
Towards Conducting Responsible Research with Teens and Parents regarding Online Risks

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Abstract

We conducted an exploratory interview study with 10 undergraduate college students (ages 18-21) to get their feedback on how to best design a research study that asks teens (ages 13-17) to share portions of their Instagram data with their parents and discuss their online risk experiences. These young adults felt that teens should have as much control as possible when sharing their data, including the way that it was used in discussions with their parents. Our findings highlight the need to ensure researchers preserve the privacy and confidentiality of teens' social media data.

Author Keywords

Adolescent online safety; parent-teen reconciliation; online risk concerns; design; privacy;

CSS Concepts

• **Human-centered computing** ~ **Human computer interaction (HCI)** ~ **Empirical studies in HCI**

Introduction

Our research team is currently working on several funded research projects (e.g., [18,19]) related to the topic of adolescent online safety and risks (e.g., sexual solicitations, cyberbullying, exposure to explicit content, etc.). Much of the previous work addressing

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this topic relied heavily on teen and parent self-reports [17] and found that parents and teens have vastly differing perceptions of online risks [6]. Other studies have shown that parents and teens rarely communicate about these risks and lack a mutual understanding of the nature and frequency in which teens encounter these risks [2,7,16,17]. Therefore, the goal of our research is to: 1) move beyond self-reporting techniques and 2) help teens and parents reconcile their differing perceptions about online risks to form a consensus about what risks are the most salient ones we need to address moving forward in our research.

As such, we are in the process of carefully designing a study in which teens share their Instagram data, flag their private messages for risky interactions, and (potentially) share these messages with their parents during a lab-based study to reconcile their differing perceptions of online risks encountered by teens and how they should be handled. Yet, we must acknowledge that when conducting research with vulnerable populations (i.e., teens), it is important that we take into consideration power hierarchies and situations that could potentially harm our participants [10], even if our intention is to help them. Therefore, we pose the following research questions:

- **RQ1:** *What considerations need to be made when asking teens to share sensitive information, such as their social media data, for the purpose of research?*
- **RQ2:** *How can we robustly and ethically design a research study in which teens and parents work together to reconcile their differing opinions about online risks?*

To answer these questions, we conducted an interview study with 10 undergraduate college students (ages 18-21), who represent the unique perspective of “emerging adults” [1] that are past adolescence but not yet adults. These youth were able to give us their unique perspective on how to balance the tensions between teens and their parents in a way that gave teens agency over their private, social media interactions but also facilitated meaningful conversations between teens and their parents. In this research, we make the following contributions:

- Highlight important considerations for the use of teens’ private social media data in adolescent online safety research.
- Provide teen-centric design strategies and recommendations for parent-teen reconciliation regarding online risks.

Through incorporating these designs into our future research studies, we hope to address teens’ concerns over the disclosure of sensitive information, while preserving the significance of novel study designs.

Background

Below, we provide relevant background for our novel design of a research study with teens (ages 13-17) and parents and motivate the need for this pilot study.

Overcoming an Overreliance on Self-Report Data

In their comprehensive review of the adolescent online safety literature, Pinter et al. [11] raised the concern of an overreliance on parent and teen self-report data without confirmatory evidence of teens’ actual online behaviors. Our goal is to overcome this limitation by asking teens to corroborate their self-reported online

risk experiences with their actual social media data. In doing so, several ethical considerations arise. For example, what information would teens be willing to share for the purpose of research? What safeguards need to be made to protect their data? As such, we posed RQ1 to better understand what considerations needed to be taken to ethically push research on adolescent online risks beyond using parent and teen self-report data.

Reconciling the Differing Perceptions of Online Risk between Parents and Teens

A consistent finding from the adolescent online safety literature is that parents underestimate the nature and frequency of their teen's online risky encounters [3,5,14]. Rideout et al. [12] explained this underestimation of online risks with teens' increasing use of the internet in private spaces (e.g., mobile phones in one's bedroom), while others have attributed it to a lack of parent-teen communication [4,17]. To some extent, parental control software has tried to reconcile this problem by giving parents a more transparent window into their teens' online activities, but this approach has been shown to be largely ineffective and potentially harmful to the parent-teen relationship [7,8,16]. Thus, researchers are advocating for more collaborative and teen-centric approaches to improve parent-teen communication [10,12,17], as well as increased teen self-regulation [15,16] of online risks.

Thus, a second phase of our planned research is to have teens share some of their risky social media interactions with their parents. The intent is to ask parents and teens to independently decide the nature and level of risk posed to the teen, as well as create a

risk mitigation plan for appropriate interventions given a particular risk. Then, parents and teens would be asked to discuss their individual responses, reconcile their differences, and come up with a joint risk mitigation plan. Again, this research plan surfaces several ethical concerns that must be addressed. Would teens be willing to share their social media data with their parents? How can we mitigate conflict that may arise by teens sharing these risky online interactions with their parents? Thus, we pose RQ2, which emphasizes best practices for moving towards reconciliation between parents and teens without potentially harming our teen participants. Thus, deemed it necessary to conduct a pilot study on our study design prior to launch.

Study Design

We conducted an initial pilot study with 10 undergraduate college students (ages 18-21) to obtain feedback prior to launching the parent-teen research study described above. Undergraduate college students are considered "emerging adults" [1], who are able to consider their entire past experience as teens, in retrospection. This demographic represented the closest age group to teens (13-17) without having to engage minors in this research. Participants were asked to review an early prototype of our Instagram data sharing and risk-flagging web-based interface and to give us feedback on components of our parent-teen study design. Semi-structured interviews were audio recorded, transcribed, and qualitatively coded for emerging themes. We conducted a thematic content analysis of our data and found ensuring teen's privacy and giving them control over their data in conducting online safety research, to be our most significant

findings. In the next section, we present the key findings in correspondence to our research questions.

Results

We had a total of 10 participants (N=10) out of which 9 were female, and all were undergraduate students between the ages of 18 and 21. The most common risks reported (N=6) were sexual in nature, with information breaches (e.g., shared screenshots that disclose their personal information) being the second most common type of online risk experienced (N=4).

Concerns for Teens' Data & Privacy

A major concern expressed by several undergrads was a **need for privacy and protection of their social media data**. This was evident from participants' (N=8) reports of information and privacy breaches as their primary concern regarding online risks. Some of them (N=4) were concerned with the sharing of their private messages and images by the researchers without their consent. They did not want us to inadvertently breach their information privacy.

While these examples convey an overall discomfort with disclosure of their personal information, most participants (N=7) also had more specific data privacy concerns regarding the study. A few of them (N=2) inquired about the kind of data that would be stored and studied by the researchers. Specifically, they raised concerns about the inclusion of teens' non-risky, personal interactions as well as the ones that were flagged as risky, implying they would prefer that only the flagged conversations be retained:

"When you download the Instagram data, is this the conversations besides the risky ones, as well?" – P7

Half of participants (N=5) were also concerned about protecting the privacy and interests of their friends and other relationships. For instance, some of them raised concerns about revealing the identity of their friends, while others expressed discomfort in sharing personal conversations with intimate partners:

"What if they don't want to, like put the other person that they had a conflict with, like on the spot or like out there?" – P10

A few participants (N=3) suggested ways to **support the teens' well-being when reflecting on their risky social media interactions**. These improvements included flagging individual messages instead of entire conversations. The rationale was that conversations could have both positive and negative interactions and that flagging an entire conversation as risky might make the teen feel bad about their relationship with that person. Another recommendation was to provide a search option to assist when marking conversations or messages as risky, as having to review entire conversations for a risky encounter could be triggering and cause teens to relive past trauma. Suggestions were also made to have more reassuring language throughout the study to help participants feel like the researchers cared about them:

"The language should have a sympathetic view towards the victim... as you're working with people who may have not gotten help." – P8

In summary, participants felt that it was important that we provide safeguards for protecting the data and make concerted efforts to minimize the risk associated

with asking teens to reflect on their past online risk experiences.

Prioritizing Teens' Control in Parent-Teen Discussions
Overall, the undergrads (N=9) liked the idea of a study that facilitated a conversation about online risks between parents and teens with the goal of reconciliation. Yet, some of them (N=4) did not wish to take part in the exercise with parents, citing concerns over sharing any of their social media data with their parents. They thought their parents would overreact and/or that they or their friends would get in trouble if their parents were to see their private messages:

"I feel like they would just call the police or something like that... They're going to go overboard with it basically." - P6

Many undergrads (N=6) provided **recommendations that gave teens more control over how their data was shared with parents**. They expressed willingness to participate if they could *selectively* share information with parents, depending on the context and severity of the online risks experienced. Some of them (N=3) gave examples of high-risk situations, such as physical threats and blackmailing as risks severe enough to share with parents:

"...If someone tries to blackmail me, I would classify that as high risk or if someone gives personal threats such as if they find out my address, then I would be like, okay, I have to tell them [parents]." - P7

Whereas others (N=5) agreed to only share information that did not involve intimate conversations with friends

or other relations, or if the conversation did not portray them or their friends in a negative light.

"[If it's] regarding a relationship with someone you have online, even if it's just a friendship, that wouldn't be something I shared with her [guardian]." - P2

Apart from selectively sharing data, participants (N=5) also suggested other ways to give teens more control over how the data was shared with parents. Undergrads suggested either anonymizing the messages, using dummy data, or social media data from other teens instead of their own personal communication with others. By separating the online risks being discussed from the teen's own experience, this would provide a layer of protection, so that parents would not punish their teens for sharing with them:

"I don't think it's a good idea [to use teen's personal data] ... The parent might see it as like, oh, that's a result of the pictures that my child is posting online, and then start to regulate that." - P8

The need to selectively share the data with parents and protect teens from judgment may also be associated with participants' (N=8) stated lack of communication with their own parents regarding online risks, which further highlights the need for more research that strives to facilitate parent-teen communication and reconcile their differing perceptions about online risks.

Discussion

In this section, we discuss the major implications from our findings and resulting design decisions.

Agency for Teens over their Personal Data

A key take-away from our study is making sure teens have full agency over how their social media data is shared and used by researchers. While most undergrads were willing to share their social media data with us under certain conditions, they were clear that they should be given complete control over how the data is shared. For instance, as researchers, we should not share teens' social media data beyond those whom teens gave us explicit permission to share. This dissemination plan needs to be clearly spelled out in the informed consent document signed by parents, as well as assented to by teens themselves. Further, other protection mechanisms should be in place to make sure that teens are not harmed by the data they share with us in confidence. That is why we plan to obtain a NIH Certificate of Confidentiality [20], which protects the information from being shared with others, including safeguarding it from subpoenaed for legal purposes.

Protecting the Well-being of Teens

To consider the emotional well-being of teens who take part in our study, we plan to allow teens to self-define the types of online risks they encountered and provide extra contextual information for flagged messages, to avoid any misunderstandings by researchers about the nature of the risks experienced. To reassure teens and avoid potential emotional fatigue, we will also allow teens to take a break or stop the message flagging process at any time, and allow them to complete the study at their own pace. We will remind teens that they can leave the study without penalty at any time and provide a list of mental health resources should they need them. These are just some of the ways we will ensure the safety and well-being of our teen participants as they complete our study.

Facilitating Understanding and Protecting Teens

The need for data privacy and control extends into much of the participant feedback for the parent-teen reconciliation exercise. Previously, recommendations have been made for designs of parental control applications, where it was suggested that parents be provided obscured information regarding the teens' online risk experiences instead of the intimate details, promoting communication regarding the risks [7]. We argue for similar privacy-preserving approaches when presenting teen's data to parents. For instance, we will give teens control over what conversation excerpts are shared with parents and allow anonymization of the people in these conversations. This would protect teens from experiencing possible punishment from their parents. We have also decided to give teens the option to participate in part one of our study (i.e., sharing and flagging social media data) without participating in the latter part of the study, which involves their parent.

Conclusion

After refining our study based on the findings presented here, we will pilot our study with teens (addressing a limitation of this pilot study conducted with mostly female undergraduates), before fully launching our future study with parents and teens.

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