

Computer Security for At-Risk Populations
SaTC 2019 PI meeting breakout group report
Co-leads: Elissa Redmiles, Damon McCoy & Tom Ristenpart

1. Problem/Domain Summary

This section should address the following questions. You can remove the questions and this comment.

What is the topic? Why is it important to society? to a secure and trustworthy cyberspace? in other ways?

Is there is an existing body of research and/or practice? What are some highlights or pointers to it?

Our break-out group focused on security and privacy research studying, and addressing the needs of, at risk populations. These populations included: kids and teens, older adults, people with various types of disabilities, those from low-socioeconomic status groups, journalists/activists, intimate partner violence survivors, South Asian women and sex workers.

Studying these groups is important for three reasons: (1) large fractions of the population are in these at-risk groups, yet they are very understudied; (2) outcomes are worse, and consequences more severe, for many of these groups; and (3) these groups have highly tangible risks and in many cases have needed to become 'lay experts' to protect themselves, so we can learn from their experiences to inform our general knowledge and system designs.

There are many single papers of research appearing in both security and HCI conferences, but no cohesive research community, as of yet.

2. Key Research Challenges

This section should address the following questions. You can remove the questions and this comment.

What are important challenges that remain? Are there new challenges that have arisen based on new models, new knowledge, new technologies, new uses, etc?

There are two key research challenges facing this area:

1. Key challenge #1: developing an identity for the research area

- a. What constitutes (good) research here? Avoiding virtue-signaling
- b. Not just SBE/HCI; getting security mechanism researchers interested
- c. Should it be part of computer security? Broader field studying tech abuse?

2. Key challenge #2: safe methods

- a. How to identify populations? (socioeconomic, physical, active threats?)
- b. How to safely work with vulnerable populations (ethics, review processes?)
- c. What/how can we learn from other fields?
- d. Avoiding technological paternalism / exceptionalism / bravado:
"we have solutions that are good for you, don't need your input"

3. Potential Approaches

This section should address the following questions. You can remove the questions and this comment.

Are there promising directions to addressing these challenges? What kinds of expertise and collaboration is needed (disciplines and subdisciplines)?

To solve these challenges, we discussed a number of approaches: (1) the need for more research, particularly research that “puts together the pieces” to generalize findings across currently studied populations and the need for more research on additional populations to fill in the gaps; (2) the need for methods papers to discuss how to evaluate the research and how best to (ethically) perform it; (3) finding methods for meaningfully studying at-risk populations and addressing their needs without re-victimizing them (e.g., observational methods, online measurement studies, interfacing with professionals who aid victims). Additionally, we addressed strategies for putting solutions in practice for at-risk populations including: design for & careful prototyping for at-risk populations and clinic models (i.e., mixed advocacy and research models).

4. Long-Term (> 10 years) Significance

This section should address the following questions. You can remove the questions and this comment.

Will this domain/problem remain relevant in 10 years? Why or why not?

Yes! The number of people relying on technology is ever-increasing, especially among at risk groups. The goal of our work should be to study the privacy, security, and safety of people using systems, not just the systems themselves *and* to address the nuanced nature of *different* types of people with different risks and needs who may be using our systems.

5. Other Important Aspects of This Topic (*specify*)