Exploring Privacy Perceptions and Hesitancy Using a Smartphone App to Fight COVID-19

UX Research Report

Background

- Existing literature on COVID-19 smartphone applications suggests that privacy concerns impact adoption of the technology to some degree.

- The concept of privacy can encompass a range of perceptions and feelings and it can be difficult to tease apart the source of the user's concern:
  - For example, does their concern relate to the potential of data reuse, accuracy, or risk of identification?

Background

- Additionally, these concerns may show up at various stages of the user's experience and can impact their decision making related to the app:

Installation　　　Reporting a positive test　　　Keeping app installed

- By understanding **how** users perceive privacy and at **what point** in their experience hesitancy appears, we can better understand what works for users and how the user experience can be improved in order to maximally benefit users.

Background

- Project goals:
  - Explore users' perceptions of privacy related to EN app use.
  - Identify where in the user experience users have privacy concerns and what is the source of their hesitancy.

- Approach:
  - Conducted user interviews (30-45 minutes) explore key themes:
    - COVID-19 Related Behaviors and Perceptions
    - Experience with Manual Contact Tracing
    - General Privacy Concerns with Smartphone Applications
    - Specific experience with EN

Participant summary:
- n = 7 (5 F, 2 M)
- Age 35+
  - 35-44 years old: 1
  - 45-54 years old: 1
  - 55-64 years old: 3
  - 65+ years: 2
- All were long-term Bermuda residents (7+ years, 4 had lived there since birth)
- All were smartphone users
  - All had experience with WeHealth Bermuda

Analysis

- Thematic Analysis using an Affinity Map to derive 3 main insights

Key Insights

Key Insight #1

Users are motivated to protect their community

- All individuals noted that they were concerned about the health of others/community

- Some individuals saw COVID-19 precautions as an act of community service

- Individuals acknowledged the importance of cooperation during the pandemic

- Users also demonstrated this role of community service in their attitudes related to the WeHealth Bermuda app through their willingness to install and report a positive test
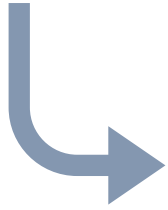
"I would report a positive test as a community service kind of thing."

"It takes a village to raise a child and it takes a village to keep a village safe."

Key Insight #1

Users are motivated to protect their community

Recommendations:

- Continue leveraging this strong value of community service to increase the number of users through messaging that emphasizes each individual's ability to contribute to the community's well-being – both by having the app installed and by uploading positive cases.

Key Insight #2

Privacy means different things to different people

- Three main themes arose from conversations about privacy:
  - Concerns about data reuse
  - Lack of control of personal information
  - Giving up privacy/ 'it is what it is'

- The majority of users also discussed a security/privacy tradeoff
  - Perceived benefits of sharing information outweigh potential privacy concerns

"[Privacy means that] any information that I have is not going to be used for any other purpose than what it is intended for."

"I would want to make sure people aren't able to get in through the app and see pictures or any other information I have."

"There's the benefits of sharing the information versus I know I'm giving up some privacy."

Key Insight #2

Privacy means different things to different people

Recommendations:

- Although users hold general concerns related to privacy and smartphone app use, all users here had installed WeHealth Bermuda.
    - Thus, the perceived benefits of using WeHealth Bermuda may outweigh privacy concerns (security/privacy tradeoff).
    - Importantly though, this is a small subset of users, 2 of which thoroughly understood the underlying technology and that it is anonymous.
    - Creating opportunities to show potential users how the technology preserves anonymity may help more individuals get on board.

Key Insight #3

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Hesitancy arises at different points in the user experience

- Users express general hesitation when privacy concerns arise during installation
  - though in the case of WeHealth, users trusted the government's recommendation to install the app

- Users would not hesitate to upload a positive test.

- User interviews revealed some hesitation to keep app installed over time due to uncertainty with app's effectiveness.
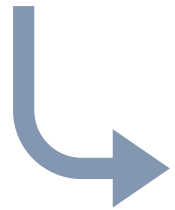
"Sometimes I go through installing the app then at the last minute I just opt out."

"I would 100% report a positive test. There's nothing that would make me not report a positive test"

"I did have the app downloaded, but I didn't get anything from it day-to-day so I deleted it."

Key Insight #3

Hesitancy arises at different points in the user experience

Recommendations:
- Excitingly, installing the app and uploading a positive test result **do not** seem to be points of hesitation for users interviewed here.

- Expanding on the users' experience with continued use of the app may provide an opportunity to mitigate hesitation at that stage.
  - Examples could include adding features that allow for greater engagement day-to-day if the user wants it. For example, many users desired access to regular data related to how the app is functioning.

Conclusions

Overall, this research revealed promising insights about how users view exposure notification technology to fight COVID-19:

- In all, users were excited about the WeHealth app and were very motivated to protect their community.

- Although users do hold general privacy concerns about smartphone applications, they acknowledge that there is a security/privacy tradeoff especially when users see a benefit in using the technology.

- Exploring the stages of the user experience with WeHealth Bermuda revealed that users are extremely motivated to upload a positive test result to the app, however, uncertainties related to the effectiveness of the app may impact continued use.
  - Targeting this stage by giving users more information about how the app is working could increase engagement with and confidence in the app
  - Demonstrating how the app is helping the community may increase the perceived benefit
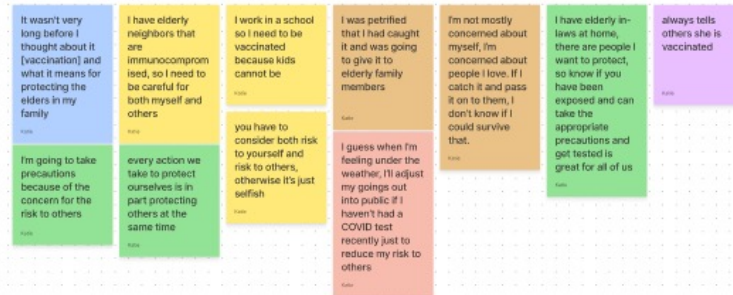
Thank you!

Appendix
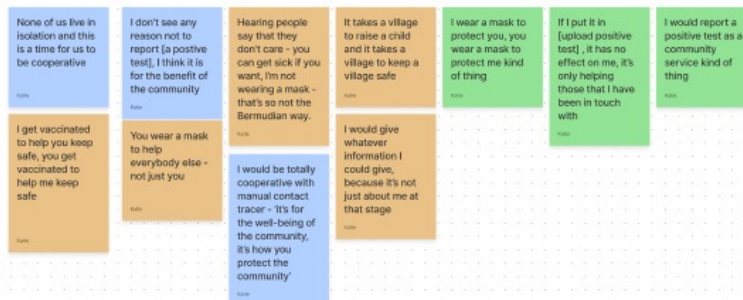
Appendix: Affinity Map

Affinity Map: Insight #1
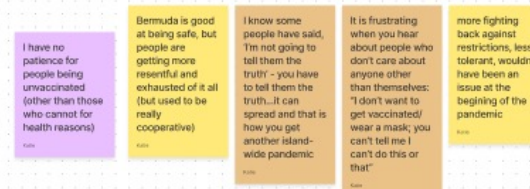
Appendix: Affinity Map

Affinity Map: Insight #2

Appendix: Affinity Map

Affinity Map: Insight #3
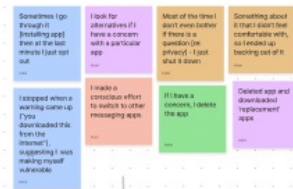
Appendix: User Journey Map

Awareness	Install App	Upload a Test	Long-term Use
1. Feels apprehensive about the pandemic and how it is affecting their community 2. Wants to take steps to help protect their loved ones and their community 3. Hears about the WeHealth app through the government 4. Thinks that it is a great idea	5. Tends to have general privacy concerns about smartphone apps but because WeHealth was recommended by the government, feels more at ease 6. Decides to install app 7. Doesn't fully understand how the technology works, but is hopeful it will help protect them	8. Discovers that they have tested positive for COVID-19 9. Feels nervous and scared that they have tested positive and feels frustrated that this will change their daily routine 10. Doesn't hesitate to upload their positive test to WeHealth Bermuda in order to protect others	11. Sees value in app but is unsure if it is working 12. Feels uncertain if others are using it or if it has been effective 13. Wishes they had more interaction or information from app showing it is doing something behind the scenes 14. Is happy and grateful for WeHealth Bermuda and the role they have played in protecting the community

"I'm nervous about the pandemic, but this app seems like an excellent idea!"

"I'm not totally sure how this works, but I trust it. I think I will install it."

"I need to upload this positive test! I would want others to do the same for me."

"I wonder how well this is working. I wish I had some data"

"I'm so happy I can do my part to help the community stay safe."