Youth Internet Safety: Risks, Responses, and Research Recommendations

Adina Farrukh, Rebecca Sadwick, and John Villasenor

Adina Farrukh, a former elementary school teacher, is currently a graduate student in public policy at the UCLA Luskin School of Public Affairs, and a researcher at the UCLA Luskin Center for Innovation.

Rebecca Sadwick is a researcher at the UCLA Luskin Center for Innovation. Her past work includes studying the impact of teacher tenure and merit-based pay on America's achievement gap through the Center for American Politics and Public Policy.

John Villasenor is a nonresident senior fellow in Governance Studies and the Center for Technology Innovation at Brookings. He is also a professor of engineering and public policy at UCLA. During fall 2014, he is a National Fellow at the Hoover Institution at Stanford.

I. INTRODUCTION

As Internet use by children and teenagers increases, so do concerns about their online safety. Providing a safe environment requires an in-depth understanding of the types and prevalence of online risks young Internet users face, as well as of the solutions most effective in mitigating these risks.

Despite the very significant amount of research that has been conducted regarding these risks, improving child/youth Internet safety remains a challenge. In part, this is because definitions of terms and categories relevant to online safety (such as "cyberbullying") often vary, making the comparison of statistics and findings among sources imprecise. In addition, there are complex overlaps among different online safety subtopics. Overall, these factors can make identifying the specific gaps in existing research and knowledge difficult. If these gaps can be better identified and filled, a data-based understanding of issues facing youth could play a key role in driving policy decisions regarding online safety.

To address this issue, the present paper aims to provide 1) an overview of existing online safety research across a wide range of categories, 2) an analysis of major findings, 3) an identification of knowledge gaps, and 4) a set of recommendations for specific areas of research that can further the policy dialog regarding online safety.

II. CHILD/YOUTH INTERNET SAFETY: A CATEGORY-BASED APPROACH

The appendix on page twelve lists the over 50 publications that were considered in this study. For each publication, we identified the relevant online safety category (or, in many cases, categories), as well as the country where the study was primarily performed, and other relevant information. We then integrated the results on the basis of the categories identified below.

CYBERBULLYING

VARYING DEFINITIONS. Some instances of cyberbullying are clearly identifiable, given the language and tactics used to harass and/or intimidate a victim online. Given the range of problematic/harmful behaviors involved, however, it can sometimes be difficult to pinpoint when an action crosses the line from poor conduct to a more serious – and possibly criminal – offense.[1] Nevertheless, researchers generally characterize cyberbullying as actions using a technological medium to intimidate or convey an intent to harm. The communication often involves repetition of actions, and a power imbalance between the victim and perpetrator.[2]

> In Internet bullying, power imbalance can be conceptualized in a variety of ways. For example, a bully might possess a greater familiarity with the Internet than does the victim.

In discussions of cyberbullying, repetition implies that the communication is repeated and harm is intentionally inflicted—it is not typically an isolated, one-time occurrence.[3] Power imbalance broadly refers to the dynamic that gives a bully power over the victim(s). In traditional, in-person bullying, power imbalance often comes in the form of physical strength, size, or other strategic advantage. In Internet bullying, power imbalance can be conceptualized in a variety of ways. For example, a bully might possess a greater familiarity with the Internet than does the victim. The bully is also able to preserve anonymity: physical strength is not necessary to maintain power, as a cyberbully is able to shield his or her identity from the victim(s) for a prolonged period of time. [4] This ability to conceal one's identity can also lead to cyberbullying by people who might not have engaged in bullying in traditional contexts. Additionally, the fact that content in cyberspace is difficult or impossible to delete can also contribute to a victim's feelings of powerlessness or humiliation, which can sometimes deter them from seeking help from an adult.[5]

There are many similarities between the motives and natures of traditional bullying and cyberbullying. Some researchers point to the offline presence of many of the same risks youth face on the Internet. For example, there is "often a nexus between school bullying and cyberbullying."[6] The strong overlap in motives between traditional in-person bullying and cyberbullying—namely in seeking revenge and wielding power— has led many researchers to suggest implementing school and community-wide strategies to address the underlying climate and causes of peer bullying. Bullying might start offline and continue online or vice versa, though in some cases cyberbullies and victims do not know each other in the offline world. School and community-based initiatives to improve the relationships and attitudes youth have with and toward each other are thought of as potentially effective prevention measures, though more research on which particular programs and strategies are most effective is still needed.[7]

1 Sabella, R. A., Patchin, J. W., & Hinduja, S. (2013). Cyberbullying myths and realities. *Computers in Human Behavior, 29*(6), 2703-2711.

2 (Sabella et al, 2013).

3 Slonje, R., Smith, P. K., & Frisén, A. (2013). The nature of cyberbullying, and strategies for prevention. *Computers in Human Behavior, 29*(1), 26-32.

4 (Slonje et al, 2013).

5 (Slonje et al, 2013).

6 Magid, L. (2013, Nov 11). *Preventing and recovering from bullying – what works and what doesn't*. Retrieved from http://www.safekids.com/2013/11/13/preventing-and-recovering-from-bullying-what-works-and-what-doesnt/

7 (Magid, Nov. 2013).

PREVALENCE. Different studies on cyberbullying tend to produce varying statistics. There is a lack of clear consensus regarding the prevalence of cyberbullying, especially when compared to traditional bullying. In addition, there is limited evidence regarding growth of cyberbullying, and whether (and the extent to which) it may partially replace offline bullying.

Differing definitions and survey methodologies used by researchers also contribute to the lack of consensus between statistics produced by different studies. For example, researchers report figures on the percent of youth who have been victims of cyberbullying that can be as high as 72 percent or as low as 4 percent.[8] While most studies tend to report figures between 6 percent and 30 percent,[9] developing a more longitudinal survey method, based on a more standardized definition of cyberbullying, would make studies less susceptible to differences in perception and interpretation among youth.[10] This is especially true given the fact that youth (and some researchers) interpret the term "bullying" differently, making it more difficult to develop consistency in analyzing their responses to surveys about online behavior.[11]

Some scholars caution against any use of the word "bully" or "cyberbully," especially in schools. They favor use of the word "victimization," which can describe more types of negative behaviors to be immediately addressed by school and community administrators.[12] Given recent media and community-awareness efforts, the word "bully" carries, for many children, a connotation that includes "every imaginable mean behavior—from the rolling of eyeballs 'to not wanting to be your friend,' to sexual assault."[13] Dorothy Espelage of the University of Illinois has written that the overuse of the word bully "has really obscured our ability to focus on what's happening to children."[14] The term is often misapplied to actions or behaviors that "are normative, or part of being a human being (such as saying something mean when angry, or making an honest mistake that one later regrets)."[15] Characterizing all negative behavior as bullying can deter children from seeking adults' help if they fear the adult will overreact and exacerbate the issues by drawing unwanted attention. This is often the case when adults mistakenly attribute "behavior that isn't serious and actionable" to bullying.[16] That said, behaviors that may not fit a specific bullying definition (e.g., that may fall outside the particular definition of "bullying" in a school policy) could nonetheless warrant intervention, which is further reason that some researchers suggest attributing negative behaviors to "victimization."[17]

MOTIVES. The reasons perpetrators choose to cyberbully tend to vary. However, revenge for perceived wrongdoing is frequently cited among youth who have admitted to cyberbullying others. Cyberspace has become a new forum for bullying by people who might be too afraid or weak to commit bullying in traditional ways that would

---

8   Kowalski, R. M., & Limber, S. P. (2013). Psychological, physical, and academic correlates of cyberbullying and traditional bullying. *Journal of Adolescent Health, 53*(1), S13-S20.

9   (Sabella et al, 2013).

10   Vandebosch, H., & Van Cleemput, K. (2009). Cyberbullying among youngsters: Profiles of bullies and victims. *New Media & Society, 11*(8), 1349-1371.

11   (Sabella et al, 2013).

12   Collier, A. (2013, June 4). *Stop Using the Word "bullying" in School, Researchers Say*. Retrieved from http://www.netfamilynews.org/stop-using-the-word-bullying-in-school-researchers-say

13   (Collier, June 2013).

14   Toppo, G. (2013, May 1). *Researchers: Stop Using the Word 'bullying' in School*. Retrieved from http://www.usatoday.com/story/news/nation/2013/04/30/bullying-american-educational-research-association-schools/2124991/

15   (Collier, June 2013).

16   (Collier, June 2013).

17   (Collier, June 2013).

B | Center for
Technology Innovation
at BROOKINGS

> Any young person—from the straight-A student to the class clown—might be a cyberbully.

make them more easily identifiable.[18] Young cyberbullies also cite the ability to preserve anonymity and reach wider audiences as reasons they began victimizing other youth online. Importantly, because anonymity can often be preserved and only the most basic understanding of the Internet is necessary to engage in cyberbullying, young cyberbullies do not yet have a set of clearly defined characteristics.[19] Any young person—from the straight-A student to the class clown—might be a cyberbully.

PREVENTIVE/COPING STRATEGIES. The more basic preventive strategies (which can be employed within the broader context of internet safety as well) include:[20]

- encouraging youth not to disclose any identifying information online
- utilizing IP addresses to track and block problematic visitors
- switching online user accounts if harassment begins.

Like traditional bullying, cyberbullying among peers can be placed within a broader social context. Adults and youth often have disparate interpretations of online victimization. For example, in some cases, adults are more inclined to consider certain actions cyberbullying, which youth might describe as drama between peers (that often began with an issue offline).[21] Thus, researchers often encourage schools to develop "cyberbullying policies" to reduce and address cyberbullying between classmates. Such policies can also facilitate the creation of a school-wide bullying prevention program, as well as enable annual evaluations of the effectiveness of these programs. Successful and effective programs work to promote anti-bullying strategies at each level within the school—"from individual students and classrooms to anti-bullying teams that combine educators and students."[22]

Stan Davis and Charisse Nixon of the Youth Voice Project conducted "surveys of 13,177 students in 31 schools across 12 states" and found that that "when a school works to build clear definitions of respectful behavior with meaningful student involvement, most students will uphold and follow those behavioral standards."[23] However, in schools that impose disproportionate or "zero tolerance" disciplinary responses, bullying behaviors can be exacerbated. As Larry Magid has stated, "It's better to have clear and consistent and relatively minor – but certain – consequences than zero tolerance programs with severe consequences that are inconsistently meted out."[24] Youth surveyed in the Youth Voice Project also noted the importance of inclusion and support by their peers when coping with bullying to reduce its negative impact.[25] While adult support and encouragement often made

---

18 (Sabella et al, 2013; Slonje et al, 2013).

19 (Sabella et al, 2013; Slonje et al, 2013).

20   (Slonje et al, 2013).

21 Magid, L. (2013, May 26). *Child Safety on the Information Highway – 2013 – 20th Anniversary Edition*. Retrieved from http://www.safekids.com/child-safety-on-the-information-highway/

22 Nigam, Hemanshu. (2013, Aug 29). *Choosing the right anti-bullying program*. Retrieved from http://www.safekids.com/2013/08/29/choosing-the-right-anti-bullying-program/

23 Davis, S. & Nixon, C. L. (2013). *Youth Voice Project: Student Insights into Bullying and Peer Mistreatment*. Champaign, IL: Research Press, as quoted in Magid, L. (2013, Nov 11). *Preventing and recovering from bullying – what works and what doesn't*. Retrieved from http://www.safekids.com/2013/11/13/preventing-and-recovering-from-bullying-what-works-and-what-doesnt/

24 (Magid, May 2013).

25 (Magid, May 2013).

things better for victims of cyberbullying, youth were more influenced by friends and supportive peers who said they didn't deserve the negative treatment, and/or that it wasn't their fault.[26]

WHERE MORE WORK IS NEEDED. Developing a consensus on the definition of cyberbullying (and categories of cyberbullying behaviors) would be beneficial for future research. It is important to acknowledge that parents, educators, and youth may have different perceptions of what constitutes cyberbullying. In addition, it is important to identify which preventive strategies and programs are most effective in discouraging cyberbullying and Internet aggression by youth. Further, there is not yet a clear understanding of the demographic factors (gender, age, socioeconomic status, and race, etc.) associated with likelihood of becoming a cyberbully or cyber victim. Research in this realm could help communities design more individualized and effective prevention programs. These could include home-, school-, or community-based strategies.

SEXUAL SOLICITATION/UNWANTED EXPOSURE TO SEXUAL CONTENT

DEFINITIONS. There is a significant base of existing literature exploring sexual harassment or unwanted sexual solicitation of minors by adults and other youth. Behaviors constituting sexual harassment include requests for sexual contact, sexual talk, sending or soliciting sexual photographs, or the disclosure of unwanted sexual information. "Aggressive sexual solicitation" can also include solicitation that is carried out offline as well, whether via phone, mail, or in person.[27]

Unwanted or accidental exposure to sexual content refers to any circumstance in which youth are confronted with suggestive content or sexual imagery/videos while surfing the web for non-sexual content. This can occur during web searches, pop-up ads, email scams, or when youth unwittingly open problematic links in emails or instant messages.[28]

PREVALENCE. According to results from the 2005 edition of the Youth Internet Safety Survey, 1 in 7 U.S. youth had experienced unwanted sexual solicitation as defined above. This statistic, and the statistic from the first iteration of this study that reported the figure as 1 in 5 youth, have frequently been cited in studies about the prevalence of online dangers. However, two-thirds of the youth recipients reported that they did not consider the solicitations serious or upsetting (though a young person's own evaluation of a solicitation is not necessarily a precise indicator of how problematic it may be). In addition, only 1 in 25 children received *aggressive* solicitations or reported being distressed as a result of online solicitation.[29] Researchers from the University of New Hampshire's Crimes Against Children Research Center believe this figure is more representative of youth experiences with online sexual harassment.[30] In addition, results from the most recent Youth Internet Safety Survey show a decline in both unwanted sexual solicitation (from 13 percent to 9 percent), and aggressive solicitation (from 4 percent to 3 percent).[31]

---

26   (Magid, May 2013).

27   Mitchell, K. J., Wolak, J., & Finkelhor, D. (2007). Trends in youth reports of sexual solicitations, harassment and unwanted exposure to pornography on the Internet. *Journal of Adolescent Health, 40*(2), 116-126.

28   (Mitchel et al, 2007).

29   Wolak, J., Finkelhor, D., Mitchell, K. (2007). *1 in 7 Youth: The Statistics about Online Sexual Solicitations.* Retrieved from http://www.unh.edu/ccrc/internet-crimes/factsheet_1in7.html.

30   (Wolak et al, 2007).

31   Mitchell, K. J., Jones, L., Finkelhor, D., & Wolak, J. (2014). *Trends in Unwanted Online Experiences and Sexting.* Durham, NH: Crimes Against Children Research Center.

Some data suggest that unwanted exposure to sexual content is much more prevalent than is sexual harassment of youth. One in three youth reported that they had stumbled across such content while surfing the web.[32] This is in accordance with the widespread assumption that the Internet has significantly increased the amount of pornographic/sexual material available, which in turn has increased the likelihood of youth accidentally accessing such content on the web. While figures on youth exposure to sexually explicit material differ, some studies report that youth (especially younger children) are still more likely to encounter pornographic material offline, via television shows or movies.[33]

PREVENTIVE/RESOLUTION MEASURES. The most commonly suggested strategy for dealing with unwanted sexual solicitations is to encourage or help youth block the solicitor or leave the online forum in which they are encountered.

Some children directly confront the solicitor by telling them to stop, while others simply ignore them. By and large, however, very few children actually report cases of unwanted solicitation to their parents or other authority figures. The Youth Internet Safety Survey in 2005 found that most children who experience aggressive online solicitations did not mention the solicitations to anyone.[34] Similarly, most youth opted to deal with encounters with unwanted sexual material by immediately leaving (exiting the window) the site, or blocking it altogether.

> The Youth Internet Safety Survey in 2005 found that most children who experience aggressive online solicitations did not mention the solicitations to anyone.

WHERE MORE WORK IS NEEDED. As noted above, few children tend to involve parents or authority figures after receiving sexual solicitation or coming across unwanted sexual content. It would thus be useful to explore how parents and authority figures can play a more active role in protecting children from such encounters. In particular, it would be useful to have more definitive research regarding how filtering and firewall technologies can be employed more effectively, and whether other partnerships (e.g., with companies that provide Internet access, search, content and other services) can facilitate safer environments for children.

THE ROLE OF PRIVACY

Many of the risks the Internet poses can be mitigated if youth more proactively preserve their privacy online. Doing so requires them to be more aware of the consequences of disclosing identifying information, and of guidelines for determining when it is appropriate to do so. Unfortunately, many young people do not easily recognize situations in which disclosing information might put them at risk. Recent research has shown that children tend

---

32   Wolak J, Mitchell K, Finkelhor D. (2006). *Online victimization of youth: 5 years later.* Retrieved from: http://www.unh.edu/ccrc/pdf/CV138.pdf

33   The Berkman Center for Internet & Society. (2008). *Enhancing Child Safety & Online Technologies: Final Report of the Internet Safety Technical Task Force To the Multi State Working Group on Social Networking of State Attorneys General of the United States.* Cambridge, MA: Harvard University.

34   (Wolak & Finkelhor, 2006).

Center for
Technology Innovation
at BROOKINGS

to view online and offline interaction "as part of the same reality," and are more trusting of the people with whom they interact online than parents realize.[35] Some youth operate under an underlying assumption that the information they choose to share is contained within their circle of friends, and do not always realize that it may later become much more widely disseminated.[36] Often, youth are not as cognizant of the "breadth and scope" of the Internet audience, and therefore of the potential dangers of posting private information online. In addition, attitudes toward preserving privacy are influenced largely by personal preferences – which can, and should be, informed by parental guidance.[37]

PRIVACY AWARENESS. While there is plenty of room to improve privacy awareness, youth are "far from being nonchalant and unconcerned about privacy matters."[38] For example, a majority of youth who have Facebook profiles modify their privacy settings "at least to some extent" to contain their information and pictures within a specific audience.[39] More broadly, 62 percent of teens surveyed in one study have their social media accounts set to "private" altogether, while only 17 percent made their information public.[40] In a different study, 81 percent of surveyed teens who use social networking sites reported using privacy settings to safeguard personal information.[41] In addition 70 percent of teens in yet another study stated that they have sought advice on how to manage their online privacy.[42]

PARENT AND COMMUNITY INVOLVEMENT

The measures taken by adults (parents, educators, and government employees) to safeguard youth from online risks often include:

- monitoring youth (through online technologies and software, or in-person supervision)
- educating youth about potential risks
- attempting to teach appropriate online behaviors.

Teens tend to rely on their parents and other adults in their lives for information about online safety,[43] so an expansive campaign to educate parents is likely to be effective in augmenting overall youth safety. Parents seek information on how to best "protect their children online" through the "general news media" (38 percent), other parents (37 percent), and through schools or teachers (29 percent).[44]

35   OECD. (2012). *The Protection of Children Online: Recommendation of the OECD Council*. Paris, France.

36   (OECD, 2012).

37   (OECD, 2012).

38   boyd, d. & Hargittai, E. (2010). Facebook privacy settings: Who cares? *First Monday, 15*(8).

39   (boyd & Hargittai, 2010).

40   Madden, M., Lenhart, A., Cortesi, S., Gasser, U., Duggan, M., Smith, A., Beaton, M.. (2013, May 21) *Teens, Social Media, and Privacy*. Retrieved from http://www.pewinternet.org/files/2013/05/PIP_TeensSocialMediaandPrivacy_PDF.pdf

41   Hart Research Associates. (2012). *The Online Generation Gap: Contrasting attitudes and behaviors of parents and teens*. Washington, DC: Family Online Safety Institute.

42   Lenhart, A., Madden, M., Cortesi, S., Gasser, U., Smith, A. (2013, Aug 15). *Where Teens Seek Online Privacy Advice.* Retrieved from www.pewinternet.org/files/old-media//Files/Reports/2013/PIP_TeensandPrivacyAdvice.pdf

43   (Hart Research Associates, 2012).

44   Hart Research Associates. (2011). *Who Needs Parental Controls? A Survey of Awareness, Attitudes, and Use of Online Parental Controls*. Washington, DC: Family Online Safety Institute.

PARENTAL PERCEPTION OF YOUTH SAFETY ONLINE. Most parents report that online activities are generally beneficial for youth, and feel that their children are safe online. 42 percent of parents surveyed by the Family Online Safety Institute felt their child was very safe online. 44 percent felt their child was somewhat safe online. Only 3 percent of parents felt their child was very unsafe online, and 10 percent felt their child was somewhat unsafe.[45] Studies generally report that parents are most concerned about children viewing sexually explicit information or pictures online, or communicating with strangers.[46] 93 percent of parents surveyed by the Family Online Safety Institute said that they had conversations with their children about these risks, and have set rules or limits for their children's online activities. However, only 61 percent of youth reported having such conversations with their parents, which indicates a disconnect between the generations that might be explained by differences youth and parents have in the connotation of terms used to discuss online activities and risks.[47]

PARENTAL GUIDANCE. Most parents report that it is relatively easy to "exercise guidance and supervision over their child's use of various media," although surveys of youth and parents report a significant disconnect between parental perception of youth online activity and actual youth experiences.[48] 39 percent of teens surveyed by Hart Research Associates responded that their parents monitor their online activities "very" or "somewhat" closely, though 84 percent of parents responded that they monitor their children's activities "very" or "somewhat" closely. Similarly, 91 percent of parents said they are well informed about what their teens do online and on their mobile phones, while only 60 percent of teens surveyed say their parents are well informed.[49] Part of the divide between parent and youth perception of their monitoring of online activities stem from the fact that some parents take measures to protect their children's online safety of which their children are unaware. The difference in interpretation of terms like "monitoring" accounts for some of the difference in understanding youth experiences as well.

VIEWS OF ONLINE SAFETY. Confidence in the safety and benefits of online experiences "declines the older the child gets, and the more time he or she spends online."[50] Still, as cited above, an overwhelming majority of teens and parents surveyed by Hart Research Associates reported believing that youth are either "very" or "somewhat" safe online.[51] When asked an open-ended question about what being safe online entails, 25 percent of teens mentioned issues of privacy and "ensuring no one has access to personal or identifying information."[52] 17 percent of youth "say safety means preventing harm or harassment."[53] The biggest concern among parents regarding youth online safety is "avoiding 'stranger danger' scenarios,'" followed closely by protecting teens' privacy and personal information.[54]

---

45 (Hart Research Associates, 2011).
46 (Hart Research Associates, 2011).
47 (Hart Research Associates, 2012).
48 (Hart Research Associates, 2011).
49 (Hart Research Associates, 2012).
50 (Hart Research Associates, 2011, p 4.)
51 (Hart Research Associates, 2012).
52 (Hart Research Associates, 2012).
53 (Hart Research Associates, 2012, p. 2).
54 (Hart Research Associates, 2012, p. 2).

INTERGENERATIONAL GAPS IN ATTITUDES TOWARD INTERNET SAFETY ISSUES

Intergenerational gaps refer to differences between "adult perceptions of what risks young people face online," and "young people's understanding and use of online safety."[55] Much of the policy agenda on online risks and managing youth internet safety has been guided by adult perceptions of online risk, rather than "discovering what concerns children themselves."[56]

Effective monitoring relies on an understanding and communication between youth and their parents. However, monitoring is often hindered by the gap between parents' and children's expertise in using the Internet, and their differing perceptions of the risks posed by online activities. Youth perceive "the online" and "the offline" realm to be tightly integrated, whereas parents perceive a distinction between the two.[57] This is likely reflective of the greater role technology and the Internet play in the daily lives and activities of young people, and their greater expertise in their use. Parenting styles impact strategies for ensuring children's online safety, as parents, like youth, shape their approach to online activities in large part based on offline strategies. In other words, parents approach their children's online behavior—and their monitoring of it—in much the same way they approach monitoring their children's offline activities and behavior.[58]

Many approaches to mitigating online risks faced by youth focus on risk management through education and monitoring, without accounting for the high level of technology expertise among many young people. Accounting for potential generational gaps in technological expertise is an important component in bridging the differing perceptions between youth and adults, and can lead to effective responses to online threats.[59] Youth often report "that a generational misunderstanding around the position value of [social networking sites] fuelled adults' concerns about how young people use them."[60]

BRIDGING THE GENERATION GAP. The Cooperative Research Center's "Living Lab" in Australia established "a series of guiding principles [that] should be applied in the development of future cyber safety education models."[61] The study found that structured opportunities for adults and youth to engage in dialogue about cybersafety (as brief as a single three-hour session) to be effective in closing the intergenerational gap, and ending potential misunderstandings about the nature of online risks youth face and their ability to effectively respond to them. Youth stressed the importance of parental competency and open communication in mitigating online risks. Key findings of the Living Lab research include:[62]

- Youth employ privacy settings and security controls when using social networking sites.

- Teens are often influenced by their parents when deciding how to use websites.

---

55   Strider, J., Third, A., Locke, K. & Richardson, I. (2012). *Parental Approaches to Enhancing Young People's Online Safety*. Melbourne, VIC: Cooperative Research Centre for Young People, Technology and Wellbeing.

56   Livingstone, S., Kirwil, L., Ponte, C., & Staksrud, E. (2014). In their own words: What bothers children online? *European Journal of Communication, 29*(3), 271-288.

57   Third, A., Spry, D., & Locke, K. (2013). Enhancing parents' knowledge and practice of online safety. Melbourne, VIC: Cooperative Research Centre for Young People, Technology and Wellbeing.

58   (Third et al, 2013).

59   (Third et al, 2013).

60   (Third et al, 2011, p. 7).

61   (Third et al, 2011, p. 8.)

62   Collier, Anne. (2013, Feb 5). *Tech Parenting Smarts from Teens: Australian Study*. Retrieved from http://www.netfamilynews.org/tech-parenting-smarts-from-teens-australian-study

B | Center for
Technology Innovation
at BROOKINGS

• Youth can help educate their parents on the resources and websites available online, which can help adults better supervise and facilitate their safety.

• "Experiential learning models that promote intergenerational conversation" are effective means of helping adults guide youth to more responsible online activity.[63]

The study's authors concluded that future education models and guiding principles must: "be developed in partnership with young people, and acknowledge their expertise; be experiential as opposed to didactic; combine online and face-to-face delivery; have scope to meet the specific technical skills needs of adults, as well as providing capacity for high level conversations about the socio-cultural dimensions of young people's technology use; and be flexible and iterative so that they can keep pace with the emergence of new online and networked media technologies and practices."[64]

III. RECOMMENDATIONS

Ensuring maximally effective policy decisions regarding youth/child Internet safety will require additional research in the following areas:

• A better understanding is needed regarding the role of demographic factors in shaping online risk and appropriate responses.[65]

• Most existing research on cyberbullying is based on surveys of youth and parents, with terms defined by the researchers and varying between studies. Conducting a longitudinal study incorporating participant observation, in-depth interviews, and a study of the dynamics and relationships in the relevant social networks is likely to reveal more precise information about the relationship between cyberbullying and the social context in which it occurs.[66]

• The use of mobile devices by youth has increased dramatically in the past few years. More work is needed to understand how this shift impacts online safety, and the extent to which mobile technologies may be "deviance amplifying."[67]

• A better understanding of the specific role that mobile devices may also play in promoting online safety is needed. As a 2012 publication from the Family Online Safety Institute noted, "mobile devices present

---

63   (Collier, Feb. 2013).

64   (Third et al, 2011 p. 9).

65   Lynn Schofield Clark's recent book, *The Parent App: Understanding Families in the Digital Age*, provides an important foundation for understanding "how families from various backgrounds negotiated the introduction of new media into their home lives." This book is based in part on interviews with "194 teens and preteens between the ages of eleven and eighteen, as well as eighty-six of their parents and sixty-three of their younger siblings" (Clark, 2013, p. 227). Follow-on work in this area based on an even larger number of interviews and other data could be very valuable. See Clark, L. S. (2013). *The Parent App: Understanding Families in the Digital Age*. New York, NY: Oxford University Press.

66   (Vandebosch & Cleemput, 2009).

67   Finkelhor, D. (2014). Commentary: Cause for alarm? Youth and internet risk research – a commentary on Livingstone and Smith (2014). *Journal of Child Psychology and Psychiatry, 55*(6), 655–658. Retrieved from http://onlinelibrary.wiley.com/store/10.1111/jcpp.12260/asset/jcpp12260.pdf?v=1&t=i0sd5749&s=adbd143a7604fa6b0ed5

the greatest opportunity to educate parents about the parental control technologies available, including smartphone controls and downloadable apps."[68]

• Many of the intergenerational gaps in understanding Internet safety can be attributed to a lack of communication between parents and their children. Thus, attention to the design of programs and tools to better facilitate that communication in the contemporary technology environment would be helpful in creating more effective prevention and response measures.

• While there has been some attention to "outreach measures" that parents and youth find helpful in raising awareness and augmenting understanding about Internet safety, tailoring strategies to particular youth and school environments will make them more effective. A "one-size fits all" type of messaging has sometimes dominated the Internet safety field. As ConnectSafely.org co-founder Larry Magid has observed, it is also important to consider adopting a public health approach that takes risk profiles of different demographics into consideration.[69]

• Behaviors such as cyberbullying or online sexual harassment of children and youth often go unreported, or are reported only after many weeks, months, or years. Research on ways to encourage children/youth to more proactively report these situations at their inception could be valuable in mitigating the resulting harms.

• When assessing the prevalence of phenomena like cyberbullying or online sexual harassment, it would be useful to have a standardized definition (or a set of standardized definitions that researchers can easily cite) outlining what such phenomena entail. While youth will experience episodes of cyberbullying or sexual harassment differently, having a standardized framework enables more accurate comparisons of results from different studies, and would also help in the design of new studies.

• While there are many educational programs and policy initiatives that work to promote youth/child Internet safety, more evidence- and data-based evaluations of which programs are most effective are needed to better inform future policies and program implementation.

• More work is needed to better understand the impact adults and older peers have in role modeling appropriate online Internet behaviors. In particular, a better understanding of the impact that the increasingly blurred lines between adults' online and offline interactions (including, but not limited to, online dating and hiring services) have on youth perception of online risks and safety is needed.

• The near complete integration of cameras into mobile phones has led to a "selfie" culture that puts youth in an unprecedented position: they now have the power to produce their own potentially problematic content featuring images of themselves. Such content raises many potential concerns, including the possibility that shared images could later be used in exploitative ways. More research is needed to discern how best to reduce the creation, distribution, and exploitation of this content.

---

68   (Hart Research Associates, 2011, p. 2).
69   Magid, L. Personal Correspondence, July 2014.

B | Center for
Technology Innovation
at BROOKINGS

APPENDIX

This appendix contains the publications that were considered in writing this paper. This list is not intended to be exhaustive, but instead is meant to be representative of the depth and breadth of publications addressing youth/child online safety. Similarly, many publications in this field span multiple categories (e.g., cyberbullying, privacy, etc.), and may be based on data gathered within a single country or from multiple countries.

Reference	Categories	Country/Region
Australian Communications and Media Authority. (2009). *Developments in Internet filtering technologies and other measures for promoting online safety*. Retrieved from: www.acma.gov.au/webwr/_assets/main/lib310554/developments_in_internet_filters_2ndreport.pdf	Cyberbullying, Parent & Community Involvement (Prevention Measures), Privacy, Internet Reputation, Youth Resolution Measures, Sexual Content/Harassment	Australia
Australian Communications and Media Authority. (2010). *Cybersmart parents: Connecting parents to cybersafety resources*. Melbourne, Australia.	Parent & Community Involvement, Intergenerational Gaps	Australia
Australian Communications and Media Authority. (2013). *Like, post, share - short report. Young Australians and Online Privacy*. Melbourne, Australia.	Privacy	Australia
Australian Communications and Media Authority. (2013). *Like, post, share: Young Australians' experience of social media*. Melbourne, Australia.	Cyberbullying, Parent & Community Involvement (Prevention Measures), Privacy, Internet Reputation, Youth Resolution Measures, Intergenerational Gaps, Sexual Content/Harassment	Australia
Baas, N., de Jong, M. D., & Drossaert, C. H. (2013). Children's perspectives on cyber-bullying: insights based on participatory research. *Cyberpsychology, Behavior, and Social Networking*, 16(4), 248-253.	Cyberbullying, Parent & Community Involvement (Prevention Measures), Youth Resolution Measures	Netherlands
Berkman Center for Internet & Society. (2008). *Enhancing Child Safety and Online Technologies: Final Report of the Internet Safety Technical Task Force to the Multi-State Working Group on Social Networking of State Attorneys General of the United States*. Boston, MA: Harvard University.	Cyberbullying, Parent & Community Involvement (Prevention Measures), Privacy, Internet Reputation, Youth Resolution Measures, Sexual Content/Harassment	United States

boyd, d. & Hargittai, E. (2010). Facebook privacy settings: Who cares? *First Monday, 15*(8).	Privacy	United States
Bryce, J., & Fraser, J. (2013). "It's Common Sense That It's Wrong": Young People's Perceptions and Experiences of Cyberbullying. *Cyberpsychology, Behavior, and Social Networking, 16*(11), 783-787.	Cyberbullying, Youth Resolution Measures	United Kingdom
Byrne, S., & Lee, T. (2011). Toward predicting youth resistance to internet risk prevention strategies. *Journal of Broadcasting & Electronic Media, 55*(1), 90-113.	Parent & Community Involvement (Prevention Measures), Intergenerational Gap	United States
Cai, X., & Gantz, W. (2000). Online privacy issues associated with Web sites for children. *Journal of Broadcasting & Electronic Media, 44*(2), 197-214.	Privacy	United States
Chai, S., Bagchi-Sen, S., Morrell, C., Rao, H. R., & Upadhyaya, S. J. (2009). Internet and online information privacy: An exploratory study of preteens and early teens. *Professional Communication, IEEE Transactions on, 52*(2), 167-182.	Privacy	United States
Clark, L. S. (2013). The Parent App: *Understanding Families in the Digital Age.* Oxford University Press.	Intergenerational Gaps	United States
d'Haenens, L., Vandonink, S. and Donoso, V. (2013). *How to cope and build resilience.* London: EU Kids Online, LSE. http://eprints.lse.ac.uk/48115	Youth Resolution Measures	EU (European Union)
DeHue, F., Bolman, C., & Völlink, T. (2008). Cyberbullying: Youngsters' experiences and parental perception. *CyberPsychology & Behavior, 11*(2), 217-223.	Cyberbullying, Intergenerational Gaps	Netherlands
Dyson, H. (2011). The electronic footprint. *Academy Magazine, 1*(1) p. 55	Internet Reputation	United Kingdom
Ey, L. A., & Cupit, C. G. (2011). Exploring young children's understanding of risks associated with Internet usage and their concepts of management strategies. *Journal of Early Childhood Research, 9*(1), 53-65.	Parent & Community Involvement (Prevention Measures), Intergenerational Gap	Australia

Faughty, J. J. (2010). *Challenging Risk: NZ High-school Students' Activity, Challenge, Distress, and Resiliency, within Cyberspace*. Retrieved from: https://researchspace.auckland. ac.nz/bitstream/handle/2292/6775/whole. pdf?sequence=8	Cyberbullying, Parent & Community Involvement (Prevention Measures), Privacy, Internet Reputation, Youth Resolution Measures, Intergenerational Gaps, Sexual Content/Harassment	New Zealand
Fenaughty, J., & Harré, N. (2013). Factors associated with distressing electronic harass-ment and cyberbullying. *Computers in Human Behavior, 29*(3), 803-811.	Cyberbullying	New Zealand
Fenaughty, J., & Harré, N. (2013). Factors associated with young people's successful resolution of distressing electronic harass-ment. *Computers & Education, 61,* 242-250.	Cyberbullying, Youth Resolution Measures	New Zealand
Finkelhor, D. (2011). *"The Internet, Youth Safety and the Problem of 'Juvenoia.'" A Report of the Crimes Against Children Research Center.* Retrieved from: http://www.unh.edu/ccrc/pdf/ Juvenoia%20paper.pdf.	Intergenerational Gaps	United States
Finkelhor, D., Mitchell, K. J., & Wolak, J. (2000). *Online Victimization: A Report on the Nation's Youth.* Retrieved from: www.unh.edu/ccrc/pdf/ jvq/CV38.pdf	Sexual Content/Harassment	United States
Finkelhor, D., Turner, H. A., & Hamby, S. (2012). Let's prevent peer victimization, not just bullying. *Child Abuse & Neglect, 36*(4), 271-274.	Cyberbullying	United States
Hart Research Associates. (2011). *Who Needs Parental Controls? A Survey of Awareness, Attitudes, and Use of Online Parental Controls.* Washington, DC: Family Online Safety Institute.	Parent & Community Involvement (Prevention Measures), Intergenerational Gap	United States
Hart Research Associates. (2012). *The Online Generation Gap: Contrasting attitudes and behaviors of parents and teens.* Washington, DC: Family Online Safety Institute.	Intergenerational Gap	United States
Hart Research Associates. (2013). *Teen Identity Theft: Fraud, Security, and Steps Teens are Taking to Protect Themselves Online.* Washington, DC: Family Online Safety Institute.	Privacy	United States

Hertzel, D. A. (1999). Don't talk to strangers: An analysis of government and industry efforts to protect a child's privacy online. *Fed. Comm. LJ, 52,* 429.	Privacy	United States
Hinduja, S. & Patchin, J. (2014). *State Cyberbullying Laws: A Brief Review of State Cyberbullying Laws and Policies.* Retrieved from: http://www.cyberbullying.us/Bullying_and_Cyberbullying_Laws.pdf	Cyberbullying	United States
Hinduja, S., & Patchin, J. W. (2012). Cyberbullying: Neither an epidemic nor a rarity. *European Journal of Developmental Psychology, 9*(5), 539-543.	Cyberbullying	United States
Hoofnagle, C. J., King, J., Li, S., & Turow, J. (2010). *How different are young adults from older adults when it comes to information privacy attitudes and policies?* Retrieved from: http://papers.ssrn.com/sol3/papers.cfm?abstract-id=1589864	Intergenerational Gap	United States
Lee, S. J., & Chae, Y. G. (2012). Balancing participation and risks in children's internet use: The role of internet literacy and parental mediation. *Cyberpsychology, Behavior, and Social Networking, 15*(5), 257-262.	Parent & Community Involvement (Prevention Measures), Intergenerational Gap	South Korea
Lenhart, A. (2007). *Cyberbullying and online teens.* Retrieved from: http://www.pewinternet.org/2007/06/27/cyberbullying/	Cyberbullying	United States
Levy, N., Cortesi, S., Gasser, U., Crowley, E., Beaton, M., Casey, J., & Nolan, C. (2012). *Bullying in a networked era: A literature review.* Boston, MA: Berkman Center for Internet & Society.	Cyberbullying	United States
Livingstone, S. (2006). Drawing conclusions from new media research: Reflections and puzzles regarding children's experience of the Internet. *The Information Society, 22*(4), 219-230.	Parent & Community Involvement (Prevention Measures), Internet Reputation, Intergenerational Gaps	United Kingdom

Center for
Technology Innovation
at BROOKINGS

Livingstone, S., & Bober, M. (2006). Regulating the internet at home: contrasting the perspectives of children and parents. *Digital generations: Children, young people, and new media*, 93-113.	Parent & Community Involvement (Prevention Measures), Youth Resolution Measures, Intergenerational Gaps	United Kingdom
Livingstone, S., Kirwil, L., Ponte, C., & Staksrud, E. (2014). In their own words: What bothers children online? *European Journal of Communication, 29*(3), 271-288.	Intergenerational Gaps	EU (European Union)
Madden, M., Cortesi, S., Gasser, U., Lenhart, A., & Duggan, M. (2012). *Parents, teens, and online privacy.* Washington, DC: Pew Research Center's Internet & American Life Project.	Privacy	United States
Marwick, A.E., & boyd, d. (2011). The drama! Teen conflict, gossip, and bullying in networked publics. In *A Decade in Internet Time: Symposium on the Dynamics of the Internet and Society.* Oxford Internet Institute.	Youth Resolution Measures, Intergenerational Gaps	United States
Nigam, H., & Collier, A. (2010). *Youth safety on a living Internet.* Retrieved from: www.ntia.doc.gov/legacy/reports/2010/OSTWG_Final_Report_060410.pdf	Parent & Community Involvement (Prevention Measures)	United States
OECD. (2012). *The Protection of Children Online: Recommendation of the OECD Council.* Paris, France.	Cyberbullying, Parent & Community Involvement (Prevention Measures), Privacy, Internet Reputation, Youth Resolution Measures, Sexual Content/Harassment	
Patchin, J. W., & Hinduja, S. (2012). School-Based Efforts to Prevent Cyberbullying. *The Prevention Researcher, 19*(3), 7-9.	Cyberbullying, Parent & Community Involvement (Prevention Measures)	United States
Pieschl, S., Porsch, T., Kahl, T., & Klockenbusch, R. (2013). Relevant dimensions of cyberbullying—Results from two experimental studies. *Journal of Applied Developmental Psychology, 34*(5), 241-252.	Cyberbullying	Germany
Sabella, R. A., Patchin, J. W., & Hinduja, S. (2013). Cyberbullying myths and realities. *Computers in Human Behavior, 29*(6), 2703-2711.	Cyberbullying	United States

Steeves, V. (2012). *Young Canadians in a Wired World Phase III: Talking to Youth and Parents about Life Online*. Ontario, Canada: MediaSmarts.	Parent & Community Involvement (Prevention Measures), Intergenerational Gap	Canada
Strider, J., Third, A., Locke, K. & Richardson, I. (2012). *Parental Approaches to Enhancing Young People's Online Safety*. Melbourne, VIC: Cooperative Research Centre for Young People, Technology and Wellbeing.	Parent & Community Involvement	Australia
Third, A., Richardson, I., Collings, P., Rahilly, K. & Bolzan, N. (2011). *Intergenerational attitudes towards social networking and cybersafety: A living lab*. Melbourne, VIC: Cooperative Research Centre for Young People, Technology and Wellbeing.	Intergenerational Gaps	Australia
Third, A., Spry, D., & Locke, K. (2013). *Enhancing parents' knowledge and practice of online safety*. Melbourne, VIC: Cooperative Research Centre for Young People, Technology and Wellbeing.	Parent & Community Involvement (Prevention Measures), Intergenerational Gap	Australia
Vandebosch, H., & Van Cleemput, K. (2008). Defining cyberbullying: A qualitative research into the perceptions of youngsters. *CyberPsychology & Behavior*, 11(4), 499-503.	Cyberbullying, Intergenerational Gaps	Belgium
Vandebosch, H., & Van Cleemput, K. (2009). Cyberbullying among youngsters: Profiles of bullies and victims. *New Media & Society,* 11(8), 1349-1371.	Cyberbullying	Belgium
Wolak J, Mitchell K, Finkelhor D. (2006). *Online victimization of youth: 5 years later*. Retrieved from: http://www.unh.edu/ccrc/pdf/CV138.pdf	Cyberbullying, Sexual Content/ Harassment	United States
Wolak, J., & Finkelhor, D. (2011). *Sexting: A Typology*. Durham, NH: Crimes against Children Research Center.	Sexual Content/Harassment	United States
Ybarra, M. L., Mitchell, K. J., Wolak, J., & Finkelhor, D. (2006). Examining characteristics and associated distress related to Internet harassment: findings from the Second Youth Internet Safety Survey. *Pediatrics*, 118(4), e1169-e1177.	Cyberbullying, Sexual Content/ Harassment	United States

Center for
Technology Innovation
at BROOKINGS