Sheets, developed for this project.

3) Next, we conducted a process evaluation to better understand how internet safety education programs, including the four reviewed curricula, are being implemented by ICAC Task Forces. The process evaluation was conducted via national surveys with three different groups of respondents: ICAC Task Force commanders (N=43), ICAC Task Force presenters (N=91), and a sample of school professionals (N=139). Questions asked the law enforcement samples for information on ISE presentations conducted by ICAC Task Forces over the past year (numbers, materials, audiences) and detailed information about the last internet safety presentation that was provided by ICAC Task Force educator respondents (setting, audience size and type, program length, materials used and educational activities included). School respondents were asked about the ISE programs, materials, and curricula used in the school, about ISE-associated educational activities (e.g., discussion sessions, small group activities, role-plays), and thoughts by respondents on the best formats for presenting ISE and barriers to implementation.

4) Finally, we developed an internet safety education outcome survey focused on online harassment and digital citizenship. The intention for creating and piloting this survey was to provide the field with a research-based tool that can be used in future evaluation and program monitoring outcomes. Items for the outcome survey were developed based on previous surveys conducted by our research center, and through several focus groups conducted with youth on ISE issues. The UNH Internet Safety Pilot Outcome Survey was administered to 1051 students in the 6th through 10th grades at 5 middle schools and 1 high school in New Hampshire. An additional goal of the current study was to make research-based outcome surveys like this one and others more easily available to ISE presenters and the ICAC Task Force agencies. We have therefore been working with the Fox Valley Technical College's Internet Crimes Against Children Training and Technical Assistance Program (FVTC/ICAC T&TA) to create a community collaboration portal for the placement of ISE materials, research articles, and links relevant to conducting research-based ISE.

A description of the methods and results are provided for each of these subprojects separately below. We then summarize the overall findings of the project and the implications for ISE practice and policy. Based on evaluation results, we make detailed recommendations to ICAC Task Force educators and policy makers for improving internet safety education content, and highlight key questions that we think must be answered for the field to move to a new level of effectiveness.

PROJECT METHODOLOGY AND RESULTS

Subproject A: Prevention Research Meta-Synthesis to Identify Critical Components of Effective Prevention

There are a number of reviews that have summarized effective elements of youth prevention education (Bond & Carmola Hauf, 2004; Botvin, 2000; Dusenbury & Falco, 1995; Kirby & Coyle, 1997; Luna & Finkelhor, 1998; Nation et al., 2003; Norman & Turner, 1993), but they are often compiled from informal reviews or target one particular area, like substance abuse. This subproject was designed to more systematically review the elements of effective prevention education across multiple evaluation studies and youth problem areas (substance abuse, youth violence, mental health, safe sex practices, bullying, dating violence, etc.). The goal was to identify a core set of effective prevention education elements that can serve as a starting place for those developing prevention curricula in new areas like internet safety education (ISE). Our intention was to develop a "checklist" based on the findings from our review, so that consumers and policy-makers have specific guidelines for reviewing existing programs to and identifying how well they incorporate proven prevention education practices.

The most structured way to synthesize research is to conduct a meta-analysis, which is a statistical technique for combining the findings from independent studies. A meta-analysis is the gold-standard for pooling results across different studies that have looked at the same research question. These "pooled" results are more reliable than the results of an individual study. While a meta-analysis would be the ideal way to identify core effective components of prevention education across multiple areas, the current project did not allow for the extensive time and resources that would be needed for such an undertaking. Instead, we conducted a systematic review of meta-analyses on youth prevention education that provided findings on program characteristics that

were more or less effective. A total of 31 such meta-analyses were identified. The review process we conducted has been described as a "meta-synthesis" by some (although the term is also used to refer to synthesizing multiple qualitative studies). We drew from those who have conducted and written about meta-syntheses to shape our methodology and structure our findings (Johnson, Scott-Sheldon, & Carey, 2010; Sipe & Curlette, 1997; Strobel & van Barneveld, 2009).

METHODOLOGY

Sample. Psychinfo, Medline, Criminal Justice Abstracts, ERIC and the library of the Campbell Collaborative were searched comprehensively using multiple keyword variations for summaries, reviews, and meta-analyses of youth prevention program evaluations. We searched across 11 topical areas: drug/alcohol/tobacco; violence/delinquency/bullying; risky sex behavior; mental health; sexual abuse; suicide; obesity/eating disorders; dating violence; driving safety; skin cancer; and general youth prevention education. Two investigators selected abstracts that met the following definition: "An article, report or book chapter published between 1990 and 2012 that summarized, contrasted, or compared the effectiveness of two or more prevention programs or approaches delivered to youth and targeting social, emotional or behavioral problems." The search resulted in a total of 424 documents including 73 meta-analyses meeting that definition. Two investigators then reviewed the text of these documents to identify publications that: "reported on better or worse performing *characteristics or components* of the reviewed youth prevention programs." The second review resulted in the identification of 41 meta-analyses, 22 systematic reviews[1], and 14 informal reviews meeting this criterion.

Given the substantial number of meta-analyses meeting our definitional criteria, and given the greater rigor provided by these types of studies, only meta-analyses were included in the meta-synthesis. Further review determined that 31 meta-analyses provided unique information on whether at least one program or audience characteristic was related to the effectiveness of the reviewed prevention programs (many of the publications were analyses conducted from the same meta-analysis).

The 31 meta-analyses focused on a variety of youth problems (see **Table A1**). The number of studies or programs reviewed in each meta-analysis ranged from 8 to 213. Ninety-four percent of the meta-analyses focused on programs with behavioral or symptomatic outcomes. The remaining six percent of studies measured attitude or knowledge outcomes only.

Coding. The coding of the meta-analyses proceeded in two stages. The first stage involved a qualitative review in which a total of four senior project staff (two per study) identified the program components analyzed in each meta-analysis. Coders were instructed to identify: program-level variables analyzed by the meta-analysis, defined as "any feature of the prevention program, curricula, or approach (e.g., theoretical approach, type of program leader, length of program, activities)," and 2) participant-level variables analyzed by the meta-analysis, defined as "features of the audience or intended participants (e.g., risk-level, age, gender)."

For 25 out of the 31 meta-analyses, or 81% the 2 coders were in 100% agreement on the number and types of components measured by the reviewed study. For 5 meta-analyses, agreement ranged from 63-85%. For one meta-analysis, one coder identified 1 element and the other identified 3 for a 33% agreement rate. Discrepancies were resolved by group review.

[1] As defined by the Campbell Collaboration

The second coding process was conducted using a quantitative coding form derived from the set of components identified in the first review. Two senior staff coded the 31 meta-analyses, identifying whether each identified component was found to: 1) significantly increase effect sizes compared to when it was absent; 2) significantly decrease effect sizes compared to when it was absent; or 3) result in non-significant differences.

Cohen Kappa coefficients were between .80 and 1.00 for 52% of coding questions. For another 33% of coding questions, the Kappa coefficients fell between .60 and 89. For the remaining 18%, reliable coding could not be established. Five "components" with low kappas (<.60) included: 1) the number of prevention "strategies" used in a program; 2) the involvement of a community-level or "environmental" prevention strategy in some programs; 3) the inclusion of youth or peer program leaders; 3) the racial and ethnic makeup of the participants and 4) the geographic location of the program (urban, suburban, or rural). The difficulty in detecting the effect these variables had on program effectiveness was due in part to unclear or different ways that these components were measured by the studies. Some findings on these variables are mentioned below with qualifications. All disagreements between coders were resolved through discussion.

RESULTS

The results of our findings for each of the prevention education strategies and characteristics are described below and provided in **Table A2.**

Prevention Components

1. Active Participation versus Information Only. Twenty-three of the reviewed meta-analyses compared different types of educational strategies. For 6 out of 23 studies (26%), the programs compared different types of "active" approaches (defined as skill-building, interactive tasks, role-playing, group problem-solving, or rehearsal). In 13 out of 23 studies (57%), programs compared active and non-active approaches (lecture or information-only). For 4 out of 23 studies not enough information was given to determine whether the approaches were active or non-active. For the 13 meta-analyses that compared active and inactive strategies, the overwhelming majority (12 meta-analyses or 92%) found that the active programs were significantly more effective than the inactive programs.

2. Parent involvement. Seven meta-analyses examined the difference in effectiveness when involving parents as a part of the prevention program. Findings were mixed. While two meta-analyses found parent involvement resulted in increased effectiveness, four meta-analyses found no significant difference when parents were involved, and one meta-analysis found less effectiveness for parent-involved programs. Some of the differences in findings may be related to how parents were involved. Sometimes parents were trained as co-leaders in the intervention, sometimes they were provided with training sessions or interventions separately or with their children. The one meta-analysis finding lower levels of effectiveness for programs with parent involvement concluded that these programs had a harder time maintaining high program involvement and fidelity (Park-Higgerson, Perumean-Chaney, Bartolucci, Grimley, & Singh, 2008). More research will be needed to determine if and how parental involvement or training best enhances prevention programs targeting youth.

3. Programs that are theory-based or target established risk factors. Three of the reviewed meta-analyses measured the impact of having a program that is "theory-based." Two

meta-analyses found that theory-based programs were more effective than non-theory-based programs. One study found that programs based on prior research or on a specified theory outperformed programs guided by investigator-driven hypotheses or those with no stated hypotheses (Haney & Durlak, 1998). Another meta-analysis found greater effectiveness for interventions that focused on research-based risk factors for the problem (eating pathology) versus non-established risk-factors (Stice, Shaw, & Marti, 2007). However, one study found that programs that specified a logical path between the program strategy and the targeted problem performed less well than those that did not (Park-Higgerson et al., 2008).

4. ***Narrow versus broad focus.*** Three meta-analyses examined the effectiveness of focusing on a narrow versus broad category of problem behaviors. Findings were mixed. One study found that prevention programs only focusing on weight change were more successful than programs that included multiple healthy behaviors (Stice, Shaw, & Marti, 2006). Alternately, a different meta-analysis found that programs targeting just tobacco use were less effective than those that focused on alcohol/drug use or health in general (Rooney & Murray, 1996). And a third study found that programs focusing on aggression and violence in general versus a particular aggression problem (e.g., bullying, gang violence) were equally effective (Hahn et al., 2007).

5. Sequenced, Active, Focused, and Explicit (SAFE). Two meta-analyses (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Durlak, Weissberg, & Pachan, 2010) found that prevention programs were more effective when they were 1) sequenced (taught children skills sequentially from less complex to more complex) ; 2) active (required youth to act on the material, practice and receive feedback); 3) focused (adequate time, effort and attention to skill-building), and 4) explicit (clear and specific learning objectives). Durlak and his colleagues also found that program effectiveness increased when a greater number of these 4 elements were included in a program.

6. Homework. One meta-analysis found that the inclusion of homework assignments was significantly associated with higher effect sizes for programs targeting depression.

7. Booster sessions. One meta-analysis found that prevention programs offering "booster sessions" (typically follow-up shorter programs offered a year or more after the original program) were associated with larger effects at a 1 year follow-up for smoking prevention.

8. ***Program leaders*****.** Seventeen meta-analyses compared the effects of using different types of program leaders. The categories of leaders analyzed by the studies were highly varied. We coded findings on the effectiveness of the following types of leaders: 1) peers (either led solely by peers/youth or co-led with other adults); 2) school professionals, including teachers; 3) specialists (mental health or health professionals, experts, researchers, or grad students); or 4) police officers. Each group was coded for whether they were found to be associated with significantly improved or reduced effectiveness, or no difference, when compared with the other groups used in the meta-analysis. Findings were mixed and the impact of program leader on prevention effectiveness is not clear. There appeared to be some indication that the use of specialists may help improve program effectiveness, six meta-analyses found this to be the case. However six other meta-analyses found no difference for specialists compared to other leaders.

As described above, coding the effectiveness of peer leadership resulted in low inter-coder reliability (kappa=.5). In reviewing the coding discrepancies the low reliability seemed to be due to peers sometimes being included as a part of other categories (e.g., "lay personnel") or not clearly identified as peers, thus being easily missed by one of the coders. However, seven out of nine

meta-analyses looking at this found evidence of greater or equal effectiveness for peer-led programs compared to programs that were led by adults only.

9. *Program dose*. Twenty out of 31 of the reviewed meta-analyses measured the effect of program dose on effectiveness. Different metrics and varying timeframes were used by the studies which made it difficult to summarize. Some studies measured dose in terms of weeks, sessions, or hours; other studies looked at session length or distribution (number of times per week). To simplify we coded four categories separately: 1) studies that compared 1 session programs to programs lasting more than one session; and 2) studies that compared programs lasting up to 12 sessions versus those that ran longer; 3) studies that compared programs lasting up to 19 sessions versus those that ran longer; and 4) studies that compared program length as a continuous measure.

Findings across the three meta-analyses that compared at single-session programs versus longer all found single-session programs to be less effective than multiple-session programs. However, when comparing shorter and longer multiple-session programs, it does not appear that dose is substantially related to effectiveness. Most studies found no difference in effectiveness by dose. In fact, several meta-analyses found that shorter programs (e.g., less than 10, less than 16, less than 12) performed better than longer-running programs (Durlak et al., 2011; Rooney & Murray, 1996, (Stice et al., 2006, 2007).

Participant Characteristics

1. *Age.* Twenty-three of the 31 meta-analyses looked at how participant age impacted the effectiveness of prevention efforts. **Table A3** displays the findings of the 23 meta-analyses according to the age groups that were compared. Most of the meta-analyses found that the age of the participant was not a significant factor in the effectiveness of the program. One exception was the four meta-analyses that compared pre-kindergarteners and kindergarteners to older elementary youth and found greater effectiveness for younger participants. Three of these four meta-analyses were focused on sexual abuse prevention programs (Davis & Gidycz, 2000; Heidotting, Keiffer, & Wegener Soled, 1994; Rispens, Aleman, & Goudena, 1997). The authors suggest that the greater retention by the youngest participants could be due to their starting off with less knowledge and experience about the issues being taught, but they also note that the programs directed to older youth might have involved less activity and more lecture. Davis and Gidycz (2000) also found that the programs targeted to children with a mean age higher than 8 were less likely to include "active participation, behavioral skills training and more than three sessions of instruction."

2. SES. Four meta-analyses looked at the effect of socio-economic status on the effectiveness of the reviewed programs. Two found no difference across SES groups, while two meta-analyses found that those targeted to lower SES groups of youth were more effective.

3. Risk-level. Thirteen meta-analyses compared the effectiveness of programs that were provided universally versus targeted to either at-risk youth, or those already participating or experiencing the problem behavior being addressed (indicated). Universal programs are those that are presented to groups of youth with no effort to target those at-risk, such as a regular classroom or whole school. While several studies found no differences for this variable, the majority of studies—eight meta-analyses—found that programs targeted to high-risk or indicated youth were more effective than universal programs.

4. Gender. Finally, 10 meta-analyses looked at the effect of gender and results were mixed. Half of the studies found no difference with regard to the gender makeup of the youth. Four, however, found that programs targeted mostly to girls were more effective than those targeted to boys. Only one study found that programs targeted to boys were more effective.

DISCUSSION

The purpose of the meta-synthesis was to systematically identify prevention program strategies that could be considered "evidence-based" across a wide range of youth problems. These should be considered an immediate starting place for prevention efforts that develop around new concerns about youth. Given the degree that ISE has already been developed and disseminated these effective prevention elements can serve as markers for evaluating the degree to which current ISE adheres to effective educational strategies, and to identify programs that appear to be most promising.

The review we conducted identified that the most consistent core markers of successful prevention education across the meta-analyses were: 1) skill-based learning targeting established risk and protective-factors; 2) active learning strategies; 3) adequate dose; and 4) additional learning opportunities (homework and booster sessions). Program fidelity and implementation quality has also been shown to be consistently related to effect size (Cornell & Eliot, 2010; Domitrovich & Greenberg, 2000; Durlak & DuPre, 2008; Gottfredson, Fink, Skroban, & Gottfredson, 2010; Jaycox et al., 2006; Kerns & Prinz, 2002; Payne & Eckert, 2010; Topping & Barron, 2009) and presenter manuals and instructions need to be available and clear so that educators know how the program should be implemented. It should be likely that two different presenters would conduct the provided curriculum in fairly similar ways. These core research-based strategies served as the foundation for the development of the KEEP (Known Elements of Effective Prevention) Checklist, which is included in **Appendix A**. The KEEP Checklist was used to review and compare four ISE programs in the content analysis described below (see subproject B).

For other reviewed elements, more research will be needed to understand how successful they are as a general prevention strategy. For example, parent involvement showed mixed results, likely due to differences in how parents were involved in the reviewed programs, and how successful programs were at involving them. Findings on presenter backgrounds were also mixed. It seemed to be that using an "expert" presenter may have increased program fidelity, leading to improved results, but much of the reviewed research showed no difference for presenter background. Including youth as presenters showed mixed findings as well, and it is likely that there are more effective and less effective ways to involve youth as leaders in prevention education delivery. The differences in findings may have had to do with whether same-age peers versus older peers were used, how they were included as education leaders, and how much supervision was provided. But at least one meta-analysis found a strong positive effect for the involvement of peers (Gottfredson & Wilson, 2003) and it is a prevention education strategy that deserves more focus from evaluation researchers.

Differences in target audience did not appear to play much of a role in program effectiveness and at this point no clear-cut recommendations can be made. This also might be an area in which the targeted problem (e.g., sexual abuse versus drug use) makes a difference in the types of audiences that are most successfully affected by the education program. One exception appears to be a fairly consistent positive finding for programs targeted at higher-risk youth. It might be that such programs are able to demonstrate effects more easily with treatment-control group comparisons because the base rates of the problem behavior are higher for at-risk youth.

These findings do suggest some possibility of a cost-benefit advantage for programs targeted to high-risk youth.

Limitations. The meta-analyses included in this review categorized and measured key variables differently, and used different meta-analytic standards and strategies, meaning that it is likely that evidence for and against some of the prevention "elements" was not equal, in ways that our tally could not account for. Furthermore, the meta-analyses in each particular topic area (e.g., sexual abuse) included overlapping groups of studies, which may have over-emphasized the consistency of some of the findings. And while many of the strategies used to successfully educate youth and prevent problems cross-cut the concerns being addressed, there are likely program strategies that work more successfully or less successfully with specific problem areas.

Finally, it was clear from the reviewed meta-analyses that many program characteristics are related to each other. For example, the type of program leader appears to be related to issues of program fidelity. It should be kept in mind that the characteristics described here may directly influence effectiveness or may be correlated with other factors influencing effectiveness.

Nonetheless, the characteristics identified by the review as effective and included in the KEEP Checklist appear to robustly identify a minimum starting place for program developers, particularly as they approach a new area of prevention education, like ISE. Given that no quality evaluation is yet available on ISE, it is recommended based on this review that, based on the best available evidence, higher quality programs will: be structured manual-based lessons, provide education in an adequate dose (multi-session), specify skill-based learning objectives, use active learning strategies such as open-discussion periods and role-playing, and will cite research supporting why the educational approach and the skills taught should result in improved outcomes (research-supported program theory).

Subproject B: A Content Evaluation of Established Internet Safety Programs

In our second subproject, we applied the findings from our meta-synthesis of prevention research and the resulting KEEP Checklist to serve as the basis of a content analysis to examine four longer-standing and well-established ISE programs: iKeepSafe, I-SAFE, Netsmartz, and Web Wise Kids. The content analysis addressed the following research questions:

1. Which ISE topics are being covered using which key messages?
2. To what degree do programs incorporate current research-based knowledge about ISE topics?
3. And, in what ways do they adhere to established effective educational strategies?

While the four ISE programs were selected for review because they are well-established, the intention of the content analysis was not to compare the four programs, but to use the review to comment on the status of ISE efforts generally, offer recommendations for curriculum improvement, and provide the entire field with a method for tracking progress as it moves forward.

Information on reviewed ISE programs

iKeepSafe. iKeepSafe was established in 2005 as a non-profit, formed by a coalition of governors, first spouses, attorneys general, industry leaders, and others interested in ISE. Their ISE material is geared toward elementary, middle, and high school students and consists of books, videos, and animated films. iKeepSafe has collaborated with technology companies such as

YouTube, Google, AT&T, Symantec, and others to develop ISE materials covering a range of different topics. Programs include the Faux Paw the Techno Cat series for young children; a series of workshops on digital literacy developed with Google; and Project Pro, an interactive program focused on online reputation and privacy. All educational programming material is made available for free to educators and focuses on providing information about how to recognize and avoid "inappropriate contact, content and conduct online." Recently, iKeepSafe has developed a consulting program for schools called Generation Safe, in which they provide multiple resources for schools for a subscription including professional development videos, recommendations on incident management, and ways that schools can assess their compliance with new government e-safety policies.

i-SAFE. The i-SAFE prevention program was founded in 1998 by i-SAFE America, a non-profit foundation. The i-SAFE Safe Schools Education Initiative and Outreach Campaign began in 2002 and expanded to a presence in all 50 states with funding assistance from the U.S. Department of Justice. The school-based curriculum was originally designed for middle-school children but later adapted for presentation to children in all grades (K-12). In 2009, i-SAFE moved from a model of free online access to its materials to a multi-level subscription service. They have a library of over 300 lessons organized by educational topic and grade-level, which is updated regularly. While there is no specific sequence to the lessons, i-SAFE provides schools with "implementation guides" to help guide lesson combinations. The curriculum, which is updated regularly by developers, focuses on seven general areas: 1) cyber community citizenship; 2) personal safety online; 3) cyber-security; 4) cyber predator identification; 5) intellectual property; 6) digital literacy; and 7) outreach, empowerment and review.

Netsmartz. The NetSmartz program was created by the National Center for Missing & Exploited Children (NCMEC). The curricula and materials are designed to educate youth about potential internet risks and empower them to prevent online exploitation and victimization. Materials, developed for youth from elementary school through high school, are all available on their website for free. Power point presentations are available for use in assemblies, and over 25 individual "lessons" are also available that include short videos with "activity cards" that educators can use to shape the lesson. The presentations for elementary school children feature animated characters (e.g., "Clicky") and focus on messages about avoiding adult websites, avoiding strangers; not using rude language online; and not giving out personal information. The programs for older children cover a range of ISE topics including online predators, inappropriate online relationships, cyberbullying, privacy, online reputations and respectful behavior when gaming.

Web Wise Kids (WWK). Web Wise Kids (WWK), established in 2000, is a national nonprofit organization that specializes in interactive computerized games on ISE topics. Web Wise Kids provides family and school editions of their original games for a fee: MISSING, Air Dogs, and Mirror Image as well as three hour training workshops for school personnel and law enforcement offices. The detective-style computer games are based on actual criminal cases that youth working with detectives try to solve. The games cover issues of piracy, e-fraud, online-romances, cyber-stalking, online predators, and identity theft. A newer program "It's Your Call" was designed to address cell phone safety. And a free game played through a cell phone application: "Be Seen" was developed to address responsible behavior on social networking sites.

METHODS

Content analysis procedures were followed as recommended by Neuendorf (2002). ISE materials were reviewed from Netsmartz, iKeepSafe, i-SAFE and Web Wise Kids and double-coded

by four project staff, including three primary investigators. We also conducted multiple key informant interviews for each of the programs being reviewed to gather information from developers on the background of the programs, their approach to education, and to better understand the scope of their primary ISE curricula.

Content Sampling

Coders first reviewed all available electronic and written materials for each of the four ISE programs to gather information on the breadth of their program. We narrowed our formal review to ISE materials meeting the following criteria:

1) Materials directed toward youth. We reviewed program ISE materials targeted at parents, teachers, and law enforcement, but found that most of the adult materials replicated the messages of youth-targeted program materials. Furthermore, less is known about the best strategies for improving youth safety via parent and teacher education, making it difficult to comment on the likely effectiveness of these initiatives.
2) The materials covered internet safety education. Some programs were excluded from review that focused on off-line dangers and safety issues.
3) The materials were accompanied by curriculum or presentation recommendations such as a presenter's or teacher's manual, suggested discussion questions, or activity cards. This excluded materials that programs had available on their website such as brief games, short videos, or public service announcements, that were not connected to a presentation or curriculum.

A full list of coded program lessons has been included in **Table B1**. Decisions about which materials to review varied across programs, and was made in consultation with program representatives—our goal was to review curricula and lessons that were representative of the program's approach to internet Safety Education. For Netsmartz and Web Wise Kids, all program materials were reviewed meeting the criteria above. For iKeepSafe, we reviewed primary curriculum offered by several initiatives and collaborations: their Faux Paw series, a curriculum series developed in collaboration with Google, a cyberbullying curriculum developed in collaboration with DARE, and a digital literacy program called Project PRO. For i-SAFE, program developers provided us with materials corresponding to three lessons that they felt were representative of their ISE curriculum approach, as well as curriculum guides, curriculum sequencing recommendations, and other supporting documents.

For all selected programs, coders recorded the recommended age range for the materials (if specified), the number of lessons the topic required, and how long the lessons or presentations ran. After reviewing all materials thoroughly, a decision was made to analyze selected curricula using two different strategies.

Short Coding Form

One group of materials was coded by extracting key educational messages only (short coding form). Materials were reviewed this way if:

1) Lessons focused on digital literacy. Much of the reviewed ISE program materials provided information on what we have labeled "digital literacy." This includes topics such as: social network site privacy settings; online reputations and digital footprints; e-scams, spam and spyware; and illegal downloads, for example. Researchers have not studied the nature of youth

experience with these problems in detail (although it is starting to develop, see for example K. Davis & James, 2012) and therefore it is difficult to gauge the research-base for the educational messages. We therefore focused our analyses of these materials on understanding the key messages delivered to youth.

2) Curricula aimed at elementary school-aged youth. Some of the ISE program materials that we reviewed were directed at elementary aged audiences. Here also we found it difficult to assess the degree to which educational messages were research-based. A minority of elementary school youth uses social networking sites, cell phones, or emails and very few have problems with victimizations or unwanted experiences if they are under 12 years of age (Jones, Mitchell, & Finkelhor, 2012). We analyzed the key messages of ISE materials created for younger children in order to better understand the educational goals.

To code key messages, coders reported whether one of eight popular pre-specified ISE messages were included (e.g., "Think before you post" "Don't share your password with anyone"). The form then also listed space for coders to record up to 5 additional "key educational messages" present in the materials they reviewed. In order to be as expansive as possible, key messages recorded by either coder were included in analyses. The educational messages were then grouped into categories through an iterative process.

Long Coding Form

If a curriculum or lesson was: 1) directed at middle or high-school youth, and 2) it dealt cyber-bullying, internet predators, or sexting, the materials were reviewed by coders using the full (long-form) coding process. This included coding key messages as described above, but also included a quantitative coding process to analyze: 1) the degree that curricula incorporated educational strategies known to be most effective (KEEP Checklist-Known Elements of Effective Prevention Education); and 2) incorporated research-based messages (Internet Safety Education Fact Checking Sheets). A copy of the Long Coding Form has been included as **Appendix A**.

The KEEP Checklist. The KEEP Checklist was developed as part of our meta-synthesis described above (subproject A) and identified a total of five educational elements that have been shown to be critical to effectiveness across multiple areas of youth prevention. The five elements were: 1) a structured curriculum; 2) skill-based and research-supported learning objectives operationalized in two ways: a) behaviorally-based learning objectives, and b) research on risk and protective factors specified as a basis for the learning objectives (research-supported program logic or theory); 3) active participant involvement and learning, which was operationalized as the inclusion of a) role-playing activities; and b) discussion periods with open-ended questions provided by the program leader; 4) an adequate program dose, operationalized as at least 4 lessons building on learning; and 5) additional learning opportunities, with homework or booster sessions. Given that only 16 lessons were reviewed using this checklist, sample size was too small to effectively calculate Cohen's kappa as a check on inter-rater reliability, however, inter-rater coding agreement rates ranged from 88%-100% per coded element.

The Internet Safety Education (ISE) Fact Checking Sheets. In order to obtain some measure of the degree to which the reviewed ISE materials included research-based messages, we created three ISE Fact Checking Sheets that evaluated messages around 1) sexual solicitations/internet predators; 2) sexting; and 3) online harassment or cyberbullying. Each fact-sheet includes a list of messages that were drawn from existing research on these topics (e.g., "Materials state that internet predator cases are not common) or provide youth with skills to help them reduce problem

size or impact (e.g., "Materials provide potential bullies/aggressors with ideas and skills to de-escalate when they feel angry or "disrespected"). See the Fact Checking Sheets in **Appendix A** for associated research citations. Scores are calculated based on the numbers of messages that were included in materials. Scores on the Fact Checking Sheets can range from 0-7 for materials discussing sexual solicitations; 0-5 for materials discussing sexting; and 0-8 for materials discussing online harassment. Coder agreement across items was between 75-100% for the 8 lessons that covered sexual solicitations or internet predators; between 66%-100% for the 3 lessons that covered sexting; and between 80-100% for the 10 lessons that covered online harassment.

RESULTS

Overall content analysis results are provided for the KEEP scale and ISE Fact-Checking Sheets for the 16 ISE lessons reviewed using the long-form. We then discuss the "key message" analysis conducted with all 33 coded ISE lessons.

KEEP Checklist. Results for the KEEP Checklist scoring are provided in **Table B2** and indicated that the reviewed ISE program lessons and curricula failed to incorporate important basic standards of effective prevention education.

Positively, all of the reviewed programs provided "structured lessons." This criterion required that program instructions were clear enough that "two different presenters to present very similar lessons." Most of the reviewed lessons also included active discussion sessions in which time was set aside for youth to respond to open-ended questions. These kinds of interactive discussions result in a variety of opinions and answers by youth, giving them an opportunity to engage critical thinking skills. For example, the Netsmartz activity card for the video "You Can't Take it Back" includes discussion questions asking: "What should the boy have done when his friends asked him to rate the website?" and "Think of legitimate responses he could have made that might have made his friends also reconsider their actions."

However, most of the reviewed programs failed to list skill-based learning objectives. Most learning objectives, when they were provided, reflected the goal of imparting knowledge to youth. Only two programs, ISE workshops created by iKeepSafe and Google, and one i-SAFE program, provided a few skill-based learning objectives. And none of the reviewed programs provided research evidence linking the skills they taught with the likely result of improved safety. These are the basic foundation of program logic or program theory development: program developers need to be able to specify how they envision the interventions and messages resulting in program or outcome objectives, and then supporting that causal process with research. There was no evidence from our review that these ISE programs had specified these program logic elements.

Role plays are one of the more common ways that successful prevention programs provide ways for youth to practice skills and only one of the reviewed programs, "Attitude Overdrive" by Netsmartz, included a role play. Although role-plays are common in effective prevention education, there are other activities that would provide youth with an opportunity to practice new skills, however, none of the programs we reviewed had any other comparable skill-based activities. Some creative learning exercises had been included as part of the ISE programs: one common exercise, for example was to have youth answer "Dear Abby"-type letters by providing advice and information in response to hypothetical internet problems and victimizations. But coders agreed that these were exercises mostly designed to have youth repeat back learning points, versus practice how they would handle problems themselves using new skills. Being able to repeat back

lesson messages is an important component of education, but not sufficient to promote behavior change according to prevention research.

The reviewed programs also failed to provide an adequate dose for learning. All of the programs had spent a lot of time creating multiple lessons on a range of different ISE topics, but the lessons were most typically offered as stand-alone topics. I-SAFE and iKeepSafe's Google Digital Literacy Tour Workshops came closest to being a multi-lesson curriculum, but each lesson still typically covered an entirely different ISE topic. No program that we reviewed provided a fully adequate dose of learning on one topic over multiple lessons, each lesson building upon the learning in the others. As an example of what this could look like, a curriculum on cyberbullying might teach students over five lessons how to: 1) identify cyberbullying, 2) de-escalate peer conflict, 3) understand how joking can feel mean, 4) practice intervening as online bystanders, and 5) practice options for handling victimization.

Finally, the KEEP checklist also notes whether the programs include practice and learning through homework or booster sessions, and while some programs provided optional take-home practice and informational sheets, no program that we reviewed included homework as an integrated part of the lesson, or planned booster sessions.

ISE Fact Checking Sheets. **Table B3** provides the coding results for the three ISE Fact Checking Sheets. Results indicate that most ISE programs are still far from incorporating research-based messages consistently. The materials on sexual solicitations and internet predators included an average of 2 out of 7 research-based messages. Materials on sexting included an average of 2 out of 5 messages that we looked for. And materials on online harassment and cyberbullying included an average of 3 out of 8 messages. The "facts" contained in these sheets are not an exhaustive list and a review of the internet safety research might identify additional results that could inform prevention. Nonetheless, the findings of our review suggest that more work is needed by program developers to use research in developing messages.

Internet predator messages: Some research findings do appear to have successfully found their way into program materials. One of the mistakes in early ISE educational materials was to portray internet predators as older men who prey on young children by deceiving them about who they were. Research, on the other hand, identified that the overwhelming dynamic in internet predator cases was teenage victims who knowingly went to meet older persons interested in sexual relationships (Wolak, Finkelhor, Mitchell & Ybarra, 2008). None of the materials that we reviewed portrayed the mistaken stereotype (although it was suggested in some of the materials targeting younger children), depicting more accurately internet predator situations involving teenagers who knew their correspondent was an adult, were flattered by the attention, and felt close to them. Most of the materials also mentioned why it might feel hard to tell an adult about such a relationship, although lengthier and more nuanced discussion of this issue would likely be helpful.

However, even when depicted correctly, internet predator cases of a youth meeting an adult online, forming a romantic attachment, and meeting them in person is an extremely rare event. None of the program materials accurately presented rates of internet predator cases, and implied they were a high risk for youth. And none discussed the more common experience of receiving unwanted sexual requests or questions online from either peers or unknown persons. The materials we reviewed also did not discuss that sexual assault by a person the youth knows is much more likely than an assault by an internet predator (see for example, Pereda, Guilera, Forns, & Benito, 2009). Finally, no materials acknowledged that we are still learning exactly what kinds of online behaviors put youth at risk for upsetting sexual requests online or contact by predatory

adults, or lead to harmful results from an online relationship. Instead, admonitions like "don't share personal information online" suggest that simple (and almost impossible to follow) advice will keep youth safe from something as complex and risky as a youth becoming romantically or sexually involved with someone who is much older than them.

Sexting messages. Sexting behavior, or the production or forwarding of sexual photographs and videos of themselves or other youth, was the least common topic for the materials we reviewed. Research based messages were infrequent here as well. A few programs that we reviewed noted that sexting usually happens in the context of a relationship, acknowledged the different ways that youth might feel about getting a request for a sexual image, or noted that the most egregious behavior was to forward or send a sexual picture without permission. None of the programs reported that most youth do not "sext" (Mitchell, Finkelhor, Jones, & Wolak, 2011). and none provided youth with detailed information about the elements of sexting behavior that are most likely to provoke the attention of police (cases involving blackmail, bullying, or forwarding without permission) (Wolak, Finkelhor, & Mitchell, 2012).

Cyber-bullying messages. The ten lessons focused on cyber-bullying showed some inclusion of research, although not consistently. Most included information on different options that victims of online harassment can try (7 out of 10 programs) and information on how cyberbullying feels to victims (6 out of 10 programs). Some included information specifically on understanding how teasing and put-downs can be harassment (4 out of 10 programs) and information showing ways that bystanders can be helpful (5 out 10 programs). None of the programs that we reviewed portrayed suicide as a typical outcome of cyberbullying—a problem that some have noted with alarmist cyberbullying materials (see http://www.stopbullying.gov/at-risk/effects/index.html). However, none of the programs acknowledged that most youth do not "cyber-bully" (Jones, Mitchell, & Finkelhor, in press; Ybarra & Mitchell, 2007). None included information that peer harassment happens both on and off-line, or that off-line harassment is consistently found to be a problem for more youth (Beran & Li, 2007; Raskauskas & Stoltz, 2007). Few programs helped potential aggressors learn different strategies for handling anger, jealousy or feelings of being "insulted." And only one program showed adults providing positive help.

Key ISE messages. An finally, all 33 of the reviewed ISE program lessons were coded for key educational messages. **Table B4** provides the results of those analyses, listing the most common 9 categories of ISE messages. We tallied messages separately for three types of programs: 1) lessons targeting messages about online predators, sexting, or cyberbullying and designed for middle school and high school aged youth (n=17): 2) lessons targeting messages for elementary school-aged youth (n=8); and 3) lessons focused on digital literacy topics only (n=9).

For ISE programs targeting both older and younger children, the most common educational message was: *"Tell an adult if something happens online that makes you uncomfortable."* Almost all of the programs told children to tell an adult in the case of any online problem. Children were often given specific information about what to report (e.g. "*Report online predators or cyber-bullies.")* and when to report ("*Tell and adult of the harassment doesn't stop."*) and some programs encouraged youth to save evidence of the harassment or concerning text or pictures. Another key educational message by almost all ISE programs was the instruction: *"Don't share or post personal information online."* Sometimes programs specified the kind of personal information that shouldn't be shared, some exercises were created to help children spot the identifiable information in hypothetical screen-names or social network sites.

For elementary-aged youth, another common ISE message was to *"Be wary of people youmeet online;"* and often youth were told *"Never meet in person with someone you meet online."* Five out of the 8 ISE programs directed to younger children included these warnings, but 8 out of 16 programs targeted to older youth also contained this message—including all of the materials for older youth focused on internet predators. For older youth, another common message category was a caution to *"Not bully"* or "*Be respectful."* This was a broad category and most materials elaborated on what this meant or suggested something more specific such as *"Don't be rude while gaming," "Don't spread rumors online,"* or *"Online jokes can go wrong*." Another message in this category was "*Don't say it online if you wouldn't say it to someone's face."*

The digital literacy materials showed slightly different emphases in their messaging. Instructions to tell an adult about problems, not share personal information, and be respectful online were rarer although still present. More typical were the messages: *"Think before you click or post*" (66% of digital literacy materials); "*Check your social network privacy settings and be careful who you friend"* (55% of materials); and "*Consider what the information you put online says about you*" (55% of materials). These messages were also common in the ISE materials targeted at middle and high school-aged youth focusing on victimization issues like internet predators and online harassment.

DISCUSSION

The goal of this review was to consider the status of current Internet Safety Education (ISE) educational content and strategies as a whole and to make recommendations for the field. The four programs reviewed in this study (iKeepSafe, i-SAFE, Netsmartz, and Web Wise Kids) were selected because they represent some of the longest-standing and most used ISE program material in the field. The findings of the content analysis suggest that ISE efforts have not incorporated important educational strategies that prevention researches have shown to be fundamental to effective youth education in many other areas. While there is evidence that the programs reviewed here have revised some of their newer materials directed at older youth to better reflect the research, there is still a critical need to build ISE educational messages around what we know about the prevalence, characteristics and risk factors for youth victimization involving new technology. Unfortunately, research on privacy and digital reputation is almost non-existent and yet basic untested prevention messages have proliferated to the point that they were almost standard across the programs that we reviewed.

All of the reviewed programs had spent a great deal of effort creating their materials, and there is evidence across all of the programs that they were working to improve them. Because of their leadership in the ISE field, however, these programs also have a critical responsibility to move the ISE field into the next level of maturity. They need to remove outdated materials and step-up their curriculum structure by adding skill-based learning objectives, provide opportunities for youth to practice these new skills, and insist that if schools want to see improved safety and behavior they have to commit more educational time than one hour a year. Respected program developers need to lead the field in defining the program logic on "digital literacy" and "digital citizenship" messages and rethink, in particular, what kinds of information very young children really need to know about using the internet.

Although online internet safety materials have multiplied and will continue to do so, and many presenters and educators use their own materials anyway, the programs reviewed here are in a strong place of leadership and have an opportunity to guide the field by example. Below we briefly discuss recommendations for each program.

IKeepSafe. Much of the newer material developed by iKeepSafe is focused on digital literacy. In fact, among materials we reviewed targeted at middle and high-school aged youth, only one program (Google Digital Literacy Tour Workshops: Playing and Staying Safe Online) included information on online harassment and none directly discussed online predators. While, as we describe above, we think that the logic behind much of the digital literacy messages needs to be better thought through, the approach of the newer iKeepSafe materials developed with Google is promising. The lessons are planned out carefully and many of the activities are creative, such as the "Detecting Lies" lesson in which students spend time comparing different website sources to answer the question "Is there life on other planets?" and evaluate the quality of the information across sources. There is an opportunity for iKeepSafe to help shape digital literacy education as it advances. Unfortunately, their older ISE materials directed at younger children contain almost all of the problems we cite above. The Faux Paw series suggests misleading stereotypes and it is not clear that young children will be able to translate the warnings from these videos to the new experiences they are starting to have with cellphones and the internet.

iSAFE. iSAFE was at the forefront of creating ISE materials designed to be integrated into a classroom curriculum. They have a very extensive array of lesson options and have gone further than any of the other programs reviewed here in helping schools create full multi-lesson ISE plans. Their curriculum guide (2011-2012) cites their efforts to follow proven educational practices by providing experiential lessons, engaging higher-order thinking, and drawing from real-world issues and challenges. There were examples of these efforts, such as complex discussion questions and activities requiring engagement. However, the lessons that we reviewed suggest that iSAFE still over-focuses on providing youth with rules and "Don't" messages, and do not include enough skill-building. Their internet predator lesson relies on some outdated stereotypes like deception and suggests that sharing information online is somehow related to predator risk. iSAFE could improve their ISE lessons with more direct incorporation of the research available on youth problematic experiences online and greater inclusion of skill-based lessons.

Netsmartz. Netsmartz has updated much of their material in recent years and has created some good videos for older youth. Their Tweens and Teens presentations have been updated to include new research statistics, although there are still places where untested messages and a reliance on overly-dramatic statements remain. The video and activity card combinations offered for middle and high school-aged youth contain a number of creative, thoughtful and active exercises for use in the classroom. The video "You Can't Take it Back" for example includes useful discussion about why online jokes may not be funny to those targeted. And the activity card that accompanies the online gaming video "Attitude Overdrive" is one of the few places we saw youth provided with a role-playing activity that lets them practice new strategies. The videos on internet predators portray the grooming process realistically with vulnerable and disconnected victims running away from home, knowing that perpetrators are older. However, most youth will watch correctly judging that they are unlikely to end up in such a situation.

As with the iKeepSafe Faux Paw program, the materials developed for younger children using the animated character "Clicky" are not grounded in research and have vague educational objectives. It is not clear how much learning children can derive from fast-paced short cartoon "raps" and the "take-home" lessons do not seem to match how most young children use online resources. (E.g., elementary school-aged children probably will not run a scan each time they open an attachment and are unlikely to even receive "attachments" in an email account.) For older youth however, Netsmartz materials are provided in well-organized formats, are freely available and very

usable by teachers and other presenters. Effectiveness would be increased if the lessons incorporated the recommendations made above.

Web Wise Kids. Web Wise Kids has taken a slightly different approach by creating interactive games as a foundation for their educational objectives. Evaluation research is needed to determine whether this style of engagement provides a similar effect as practicing through role plays or classroom group activities. There seems to be a danger with the Web Wise Kids games that youth will spend a great deal of time solving "puzzles" when time would be better spent practicing more direct protective skills. Their newer program "It's Your Call" is focused on a very broad range of topics (all linked to cell phone use) which may detract from focused educational learning objectives, but the experience of the girl in the video with cyberbullying is portrayed realistically. While the right answers are obvious and youth will probably pick "wrong answers" just to see what happens, the game shows informative consequences as a result. It is recommended that Web Wise Kids focus new programs on one area of focus (e.g., online harassment) and test with evaluation research whether a game such as "It's Your Call" combined with active classroom discussion time can be an effective way for youth to practice new skills.

Limitations. The measures used here and the coding process we followed provides program developers, consumers and policy makers an example and tools for roughly assessing the degree to which ISE programs adhere to current standards of prevention best practice. The project was a content and process evaluation, not an outcome evaluation, and the checklists should not be considered direct measures of program effectiveness.

These caveats and recommendations for use have been added to the instructions and will be expanded on as we format the tools for use by program developers, consumers and policy-makers. Nonetheless, the KEEP and Fact-Checking forms provide an important structured framework for appraising current ISE efforts and are useful for: 1) highlighting areas of needed improvement to ISE programs and 2) guiding consumers and policy-makers to consider the elements that define more promising programs.

Subproject C: Evaluating the Delivery of Internet Safety Education: A Survey of Law Enforcement and School Professionals

The content analysis described in the previous section found that the reviewed internet safety education (ISE) programs have not incorporated proven educational approaches to the degree that confidence can be placed on their ability to increase youth safety. However, even if these programs were to improve their curricula as recommended, implementation issues are still a concern. To make recommendations for improvements that take current ISE delivery into account, it is important to gather more information on how ISE is being conducted by law enforcement and school professionals, to which kinds of audiences, and using what materials.

To collect implementation and context data for ISE, we conducted three surveys on ISE delivery with the following groups of respondents: ICAC Task Force commanders (N=43), ICAC Task Force presenters (N=91), and school professionals (N=139).

METHODS

Respondents were invited to participate in the online surveys through an internet link sent directly to them via email or posted by email on a professional listserv. Online surveys were hosted by Vovici (www.vovici.com) using their EFM Feedback survey software system. Surveys were

accessed by respondents through the Vovici website. Responses were stored on a secure server and protected by encryption. Tracking services provided information on response rates and survey results were downloaded into SPSS files by the investigators.

Invitation emails described the purpose of the study and informed respondents that surveys would take approximately 15 minutes to complete, that participation was voluntary, and that all responses would be kept confidential.

ICAC Task Force ISE survey. All 61 ICAC Task Forces were invited to participate in the Task Force survey and 43 surveys were completed between February and March, 2011 (70% response rate). Email invitations were initially sent to the Task Force commander and respondents to the survey were either the commander themselves (40%) or someone identified by the commander as most knowledgeable about Task Force ISE efforts (60%) (see **Table C1**). Survey questions collected information on how requests for education programs come into the Task Force, who typically requests ISE, how many presentations the Task Force provided in the past year, the size of waiting lists, which ISE program curricula or materials were used, and what kinds of audiences were being reached by ISE efforts. Respondents were also asked to provide names and contact information for up to five individuals who present ISE for the Task Force or for affiliate members.

ICAC Task Force presenter survey. Presenter contact information provided by the ICAC Task Force commanders was used to recruit respondents for the ICAC Task Force presenter survey. One-hundred and thirty-one ICAC Task Force ISE presenters were invited by direct email to participate in the survey and 53 responded (35% response rate). We also asked contacts to forward email invitations with the survey link to individuals who conducted internet safety presentations for ICAC Task Forces and posted the recruitment email on the ICAC Task Force listserv and website. An additional 58 respondents completed the survey following these efforts, for a total sample of 111 respondents. Twenty respondents had not presented any ISE in the past year and were eliminated from the sample, resulting in a total sample size of 91 ICAC ISE presenter respondents from 34 states.

Survey questions asked about respondent demographics and professional experience (employment agency, years in current position, years presenting ISE), information about internet safety presentations conducted over the past year (numbers, materials, audiences) and details about the last internet safety presentation that was provided (setting, audience size and type, program length, materials used and educational activities included).

Surveys were conducted in the spring of 2012. A summary of respondent demographics is provided in **Table C2.** Sixty-five percent of respondents were male and most (43%) were between 36 and 45 years old. Forty-eight percent of respondents were employed directly by the ICAC Task Force, 36% were employed at an affiliate member agency, and 15% were employed by another agency. The largest percentage of respondents had been in their current position for 6-10 years (35%), and almost half of the sample had been presenting ISE for more than 5 years (48%). Twenty-one percent of the sample had been presenting ISE for 2 years or less.

School ISE survey. Our initial goal for the school survey was to understand more about the school contexts in which ICAC presenters were providing ISE. We were interested in learning, for example about the extent that law enforcement representatives were being asked into schools where other internet safety education efforts were in place. We therefore asked each ICAC presenter respondent for information about the school they presented at most recently and contact information for the person who coordinated their presentation. Only 17 ICAC presenter

respondents provided us with school contact information. Most did not either because they did not present in a school setting, they did not have contact information on hand, or they felt reluctant to share it. From the 17 school contacts, 11 completed our survey (65% response rate).

To increase our sample size of school respondents, we used a new recruitment strategy. Emails with a link to our school survey were posted on several educational listservs, including three email forums serving school librarians. We received 128 responses to these recruitment efforts and combined these with the ICAC contact school respondents for a total sample of 139 school respondents from 32 states. Most of the respondents were librarian-teachers or media specialists (70%), 14% were technology teachers, directors or coordinators, 8% were administrators and another 4% each were teachers and counselors. Seventy-nine percent of respondents worked in a public school with another 9% working for a public school district. Grade-levels taught at respondent's school were fairly evenly divided across early elementary (pre-kindergarten-3rd grade) (60%); upper elementary school (4th and 5th grades) (40%); middle school (6th-8th grades) (45%); and high school (9th-12th grades) (34%).

Survey questions asked about how ISE was implemented in the school in the previous year, which grades were provided with ISE, and ISE topics that were of most interest to the respondent. The survey also asked about which ISE programs, materials, or curricula were used in the school, about associated educational activities (e.g., discussion sessions, small group activities, role-plays), and thoughts by respondents on the best formats for presenting ISE, and barriers to ISE implementation.

RESULTS

ICAC Task Force ISE survey**.** The ICAC Task Force Survey results highlighted the active involvement of Task Forces in providing ISE to their communities (see **Table C1**). Task Forces respond to large numbers of requests for ISE each year. Sixty-eight percent of Task Force respondents reported they had received 50 or more requests for ISE in the previous year and the majority of Task Forces (66%) accepted each request. The remainder turned down some requests or established wait-lists when presenter availability was a problem. The Task Forces use a varying number of presenters to respond to ISE requests (range: 1 to 150). ISE presenters are most typically law enforcement officers, school resource officers, or state attorneys general (AG) staff. However, the Task Forces also use victim advocates, hire individuals, or contract with outside agencies to conduct ISE.

Most Task Force ISE is delivered in a school setting: 90% of respondents reported that over half of Task Force presentations in the previous year were delivered in school settings. Other settings included community groups, churches, corporations, or presentations made to other law enforcement groups. Although Task Forces present regularly at student assemblies, this was not the primary setting for ISE delivery. Only 22% of Task Force respondents indicated that more than half of their ISE was delivered at assemblies. Thirty percent of respondents (n=11), reported that small student classroom groups made up the majority of their presentations, and most reported a mix of student classrooms, student assemblies, and presentations to adults. For ICAC Task Forces that collected information on or could estimate the racial distribution of their audiences, they reported audiences with high racial diversity. Fifty-three percent of respondents reported that their Task Force's ISE audiences in the previous year were racially diverse (more than 50% either Asian or Pacific Islander, Native American, African-American, Latino, or other non-white groups).

In responding to questions about ISE materials used in presentations, the majority of respondents indicated that their Task Force draws most regularly from Netsmartz (93%) and "other" sources of materials (67%), including materials that the Task Force developed themselves. A smaller percentage of Task Force educators use materials from Web Wise Kids (28%), i-SAFE (21%), or iKeepSafe (16%).

ICAC Task Force presenter survey. The survey administered to ICAC Task Force presenters found respondents actively involved in disseminating ISE (**see Table C2**). Sixty-six percent of the sample reported presenting on ISE 6 or more times in the previous year with 23% of respondents presenting over 25 times in the past 12 months. Almost all presenters had presented to school groups in the previous year (95%), but substantial percentages had also presented to religious organizations or churches (45%), community groups (71%), and other organizations (26%) such as businesses, law enforcement agencies, and human services groups. Respondents presented to small groups of youth (79%), youth assemblies (71%), parents (75%), teachers (67%), and other groups of adults (22%).

ISE presenters described updating their presentations regularly, with 32% reporting that they updated materials between each presentation. Presenters use a wide range of materials to update presentations including: new research findings (62%), stories from law enforcement (75%); media stories (77%); information from schools (36%), updated materials from ISE websites or programs (75%); feedback from students, parents and educators (56%), and other sources (7%). The 40 respondents using research sources to update their materials were asked about which source they used to access research findings and an analysis of open-ended responses found that 22% (10% of whole sample) used publications or website material from established research centers such as The Pew Research Center's Internet and American Life Project or the Crimes Against Children Research Center; 10% used news sources ; 15% used a search engine (e.g, Google); 23% used information disseminated by the National Center for Missing and Exploited Children (the developers of Netsmartz ISE materials); and 30% used information from other sources such as internet safety websites and conference presentations.

We were interested in gathering more details about the specific materials used in Task Force ISE presentations and the structure of education efforts (ISE topics, presentation time, educational activities, etc.). We therefore asked the sample of Task Force presenters to give us details about their most recent ISE presentation (**see Table C3**). For 53% of the sample (n=53), the most recent presentation was held for a school group; 24% presented to a community group, 4% presented to a church or religious organization, and 18% presented to another group. Most of the presentations were offered to an assembly-size group of youth (33%), but 19% were provided to small groups of youth (less than 30), to parents (23%), to teachers (7%), and to other audiences (19%). Few of the presentations included audiences of youth under age 8 (8%). The most common audience group was 13-15 year old youth (43%), followed by 9-12 year olds; all adult audiences (32%); and 16-18 year olds (19%). Seventy-eight percent of respondents reported that the audience for their most recent presentation was over 50% white, while 19% of respondents presented their most recent presentation was provided to a more diverse audience (more than 50% other racial and ethnic groups).

In describing the characteristics of their most recent ISE presentation, survey results indicated that the majority of presentations are done in one session (86%) ranging from less than an hour (10%), an hour (46%), or between 1-3 hours (30%). Eleven respondents (12%) presented over multiple sessions. Most respondents presented by themselves (76%), but 24% presented with others including other law enforcement, legal professionals, and youth advocates or mentors. The

topics of the ISE presentations covered a wide range of current concerns including: internet predators (89%); sexting (89%); cyberbullying (88%); privacy (62%); online reputation (56%); and other topics (20%) such as child pornography, e-security, and social networking safety. When asked about the primary topic, most respondents reported either internet predators (38%); cyberbullying (28%); or else indicated that there was no primary topic (17%).

When asked about materials used in their last presentation, the majority of ICAC Task Force presenters described using self-created materials (81%). Fifty-six percent of respondents also used Netsmartz materials, while smaller percentages used materials from Web Wise Kids (1%); i-SAFE (6%); or iKeepSafe (3%). Forty-six percent described also using "other" information related to ISE in their presentations. For those who used Netsmartz materials (n=51), most described using it for about half of their presentations (n=34, 67%) and 40% (n=20) of those using Netsmartz used either the Tweens or Teens Power Point presentations. However, only 7 respondents or 30% of those using the Netsmartz presentations, used the entire Power Point presentation. Six out of 51 (12%) used activity cards designed by Netsmartz to accompany their videos.

The majority of ICAC Task Force respondents included a discussion session as part of the presentation (87%) with 34% using standard questions to generate discussion with the audience, 28% using questions that were designed to go with the ISE materials that they used, and 74% taking questions from the audience. The minority of ISE presentations conducted by Task Force respondents included some kind of additional learning related activity (24%): 7% used role-playing, 3% used small-group exercises, and 3% used writing activities. Seventeen percent of respondents (n=15) collected data as follow-up to the presentation, mostly to elicit performance feedback.

School ISE survey. Our school survey respondents reported that ISE was provided across a range of grades in their schools, with middle school students being most likely to receive ISE (52%) and high school students the least likely (29%) (see **Table C4**). Respondents also indicated that ISE implementation is happening in very diverse ways, only some of which includes presentations by law enforcement. Twenty-nine percent of respondents reported that ISE was provided by an outside speaker coming into the school and 19% reported that an ISE speaker came having a criminal justice background. The majority of school respondents reported that teachers informally include ISE in the classroom (56%) and 36% reported that teachers or school staff use specific ISE curricula or programs. Trainings for teachers (17%); student designed ISE campaigns (17%); and parent trainings (10%) were less common.

The reasons for the schools interest in ISE also varied. The most common reason was that staff felt it was an important area of education for youth (76%), but other reasons for implementing ISE were endorsed as well. Thirty-eight percent of respondents reported that it was part of district policy; 34% said that they needed to fulfill the requirements of the Children Internet Protection Act (CIPA); 20% said that it was part of state law requirements; 17% noted that parents and school staff were requesting it; and 14% said it was implemented in response to a problematic incident involving ISE. In comments, a large number of respondents mentioned a responsibility for education that schools are feeling due to an increase in one-to-one laptop programs. Representative of several comments, one respondent wrote:

> *"It is a very large concern for parents, especially in students' first year with a 1-on-1 device (5th grade). Students in later grades have cyberbullied and harassed each other online, so as part of our Media Literacy class in 5th, we decided to take preventative measures by completing several units on building positive online communities,*

including the topic of safety. This was also extended to 4th and 6th grade library classes informally. 6th had a large emphasis on plagiarism."

Respondents endorsed a range of ISE topics as important, including (in order of decreasing importance): cyberbullying (82%); privacy (78%); plagiarism (66%); online reputation (64%); internet predators (58%); illegal downloading (43%); sexting (42%); and overuse (14%). When listing the most important ISE topics, school respondents indicated that the primary concerns are cyberbullying (39%), privacy (21%), and online reputation (18%). Less than 10% cited internet predators (7%); illegal downloading (1%); overuse (1%); and sexting (0%) as most important for ISE focus.

Schools are using a broader range of available ISE materials than the law enforcement presenters. The most commonly used curricula by the schools in our sample were Netstmartz (35%); Common Sense Media Digital Literacy curriculum (35%); and i-SAFE (20%). Fewer schools reported using materials from iKeepSafe (6%) or Web Wise Kids (4%). Twenty-three percent of schools reported that they did not use any of the pre-listed programs. Respondents were asked about the kinds of educational activities that are included as part of the ISE educational program they implement. When asked about discussion periods, 64% reported that materials included a period of open-ended questions meant to generate discussion and 41% reported that materials included short-response questions meant to reinforce materials. Thirteen percent reported that no discussion period was included. We also asked about a number of other learning strategies and 39% of respondents reported that their ISE program included role-playing to reinforce new skills and learning; 47% included small group work activities; 38% including writing assignments to reinforce learning; 29% included games like cross-words and puzzles; and 20% included none of these kinds of activities.

As a follow-up analysis, we were interested in determining whether the type of ISE program materials used by the respondent's school was related to their use of either active, open-ended discussion periods or role-playing, two strategies that have been linked to effective skill-building and learning. We compared the use of I-SAFE, Netsmartz, and Common Sense Media (the most frequent response categories) to the inclusion of open-ended discussion and role-plays (see **Table C5**). We found that schools implementing Netsmartz and Common Sense Media curricula were significantly more likely to report using open-ended discussions as part of ISE. Schools that were implementing Common Sense Media ISE curriculum were also significantly more likely to be using role plays to practice skills (69% of schools implementing Common Sense Media curriculum versus 21% of schools not using the curriculum).

Finally, respondents were asked about their thoughts on how ISE should be taught in schools and barriers to implementation. Very few thought that the best option was to have ISE provided at an assembly by law enforcement or ISE expert (7%). Respondents were divided on whether ISE should be provided through an in-class ISE curriculum offered to students over several sessions (41%) or that ISE should be incorporated into existing school curricula and prevention programs (47%). We asked about other prevention programs in place at the schools and, although we did not ask follow-up questions about the extent of implementation, many of the schools in our sample reported that other prevention curricula was in place. Fifty-seven percent had an anti-bullying curriculum in place, 71% provided sex education to students and 28% had additional prevention efforts in place for concerns such as dating violence and sexual harassment.

In responding to questions about what they would like to see added or changed to their school's approach to ISE, many respondents mentioned that they would like to see a more

formalized curriculum in place and others talked about wanting more time to address it. Most mentioned that finding the time to teach ISE was a critical barrier.

DISCUSSION

The findings from our surveys on ISE delivery highlight the significant role that law enforcement is playing. The Task Force commander survey, presenter survey, and the school survey all indicate that a significant amount of youth and community education is being disseminated by law enforcement. This corresponds to survey data showing that 47% of youth reported receiving information on ISE from law enforcement in 2010 (Mitchell et al., 2012b). According to survey results, law enforcement present frequently at school assemblies, but presentations to small groups of youth or to adult audiences (parents, school professionals, other professional groups) are also common. Our survey of school professionals identified that, while use of law enforcement ISE presenters was somewhat common, schools are implementing other ISE strategies as well.

While ICAC Task Force presenters reported significant efforts to keep ISE presentation materials up-to-date, survey results suggest that their efforts are not currently incorporating research-based strategies for effective prevention education. Law enforcement presentations are almost always single-session events; most do not present as part of structured curriculum; a minority draw from internet safety research when updating presentation materials; and while it is encouraging that the majority include active discussion as part of their presentation, only a quarter use other learning-related activities and a very small percentage include active learning elements such as role-plays or small group exercises.

ICAC Task Force presenters seem to be targeting their messages to appropriate age groups: most were presenting to middle school and high school aged youth, with few presentations to elementary-aged youth. Research has found that elementary school-aged children interact online with others at much lower rates than older youth, and few experience risky or upsetting online situations (Jones et al., 2012). But even in presenting to older audiences, the law enforcement ISE presenters focused frequently on rare scenarios: the most common focus of Task Force presenter materials was internet predators. Internet predator crimes, in which adults troll the internet looking for youth to meet with for sexual activity, are rare, and even the broad category of unwanted online sexual solicitations of youth (which involve unwanted online requests for sexual pictures or information) have declined in the last 10 years (Jones et al., 2012). There was also a lack of correspondence between topics that law enforcement presenters felt were most important to cover in the ISE materials, versus school staff. Only 7% of school respondents listed internet predators as a primary concern; more were concerned with cyberbullying and with digital literacy concerns of privacy and digital reputation.

Responses to our school ISE survey suggest that schools are actively trying to figure out how to implement ISE. This is likely to continue both due to CIPA legislation and because schools are increasingly integrating new technology into learning, such as with their one-to-one computer programs. Although our sample was made up of a number of media educators and school librarians with a particular interest in ISE (which limits generalizability), it does appear that many schools are implementing multiple strategies to educate youth about ISE. The most common curricula and ISE materials used by schools were i-SAFE, Netsmartz and Common Sense Media. I-SAFE and Common Sense Media curriculum are clearly programs that have attracted school versus law enforcement attention at this point. It is interesting that the Common Sense Media curriculum, a more recent program compared with those we included in our content analysis was so extensively used by

schools. The Common Sense Media curriculum was also notably the only program to be positively related to both the use of active discussion and role-playing as educational strategies by schools, compared to schools that were not using this program.

When asked to reflect on the future of ISE delivery, our school survey respondents appeared particularly interested in more structured curricula, although they were concerned about the burden on teachers. Some felt the ideal scenario was disseminating ISE topics through existing prevention or education topics, while others thought that having a librarian or media educator teach through a prevention curriculum would work best.

Limitations. Caution should be taken when generalizing results from the survey findings to larger populations. While our efforts to survey ICAC Task Force presenters were successful in obtaining a large and geographically well-distributed sample size, it may be that those presenters who chose to respond to the survey via email or through a listserv posting are not representative of the larger population of ICAC Task Force presenters. We guess however that this was an important subset of ICAC Task Force presenters particularly active in, and interested in ISE.

Similarly, our sample of school surveys were also selected using a "snow-ball" strategy of recruitment and were: 1) mostly recruited via library science and media specialist listservs; and 2) drew individuals interested in responding to a survey on ISE. Thus, results from our school survey are not a national survey.

We were limited in how much data we were able to get from respondents and did not ask about how presenters made decisions around selecting particular materials or programs and the training experiences of presenters on the use of those materials. Future research should examine what training recommendations or requirements are promoted by ISE programs, how much is used by educators and presenters, and how such training effects program delivery.

Despite these limitations, the data provided by the ICAC presenters and the school respondents is the first time we are aware that a structured survey has been conducted on ISE implementation. The findings provide important information that adds to our understanding of how consumers are using available ISE materials, and the extent that they are implementing education in line with strategies that we know to be most effective. The findings allow us to better understand the challenges, target recommendations, and plan for evaluation of future ISE efforts.

Subproject D: Internet Safety Education Resource Center and Evaluation Toolkit

The content and process evaluations described above provide a baseline understanding of the status of current ISE efforts. Our hope is that the findings will lead to improved programs and that the instruments developed as a part of this project will help stakeholders identify those with the greatest chance of success. This will allow evaluation resources to be appropriately directed to the most promising programs. Such an investment is a critical next step for determining whether ISE is meeting the expectations of policy-makers and consumers for keeping youth safer online and improving their decision-making.

In addition to providing feedback on current ISE efforts through our content and process analyses, our aim with this project was also to improve the accessibility of research-based ISE tools and resources for ICAC Task Force members and others interested in ISE. We have been therefore been working with the Fox Valley Technical College's Internet Crimes Against Children Training and Technical Assistance Program (FVTC/ICAC T&TA) to set up an **Internet Safety Education**

Resource Center on their community portal that will locate a number of different resources, including the findings from this study and other high-quality research relevant to youth internet safety and digital literacy education. One element of the resource center will be an **Evaluation Toolkit**. The Evaluation Toolkit will include brief reports on how to conduct program monitoring and evaluation, measurement tips and tools, and tested ISE and digital literacy scales and measures. We will include the KEEP scales and ISE Checklists that were used in this survey and found in **Appendix A,** once more work is done to improve the use of these tools for others (e.g., additional instructions, information on the limits of their use, etc.).

Because the resource center will be located on the FVTC/ICAC T&TA website, it will be very visible to Task Force full and affiliate members and their ISE presenters. The resource center will be placed on an open section of the website and so available to anyone who is interested in using the tools and resources that we locate there. This will allow access for example by ISE program specialists, policy-makers, and school professionals. The resource center will be designed so that ongoing maintenance by the ICAC Task Force T&TA program is minimal. Investigators from this study will provide the ICAC Task Force T&TA staff with documents to upload on the site, including publications from the current study and relevant ISE outcome surveys, as they become available.

One of our strong concerns with previous evaluation efforts on ISE programs, and therefore one of our interests in developing an Evaluation Toolkit, was the lack of psychometrically sound outcome measurement tools. For example, in one evaluation with a fairly rigorous design (Chibnall et al., 2006), the measurement tools in that study unfortunately reflected misguided assumptions about the nature of risk, the nature of the problem, and the kinds of knowledge that would lead to safety. For example, one question about managing online risk, queried students: "How likely is it that someone you meet online would try to hurt or scare you?" A higher rating (e.g., "very likely") was taken as representing improved knowledge. This runs directly counter to research evidence and likely also to students' own experiences.

Such problems with existing measurement tools reflect not only a need for more evaluation of internet safety curricula, but also the need for carefully constructed evaluation tools. Therefore, as a final subproject for this study, we developed an ISE outcome measurement tool for use in schools or other settings (see **Appendix B** for a copy of the survey), and piloted the measure with 1051 middle and high school students in New Hampshire. The results of the pilot study are provided below.

METHODS

Instrument Development

Items for the ISE outcome measure were developed based on instruments created by the investigators for a previous study that surveyed a national sample of youth by phone about negative internet experiences (Mitchell et al., 2012b). The items were adapted from the original telephone survey format to one that was appropriate for a computer-based self-report survey for youth in middle and high school.

We also conducted two focus groups to help us develop the surveys further. One focus group was held with 12 7th and 8th grade youth, 6 boys and 6 girls, who answered questions about internet and cell phone use, and gave us their thoughts about internet safety education messages and delivery. Another focus group was held after a draft survey had been completed to pre-test the survey for feedback on readability. Eight youth 7th-9th grade (3 girls and 5 boys) attending a YMCA

evening leadership program took the survey and provided investigators with feedback on whether the wording of questions was confusing, or used language or terms that they would not use. They also provided feedback on the process of taking the survey (e.g., how long it took, whether questions repetitive) and the nature of the questions that we asked. The draft survey was revised based on their feedback.

We had originally intended the outcome survey to cover all of the primary issues targeted by prevention education programs: cyberbullying, internet predators, and sexting. But we decided to limit our outcome survey to cyberbullying and digital citizenship for a number of reasons. First, we have a concern, based on our content analysis above, that one of the current problems with ISE prevention programs is that they target too many outcomes, too briefly. In order to encourage programs to think about developing lengthier curricula around specific outcomes, we designed our survey around an ISE concern that was salient for both law enforcement and schools.

We did not include questions on internet predators because testing a reduction in internet predator exposure will be impossible for most evaluators given how rarely it occurs. Outcome measures targeting online youth sexual harassment, sexual solicitations, and sexting behaviors, are a better option because they occur somewhat more frequently. However, research on these topics is still in an early stage, ISE prevention programs have yet to focus on these issues significantly, and it is likely that "sexting" prevention in particular is something that is more appropriate for high school versus middle school youth. For these reasons we focused our evaluation tool on online harassment and digital citizenship.

Survey questions collected information on: 1) how youth used the internet and cell phones, with what frequency; 2) exposure to and sources of internet safety information and education; 3) online harassment experiences, reactions, and degree of perceive harm caused by the harassment experience; 4) online harassment behaviors; 5) bystander experiences with online harassment; 6) online citizenship; and 7) ratings on responding to a hypothetical online harassment experience if it happened in the future. Most questions ask about experiences occurring in the last 3 months.

Online Citizenship Scale. Most of the outcome survey sections are intended to be tallied and summarized with percentages, but an 11-question online citizenship scale was designed to provide an overall summary of the extent to which the youth endorsed positive online citizenship behaviors as being like them. Questions were asked on a 5-point scale ranging from "not at all like me" to "very much like me." We conducted a factor analysis and determined, based on eigenvalues and scree plot, that a two-factor solution best described the scale results. Examining factor loadings from rotated component matrix (Varimax rotation with Kaiser normalization), the items were included in a subscale when factor loadings were over .5. There were no complex items.

The first factor or subscale was labeled "Online Kindness." This subscale was made up of 7 items ("If I disagree with people online, I watch my language so it doesn't come across as mean." "I am careful to make sure that the pictures I post or send of other people will not embarrass them or get them into trouble." "My favorite places to be online are where people are respectful toward each other." "I think about making sure that things I say and post online will not be something I regret later." "I am careful about how I say things online so they don't come across the wrong way." "I do not add to arguments and insulting interactions that happen on the internet." and "I like to present myself online as someone making positive choices.") Cronbach's alpha for this subscale was .920 indicating very strong reliability. The mean for the 7-item Online Kindness subscale (0-4) was 2.6 (s.d.=1.18).

The second subscale was labeled "Online Helpfulness" and was made up of 4 items ("I have used the internet to improve my school or my town in some way" "I have used the internet to learn how I can help a friend or help other kids in general." "When I am online, I try to end arguments or dramas when they develop." and "I have used the internet to share something that I am good at.") Cronbach's alpha for this subscale was .70, indicating adequate reliability. The mean for the 4-item Online Helpfulness subscale (0-4) was 1.7 (s.d.=1.03).

Procedures

The anonymous online survey was administered to 1051 students in the 6th through 10th grades at 5 middle schools and 1 high school in New Hampshire. Consent and assent procedures were approved by the University of New Hampshire's Institutional Review Board (IRB) and by each participating school principal prior to administration. Parents were sent information about the study two weeks ahead of time and were instructed that they could let the school know if they did not want their youth to participate. Students were told, prior to beginning, that the survey was anonymous and that they could skip questions or submit a blank survey if they did not want to participate. Survey administration occurred at school computers and was overseen by a contact person at each school.

Sample

One-thousand and sixty-five students from 5 middle schools and 1 high school in New Hampshire took the survey between January 17th and April 12th, 2012. Survey responses from 14 youth were eliminated either because there was extensive missing data or because response patterns suggested that it was highly probable they were "fake" responses (e.g., all items were answered using the most extreme selection). The final sample included 1,051 youth. Respondent demographic have been included in **Table D1.** Fifty-one percent of respondents were male and 49% were female. The bulk of students were in 7th (29%) or 8th grade (37%), but 19% were in 6th grade, and 8% and 7% were in 9th and 10th grade respectively. Most student respondents described themselves as White (80%), a significant percentage were Hispanic or Latino (14%). Smaller percentages of youth labeled themselves as Black/African-American (6%), Asian/Pacific Islander (5%), American Indian/Eskimo (3%), or "Other" (5%).

RESULTS

The first section of the survey asked respondents about their internet and cell phone use. (see **Table D1** for results). Every student reported that they have used the internet or a cell phone in the past 3 months. Forty-eight percent reported accessing the internet 7 days a week. Another 21% reported that they are online 5 or 6 days a week. When asked about the amount of time they spend online on a typical day, the largest percentage of students (38%) reported spending 1 hour or less online on a typical day, but 16% spend 3 or more hours a day online. Students use the internet for a wide variety of activities, but the most common activities were using a social networking site (69%) and downloading music (49%). Seventy-seven percent of students reported that they have cell phones (including smartphones or iPhones). Cell phones were also used in a wide variety of ways but most typically to make calls (66%) and send or receive texts (70%). Eighteen percent receive emails on their phone, 43% send and receive photos on it, and 30% used the phone to connect to the internet.

We also asked students about whether they had received information on internet safety from a variety of sources in the last 3 months. Twenty percent of youth reported that their parents

had talked with them about "taking, sending, or posting sexual pictures online" in the last 3 months; 22% of youth said their parents had talked with them about "people on the internet who might ask sexual or other inappropriate questions;" and 42% reported that, in the last three months, their parents had talked to them about online harassment or cyberbullying. Forty-nine percent of students said that their parents talked with them about at least one of these things in the past 3 months. Almost half of the students (47%) reported that someone at school had talked with them about internet safety. Only nine percent had visited a website that gave them tips on how to stay safe online. There were no differences between youth who said that they received an ISE program in the school versus those who did not or were not sure in terms of their experience of an online harassment event. There was however a small difference in perpetration rates with 24% of youth reporting perpetration for those who received ISE versus 31 and 32% perpetration rates for youth who either did not receive ISE or were not sure, respectively (X^2=8.0; p<.05).

Students were then asked a series of questions about how often they had negative or harassing experiences on the internet, and what they did in response. Results indicated that online harassment is something only a minority of students had experienced. (See **Table D2** for results). Thirty-five percent of students reported that they had been the target of at least one of five negative harassment experiences in the last 3 months. For the majority, the harassment experience was not particularly upsetting. Youth who had endorsed an online harassment event (n=371) were asked how worrying or embarrassing it was (they were instructed to pick the one that stood out the most in their minds if there were multiple experiences). Out of the 371 youth who reported such an incident, 15% felt pretty or very "worried or threatened" as a result and 22% felt pretty or very "embarrassed." Out of the whole sample of 1051 students, 9% described an online harassment incident occurring in the last 3 months that was pretty or very worrisome or embarrassing to them. There was no differences in ages of distressed harassment victims or the amount of time they spent online, but distressed victims were significantly more likely to be girls (14% of girls vs. 4% of boys, X^2=32.2, p<.001), and were more likely to have perpetrated harassing behaviors as well (see below).

We also asked the sample of 371 youth who had experienced online harassment how they handled the incident and students reported trying a wide range of things (see **Table D2)**. The most common solutions were: "blocking the person or deleting the message" (65%); "ignoring or avoiding the problem" (56%); and "telling the person to stop" (54%). While most youth handled the harassment incident on their own, 26% talked about the problem with an adult in their family and 15% talked with an adult at school about it. Out of the 371 students reporting an incident of online harassment, 88% tried at least one of the listed solutions and 69% had tried multiple things. Additional analyses indicated that the more frequent the online harassment experienced by the youth in the previous 3 months (at least one type of harassing behavior happened 3 or more times), the more things they tried in response. High-frequency victims tried an average of 4.18 solutions compared to 2.7 solutions for low-frequency victims (t=-5.84 (369), p<.001).

Next we asked youth how often they had behaved in negative ways when they were online. Twenty-four percent reported that they had made rude or nasty comments to someone on the internet, with smaller percentages reporting that they had used the internet to harass or embarrass someone they were mad at (11%); spread rumors (6%), share something with others that was meant to be private (9%); or posted or forwarded a picture of video of someone when they knew it would be upsetting to them (6%). Six percent of the sample also reported participating in an online group or social networking site where the focus was making fun of someone they knew. The overlap between youth who experienced online harassment and perpetrated it was substantial. Seventy-four percent of youth who reported experiencing distressing online harassment also

reported at least one of the 6 types of internet harassment perpetration in the last 3 months, compared to 28% of youth who had not experienced this type of harassment (X^2=101.7; p<.001).

We also asked the youth about witnessing online harassment and how they responded. Forty-eight percent of students reported that in the past 3 months, they had seen a situation where someone they knew was having problems being harassed or made fun of online. When we asked those students (n=501) what they did in response, 71% reported that they responded in a potentially helpful way after witnessing online harassment (said yes to at least one of first six responses listed under this question in **Table D2**). The most popular ways of responding were telling the person causing the problem to stop (57%), getting friends to try and help (35%), an ignoring the problem or avoiding the person causing the problem (33%). Eighteen percent of these youth file a report or used a "report a problem" button or link; 21% talked to an adult at home about what they saw; and 15% talked to someone at school. How often students reported witnessing an online harassment event in the last 3 months did not impact whether or how many ways they responded.

As we reported above, the mean for the 7-item Online Kindness subscale of the Digital Citizenship scale (0-4) was 2.6 (s.d.=1.18) and the mean for the 4-item Online Helpfulness subscale (0-4) was 1.7 (s.d.=1.03). The percentage of youth responding to each item response option is provided in **Figure D1.** We conducted some additional analyses to identify factors that correlate with higher digital citizenship scores and found that higher scores on the Online Kindness and Digital Citizenship scales were significantly correlated with greater likelihood of: 1) helping in a positive way as a bystander of online harassment (Pearson's r=.158, p<.01; and Pearson's r=.207, p<.001, respectively); and 2) seeing themselves as trying different solutions if victimized in the future (see below) (Pearson's r=. 619, p<.001; and Pearson's r=. 585, p<.001 respectively). These two subscales were also negatively correlated with reported perpetration of online harassment in the past 3 months as well (Online Kindness subscale: Pearson's r=-.263, p<.001; Online Helpfulness subscale: Pearson's r=-.086, p<.01).

Finally, we wanted to get a sense of how youth imagined that they might react in the future if they witnessed online harassment occurring. The entire sample of youth were asked: "Imagine that you are trying to handle the following problem: Someone at school is spreading rumors and making mean comments about someone you know by texting and posting comments on a website like Facebook. Other kids have started to join in. How likely do you think it is that you would react in the following ways?" Percentages of endorsement to item response options are provided for each item in **Figure D2.** Responses are similar to the responses for children who told us how they responded to a harassment incident, with most youth indicating they would handle it on their own. Although projections of future behavior based on a hypothetical incident may not necessarily be accurate, this section of the measure provides a rough way for an online harassment prevention program to measure impact for all youth.

DISCUSSION

The pilot study is a first step in establishing the usefulness of the ISE Outcome Measurement Survey as an evaluation tool. The piloted instrument offers information about: 1) the impact of their program on rates of overall and distressing harassment victimization and harassment perpetration; 2) whether youth try more solutions to victimization experiences as a result following the program; 3) whether they talk more about their experiences to adults or friends; 4) whether they anticipate trying more solutions when they consider a hypothetical online harassment

experience in the future; and 5) whether bystanders respond to observed harassment in more helpful ways.

Results indicate that we successfully adapted a measure that had been used in basic research on internet safety, though administration by telephone to a national sample, given that the rates of victimization and perpetration were comparable. The pilot data found that 9% of youth reported experiencing distressing harassment in the last 3 months, compared to rates of 5-6% found in national surveys (Jones, et al., 2012). We found rates of disclosed perpetration somewhat lower than national samples: for example, 24% of our sample reported making "rude and nasty comments online" compared to 40% in the national survey (Jones et al., in press). However, both our sample and the national samples found 11% of youth reporting that they had used the Internet to "harass or embarrass someone." Finally, we found 47% of youth reporting exposure to ISE in schools –the same rate found in national samples (Mitchell et al., 2012a).

Additionally, the instrument provides a unique measure of "digital citizenship" with Online Kindness and Online Helpfulness subscales. These subscales show good initial psychometric results, and correlate significantly with other online behaviors in expected ways. This scale would provide ISE programs with a way to measure positive effects of a program on kind and helpful behavior online, something that is not currently available in the field.

Additional psychometric work will need to be done using more diverse samples and testing the measure on a sample of youth before and after an intervention. Encouraging the use of the measure by providing it through our Evaluation Toolkit will facilitate additional data collection. When we include the survey in the Evaluation Toolkit, we will include with it a short "user's manual" that will provide a summary of the pilot study, instructions on scoring, and psychometric information on the digital citizenship. We will also add questions about program elements, such as message, content, and delivery. Such questions were not appropriate for this initial pilot but will eventually be critical to determining which program qualities are most effective in ISE.

OVERALL PROJECT CONCLUSIONS

The internet safety education (ISE) content and process evaluations conducted as a part of this study found that that the educational approach and messages of most current ISE fails to incorporate critical elements of effective prevention education. Our content analysis of four leading ISE programs and survey of ICAC Task Force ISE presenters suggest that the current approach to ISE lacks: 1) research-based messages; 2) skill-based learning objectives; 3) opportunities for youth to practice new skills; and 4) sufficient time for learning. The primary goal of ISE efforts appears to be conveying "protective messages" to youth, but there is no evidence that the messages will succeed in making youth safer or help them make decisions that will improve their well-being. As a whole, the ISE field has been slow to include a growing research-base on internet safety problems like internet predators and online harassment. And educational messages around "digital literacy" concerns like privacy and digital reputation (e.g., "Think Before you Click") are widely repeated without a research-based understanding of how youth are being negatively affected, and what factors drive the youth behaviors that so concern adults. This means that most ISE is a highly speculative and experimental undertaking, whose success cannot be assumed. Without a rapid shift in approach, it is likely that it will face the verdict of so many first generation prevention efforts in such varied areas as drugs, alcohol, smoking, suicide and driving safety. Policy-makers, consumers, and communities need to demand ISE programs increase their efforts meet basic standards of

effective prevention. Programs that successfully respond to these demands will define the next generation of ISE efforts.

The four ISE programs reviewed in this study--iKeepSafe, i-SAFE, Netsmartz, and Web Wise Kids--were selected because they represent some of the longest-standing and most widely-used ISE program material in the field. Although we found that they have not yet sufficiently incorporated research-based prevention practices, there were signs that they are working to make improvements. All of the programs that we reviewed had developed accessible manuals or activity cards. Presenter instructions included open-ended questions to encourage discussions with youth. The program instructions include creative activities designed to get youth to engage with the materials more, although the goal of most activities appeared to be reinforcing educational messages versus have youth practice new skills. There was some evidence that the programs were working to incorporate new research, particularly in materials directed at older youth, but overly dramatic statements and fear-based messages still dominated. Nonetheless, these programs are all in a good place to strengthen their curricula based on the recommendations provided in this report.

An extensive amount of ISE materials have been developed, but our guess is that the four programs reviewed here are fairly representative of the ISE strategies and messages that are being disseminated by the field at large. In fact, they probably represent an improvement over much of what is being delivered—a quick search identifies many ISE "experts" and presenters that use highly fear-based messages and scare-tactics and rely on very outdated stereotypes. The survey of ICAC Task Force presenters suggest that many create their own ISE materials, and only a few draw from research. There are however, newer ISE curricula that look promising and we encourage them to use the review process undertaken in this study to improve the research-base for their program as well. The ISE curriculum developed by Common Sense Media is worth a particular mention given that our process evaluation suggests that this freely available program is being extensively used by schools and there is evidence that use of the program was correlated with the use of active discussion periods and role-playing in school educational efforts. A quick review of their program content, for example their lesson on internet predators, shows evidence that they have made a concerted effort to incorporate existing research into messaging.

Program developers may worry that implementing the recommendations spelled out below will make their programs less practical for schools to implement, and more difficult for law enforcement to present. Many of the program developers we talked with prided themselves on the flexibility of their lesson plans—they openly encouraged schools and presenters to pick and choose among the lessons, to adapt them, and to implement as much or as little as they have time for. And our survey of law enforcement presenters suggested that this was in fact happening. However, this adaptability comes at a big cost if the effect is that the goals of improved youth safety are compromised. As programs work to strengthen their curricula, they are also going to need to take a larger role in insisting that if schools want to see change, adequate time must be devoted to education. This may be less difficult than they imagine: our school survey found that many school professionals would like to have a structured curriculum to use. Short-cuts provide only an illusion of education, and it is the responsibility of program developers and policy-makers to find a way that ISE can be incorporated into school and other settings practically, but also delivered effectively.

What is the best role for law enforcement?

Our survey of ICAC Task Forces, presenters and school professionals confirms that law enforcement has been one of the most active groups of professionals in developing ISE materials, and going into schools and communities to present to youth and parents. The findings support

reports by youth that they have received a significant amount of ISE from law enforcement (Mitchell et al., 2012b). The criminal justice field deserves praise for highlighting potential internet problems and for mobilizing so quickly. But law enforcement as the lead professionals in the ISE mobilization also has some drawbacks. First, law enforcement personnel are not generally trained in pedagogical approaches. Especially given some of the complex concepts, it may be better for highly skilled educators to be involved. Second, law enforcement does not specialize in curriculum development and evaluation that characterizes the most effective programs of the education field. Third, it is not clear that law enforcement as internet safety educators is a sustainable model. It is difficult for law enforcement agencies with extensive responsibilities and notable resource limitations, to commit to curricula that require skill-based lessons to be taught over multiple sessions. And with unexpected shifts in funding that typify governmental support, it may be better to have career school personnel with ISE knowledge and skills rather than external educators from law enforcement.

Additionally, law enforcement may not bring the most successful message or tone to ISE. Law enforcement, because of their experience and professional orientation, tend to emphasize crime and danger, and punishment and sanctions. It is not clear that these themes help to advance many of the skills and behavioral changes that ISE is trying to achieve. The prevention domains where law enforcement have had the most ongoing presence are driver education and drug abuse prevention because they are the dominant enforcers of traffic and drug possession laws. The law enforcement connection to internet education through sex crime investigation is a much weaker one, because internet predator cases are relatively rare encounters for most youth. Instead, the most frequent kinds of problematic internet encounters for youth are things like peer harassment, viruses, unwanted content exposure, and social embarrassment. It is noteworthy that bullying education, although potentially a criminal issue, has not been a law enforcement-led enterprise. So is it advantageous to have law enforcement, with their emphasis on crime and punishment, playing such a large role in ISE?

The answer is not necessarily to exclude law enforcement, but to clarify through study and evaluation the roles in which they can be most effective. Law enforcement involvement in primary prevention has several arguable benefits: 1) they have obvious expertise on issues involving criminal justice or legal matters; 2) their involvement presents a visible statement that communities consider a particular problem important; and 3) their presence may provide youth with a visible image of them as a positive and friendly resource. There are likely creative ways to maintain these benefits of law enforcement involvement, even if their role shifts. For example, law enforcement presenters could be brought into talk about very specific components of ISE as a part of a larger planned ISE school-based curriculum. Or, school resource officers, located in schools might be trained to provide evidence-based curricula over a longer period of time. We encourage policy-makers, the law enforcement community, program developers, and schools to directly engage in conversations on this issue as a part of implementing the recommendations stemming from this project.

POLICY AND PRACTICE RECOMMENDATIONS

Below we highlight the implications of our review for the ISE field and outline our key recommendations for re-conceptualizing ISE and developing a more effective, research-based approach to protecting youth.

1. **ISE education must move beyond a reliance on stock safety messages and the use of single lessons when addressing complex social-emotional behaviors.**

To their credit, the ISE programs that we reviewed all had developed creative activities and included interesting discussion questions to accompany their program materials. However, the purpose of most of the activities and questions was to reinforce educational messages. The assumption underlying this approach is that youth suffer from a lack of knowledge—so the goals are to ply youth information: "Bullying hurts;" "Using a sexual username is going to lead people to think certain things about you;" and "Posting pictures of you partying is going to give people the impression that you like to party." However, we have made this mistake before-- thinking that the reason youth make bad decisions is because they lack knowledge. For example, evaluation research from drug abuse prevention education demonstrated that just giving youth information about the negative effects of drug youth was not enough to change their decision to use (Tobler, 1992).

ISE is likely making the same mistake. There is no research to support that youth do not understand bullying is a bad thing, or do not know that posting a sexy picture of themselves sends a particular message. There is also no data to support the hypothesis that youth do not understand that things spread fast on the internet or that information posted there is very public. Telling youth to not cyber-bully or share sexual pictures with a boyfriend will likely have little effect on behavior, according to the experience of prevention science: Most youth already know these behaviors are wrong or risky, and those who behave in these ways either see the benefits outweighing the risks, or perhaps see no other options to handle strong emotions.

The more difficult job for ISE program developers is to get youth to actually use this knowledge. According to the meta-synthesis we conducted as part of this project, prevention research provides us with a roadmap for how to do this. First, there must be a much greater emphasis on skill-building. These are complex social and emotional behaviors for adolescents. It is also not enough to choose skill-based learning objectives that just sound appealing, but there must be a known connection between the skill and protection from the problem of interest. Consider a program that teaches students to repeat positive statements about themselves when feeling down as a way to improve self-esteem—this is a skill-based objective, but if there is no demonstrated connection between the skill and the problem area of interest (e.g., self-esteem and the propensity to cyberbullying), then no change in that behavior will result.

Youth also need a chance to discuss and practice the new protective skills they are taught. The most established way for youth to practice is through role-plays, although other creative activities can be designed that let youth imagine when and how the skills could be applied and some of the different outcomes. Finally, there needs to be adequate time for youth to learn and practice the skills. Complex problems like peer harassment, risky sexual decisions, and unhealthy romantic relationships (online or off-line) require more time than one 45-minute lesson can offer for learning to learn new ways of thinking about these problems and building skills that can improve healthy decision-making. Research has shown that new skills can be taught to youth in a relatively short amount of time, but more than one or two lessons are needed.

2. ISE program developers need to reduce their reliance on dramatic statements and scare tactics even further.

While none of the ISE program materials that we reviewed used the most egregious examples of scare tactics—such as disturbing internet predators lurking online, looking for young children—there were still more subtle examples. One example we found was a pairing of lower-risk and more common behaviors with extreme outcomes. The Netsmartz "Teen" presentation for example provided youth with this message on sexting: "Sexting is the sending of sexual messages,

pictures, or videos through cell phones. Sometimes sexting is considered child pornography, which is a crime. Even teenagers can be registered as sex offenders for sexting." While all of these statements are true, the first statement uses a very broad definition of sexting, including sexually worded messages. The next two sentences then create the vague impression that all sexting is criminal and could result in being labeled a sex offender –consequences that are very rare and only apply to a small category of what has been defined as sexting.

A second type of scare tactic is using large percentages to impress on youth, schools and parents the large "scope" of the dangers. Educators and advocates in the ISE field use prevalence statistics to try to motivate parents, school officials and youth themselves to take internet problems seriously. Often they will cherry-pick the largest estimates that are available in the literature. Programs have cited statistics like 50% of youth are more are cyber-bullied or 20% of youth engage in sexting. While they do come from research, some of these statistics are misleading, in that they include cases of questionable seriousness, or high risk samples, or ignore other studies that have lower estimates. The educators often choose the largest of the available numbers and use them in their programs because they believe that large numbers get people to treat the problem seriously.

But research shows that most youth do not cyber-bully, do not send sexual pictures, and internet predator abductions are rare. Youth are either going to discount the inflated numbers, be confused by them, or even worse, the messages could back-fire by providing youth with negative social norms. There is research to support this concern: alcohol researchers found that when young people heard inflated estimates about alcohol usage, it made them think that binge drinking was normative, so it made them more likely to do it themselves (Perkins, 2003). Eliciting students' own experiences in a class or a school may help make the problems real for students, but it is not clear that citing general statistics and in particular large ones, really helps to prevent problems.

3. The ISE field needs to entirely rethink ISE materials directed at young children.

Child development varies dramatically across key issues relevant to ISE such as independent decision-making, the importance of peer relationships, romantic interest and sexual development. Most of the programs that we reviewed were clear about the target age group for their materials. The information directed at middle-school and high-school youth appeared to be fairly well-matched to development. However, the ISE materials that the programs developed for younger children using animated characters (e.g., "Clicky" and "Faux Paw"), relied much more on stereotypes and vague messages, and the problems that they targeted represented situations that very few children under ten years old have come across. Young children are not interacting with peers online very much; have limited and controlled interactions with "strangers" online; are not yet using cell phones frequently or very independently; and have extremely low rates of unwanted experiences online such as sexual solicitations or cyberbullying (Jones et al., 2012).

The idea behind developing ISE materials for young children is probably the hope that important prevention messages will be conveyed before youth reach the age that problems begin, but there is no research to suggest that these vague messages will be remembered once the youth reaches the age in which the scenarios might apply.

Elementary school children are certainly becoming acquainted with the internet and parents and schools will need advice about how to help young students get the most out of this tool. Acquiring information and skills in a certain sequence, at a certain time is essential to successful skill acquisition and when information is presented too early or too late, effective learning may be compromised. There are likely developmental capacities and sequences of internet skill

development in the same way that there are for reading and math. But these sequences are not yet understood in the same detailed way for digital literacy and ISE programs need to do more work formulating what information young children need about using new technology.

4. "Internet safety" goals are very disparate—different educational strategies are needed for different ISE topics.

"Internet safety" topics are a very broad and shifting mix of concerns, which makes it difficult to create comprehensive program logic around the entire problem as a set. As we highlight in our content analysis, ISE programs combine messages about any or all of the following topics: cyberbullying, problematic content (e.g., videos of fights, inappropriate pictures), internet predators, sexting, spam, e-theft, and illegal downloading. The Web Wise Kids program "It's Your Call" program, for example, teaches youth that: it is not okay to use cell phones to cheat on a test, take and send risqué pictures, spread rumors, and the importance of using their phone to get medical help when needed. Similarly presentation materials provided by Netsmartz for "Tweens" and "Teens" covers ground on not running away with internet predators, not being mean to kids online, and being careful about your online reputation.

This comprehensive strategy may seem to make some initial intuitive sense: If you have a captive audience of youth in front of you, why not educate them about as many things as possible at one time? But we would not combine these kinds of things in an "offline" risks presentation. For example, most people would find it strange to have a 1-hour presentation for youth that covered driving safety, safe sex, the dangers of drug use, and plagiarism. Most of us would think that these very different issues needed to be handled separately and using different educational tactics.

Similarly, the program logic should look very different for different ISE concerns: the dynamics of the problems are different, the risk levels are different, the causal factors are different, and therefore, the skills and knowledge that need to be targeted with youth education and prevention are different. What a youth needs to know to avoid being groomed by an adult online offender (e.g., how to make healthy relationship decisions and avoid risky relationships) is very different from what they may need to know to avoid cyber-bullying (e.g., how to de-escalate peer conflict). And the skills needed to navigate these very complex social-emotional concerns are quite different from the fairly straight-forward knowledge needed for youth to avoid spam and malware. There is not a generic "skill set" or "knowledge set" that is a core to an internet safety "curriculum."

We recommend that ISE programs decide which educational or prevention topics they are most interested in. If programs are interested in reducing rates of cyberbullying or improving youth abilities to make healthy relationship choices, online and offline, then these are probably best handled through primary prevention efforts that follow the recommendations we make above for developing active, multi-session, skill-based curricula. Secondary prevention would also be promising for these target problems—ISE programs have yet to develop educational material for high-risk youth audiences. Numerous research studies have identified that youth who behave in high-risk ways off-line have negative experiences online at higher rates than other youth.

One of the problems with developing separate ISE curricula around cyber-bullying or online sexual harassment, solicitations and relationships (or internet predators), is that schools are having to juggle multiple concerns with shrinking resources, and are having a difficult time maintaining existing prevention programs, let alone adding new ones. This might be why schools often resort to providing youth with one-time assemblies to deliver ISE. Rather than supplying schools with these ineffectual short-cuts, ISE program expertise might be better used to consult with and add content

to existing, evidence-based youth education and prevention programs to reflect the new issues and concerns introduced by new technology. There is an opportunity to help schools tackle similar problems with one prevention approach. Skills to inoculate youth against grooming would certainly help offline as well as online: sexual predators are more likely to meet and groom young people in the neighborhood, at parties, and in youth serving organizations versus online. Predators whom youth meet online are just a very small fraction of child sex offenders (Wolak, Finkelhor, & Mitchell, 2009). Similarly, research suggests that there is considerable overlap between offline and online harassment, in terms of victims and offenders, and it is not clear that there are many specific cyber-bullying skills and information that would not coincide with ordinary bullying prevention (Olweus, 2012). Given the much longer track record and research base for bullying in general, it might make most sense to integrate the efforts.

We also recommend that digital literacy issues, such as privacy and avoiding e-spam, be separated from the internet "safety" concerns. "Digital literacy" may be best taught by computer or media specialists in schools, or by parents. Many of the recommendations we make above still apply: learning objectives will be achieved more successfully if lessons are skill-based and active. And even with the arguably simpler educational objectives of digital literacy goals, it is critical that program developers think through program logic—what do programs want youth to learn and how does the message or information get you there? And what research is available that supports this link? We have some concerns that many of the currently popular digital literacy topics deal with ethical and moral grey areas that are difficult to "teach."

5. The field needs to use research more when developing educational messages: ISE messages have critical problematic assumptions and under-developed program logic.

Program logic is the process of specifying the research-based link between the problem, the intervention, and the prevention or reduction of the problem. Research on unwanted sexual solicitations, requests for sexual pictures, and cyber-bullying is growing. While more research is needed on causal factors and similarities and differences with related offline problems, how online victimization is similar or different from off-line victimization, there is enough information that current educational programs should be incorporating it better.

Many of the ISE messages that our content analysis found to be common do not appear to be based on any research, and the link between the message and its intended effect has problematic logic. Take for example the common ISE message: "Think before you click." This message was used across many of the ISE curricula that we reviewed. The thought behind it appears to be that impulsivity is causing a lot of online problems for youth, and that if youth would pause and reflect before posting or sending, they might soften an aggressive text or not post an inappropriate photo. But we have no data that impulsivity is behind internet safety problems. It may be that even if there were a way to get them to pause and "think," youth would still choose to send the mocking text or post or send the sexy picture. Youth decision-making in these contexts may have more to do with anger, or attention seeking, or sexual identity than impulsive actions.

The message itself is also very vague. Should youth think before every click? Youth are constantly sending out electronic comments and posts very rapidly, it is inherent to the nature and appeal of instant messaging, texting or "Tweeting." And what exactly should they think about? The programmers are assuming youth will understand they mean: "Think about how it will emotionally affect the person that you are sending the message to or the person you are talking about." Or "Think about what this says about you to others who will see it." But, even if that could be made clear, it might be that perspective-taking skills are needed for youth to distinguish better how their

communications might affect others. And perspective-taking may not even end up being a protective factor—it may be very clear to many youth who engage in online harassment that their communication will have a negative emotional impact on the target.

Another common ISE message is: "Don't share personal information." Can such generic messages actually be much of a guide? Giving out personal information like one's email or address and posting pictures is a standard part of online experiences. And we are likely confusing youth by implying that sharing information can lead to grave danger, when no research that supports such a conclusion.

Even the almost ubiquitous ISE recommendation for youth to "Tell an adult" has questionable protective logic. It is unlikely that youth respond to those messages by thinking "I never thought of telling an adult!" Probably most youth in difficult situations consider it, but hold off for a variety of understandable reasons. For example, research suggests that most youth are quite skeptical that telling actually helps (Davis & Nixon, 2010) and report that such disclosures often result in no change or can even make things worse. And a youth would have to overcome strong natural inhibitions to talk to an adult about sexual conversations he or she has been having online with someone, even if that talk had turned disturbing or uncomfortable. Making the issue of "telling" even more complex, the youth running into particular troubles online are often the very youth who communication problems with parents and other adults to begin with. It seems unfair to provide youth with slogans or advice that has unclear or unproven ties to improving their safety and well-being.

There is still a lot to learn about the dynamics and causes of internet safety issues, and programmers must make a lot of guesses and assumptions about what educational messages might work to protect youth or reduce problems. Because of this, they fall back on repeating untested and often vague protective "messages" or present anecdotes and just hope that children will figure out the point. Below we review some of the logic errors we have found connected with specific ISE topics:

Internet predators. The original concept of the internet predator was an adult who pretended to be another youth, used deceit to gain their confidence, and arranged for a meeting leading to an abduction or violent assault. This influenced much of the messaging in early ISE which warned children to be suspicious of claims of their online contacts and to never go to meet someone they met online. But subsequent research has painted a much different picture of most internet sexual abuse (Wolak et al., 2008). Research shows that most cases do not involve such deceit, but rather involve teens agreeing to meet individuals that they know are adults for sexual encounters, because they believe they are in love or in pursuit of romantic adventure or excitement. Rather than naïve youth, the victims are often at-risk youth with family conflict and abuse histories. This is a different dynamic that warnings about adults posing as teens and exhortations about parental supervision may not be adequate to address.

Some (but not all) of the ISE has tried to incorporate a revised understanding of these dynamics into their education. However, even in some of the newer materials the core issues are still rarely addressed, because they are so challenging. What exactly are the messages that will discourage a teen from believing that a sexual relationship with an adult will be exciting, romantic and will not end in tragedy? How can education reach and persuade the vulnerable and perhaps alienated youth who may already at high risk because of family conflict, neglect and abuse? Can this problem be addressed without raising highly charged issues about sex, romance and relationships?

Obviously there is a great deal of developmental work that education needs to do around this problem to craft a successful strategy.

Sexting. The "sexting" problem has been conceptualized as young people making and sending sexual images of themselves, which puts them at risk for blackmail, humiliation and prosecution as sex offenders for violating child pornography statutes. This has led to programs that warn young people of the risk of winding up on the sex offender registry. But there is an enormous amount about the dynamics and motives of sexual image production and exchange among youth that is not yet understood. Available research suggests that this behavior is complicated and diverse, and ranges from blatant exploitation at the hands of adults to romantic sharing among youth who are old enough to have legal sexual relationships, from graphic sexual acts to many images that would not qualify as child pornography. Will warnings about legal prosecution and effects on one's reputation increase responsible behavior? It is not a simple proposition. This may be a reprise of the "informational deficit" strategy that did not work with cigarette smoking. The results of such a strategy could be even worse and have a boomerang effect. For example, warnings about being prosecuted could lead some children who have been victims of adult groomers to avoid going to the authorities. They could even reinforce the exploiters' blackmail: "You'll go to jail." The warnings be seen as adult bluster or even add to the excitement?

Effective education on this issue has to take into account a wide variety of situations and motives. It also has to acknowledge young people's normal interest in sex and being seen as sexually attractive. And it has to recognize the changing nature of sexual mores. Sexual behavior is among the most difficult of human domains to affect. There is every reason to think that this will also be a challenging domain for education, and long and careful study is needed to produce an effective response.

Cyber-bullying. Widely publicized examples of youth being harassed by peers online have led to a massive mobilization to educate youth about cyber-bullying. Among the major messages of this mobilization that we found in our review of ISE materials is exhortations to tell parents and school authorities, and to refrain from nastiness and meanness in online communications. But the challenges of bullying prevention are large and have befuddled educators for generations, and they almost certainly apply to cyber-bullying as well.

One problem is how to characterize bullying and distinguish it from other forms of social conflict in ways that young people understand. Children lack many social skills and often say honest but hurtful things ("you walk funny") or don't realize that attempts to be funny can be insulting, or get caught up in competitive fervor or have strong preferences for whom they associate with. To clarify this, bullying is often defined with terms like "intended to cause harm" in a relationship involving "a power imbalance" or where a children "is unable to defend himself". But these are very imprecise concepts and are not particularly useful in helping children understand when they have crossed a line. It is not clear that bullying education in general or cyber-bullying in particular have figured out how to clearly demarcate the problem.

In the absence of clear demarcation, cyber-bullying prevention often operates by giving examples. But it is not clear how easy it is for students to draw general conclusions from these examples to their own social context. Research on aggression suggests that aggressors often see their own behavior a legitimate and justified by the context (Stillwell & Baumeister, 1997). By contrast it is much more clear-cut to specify rules like no hitting, pushing, threatening with an object, etc., but these do not apply to online and most verbal kinds of bullying.

Another common cyber-bullying prevention strategy is to try to illustrate how much harm the meanness or exclusion can cause. The logic here seems to be that children are unaware of the hurtfulness (the "information deficit" model again) and will be deterred to find out that it is severe or might prompt another child to consider suicide. For one thing, post-bullying suicides are rare, and students may know this and dismiss it as adult bluster. But more importantly, many bullies likely cause pain intentionally. Could dramatic presentations of distress actually increase its appeal among bullies, or at least be useless in deterring it? Some youth report that the taunt "go commit suicide" has been added to the cyber-discourse, now that the cyber-bullying-to-suicide connection has been so widely (and to many authorities misleadingly) emphasized.

Privacy. Privacy instructions are one of the most common messages we found across all ISE topics that we reviewed. They are meant to protect youth against a lot of things—unwanted advertisement, spam, fraud, e-theft, identity-theft, hacking, internet predators, and peer harassment. Some of the educational messages that have been deemed useful to young people include cautions not to give out personal information, not to share passwords, not to use their real name and address. But can such generic messages actually be much of a guide? One can hardly get past Wikipedia online these days without having to give out personal information like one's email, perhaps one's address, and a variety of other things. The developmental problem for youth and everyone else is learning who to trust with these vulnerable pieces of personal information. But the criteria of trustworthiness are not easy to codify even for adults. Your older sister who fixes your browser may spy on your love life. Reputable merchants may allow your credit card and PIN to be hacked.

Another popular theme of ISE privacy messages is admonitions to keep personal information off of your social networking site or blog. ISE program materials on this topic will start by recommending choosing privacy settings carefully, which seems like good advice if a youth is interested in privacy. But then, program materials often suggest that even with these settings in place, friends may not be friends, and even if they are, they may copy and paste information in a way that their friends can see your personal information. It is unclear however, what the biggest concerns are: materials variously suggest danger to one's reputation, danger of being bullied, or unsavory people using your personal information to harm or harass you. But there are two big problems with this strategy. One is that the category of things that count as "personal" or "private" appears to be so broad as to defeat the entire purpose of social networking or blogging. The other problem is that the scenarios of "danger" that result from sharing personal information often stretch credulity.

Some of the concern seems to stem from fear that youth don't understand the need for "privacy." But privacy is an abstract topic. People can be alarmed by discussions of targeted marketing toward children or denial of health benefits, but little research exists about what privacy problems children and families have actually had.

So what do young people actually hear when educational programs give them messages like "don't give out personal information" that are at odds with the real world and fail to account for its obvious complexity? At best, one would hope that they think about the problem a bit and derive some rough personal rules. But more likely they just ignore it. Worse, however, is the possibility that such information adds to youth cynicism that adults and educators don't know what they're talking about, and then feel free to ignore everything else they say.

Online reputation management. Finally, another topic popular among the digital literacy materials that we reviewed were instructions on online reputation management. These messages

are apparently designed to protect youth against their pastor, future employers, colleges etc. finding out things they don't want them to know. However, the concern here seems to be based on dramatic anecdotes or media stories of educational or career opportunities lost because of information a youth posted online, but it is unclear how much this is actually a problem for youth. Decisions about what is a "good" reputation may also be very different for kids and hard to "teach." Maybe the desire to be seen by their friends as "sexy" is paramount and what others view it is immaterial.

Additionally, there seems to be an emphasis in this advice on r*emoving evidence of problematic behavior* instead of helping youth understand why the behavior itself is problematic (e.g., underage drinking, illegal behavior). For example many programs use the example of a news story about a boy who posted about growing "Maryjane" in his closet on a social networking site. The photograph was noticed by or forwarded to law enforcement who showed up at his door. The intended message however is the problem of posting material online, not the problem with drug use itself.

An example of research-supported program logic. We recommend that program developers specify their program logic as they become familiar with the preliminary research in internet safety, and the more extensive literature on prevention in related problem areas (e.g., bullying, sexual risk taking, dating violence). For example, a program for middle-school youth targeting cyberbullying might begin by researching risk and causal factors related to bullying and cyberbullying (e.g. anger management problems, social pressure or positive feedback experienced by peers when engaging in bullying behaviors) and develop a program that uses evidence-supported strategies to improve these factors (teaching youth anger-management skills or ways to handle social pressure to "join in" with negative peer behaviors; or increasing social norms around support for students who promote positive bystander behaviors), with the expectation that these strategies will reduce cyber-bullying behaviors and increase positive bystander behaviors.

As another example, a prevention program directed at preventing youth emotional distress caused by sexting might find research suggesting that the sexting behaviors resulting in negative consequences come from pictures distributed without their permission, and blackmail, or from pictures reluctantly taken as a result of pressure by friends and romantic partners. Research on sexual risk-taking might find that the most effective programs work to increase confidence around sexual choices, provide youth with skills to refuse unwanted pressure, and help them build critical decision-making skills around sexual choices. A program developer might use this research to design a sexting prevention program theory or logic model that increases these skills.

These are simplifications of what should be a very detailed process of program logic development, research review, and program development, but they provide examples of the kinds of efforts that are required to build on the research base and design more effective prevention programs.

6. Outcome evaluation is a critical next-step.

We hope that this study will encourage ISE program developers, consumers and policy-makers to replicate our review process themselves and consider the degree that existing and new curricula incorporate research. We also urge stakeholders to define program logic clearly, by drawing an explicit connection between the messages given, the skills that are expected to be learned, and how these behaviors will lead to improved safety and well-being. Once an ISE program has defined their problem and goals well, clarified their program logic based on the best

available research, and incorporated proven educational and prevention evaluation strategies, rigorous outcome evaluation is the next step to making sure that these efforts work in the expected ways.

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PROJECT DATA TABLES

Subproject A: Prevention Research Meta-Synthesis to Identify Critical Components of Effective Prevention

Table A1: Relationship of Participant Characteristics to Program Effectiveness
Table A2: Effectiveness of Prevention Program Components
Table A3: Relationship of Participant Characteristics to Program Effectiveness

Subproject B: A Content Evaluation of Established Internet Safety Programs

Table B1: ISE Materials Reviewed by Content Evaluation
Table B2: KEEP (Known Elements of Effective Prevention) Checklist for Internet Safety Materials directed at Middle and High School Youth
Table B3: Inclusion of Research-Based Messages for Internet Safety Materials directed at Middle and High School Youth
Table B4: Key Educational Messages of Reviewed ISE Materials

Subproject C: Evaluating the Delivery of Internet Safety Education: A Survey of Law Enforcement and School Professionals

Table C1: ICAC Task Force ISE Survey Results
Table C2: ICAC Presenter Survey: Demographics and Experience with ISE
Table C3: ICAC Presenter Survey: Characteristics of Last ISE Presentation
Table C4: School ISE Survey: Characteristics of Implemented ISE
Table C5: School ISE Survey: Percentage Differences in Active Discussion and Role-Playing by ISE Curriculum

Subproject D: Internet Safety Education Outcome Measure and Toolkit

Table D1: Pilot Internet Safety Outcome Survey: Respondent Characteristics and Experiences with ISE
Table D2: Pilot Internet Safety Outcome Survey: Online Experiences and Behaviors
Figure D1: Pilot Internet Safety Outcome Survey: Online Citizenship Scale
Figure D2: Pilot Internet Safety Outcome Survey: Reacting to Online Harassment in the Future

Table A1. Meta-Analyses Reviewed for Meta-Synthesis

Prevention Topic Area	Included Meta-Analyses	Number of reviewed studies	Date range for reviewed studies
Drug/alcohol/tobacco	Bruvold, W. H. (1993). A meta-analysis of adolescent smoking prevention programs. *American Journal of Public Health, 83*(6), 872-880[1].	94	1971-1989
	Cuijpers, P. (2002). Peer-led and adult-led school drug prevention: A meta-analytic comparison. *Journal of Drug Education, 32*(2), 107-119.	12	1982-1995
	Ennett, S. T., Tobler, N. S., Ringwalt, C. L., & Flewelling, R. L. (1994). How effective is drug abuse resistance education? A meta-analysis of project DARE outcome evaluations. *American Journal of Public Health, 84*(9), 1394-1401.	8	1981-1994
	Gottfredson, D. C., & Wilson, D. B. (2003). Characteristics of effective school-based substance abuse prevention. *Prevention Science, 4*(1), 27-38.	94	1979-2002
	Hwang, M. S., Yeagley, K. L., & Petosa, R. (2004). A meta-analysis of adolescent psychosocial smoking prevention programs published between 1978 and 1997 in the United States. *Health Education & Behavior: The Official Publication Of The Society For Public Health Education, 31*(6), 702-719.	65	1978-1997
	Rooney, B. L., & Murray, D. M. (1996). A meta-analysis of smoking prevention programs after adjustment for errors in the unit of analysis. *Health Education Quarterly, 23*(1), 48-64.	90	1974-1991
	Tobler, N.S. (1992). Drug prevention programs can work: Research findings. *Journal of Addictive Diseases, 11*(3), 1-28.	91	Not specified
	Tobler, N. S., & Stratton, H. H. (1997). Effectiveness of school-based drug prevention programs: A meta-analysis of the research. *The Journal of Primary Prevention, 18*(1), 71-128.	120	1977-1991
Mental health	Durlak, J. A., & Wells, A. M. (1997). Primary prevention mental health programs for children and adolescents: A meta-analytic review. *American Journal of Community Psychology, 25*(2), 115-152.	177	1958-1991
	Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and	213	1955-2007

	emotional learning: A meta-analysis of school-based universal interventions. *Child 116Development, 82*(1), 405-432.		
	Haney, P., & Durlak, J. A. (1998). Changing self-esteem in children and adole69scents: A meta-analytic review. *Journal of Clinical Child Psychol47ogy, 27*(432-433).	116	1958-1990
	Horowitz, J. L., & Garber, J. (2006). The prevention of depressive symptoms in children and adolescents: A meta-analytic review. *Journal of Consulting and Clinical Psychology, 74*(3), 401-415.	30	1987-2005
	Jane-Llopis, E., Hosman, C., Jenkins, R., & Anderson, P. (2003). Predictors of efficacy in depression prevention programmes: Meta-analysis. *British Journal of Psychiatry, 183*, 384-397.	69	1985-2003
	Stice, E., Shaw, H., Bohon, C., Marti, C. N., & Rohde, P. (2009). A meta-analytic review of depression prevention programs for children and adolescents: Factors that predict magnitude of intervention effects. *Journal of Consulting and Clinical Psychology, 77*(3), 486-503.	47	1987-2008
Obesity/eating disorders	Seo, D.-C., & Sa, J. (2010). A meta-analysis of obesity interventions among U.S. minority children. *Journal of Adolescent Health, 46*, 309-323.	40	1999-2007
	Stice, E., Shaw, H., & Marti, C. N. (2006). A meta-analytic review of obesity prevention programs for children and adolescents: The skinny on interventions that work. *Psychological Bulletin, 132*(5), 667-691.	64	1982-2006
	Stice, E., Shaw, H., & Marti, C. N. (2007). Meta-analytic review of eating disorder prevention programs: Encouraging findings. *Annual Review of Psychology, 3*, 207-231.	38	1987-2003
Prevention (cross-topic)	Durlak, J. A., Weissberg, R. P., & Pachan, M. (2010). A meta-analysis of after-school programs that seek to promote personal and social skills in children and adolescents. *American Journal of Community Psychology, 45*, 294-309.	69	1979-2005
Risky sexual behavior	Jemmott, J. B., III, Jemmott, L. S., Peterson, J. L., & DiClemente, R. J. (2000). HIV behavioral interventions for adolescents in community settings *Handbook of HIV prevention* (pp. 103-127). Dordrecht Netherlands: Kluwer Academic Publishers.	21	1990-1998
	Kalichman, S. C., Carey, M. P., & Johnson, B. T. (1996). Prevention of sexually transmitted HIV infection: A meta-analytic review of the behavioral outcome literature. *Annals of Behavioral Medicine, 18*(1), 6-15.	12	1989-1995

Sexual abuse	Davis, M. K., & Gidycz, C. A. (2000). Child sexual abuse prevention programs: A meta-analysis. *Journal of Clinical Child Psychology, 29*(2), 257-265.	27	1985-1995
	Heidotting, T., Keiffer, S., & Wegener Soled, S. (1994). A quantitative synthesis of child sexual abuse prevention programs.	18	1985-1992
	Rispens, J., Aleman, A., & Goudena, P. P. (1997). Prevention of child sexual abuse victimization: A meta-analysis of school programs. *Child Abuse & Neglect, 21*(10), 975-987.	16	1985-1996
Youth violence, delinquency, bullying	Farrington, D., & Ttofi, M. (2009). School-based programs to reduce bullying and victimization *Campbell Systematic Reviews* (pp. 147).	44	1983-2009
	Ferguson, C. J., San Miguel, C., Kilburn, J. C., Jr., & Sanchez, P. (2007). The effectiveness of school-based anti-bullying programs: A meta-analytic review. *Criminal Justice Review, 32*(4), 401-414.	42	1995-2006
	Hahn, R., Fuqua-Whitley, D., Wethington, H., Lowy, J., Liberman, A., Crosby, A., . . . al., e. (2007). The effectiveness of universal school-based programs for the prevention of violent and aggressive behavior (pp. 1-16): National Center for Helath Marketing and Division of Health Communication and Marketing.	53	1981-2004
	Losel, F., & Beelmann, A. (2003). Effects of child skills training in preventing antisocial behavior: A systematic review of randomized evaluations. *Annals of the American Academy of Political and Social Science, 587*, 84-109.	135	1971-2000
	Park-Higgerson, H.-K., Perumean-Chaney, S. E., Bartolucci, A. A., Grimley, D. M., & Singh, K. P. (2008). The evaluation of school-based violence prevention programs: A meta-analysis. *The Journal of School Health, 78*(9), 465-479.	26	1977-2004
	Wilson, D. B., Gottfredson, D. C., & Najaka, S. S. (2001). School- based prevention of problem behaviors: A meta-analysis. *Journal of Quantitative Criminilogy 17*(3), 247-272.	165	Not specified
	Wilson, S. J., & Lipsey, M. W. (2006a). The effects of school-based social information processing interventions on aggressive behavior: Part I: Universal programs *Campbell Systematic Reviews*.	47	1974-2004
	Wilson, S. J., & Lipsey, M. W. (2006b). The effects of school-based social information processing interventions on aggressive behavior: Part II: Selected/indicated pull-out programs *Campbell Systematic Reviews* (pp. 37).	73	1976-2004

Table A2. Effectiveness of Prevention Program Components (N=31)

Prevention Components	Total #	# More Effective	# No Difference	# Less Effective
"Active" prevention program strategies vs. non-active	13	12	1	--
Parent involvement	7	2	4	1
Theory-based	3	2	--	1
Narrow vs. broad problem behaviors targeted	3	1	1	1
Sequenced, active, focused and explicit (SAFE)	2	2	--	--
Homework	1	1	--	--
Booster sessions	1	1	--	--
Program leader:				
Peers/students	9	4	3	2
Teachers/Other school	15	2	5	8
professionals	14	6	6	2
Specialists	2	--	1	1
Police officers				
Program dose (sessions, hs, or weeks):				
One v. more than one	3	--	--	3
12 or less vs. more	8	2	5	1
19 or less vs. more	3	1	1	1
Less vs. more (continuous) [1]	6	1	5	--

[1] The study with positive findings for fewer sessions reported that reviewed programs ran an average of 41 sessions (Duralk, 2011); The 5 studies finding no difference for program dose reviewed programs with the following reported ranges: 1-95; 3-14; 1-20; 2-20; and 5-144 sessions or weeks.

Table A3. Relationship of Participant Characteristics to Program Effectiveness (N=32)

Participant Characteristics	Total #	# More Effective	# No Difference	# Less Effective
Participant age				
Pre-K/K vs. older elementary	4	4	--	--
Elementary v. MS/HS	9	1	6	2
Middle School vs. High School	8	1	4	3
Continuous (Younger vs. Older)	2	1	1	--
SES				
Low SES vs. low/middle; middle; mixed	4	2	2	--
Risk-level				
High-risk or indicated vs. no-risk/universal	13	8	4	1
Gender				
All/mostly males vs. all/mostly females	10	1	5	4

Table B1. ISE Materials Reviewed by Content Evaluation

Program	Presentations/Lessons	Target Age[1]	Topics Covered				Coding Form[3]
			Internet Predators	Online Harass.	Sexting	Other[2]	
Netsmartz	Presentations						
	Tweens PowerPoint Presentation	MS	■	■	■	■	L
	Teens PowerPoint Presentation	HS	■	■	■	■	L
	Assemblies Grade 3-6	E				■	S
	Router's Birthday Surprise	E				■	S
	Videos w/ Activity Cards						
	Terrible Text	MS, HS		■		■	L
	Survivor Diaries	MS, HS	■				L
	Amy's Choice	MS, HS	■				L
	Attitude Overdrive	Older E, MS		■		■	L
	Cyberbullying Broken friendship	MS, HS		■		■	L
	Cyberbullying You can't take it back	MS, HS		■			L
	Julie's Journey	MS, HS	■				L
	Tracking Teresa	MS, HS				■	S
	Miketosis	Older E, MS				■	S
	Posts 2 Be Private	Older E, MS				■	S
	Profile Penalty	Older E, MS				■	S
	Don't Open that File	E				■	S
	Boy who loved IM	E				■	S
	Password Rap	E				■	S
i-SAFE	Cyberbullying	MS		■			L
	Examining the Risks: Willing Participation	MS	■				L
	Thinking Things Through--Online Friending	MS, HS				■	S
iKeepSafe	Google Digital Literacy Tour Workshops: Playing and Staying Safe Online	Not specified		■		■	L
	Google Digital Literacy Tour Workshops:Detecting Lies and Staying	Not specified				■	S

	True						
	Google Digital Literacy Tour Workshops: Steering Clear of Cyber Tricks	Not specified					S
	Project PRO (Privacy and Reputation Online)	Older E, MS, HS					S
	DARE/iKeepSafe Cyberbullying Curriculum	E					S
	Faux Paw Meets the First Lady: How to Handle Cyberbullying	E					S
	Faux Paw Adventures on the Internet	E					S
Web Wise Kids	It's Your Call	MS					L
	Missing	MS					L
	Mirror Image	HS					L
	Be Seen	MS, HS					L
	Air Dogs	HS					S

[1]E=Elementary, Grades K-6; Older E=Older Elementary,Grades 5-6; MS=Middle School, Grades 7-8; HS=High School, Grades 9-12
[2]Other digital literacy and citizenship topics: privacy, online reputation, avoiding cyber-scams, illegal downloads etc.
[3]L=Long Form; S=Short Form

Table B2. KEEP (Known Elements of Effective Prevention) Checklist Results f or Internet Safety Materials directed at Middle and High School Youth

Program	Curriculum	Q1: Structured Lesson	Skill-Based Objectives		Active Learning		Q4: Adequate Dose	Q5: Additional Practice
			Q2A: Behavioral Skills Taught	Q2B: Research Links Skills and Problem	Q3A: Role-playing activities	Q3B: Open-ended and active discussion periods		
Netsmartz	Tweens PowerPoint Presentation	✓	--	--	--	--	--	--
	Teens PowerPoint Presentation	✓	--	--	--	--	--	--
	Terrible Text	✓	--	--	--	✓	--	--
	Survivor Diaries	✓	--	--	--	✓	--	--
	Amy's Choice	✓	--	--	--	✓	--	--
	Attitude Overdrive	✓	--	--	✓	✓	--	--
	Cyberbullying Broken friendship	✓	--	--	--	✓	--	--
	Cyberbullying You can't take it back	✓	--	--	--	✓	--	--
	Julie's Journey	✓	--	--	--	✓	--	--
iKeepSafe	Google Digital Literacy Tour Workshops: Playing and Staying Safe Online	✓	✓	--	--	✓	--	--
Web Wise Kids	Its Your Call	✓	--	--	--	✓	--	--
	Missing	✓	--	--	--	✓	--	--
	Mirror Image	✓	--	--	--	✓	--	--
	Be Seen	✓	--	--	--	✓	--	--
i-SAFE	Cyberbullying	✓	✓	--	--	✓	--	--
	Examining the Risks: Willing Participation	✓	--	--	--	✓	--	--

Table B3. Inclusion of Research-Based Messages for Internet Safety Materials directed at Middle and High School Youth

	Netsmartz									iKeep Safe	Web Wise Kids				I-SAFE	
Fact-Based Messages	Tweens Pres.	Teens Pres.	Terrible Text	Survivor Diaries	Amy's Choice	Attitude Overdrive	CB: Broken friendship	CB: You can't take it back	Julie's Journey	Google Playing and Staying Safe Online	It's Your Call	Missing	Mirror Image	Be Seen	Cyber-bullying	Examining the Risks
Sexual Solicitations/internet Predators																
1. Internet predator cases are rare.	n	n	-	n	n	-	-	-	n	-	-	n	n	-	-	n
2. There is a difference between unwanted sexual requests and internet predators.	n	n	-	n	n	-	-	-	n	-	-	n	n	-	-	n
3. There are a number of different options for responding to a sexual solicitation.	y	y	-	n	n	-	-	-	n	-	-	n	n	-	-	n
4. Reasons why it may be hard to tell an adult	n	y	-	y	y	-	-	-	n	-	-	y	y	-	-	y
5. Internet predator cases typically involve flattery and feeling close to the adult.	y	y	-	y	y	-	-	-	y	-	-	y	y	-	-	y
6. We are still learning about what online behaviors are risky.	n	n	-	n	n	-	-	-	n	-	-	n	n	-	-	n
7. Sexual assault by someone you know in person is a greater risk.	n	n	-	n	n	-	-	-	n	-	-	n	n	-	-	n
TOTAL (# out of 7)	2	3	-	2	2	-	-	-	1	-	-	2	2	-	-	2
Sexting																
1. Most youth do not "sext."	n	n	-	-	-	-	-	-	-	-	n	-	-	-	-	-
2. Sexting usually happens in the context of a relationship or goofing off.	n	y	-	-	-	-	-	-	-	-	y	-	-	-	-	-
3. Youth are likely to feel many different	n	y	-	-	-	-	-	-	-	-	y	-	-	-	-	-

Fact-Based Messages	Netsmartz									iKeep Safe	Web Wise Kids				I-SAFE	
	Tweens Pres.	Teens Pres.	Terrible Text	Survivor Diaries	Amy's Choice	Attitude Overdrive	CB: Broken friendship	CB: You can't take it back	Julie's Journey	Google Playing and Staying Safe Online	It's Your Call	Missing	Mirror Image	Be Seen	Cyber-bullying	Examining the Risks
ways when they get a request to "sext."																
4. The most important thing is to not forward sexual pictures if you receive them.	n	n	-	-	-	-	-	-	-	-	y	-	-	-	-	-
5. Most police intervention happens in cases of blackmail, bullying, or forwarding without permission.	n	n	-	-	-	-	-	-	-	-	n	-	-	-	-	-
TOTAL (# out of 5)	0	2	-	-	-	-	-	-	-	-	3	-	-	-	-	-
Online harassment/Cyberbullying																
1. Most youth do not engage in cyberbullying.	n	n	n	-	-	n	n	n	-	n	n	-	-	n	n	-
2. There are a lot of different options for handling online harassment.	y	y	y	-	-	y	n	n	-	y	n	-	-	y	y	-
3. Online harassment can feel bad in a number of ways, but does not usually end in suicide.	n	y	y	-	-	y	n	y	-	n	y	-	-	y	n	-
4. There are strategies you can use to de-escalate when you feel angry or disrespected.	y	n	n	-	-	n	n	n	-	n	n	-	-	y	n	-
5. Teasing and put-downs online or offline may be harassment even if they seem harmless.	n	y	n	-	-	y	n	y	-	n	y	-	-	n	n	-
6. Bystanders can help in a number of	n	n	y	-	-	y	n	n	-	n	y	-	-	y	y	-

Fact-Based Messages	Netsmartz									iKeep Safe	Web Wise Kids				I-SAFE	
	Tweens Pres.	Teens Pres.	Terrible Text	Survivor Diaries	Amy's Choice	Attitude Overdrive	CB: Broken friendship	CB: You can't take it back	Julie's Journey	Google Playing and Staying Safe Online	It's Your Call	Missing	Mirror Image	Be Seen	Cyber-bullying	Examining the Risks
different ways (examples shown/given).																
7. Adults may be helpful in a number of different ways (examples shown/given).	n	n	n	-	-	n	n	n	-	n	y	-	-	n	n	-
8. A lot of bullying happens offline too and kind behavior works anywhere.	n	n	n	-	-	n	n	n	-	n	n	-	-	n	n	-
TOTAL (# out of 8)	2	3	3	-	-	4	0	2	-	1	4	-	-	4	2	-

Table B4. Key Educational Messages of Reviewed ISE Materials

Key ISE Messages	Examples	ISE Lessons Aimed at MS/HS Youth (n=16) #(%)	ISE Lessons Aimed at Elementary School Youth (n=8) #(%)	ISE Lessons Focused on Digital Literacy (n=9) #(%)	Total (n=33) #(%)
Tell a trusted adult or report if anything makes you uncomfortable online or you get into trouble	"Tell someone if you are cyberbullied." "Tell a trusted adult as soon as you become uncomfortable with an online discussion."	14 (88%)	5 (63%)	3 (33%)	22 (67%)
Don't share or post personal information online	"Don't share private information." "Never give out personal information." "Don't share your name and address."	12 (75%)	6 (75%)	3 (33%)	21 (64%)
Be respectful online/Don't bully	"Don't be mean." "Don't say anything online you wouldn't say to someone's face."	11 (69%)	2 (25%)	2 (22%)	15 (45%)
Think before you post or click	"Think before you click."	8 (50%)	1 (13%)	6 (66%)	15 (45%)
Check privacy settings and watch who you "friend" on social network sites	"Understand and personalize your SNS privacy settings." "You may not know friends of friends."	7 (44%)	3 (38%)	5 (55%)	15 (45%)
Be wary of people you meet online	"Never meet in person with anyone you meet online."	8 (50%)	5 (63%)	0 (0%)	13 (39%)
Consider what the information you put online says about you	"Negative information on SNS profiles will affect athletic and job opportunities."	6 (38%)	1 (13%)	5 (55%)	12 (36%)
What you put online can spread quickly and in ways you cannot control	"Once you post or text something, it is out of your hands."	4 (25%)	2 (25%)	0 (0%)	6 (18%)
Watch out for e-scams	"Scan attachments before opening them."	0 (0%)	1 (13%)	3 (33%)	4 (12%)

Table C1. ICAC Task Force ISE Survey Results (N=43)

Task Force ISE Characteristics	Task Force Respondents (N=43) n (%)
Number of ISE requests per year:	
<50	13 (32)
50-200	19 (46)
Over 200	9 (22)
Percent of requests wait-listed:	
No requests	27 (66)
1-10%	12 (29)
More than 10%	2 (5)
ISE Presenter backgrounds: [a]	
Police officers	37 (86)
School resource officers	20 (47)
Hired specialists	8 (19)
State attorneys general and staff	22 (51)
Victim advocates	6 (14)
Outside agency	9 (21)
Other	13 (30)
Percentage of ISE provided in a school setting:	
Less than 50%	4 (10)
50-75%	17 (45)
More than 75%	17 (45)
Percentage of ISE provided at youth assemblies (30 or more youth):	
0-25%	17 (47)
26-50%	11 (31)
Over 50%	8 (22)
Racial distribution of ISE audiences: [b]	
50% or less white	16 (53)
More than 50% white	14 (47)
ISE program materials used:[a]	
NetSmartz	40 (93)
Web Wise Kids	12 (28)
i-SAFE	9 (21)
iKeepSafe	7 (16)
Other	29 (67)

Note: Some categories do not add to 100% because of rounding and/or missing data.
[a]Multiple responses possible.
[b]Thirteen (30%) of ICAC Task Force respondents did not track and could not estimate the racial distribution typical of their audiences. Minority racial groups included Asian/Pacific Islander, Indian/Native American, Black/African-American, Hispanic/Latino, and other groups.

Table C2. ICAC Presenter Survey: Demographics and Experience with ISE (N=91)

Respondent Characteristics	ICAC Task Force Respondents n (%)
Respondent sex:	
Male	59 (65)
Female	32 (35)
Respondent age:	
26 to 35	18 (20)
36 to 45	39 (43)
46 to 55	22 (24)
56 and older	12 (13)
Employment agency:	
ICAC Task Force agency	44 (48)
ICAC Task Force affiliate agency	33 (36)
Other agency	14 (15)
Years in current position:	
1-2	16 (20)
3-5	22 (27)
6-10	28 (35)
11 or more	15 (19)
Years presenting ISE:	
Less than 1	7 (7)
1-2	13 (14)
3-5	27 (30)
6 or more	44 (48)
# of ISE presentations in past year:	
1-2	12 (13)
3-5	19 (21)
6-10	18 (20)
11-25	21 (23)
26 or more	21 (23)
Groups presented with ISE in past year:[a]	
Schools	86 (95)
Religious organizations	41 (45)
Community groups	65 (71)
Other organizations	24 (26)
ISE presentation audiences in past year:[a]	
Small groups of youth (<30)	72 (79)
Large groups of youth (>30)	65 (71)
Parents	68 (75)
Teachers	61 (67)
Others	20 (22)
Frequency that ISE presentation is updated:	
Between each presentation	29 (32)
Every few months	19 (21)

Respondent Characteristics	ICAC Task Force Respondents n (%)
A few times a year	23 (26)
Once a year	9 (10)
Not applicable—use curriculum	5 (6)
Other	5 (6)
Sources used to update ISE presentation: [a]	
New research findings	56 (62)
Stories from law enforcement	68 (75)
Stories from the media	70 (77)
Information from schools	33 (36)
Material from ISE programs or websites	68 (75)
Feedback from students, parents, or educators	51 (56)
Other	6 (7)
If research, what sources? (n=40):	
Research center	9 (22)
News	4 (10)
Search engine (e.g., Google)	6 (15)
NCMEC	9 (23)
Other	12 (30)

[a]Multiple responses possible.

Note: Some categories do not add to 100% because of rounding and/or missing data.

Table C3. ICAC Presenter Survey: Characteristics of Last ISE Presentation (N=91)

Presentation Characteristics	ICAC Task Force ISE Presenters n (%)
Group requesting presentation:	
School or school related group	48 (53)
Religious organization	4 (4)
Community group	22 (24)
Other	16 (18)
Audience:	
Youth in classrooms or small groups (<30)	17 (19)
Youth in assembly-size groups (30 or more)	30 (33)
Parents	21 (23)
Teachers and school staff	6 (7)
Other	17 (19)
Audience age[a]:	
Under 5 years old	2 (2)
5-8 years old	5 (6)
9-12 years old	30 (33)
13-15 years old	39 (43)
16-18 years old	17 (19)
No youth	29 (32)
Racial distribution of ISE audiences:	
50% or less white	19 (22)
More than 50% white	66 (78)
Presentation length:	
One session, less than an hour	9 (10)
One session, about an hour	42 (46)
One session, 1-3 hours	27 (30)
Multiple sessions	11 (12)
Other	2 (2)
Presented with others (co-presenter)	
Yes	22 (24)
No	69 (76)
Topic of ISE presentation:[a]	
Sexting	81 (89)
Privacy	56 (62)
Online reputation	51 (56)
Online harassment/cyberbullying	80 (88)
Internet predators	81 (89)
Other	18 (20)
Primary topic of ISE presentation:	
Sexting	5 (6)
Privacy	6 (7)
Online reputation	4 (5)
Online harassment/cyberbullying	24 (28)
Internet predators	32 (38)
Other or no primary topic	14 (17)

Presentation Characteristics	ICAC Task Force ISE Presenters n (%)
Program used in last presentation:[a]	
NetSmartz	51 (56)
Web Wise Kids	1 (1)
i-SAFE	5 (6)
iKeepSafe	3 (3)
Self-created materials	74 (81)
Other	42 (46)
Presentation included discussion period? (Y)	79 (87)
Presentation included activities w/ participants? (Y)	22 (24)
Role-playing?	6 (7)
Small-group work?	3 (3)
Writing activity?	3 (3)
Data collected as part of follow-up? (Y)	15 (17)

[a]Multiple responses possible

Note: Some categories do not add to 100% because of rounding and/or missing data.

Table C4. School ISE Survey: Characteristics of Implemented ISE (N=139)

ISE Characteristics	School Respondents n (%)
Grades that received ISE in past year:[a]	
PK-3	41 (30)
4-5	62 (45)
6-8	72 (52)
9-12	40 (29)
Types of ISE implemented: [a]	
ISE presentation by outside speaker	40 (29)
Speaker from law enforcement or Attorneys General's offices	26 (19)
Teachers informally include ISE in classroom curricula	78 (56)
Teachers or school staff use specific ISE curriculum or program	50 (36)
Teachers received training on ISE	24 (17)
Students led or designed ISE campaigns (e.g., posters)	27 (19)
Parent training held	33 (24)
No ISE at my school	14 (10)
Other	30 (22)
Reasons why school wanted ISE: [a]	
Problematic incident involving ISE	19 (14)
To fulfill CIPA requirements	47 (34)
To fulfill state law requirements	27 (20)
Part of district policy	53 (38)
Parents and school staff have been requesting it	23 (17)
An important area of education for youth	105 (76)
Other	9(7)
Important topics for focus of ISE:[a]	
Sexting	58 (42)
Privacy	109 (78)
Online reputation	89 (64)
Online harassment/cyberbullying	114 (82)
Internet predators	80 (58)
Illegal downloading	60 (43)
Overuse	20 (14)
Plagiarism	91 (66)
Other	9 (7)
Most important topic for ISE:	
Sexting	0 (0)
Privacy	25 (21)
Online reputation	22 (18)
Online harassment/cyberbullying	47 (39)
Internet predators	9 (7)
Illegal downloading	1 (1)
Overuse	1 (1)
Plagiarism	10 (8)

ISE Characteristics	School Respondents n (%)
Other	7 (6)
ISE programs, materials, or curricula school has used: [a]	
i-SAFE	28 (20)
iKeepSafe	8 (6)
Web Wise Kids	6 (4)
Netsmartz	48 (35)
NetSkills4Life	2 (1)
Common Sense Media Digital Literacy Curriculum	48 (35)
None of the above	32 (23)
Other	21 (15)
Do ISE materials you use include discussion guidelines?:[a]	
Yes, open-ended questions to generate discussion	82 (64)
Yes, yes/no questions or short-response to reinforce material	53 (41)
No	16 (13)
Other	12 (9)
Does ISE materials you use specify any of the following activities?: [a]	
Role-playing?	50 (39)
Small group work?	60 (47)
Writing (e.g. short-answer or essays)?	49 (38)
Games like cross-word puzzles, word finds, etc.	24 (29)
None of the above	26 (20)
Other	14 (11)
Which is best option for ISE in school?:	
ISE provided at an assembly by law enforcement or other expert	9 (7)
ISE provided through an in-class curriculum offered to students over several sessions	55 (41)
Different ISE topics are incorporated into existing school curricula and prevention programs	63 (47)
Other	8 (6)
Other prevention curricula in place: [a]	
Anti-bullying curriculum	77 (57)
Sex-education curriculum	99 (71)
Other prevention curriculum (dating violence, sexual harassment, etc.)	35 (28)

[a]Multiple responses possible.

Note: Some categories do not add to 100% because of rounding and/or missing data.

Table C5. School ISE Survey: Percentage Differences in Active Discussion and Role-Playing by ISE Curriculum (N=128)

ISE Curriculum	Included active, open-ended discussion as part of ISE % (n)	*p* value	Included role-plays as part of ISE n (%)	*p* value
I-SAFE				
No (n=101)	62% (62)	.22	39% (39)	.84
Yes (n=27)	74% (20)		41% (11)	
Netsmartz				
No (n=82)	55% (45)	.004	40% (33)	.72
Yes (n=46)	81% (37)		37% (17)	
Common Sense Media				
No (n=80)	49% (39)	.000	21% (17)	.000
Yes (n=48)	90% (43)		69% (33)	

Note: *p* values based on Chi-Square analyses.

Table D1. Pilot Internet Safety Outcome Survey: Respondent Characteristics and Experiences with ISE (N=1051)

Respondent Characteristics	Students n (%)
Respondent sex:	
Male	533 (51)
Female	503 (49)
Grade-level:	
6th grade	198 (19)
7th grade	309 (29)
8th grade	383 (37)
9th grade	88 (8)
10th grade	71 (7)
Race/ethnicity: [a]	
American Indian/Eskimo	33 (3)
Asian/Pacific Islander	48 (5)
Black/African-American	59 (6)
Hispanic/Latino	143 (14)
White	843 (80)
Other	49 (5)
Amount of time spent online typical day:	
1 hour or less	394 (38)
Between 1-2 hours	324 (31)
Between 2-3 hours	155 (15)
More than 3 hours	168 (16)
In past 3 months, used internet to: [a]	
Use a social networking site	721 (69)
Go to virtual worlds	140 (13)
Use video chat	296 (28)
Use chat rooms (not video)	137 (13)
Download music	510 (49)
Create a blog site	56 (5)
Other	383 (36)
Owns cell phone: (yes)	803 (77)
Use cell phones to: [a]	
Make or receive calls	694 (66)
Send or receive emails	191 (18)
Send or receive texts	737 (70)
Send or receive photos	451 (43)
Connect to the internet	317 (30)
Other	104 (10)
In past 3 months, have your parents talked with you about:	
Not taking, sending or posting sexual pictures of yourself or other kids? (yes)	213 (20)
People on the internet who might ask sexual or other inappropriate questions? (yes)	234 (22)
People on the internet who might threaten, harass, or bother you? (yes)	442 (42)

Respondent Characteristics	Students n (%)
Yes to any of the above	511 (49)
In past 3 months, has anyone at school talked with you about internet safety, like in your classroom or a school assembly? (yes)	484 (47)
In past 3 months, have you been to a website that gave you tips on how to be safe on the internet? (yes)	90 (9)

[a]Multiple responses possible.

Note: Some categories do not add to 100% because of rounding and/or missing data.

Table D2. Pilot Internet Safety Outcome Survey: Online Experiences and Behaviors (N=1051)

Online Experiences and Behaviors	Students n (%)
In the past 3 months, did someone:	
Make rude or mean comments to you on the internet?	315 (30)
Use the internet to harass or embarrass you?	143 (14)
Spread rumors about you through the internet?	159 (16)
Share something about you with others online that was meant to be private	160 (16)
Post or forward a video or pictured of you online when they knew it would hurt your feelings or upset you?	89 (9)
Any of the above	371 (35)
If yes to any of the above, picking an example that stands out in your mind: (n=371)	
How worried or threatened did you feel because of it?	
Not at all worried or threatened	194 (57)
A little bit worried or threatened	96 (28)
Pretty worried or threatened	28 (8)
Very worried or threatened	24 (7)
How embarrassed did you feel because of it?	
Not at all embarrassed	157 (46)
A little bit embarrassed	109 (32)
Pretty embarrassed	49 (14)
Very embarrassed	29 (8)
% Youth with an online harassment incident described as pretty or very worrisome or embarrassing	91 (9)
Thinking about the things you checked above (online harassment experiences), which of the following solutions did you try?: (n=371)	
Blocked the person or deleted messages	242 (65)
Saved the posts to show an adult	86 (23)
Worked the problem with the person out	127 (34)
Told the person to stop	201 (54)
Talked to the friends of the person causing the problem to see if they could help	114 (31)
Ignored or avoided the problem	207 (56)
Tried to get a friend to help me with the problem	123 (33)
Talked about the problem with an adult in my family	98 (26)
Talked about the problem with an adult at school	54 (15)
In the past 3 months, did you:	
Make rude or nasty comments to someone on the internet?	242 (24)
Use the internet to harass or embarrass someone that you were mad at?	111 (11)
Spread rumors about someone through the internet?	60 (6)
Share something about someone with others online that was mean to be private?	90 (9)
Post or forward a video or picture of someone online	49 (5)

Online Experiences and Behaviors	Students n (%)
when you knew it might hurt or upset them?	
Participate in an online group or social networking site where the focus was making fun of someone you know?	59 (6)
In the past 3 months, have you been in a situation where someone that you knew was having problems being harassed or made fun of onine?	501 (48)
When this happened, which of the following ways did you react or try to help?: (n=501) [a]	
Told the person causing the problem to stop	287 (57)
Talked to the friends of the person causing the problem to see if they could help	149 (30)
Got my friends to try and help	175 (35)
Reported the problem by filing a report or using a 'report a problem' button or link	90 (18)
Talked to an adult at home about what happened	107 (21)
Talked to an adult at school about what happened	73 (15)
Got back at the person causing the problem (like posting mean things about them)	79 (16)
Ignored or avoided the person causing the problem	166 (33)
None of the above	78 (16)
Other	58 (12)

[a]Multiple responses possible.

Note: Some categories do not add to 100% because of rounding and/or missing data.

Figure D1. Pilot Internet Safety Outcome Survey: Online Citizenship Scale Results (N=1051)

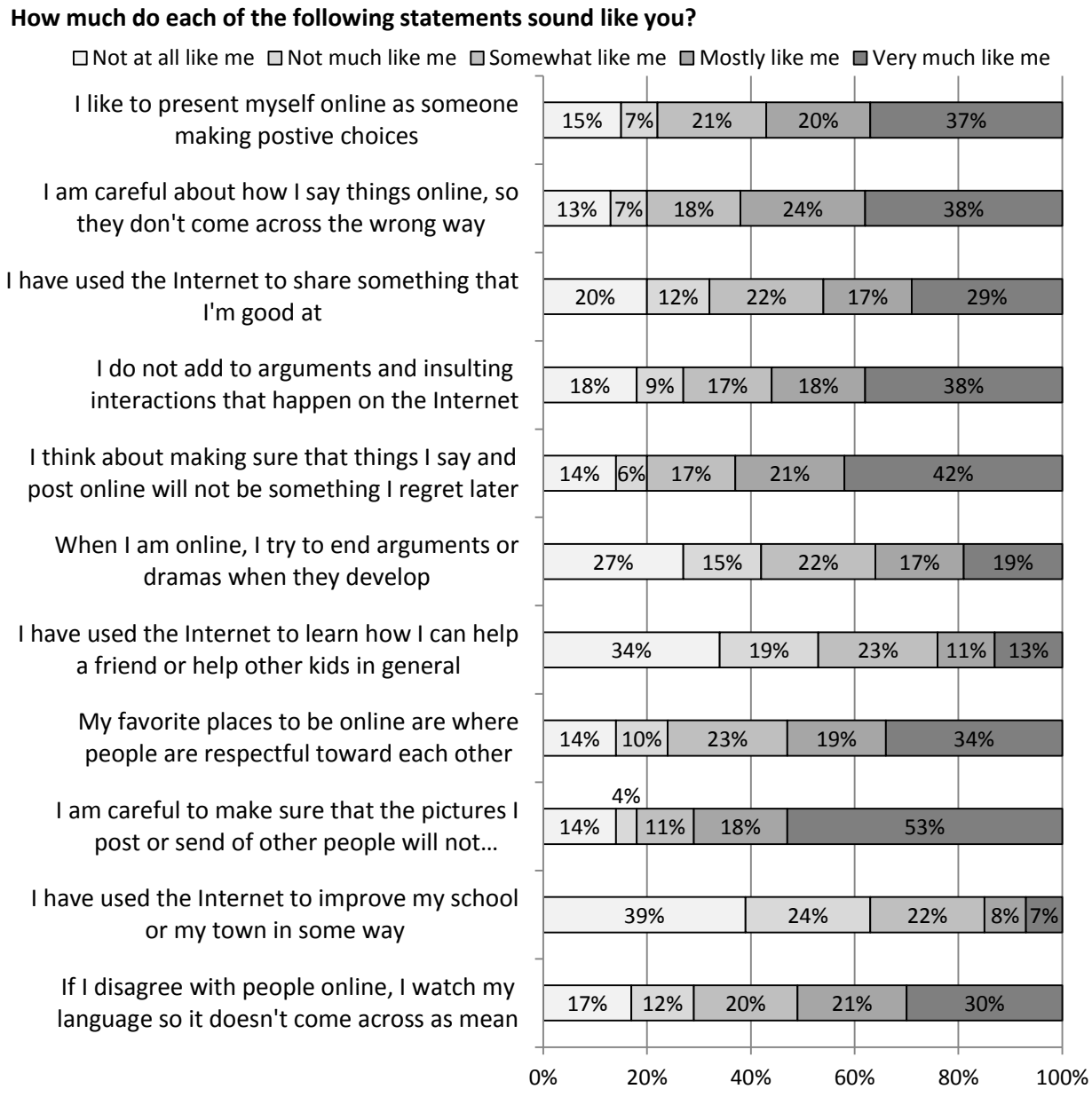
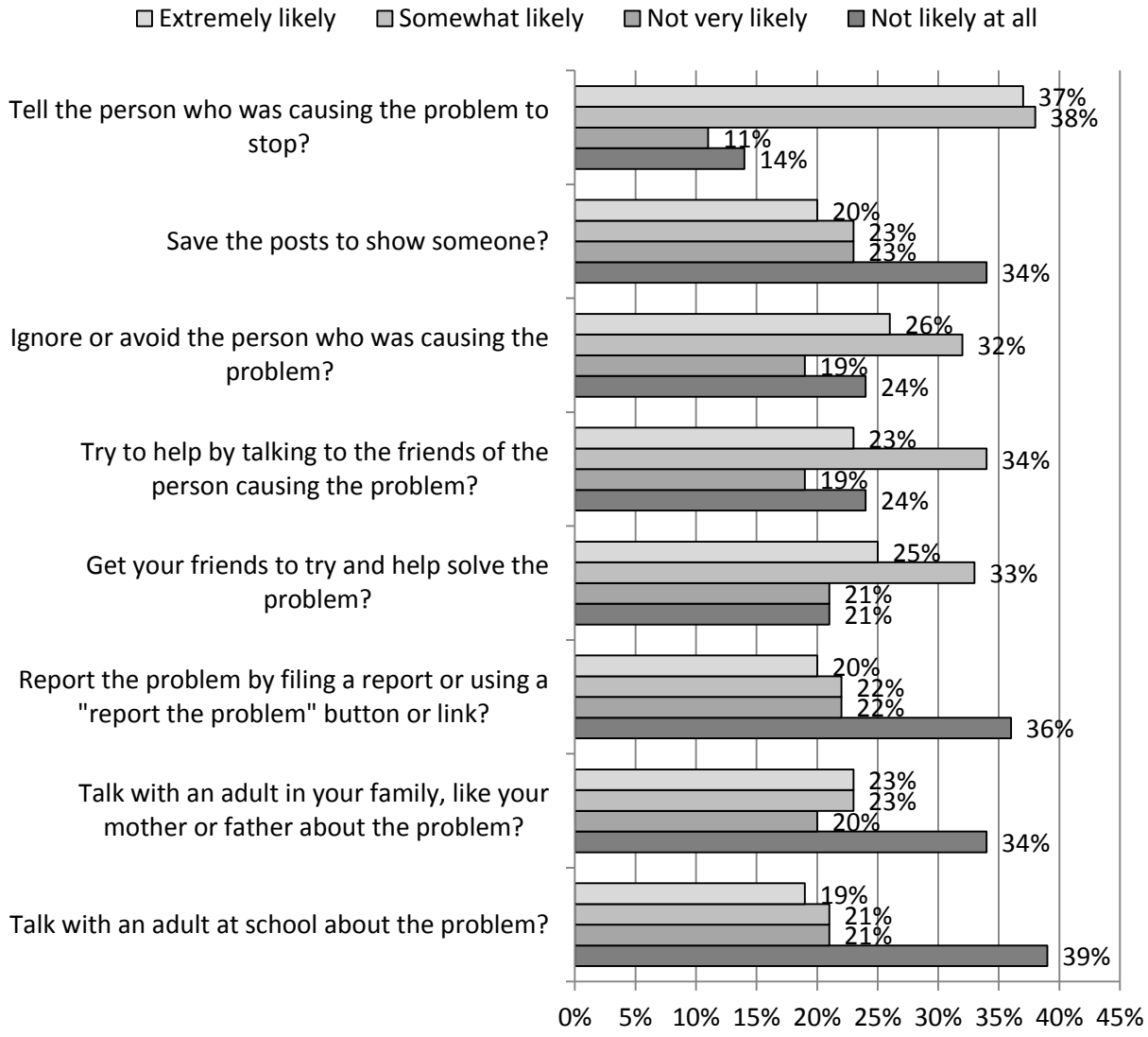


Figure D2. Pilot Internet Safety Outcome Survey: Reacting to Online Harassment in the Future (N=1051)



APPENDICES

APPENDIX A: Internet Safety Education Content Evaluation Long Coding Form
APPENDIX B: UNH Internet Safety Education Survey

APPENDIX A

INTERNET SAFETY EDCUATION CONTENT EVALUATION LONG FORM

This form is to be used with internet safety education materials that are: 1) directed at children 7th grade and older (or appears appropriate for middle school/high school populations; 2) have a presenter guide or manual that accompanies the materials; and 3) is focused on issues of technology-based victimization or youth safety (e.g., sexual solicitations, internet predators, cyberbullying, online harassment, sexting).

Coding information:

1. Date: _____/_____/_____

2. Coder name: _____

3. Select the program whose material you coded:

   _____ Netsmartz
   _____ Web Wise Kids
   _____ i-SAFE
   _____ iKeepSafe
   _____ Other (specify):
   _____

4. What is the name of the program, video or material that you coded:

_____
_____

5. What educational materials that were reviewed in the coding process (check all that apply):

   _____ Video (animated)
   _____ Video (live action)
   _____ Power point slides
   _____ Computer game/Interactive computer web-based programs
   _____ Presenter or teacher's guide, lesson plans
   _____ Activity cards or other activity materials (specify nature of the activity)
   _____
   _____
   _____
   _____ Other (specify):
   _____
   _____
   _____

6. What educational or prevention subjects were covered in the materials that you reviewed (check all that apply):

_____ Internet predators (individuals seeking to meet with you for sexual activity or obtain sexual information)
_____ Online harassment/cyberbullying
_____ Sexting (mentions sexting by name)
_____ Privacy
_____ Online reputation
Other (specify)

_____
_____
_____
_____

7. Do the materials for the program you are reviewing specify a recommended age or grade range for administration?

____ No
____Yes

If yes, please specify here: _____

8. How many lessons are required to teach these materials?
_____ (1-10 or more)

9. How long does the lesson or presentation run if only 1 (or how long do the typical lessons run if more than 1 lesson is required).
_____ minutes

THE KEEP CHECKLIST:
KNOWN ELEMENTS OF EFFECTIVE PREVENTION EDUCATION

The KEEP Checklist was developed based on a systematic review of youth prevention education evaluation research (Jones, Mitchell & Walsh, 2012)[2]. Each element below represents an aspect of prevention program delivery that has been identified as a "best practice" in numerous evaluation studies across multiple youth behavior concerns (e.g. drug use, youth aggression, risky sex behavior, mental health problems), according to our review.

The checklist is meant to be only a guideline for users. It is a tool for reviewing the presence of basic important prevention education elements. It is intended to be used by program developers who want to improve programs, or by consumers who want to roughly compare programs, when direct evaluation outcome data is not yet available.

As a checklist, we suggest based on our review that the program delivery strategies below (see footnotes for qualifications on individual elements) should be implemented **as a minimum**, in addition to providing research-based content.

In addition to the presence of the elements, quality is also likely important to consider (e.g., Are behavioral learning objectives meaningful? Are role-playing activities well-designed?), and there may be additional delivery elements that are important to effectiveness within particular problem areas that are not listed here.

PROGRAM DELIVERY ELEMENTS		Place an "✓" on the correct line
Structured curriculum	**Q1.** Are the program instructions clear and complete enough (e.g., by reviewing the presenter's manual, teacher's guide, or lessons plans) that it is likely <u>two different presenters</u> would be able to present very similar lessons? (For example, the lessons include instructions like presenter's scripts, discussion questions, or activities).	**Yes ___** **No ___**

[2] Jones, L. M., Mitchell, K. M., & Walsh, W.A. (2012). *A systematic review of effective youth prevention education characteristics and approaches.* Manuscript in preparation.

PROGRAM DELIVERY ELEMENTS		Place an "✓" on the correct line
Skill-based and research-supported learning objectives	**Q2A.** Does the program list the **behavioral** skills that will be taught by the curriculum? By skills we mean the program names the **new abilitie**s that students will learn: (e.g. "student will learn strategies for de-escalating an argument" or "student will learn ways to "cool-down" when upset") versus just **new knowledge** ("student will learn **rules** of etiquette" or "student will learn **to tell an adult** if something makes them uncomfortable").	**Yes ___** **No ___**
	Q2B. If yes above, does the program provide **research citations linking how the skills taught** are likely to reduce the problem of interest?	**Yes ___** **No ___**
Active participant involvement	**Q3A.** Does the program involve **role playing activities** in which students practice new skills with each other?	**Yes ___** **No ___**
	Q3B. Does the program include **discussion periods** with a chance for youth to respond to open-ended questions posed by the program leader? Open-ended means that most of the questions call for more than just repetition or guessing the "right answer." They should address complex issues and are designed to result in a variety of opinions and answers.	**Yes ___** **No ___**
Adequate program dose	**Q4.** Is the program provided in 3 or more structured sessions (at least 45 min. each), in which each session clearly builds on learning from the previous sessions?	**Yes ___** **No ___**
Additional learning opportunities	**Q5.** Does the program **include** homework as a component of the lesson that they do at home and bring back to class after completing? Optional take-home handouts do not count. Or, are provisions for booster sessions included 1-2 years after initial program implementation.	**Yes ___** **No ___**

CODING SECTION 2: PRIMARY PREVENTION MATERIAL MESSAGES

After reviewing all of the materials in total, place a check next to any of the following messages that were included in the materials:

- ☐ Sharing personal information online (e.g., name, phone number, address, school name) can lead to victimization by bullies or predators.
- ☐ Think before you post.
- ☐ Be respectful online.
- ☐ Don't give the wrong impression with your screen name.
- ☐ Be careful about who you accept as friends on social networking sites.
- ☐ Don't share your password with anyone.
- ☐ Only accept friends that you know in real life.
- ☐ Before you post something consider what it says about you—posting the wrong thing can damage your reputation.

In addition to the above: What are other key "take-home" messages (up to 5) that youth will learn from this program? These are key learning objectives or lessons that the materials seem most interested in having youth take away from the program.

1.	
2.	
3.	
4.	
5.	

CODING SECTION 3: INTERNET SAFETY EDUCATION FACT CHECKING SHEET (2012)

The fact-sheets below are derived from currently available research findings on internet safety and related youth safety concerns by independent and well-respected sources. It is important to note that the list is not comprehensive, and the body of research on internet safety continues to grow. This review may be helpful to those currently reviewing the research-base for ISE materials, or program developers looking for ways to increase research-based messages. But new research should always be reviewed for additional messages or strategies relevance to prevention.

A. SEXUAL SOLICITATIONS/INTERNET PREDATORS

At least some part of the reviewed educational materials included information intended to protect youth from online **sexual harassment, sexual solicitations, or internet predators.** (By internet predators, we mean someone seeking to meet underage youth online for the purpose of meeting the youth for sex or in order to obtain sexual images).

_____Yes _____No (skip to Section B)

For each item, place a Y (Yes) next to the statement if the materials you review include the research-based message and sum the points at the end of the section.

SEXUAL SOLICITATIONS/INTERNET PREDATORS	
Y=Yes; N=No	**RESEARCH-BASED MESSAGES**
	Materials state that internet predator cases are not common [1, 2].
	Materials explain the difference between unwanted sexual solicitations and internet predator cases [2].
	Materials give youth information about different options for responding if they receive an unwanted sexual request such as deleting, blocking the person, or telling someone [3, 4].
	Materials discuss why it might feel hard for youth to tell an adult about a sexual solicitation (embarrassed, like the person, feel misunderstood, think they can handle it on their own)[2, 5-7] .
	Materials describe internet predator cases as typically involving an adult who may flatter a teenage youth, or make them feel important and internet predators are presented in scenarios in which victims have some feelings of attachment to the adult [1, 2].
	Materials discuss that we are still learning about internet problems and safety and what counts as risky behavior [1, 2, 8] .
	Materials discuss that in-person sexual assault is more common and/or give youth ideas for responding to this as well [9, 10].
	TOTAL YES (out of 7)

B. SEXTING

At least some part of the reviewed educational materials is intended to prevent youth from **"sexting," or sharing and forwarding sexual photographs, images or videos of one's self or another youth under 18**.

_____Yes _____No (skip to Section C)

For each item, place a Y (Yes) next to the statement if the materials you review include the research-based message and sum the points at the end of the section.

SEXTING	
Y=Yes; N=No	**RESEARCH-BASED MESSAGES**
	Materials state that most youth do not participate in sexting [11-14].
	Materials portray sexting as happening in the context of adolescent romantic relationships or goofing around [11, 13].
	Materials acknowledge that there are different ways that youth might feel in receiving a sexting request (e.g., flattered, excited, worried) [11, 14].
	Materials emphasize the importance of **not** forwarding sexual pictures if you should receive them [15, 16][3].
	Materials are clear about the kinds of situations that are most likely to result in the involvement of law enforcement: sexually explicit photographs and in particular use of photographs in blackmail, bullying, or forwarding images without permission [16, 17].
	TOTAL YES (out of 5)

[3] Based on research indicating that explicit pictures forwarded without permission result in the most distress for youth and a greater chance of law enforcement involvement.

C. ONLINE HARASSMENT/BULLYING

At least some part of the reviewed educational materials is intended to prevent or reduce **cyberbullying, online harassment, or behaving in rude or mean ways using new technology.**

_____Yes _____No (Skip to end of form)

For each item, place a Y (Yes) next to the statement if the materials you review include the research-based message and sum the points at the end of the section.

ONLINE HARASSMENT/CYBER-BULLYING	
Y=Yes; N=No	**RESEARCH-BASED MESSAGES**
	Materials state that most youth do not engage in cyberbullying [18-22].
	Materials give youth information about or depict different options for responding if they are harassed online: e.g., deleting, blocking the person, or telling someone [23].
	Materials portray or discuss different ways that online harassment may feel and do not imply most bullying ends in suicide [24][4].
	Materials provide potential bullies/aggressors with ideas and skills to de-escalate when they feel angry or "disrespected" [25].
	Materials discuss why teasing and put-downs online or offline are a problem, even if they seem harmless [23].
	Materials show examples of bystanders responding in helpful ways [23][5].
	Materials showcase at least one example of an adult responding in a helpful way to an online harassment incident [26, 27][6].
	Materials mention that a substantial portion of cyberbullying is happening both on and off-line and suggest that kind behavior should be practiced on and off-line in similar ways [19, 28, 29].
	TOTAL YES (out of 8)

[4] Based on research showing experiences of online harassment victimization range from not upsetting to very distressing. Although bullying and online harassment are risk factors for suicidal ideation and attempts, suicide as an outcome is rare, and has complex and multiple causes. Experts caution against portraying suicide as caused by bullying or cyberbullying (see for example: http://www.stopbullying.gov/at-risk/effects/index.html).

[5] Based on research indicating that youth have questions about how to help as a bystander.

[6] Based on research showing that many youth do not report because they do not know if adults can help. Materials showing helpful adults can both encouraging reporting, as well as help educate adults on ways that are helpful to respond.

INTERNET SAFETY EDUCATION FACT CHECKING SHEET RESOURCES

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8. Ybarra, M.L., et al., *Internet prevention messages: targeting the right online behaviors.* Archives of Pediatric and Adolescent Medicine, 2007. **161**: p. 138-145.
9. Mitchell, K.J., et al., *Youth internet victimization in a broader victimization context.* Journal of Adolescent Health, 2011. **48**(2): p. 128-134.
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12. Lounsbury, K., K.J. Mitchell, and D. Finkelhor, *The true prevalence of "sexting"*, 2011, Crimes Against Children Research Center: Durham, NH. p. 1-4.
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16. Wolak, J. and D. Finkelhor, *Sexting: A typology.* Research Bulletin (March), University of New Hampshire: Crimes Against Children Research Center, 2011.
17. Wolak, J., D. Finkelhor, and K.J. Mitchell, *How often are teens arrested for sexting? data from a national sample of police cases.* Pediatrics, 2012. **129**(1): p. 4-12.
18. Jones, L., K.J. Mitchell, and D. Finkelhor, *Online harassment in context: Trends from three youth internet safety surveys (2000, 2005, 2010).* Psychology of Violence, in press.
19. Lenhart, A., *Cyberbullying and online teens*, in *Pew Internet and American Life Project,* 2007. p. 1-8.
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APPENDIX B

UNH Internet Safety Education Survey

Our school is helping the *University of New Hampshire* with research on youth internet safety education.

The researchers have developed a survey that they hope to use to evaluate internet safety education programs and improve them. Your answers will help them make sure the survey is a good one.

This survey is completely **anonymous**. No names are being collected. **There is no way to trace the answers back to the person who filled it out once it is submitted.**

Questions will ask about your use of the internet and positive and negative online experiences that you have had.

Some Information Before you Start:

By continuing through this survey, you understand that:

1. The survey will take approximately 10-15 minutes to fill out.

2. You do not have to take this survey if you do not want to (just continue to the end).

3. You can skip any questions.

4. Surveys are completely anonymous: Once you submit the survey on the last page, no one will know how you answered the questions.

5. Any information collected as part of this study will only be used for research.

If you have any questions about these things, please ask the teacher to explain.

If you have any questions about the study, you can contact Lisa Jones, the research director, at 603-862-2515 or Lisa.Jones@unh.edu.

If you have any questions about your rights as a research subject you or your parent can contact Julie Simpson in the UNH Office of Sponsored Research at 603-862-2003 or Julie.Simpson@unh.edu to discuss them.

Section 1: Questions About You

1) What school do you go to?

schools listed

2) How old are you?

- ❍ 10
- ❍ 11
- ❍ 12
- ❍ 13
- ❍ 14
- ❍ 15
- ❍ 16
- ❍ 17
- ❍ 18

3) Are you male or female?

- ❍ Male
- ❍ Female

4) What grade are you in?

- ❍ 6th
- ❍ 7th
- ❍ 8th
- ❍ 9th
- ❍ 10th
- ❍ 11th
- ❍ 12th

5) What is your race or ethnicity? (Check all that apply)

- ❑ White
- ❑ Black or African-American
- ❑ Hispanic or Latino
- ❑ American Indian or Eskimo
- ❑ Asian or Pacific Islander
- ❑ Other (please specify)

If you selected other, please specify

_____

Section 2: How Do You Use the Internet?

6) How many <u>days</u> in a usual <u>week</u> do you use the Internet from any location (including a cell phone)?

- ❍ 0
- ❍ 1
- ❍ 2
- ❍ 3
- ❍ 4
- ❍ 5
- ❍ 6
- ❍ 7

7) How many <u>hours</u> are you online on a usual <u>day</u> from any location?

- ❍ 1 hour or less
- ❍ between 1 and 2 hours
- ❍ between 2 and 3 hours
- ❍ more than 3 hours

8) In the <u>past 3 months</u>, have you used the Internet to… (Check all that apply)

- ❑ Use a social networking site, like Facebook?
- ❑ Go to virtual worlds (e.g., SecondLife)?
- ❑ Use video chat (e.g., ChatRoulette, Oovoo, Skype)?
- ❑ Use chat rooms that don't include video?
- ❑ Download music?
- ❑ Create your own blog site?
- ❑ Other (please specify)

If you selected other, please specify

_____

9) Do you have a cell phone (including a SmartPhone or iPhone)?

- ❍ Yes
- ❍ No

10) If yes, what do you use your cell phone for? Do you use it to… (Check all that apply)

- ❑ Make or receive calls?
- ❑ Send or receive emails?
- ❑ Send or receive texts?
- ❑ Send or receive photos?
- ❑ Connect to the Internet?
- ❑ Other (please specify)

If you selected other, please specify

_____

Section 3: Sources of Internet Safety Information and Education

11) Sometimes parents are concerned about what happens to kids online. In the <u>past 3 months</u>, have your parents talked to you about… (Check all that apply)

- ❑ People on the Internet who might threaten, harass or bother you?
- ❑ People on the Internet who might ask sexual or other inappropriate questions?
- ❑ Taking, sending, or posting sexual pictures of yourself or other kids?

12) In the <u>past 3 months</u>, has anyone at school talked to you about Internet safety, like in your classroom or in an assembly?

- ❍ Yes
- ❍ No
- ❍ Don't know / not sure

13) In the <u>past 3 months</u>, has anyone else talked to you about Internet safety besides your parents or at school?

- ❍ Yes
- ❍ No
- ❍ Don't know / not sure

14) In the <u>past 3 months</u>, have you been to a website that gives you tips on how to safe on the Internet (like www.ikeepsafe.org or www.netsmartz.org)?

- ❍ Yes
- ❍ No
- ❍ Don't know / not sure

Section 4: Internet Experiences and Behaviors

15) The next set of questions asks about online harassment experiences and behaviors. Check the box that best applies to you.

In the <u>past 3 months</u> how many times did someone…

	Never	1 time	2 times	3-5 times	6 or more times
Make rude or mean comments to you on the Internet?	❍	❍	❍	❍	❍
Use the Internet to harass or embarrass you?	❍	❍	❍	❍	❍
Spread rumors about you through the Internet?	❍	❍	❍	❍	❍
Share something about you with others online that was meant to be private?	❍	❍	❍	❍	❍
Post or forward a video or picture of you online when they knew it would hurt your feelings or upset you?	❍	❍	❍	❍	❍

16) If <u>none</u> of these things happened to you in the last 3 months--go to the bottom of this page and select "Next Page."

Thinking about any of the things you checked above that happened in the last 3 months, which of the following solutions did you try? Check all of the things that you tried.

- ❑ Blocked the person or deleted the messages or posts.
- ❑ Saved the posts to show to an adult.
- ❑ Worked out the problem with the person either online or face to face.
- ❑ Told the person to stop.
- ❑ Talked to the friends of the person causing the problem to see if they could help.
- ❑ Ignored or avoided the person who was causing the problem.
- ❑ Tried to get a friend to help me with the problem.
- ❑ Talked about the problem with an adult in my family, like my mother or father.
- ❑ Talked about the problem with an adult at school.

17) Out of the things above that happened to you in the last 3 months, pick an example that stands out in your mind. How <u>embarrassed</u> did you feel because of it?

- ❍ Not embarrassed at all
- ❍ A little embarrassed
- ❍ Pretty embarrassed
- ❍ Very embarrassed

18) How <u>worried or threatened</u> did you feel about it?

- ❍ Not worried or threatened at all
- ❍ A little worried or threatened
- ❍ Pretty worried or threatened
- ❍ Very worried or threatened

The next set of questions asks about things that you might have done on the Internet in the past 3 months. Check the box that best applies to you.

19) In the <u>past 3 months</u> how many times...

	Never	1 time	2 times	3-5 times	6 or more times
Did you make rude or nasty comments to someone on the Internet?	❍	❍	❍	❍	❍
Did you use the Internet to harass or embarrass someone you were mad at?	❍	❍	❍	❍	❍
Did you spread rumors about someone through the Internet?	❍	❍	❍	❍	❍
Did you share something about someone with others online that was meant to be private?	❍	❍	❍	❍	❍
Did you post or forward a video or picture of someone online when you knew it might hurt or upset them?	❍	❍	❍	❍	❍
Did you participate in an online group or social networking site where the focus was making fun of someone you know?	❍	❍	❍	❍	❍

Section 5: Seeing Problems Happen Online

20) In the <u>past 3 months</u> how often have you seen a situation where someone you knew was having problems being harassed or made fun of online?

- ❍ Never
- ❍ 1 time
- ❍ 2 times
- ❍ 3 to 5 times
- ❍ 6 or more times

21) Check any of the ways that you reacted or tried to help when you saw this happening. (Check all that apply.)

- ❑ Told the person causing the problem to stop.
- ❑ Talked to the friends of the person causing the problem to see if they could help.
- ❑ Ignored or avoided the person causing the problem.
- ❑ Got my friends to try and help.
- ❑ Got back at the person causing the problem (like posting mean things about them).
- ❑ Reported the problem by filing a report or using a "report a problem" button or link.
- ❑ Talked to an adult at home about what happened.
- ❑ Talked to an adult at school about what happened.
- ❑ None of the above
- ❑ Other (please specify)

If you selected other, please specify

_____

Section 6: Online Citizenship

22) Let us know how much each of the following statements sound like you.

	Not at all like me	Not much like me	Somewhat like me	Mostly like me	Very much like me
If I disagree with people online, I watch my language so it doesn't come across as mean.	❍	❍	❍	❍	❍
I have used the Internet to improve my school or my town in some way.	❍	❍	❍	❍	❍
I am careful to make sure that the pictures I post or send of other people will not embarrass them or get them into trouble.	❍	❍	❍	❍	❍
My favorite places to be online are where people are respectful toward each other.	❍	❍	❍	❍	❍
I have used the Internet to learn how I can help a friend or help other kids in general.	❍	❍	❍	❍	❍

	Not at all like me	Not much like me	Somewhat like me	Mostly like me	Very much like me
When I am online, I try to end arguments or dramas when they develop.	❍	❍	❍	❍	❍
I think about making sure that things I say and post online will not be something I regret later.	❍	❍	❍	❍	❍
I do not add to arguments and insulting interactions that happen on the Internet	❍	❍	❍	❍	❍
I have used the Internet to share something that I am good at.	❍	❍	❍	❍	❍
I am careful about how I say things online, so they don't come across the wrong way.	❍	❍	❍	❍	❍
I like to present myself online as someone making positive choices.	❍	❍	❍	❍	❍

Section 7: Reacting to Online Harassment in the Future

23) Imagine that you are trying to handle the following problem:

Someone at school is spreading rumors and making mean comments about someone you know by texting and posting comments on a website, like Facebook. Other kids have started to join in. On a scale of 1 to 4, how likely do you think it is that you would react in the following ways?

	Not likely at all	Not very likely	Somewhat likely	Extremely likely
Tell the person who was causing the problem to stop?	❍	❍	❍	❍
Save the posts to show someone?	❍	❍	❍	❍
Ignore or avoid the person who was causing the problem?	❍	❍	❍	❍
Try to help by talking to the friends of the person causing the problem?	❍	❍	❍	❍
Get your friends to try and help solve the problem?	❍	❍	❍	❍
Report the problem by filing a report or using a "report a problem" button or link?	❍	❍	❍	❍
Talk with an adult in your family, like your mother or father about the problem?	❍	❍	❍	❍
Talk with an adult at school about the problem?	❍	❍	❍	❍

Thank you so much for participating in our survey!