



UW ShareDNA App

Usability Study Plan

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HCDE 517D
February 6, 2018

About UW ShareDNA App

ShareDNA is a smart phone application (app) which makes it easier for individuals to share their genetic results with others. Individuals can register and either upload their own genetic results or have their results pre-loaded if they participated in genetic research at the University of Washington. Individuals can choose one or more of their contacts to share their result via text or email. ShareDNA will track the number of people results are shared with, as well as their relationship to the person sharing. An accompanying website (shareDNA.org) provides additional information on setting up and using the app.

Purpose

The current ShareDNA App has not been usability tested and the UW Share DNA group would like to learn more about the usability of the Share DNA App before it is released. UW ShareDNA group has directed our team to focus on the design, relevance, content of the app, as well as the general experience of sharing DNA as it relates to using the App.

The four goals of this study are to provide feedback on the following:

1. Design of the app — Is it visually appealing, easy to navigate, and easy to understand?
2. Relevance of the app — Is it something that would be useful? How often would participants share genetic test results via the app? Would they recommend it to others?
3. Content of the app — Should additional information be included and should there be more ways to use this data?
4. General experience — Do participants have any concerns about the app? What was their overall impressions?

Research Questions

A general population cohort will be presented with questions as listed in Appendix A.

A cohort of users who have previously had genetic testing will be presented with a pre-usability test survey and a post-usability test survey as listed in Appendix A. These questions are based on the features of the ShareDNA App as well as client expectations.

Participant characteristics:

The UW Share DNA group's current focus is on those who have either had genetic testing or considered having genetic testing and use a smartphone. The target age range is 18+ with a preference for 40-70. Gender is not specific — an even sampling is preferred.

Thus, we identified the following participant characteristics:

1. Age 35-80
2. Smartphone user
3. Has considered genetic testing

Method(s)

The general population cohort will be presented with survey questions to provide feedback on relevance of app. A smaller group of this general population will be presented with one round of task-oriented think-aloud sessions while using the ShareDNA App

The cohort of users who have never used the UW ShareDNA App and have previously had genetic testing will be presented with a pre-usability test survey followed by one round of task-oriented think-aloud sessions while using the ShareDNA App.

We will collect data for error and task completion rates, the participant's feedback during the study using the think-aloud protocol, and subjective ratings from the participants on ShareDNAs overall ease of use. We will also interview candidates post-study for overall impressions of the ShareDNA App.

Tasks

Tasks will address concerns with the design, content, and general experience of the app.

Test Setup:

Participants will be instructed to use their cellphones for all tasks.

Concern 1:

Can participants successfully download and log into ShareDNA app?

Task description:

- Download UWShare App and Log In:
 - Start with smart phone and download app from Apple Store.

Scenario 1:

You have completed a genetic testing and your doctor has informed you of UWShare App as a way to conveniently share your genetic test results. You are curious about the app and would like to learn more about it. Download and log in to the ShareDNA app.

Successful Completion:

- User is successful when ShareDNA asks for access to contacts

Concern 2:

Can participants share their genetic test results via text message?

Task 2 Description:

- Send "results" via text to (x):
 - Start at Share Your Results screen.

Scenario 2:

You are enjoying a nice day at the park and then you receive an email notification on your cell phone from your doctor containing your genetic results. You immediately want to send it to a family member. Text your test results to one family member.

Successful Completion:

- User is successful when user has chosen a contact from contacts list, selects text method for sending, and sends text.

Concern 3.

Can participants email their test results to multiple people?

Task 3 Description:

- Send “results” via email to multiple people:
 - Start at Share Your Results screen.

Scenario 3:

You are now at home and realized there are a couple more family members you would like to send your genetic test results to. Send your results via email to at least two other family members.

Successful Completion:

- User is successful when user has chosen at least two contacts from contacts lists, selects email method for sending, and sends email.

Test environment(s), equipment, and related logistics:

UW ShareDNA group will provide our team with a room in the UW Health and Sciences Library. Participants will bring their own phone to download and test the App on. We will create a script for the moderator and a task list document for users to do each of the tasks. Each task will be printed on a piece of paper. The participant sees one task at a time. After each task the participant will be asked to answer questions related to the task.

We will have a moderator in the room to moderate tasks and an observer who will take notes as the participant performs the tasks. We will also record each session using voice and video recorder for later evaluation.

Key equipment we plan to use for this study:

Smart phone

Video recorder

As for recruitment, we will use email and post on social sites such as Facebook to recruit 5-8 participants who fit our participant profiles as defined above in the Participant Characteristics section. UW ShareDNA Group will gather cohorts who have previously had genetic testing.

Facilitation approach(es)

The in-person lab study will have one moderator to walk through the tasks, another moderator to introduce the post test survey and any task questions, one note taker, and one observer from the UW ShareDNA team.

Data that will be collected

- Successful completion of tasks

- Whether prompting or assistance was required
- Major problems associated with certain tasks
- Any feedback provided by user
- Survey Results

Data Collection Methods

- Observation
- Probing Questions
- Think out Loud
- Notes
- Data evaluation

We will collect both quantitative and qualitative data, as described below.

Quantitative Data

1. Task completion rate/failure rate
2. Number of assistance (Both moderator assisted and also the help documentation)
3. Ease of use on a scale of 1-5 for each task
4. Ease of use UWShare DNA App on scale 1-5
5. Overall value of UWShare DNA App on scale 1-5
6. Net promoter index on a scale of 1-5 i.e. will participants tell their friends about this App

Qualitative Data

1. General feedback on the features
2. Feedback and suggestions provided by participants
3. Observations (notes)

Data Evaluation

1. We will develop Graph/Chart analysis for quantitative data using affinity analysis.
2. We will use affinity analysis to gain insights from qualitative data we collected as part of this study.

Reporting:

We will give a final presentation at UW ShareDNA Apps office and prepare the final report of usability testing with key insights from the test.

Reporting for class: a presentation of findings, data, and analysis via in class presentation.

Appendix A: Screener and Survey Questions

ShareDNA Screener Questions

*To be administered to General Population Cohort as first page of survey.
To be administered to IRB Cohort before usability testing.*

1. Have you considered genetic testing?
 - a. Yes
 - b. No
2. Which statement most closely matches how often you download apps for your phone?
 - a. I never download apps for my phone.
 - b. I download apps to my phone less than once a month.
 - c. I download several apps a month.
 - d. I download a few apps a week.
 - e. I download apps to my phone every day.
3. What is your age?
 - a. Less than 18
 - b. 18 - 29
 - c. 30 - 39
 - d. 40 - 49
 - e. 50 - 59
 - f. 60 - 69
 - g. 70 - 79
 - h. 80 and up
4. What is your gender?
 - a. Female
 - b. Male
 - c. Other
 - d. I prefer not to disclose

Survey questions for ShareDNA

Questions will be administered as a post usability test survey for the IRB cohort.

1. How likely are you to use the ShareDNA app?
 - 1.1. Not likely
 - 1.2. -
 - 1.3. -
 - 1.4. -
 - 1.5. Very likely
2. Why?
 - 2.1. [open response]
3. If you did use ShareDNA, how many people would you share your genetic results with?
 - 3.1. [number]
4. What relationship do you have to the people with whom you would share your genetic results with using ShareDNA? Check all that apply.
 - 4.1. Parent
 - 4.2. Grandparent
 - 4.3. Child
 - 4.4. Sibling
 - 4.5. Cousin
 - 4.6. Aunt/Uncle
 - 4.7. Partner
 - 4.8. Health Care Provider
 - 4.9. Other: [open response]
5. How comfortable do you feel sharing your genetic results with ShareDNA?
 - 5.1. Very comfortable
 - 5.2. -
 - 5.3. -
 - 5.4. -
 - 5.5. Very uncomfortable
6. How secure do you feel the ShareDNA app is?
 - 6.1. Very secure
 - 6.2. -
 - 6.3. -
 - 6.4. -
 - 6.5. Very insecure
7. What other information would you like to see in the ShareDNA app? Check all that apply.
 - 7.1. Links to support groups
 - 7.2. Links to online resources for genetic conditions
 - 7.3. Links to medical management recommendations for genetic conditions
 - 7.4. Information on genetics clinics in the USA
 - 7.5. General genetics 101 information (i.e. what is a gene, how are genetic conditions inherited etc.)
 - 7.6. Other: [open response]

8. What things would you like to do with your genetic test results in the ShareDNA app?
Check all that apply
 - 8.1. Share genetic test results with other people
 - 8.2. Store or archive test results
 - 8.3. Share genetic test results with physicians
 - 8.4. Other: [open response]
9. I feel the ShareDNA app is secure.
 - 9.1. Strongly agree / Agree / Neither / Disagree / Strongly Disagree
10. I would use the ShareDNA app to share all of my genetic results.
 - 10.1. Strongly agree / Agree / Neither / Disagree / Strongly Disagree
11. I feel comfortable sharing my genetic results with ShareDNA.
 - 11.1. Strongly agree / Agree / Neither / Disagree / Strongly Disagree
12. I would recommend the ShareDNA app to other family members or friends.
 - 12.1. Strongly agree / Agree / Neither / Disagree / Strongly Disagree
13. What would you change about the ShareDNA app?
 - 13.1. [open question]

Questions suitable for general population survey. Will be preceded by screener survey.

1. How likely are you to use a mobile app to share your DNA results with others?
 - 1.1. Very likely
 - 1.2. -
 - 1.3. -
 - 1.4. -
 - 1.5. Very unlikely
2. If you did use a mobile app, how many people would you share your genetic results with?
 - 2.1. [number, open question]
3. What relationship do you have to the people with whom you would share your genetic results with using a mobile app? Check all that apply.
 - 3.1. Parent
 - 3.2. Grandparent
 - 3.3. Child
 - 3.4. Sibling
 - 3.5. Cousin
 - 3.6. Aunt/Uncle
 - 3.7. Partner
 - 3.8. Health Care Provider
 - 3.9. Other: [open response]
4. Other than genetic test results, what other information would you like to see in a mobile app for sharing those results? Check all that apply.
 - 4.1. Links to support groups
 - 4.2. Links to online resources for genetic conditions
 - 4.3. Links to medical management recommendations for genetic conditions
 - 4.4. Information on genetics clinics in the USA
 - 4.5. General genetics 101 information (i.e. what is a gene, how are genetic conditions inherited etc.)
 - 4.6. Other: [open response]
5. I would feel comfortable sharing my genetic results using a mobile app.
 - 5.1. Strongly agree / Agree / Don't Know / Disagree / Strongly Disagree
6. I would use a mobile app to share all of my genetic results.
 - 6.1. Strongly agree / Agree / Don't Know / Disagree / Strongly Disagree

Additional questions asking for contact information for follow-up studies will also be included at the end of this portion of the survey.