

UW ShareDNA App Project Report

Helen Enguerra, Dave Kennedy, and Ed Paradis
HCDE 517D
March 16, 2018

Table of Contents

Table of Contents	1
Summary	3
Purpose and Goals	3
Participants	3
Methodology	3
Critical Findings and Recommendations	3
Video Highlights of Critical Findings	4
Introduction and Overview	5
About ShareDNA	5
Study Preparation	5
Participant Profiles	5
Methodology	6
Overview	6
Participant Recruitment	6
Test Protocol	7
Test Environment	7
Findings and Recommendations	8
Additional Findings	10
Recommendations For Next Steps	10
Successful Elements of the Study	10
Task Selection	10
Recording Methodology	10
Study Elements to Improve	11
Participant Recruitment	11
Overly-Dramatic Warnings	11
Lack of Context for General Population Participants	11
Additional Areas for Exploration	11
Technological Sophistication of Participants	11
Comparative Research into Using “Built-In” Sharing Methods of Mobile Devices	11
The Concept of a “Secure Bank” of Results	11
Sharing Results with Dozens of Recipients	11
Security Concerns	12
Appendix Listing	13
Appendix 1: General Population Survey	14

Appendix 2: Post Study Questionnaire Results	19
Appendix 3: Description of Recording Setup	22
Hardware	22
Software	22
Appendix 4: Usability Test Session Script	23
Script used during facilitation	23
Appendix 5: Consent and Recording Release Form	25
Appendix 6: Task Descriptions and Success Criteria	26
Tasks	26
Test Setup	26
Concern 1	26
Concern 2	26
Concern 3	26
Appendix 7: Task Success Rate & Ease of Task Ratings	28

Summary

Purpose and Goals

Our team conducted a usability study of the UW ShareDNA App to find and address critical usability issues and uncover feedback on the design, relevance, and content of the app, as well as the general experience of sharing DNA as it relates to using the App. We also gathered feedback from users about their feelings and attitudes toward privacy, comfort level sharing genetic results, and their general thoughts on whether they would use the ShareDNA App to share their genetic test results. Our primary goal was to provide the UW ShareDNA team with high-quality usability research data, empowering them to make effective design decisions to improve the usability of their product. Because ShareDNA was under active development and had not been usability tested, we discovered many findings and recommendations for the ShareDNA group to address in product updates.

Participants

We recruited a total of six participants; two females from the UW Next Medicine Study's (Next Medicine) Internal Review Board (IRB Cohort) and four men from our general population survey (Genpop Cohort), all representing moderate to high levels of smartphone experience with similar levels of experience downloading and using apps on their smartphones. All of our participants had considered genetic testing. The participants from the IRB Cohort had moderate to high levels of experience with genetic testing while the participants from the Genpop Cohorts experience was low to moderate.

Methodology

Each member of our team performed heuristic evaluations of the ShareDNA App to familiarize ourselves with the product and identify key areas in which to focus our usability study. While the Next Medicine team directed our group to focus on the apps design, its relevance, content, and the overall experience of using the app. Thus, we developed a general population survey, pre- and post-study questionnaires, and defined three areas of evaluation: Downloading, Sharing via email, Sharing via Text, as well as overall device/app interactions and discussing privacy concerns. We created a set of key tasks and success criteria for each area (see Appendix 6) We then conducted the usability study with 6 participants; each was video recorded answering a pre-questionnaire about their current app usage; they were then asked to perform key tasks while thinking out loud to share their expectations, thought process, and reactions; finally they answered questions in a post-study survey and interview about their experiences with ShareDNA and thoughts on privacy (see Appendix 2).

Critical Findings and Recommendations

We consolidated our findings and grouped usability issues by frequency of occurrence. The most critical findings, based on chronology and severity are summarized below along with recommendations. A complete list can be found starting on page 8 of this document.

Finding	Recommendation
Intro Screens didn't seem like an option.	Create a clear option for users on first screen such as "Get Started" or "How to use this App" allowing them to choose whether they are going start using the App or walk through a tutorial.
Create User Account intro screen caused some confusion.	Make Create User Account look less like a button. A pointing finger on top of the button may denote that it is an instruction versus a button.
Users did not know if their email was actually sent.	A confirmation text box stating their email has been sent to the following recipients will help clear up confusion after clicking send email. Alternately: a preview of the message to be sent with a final "send" button could be presented.
There was concern about whether there would be an ability to send parts of their test results to specific people instead of the entire test results.	This may depend on how test results are written, but we recommend giving the user the ability to customize the result they wish to share.
Choose File button caused some confusion on the Register for ShareDNA screen.	Have a separate screen for loading and/or accessing Results to share. Then have a Choose Results button after you've selected who you're sharing the results with.
Passphrase request created confusion.	Change "passphrase" to "password".
List of relationships does not appear directly below "choose relation" bar when you click the drop down arrow. (Currently clicking on the down arrow the list appears at the bottom of the screen.)	We recommend removing the arrow icon all together so that users will not look for a list directly below the arrow. Removing the down arrow will make the choose relation bar a button. Pressing a button means users are more likely to pay attention to the list appearing at the bottom of the phone screen.

Video Highlights of Critical Findings

We recorded the entirety of our sessions with users. You can request access to the videos here: https://drive.google.com/open?id=1wD_8FnnJIMuKb55jvKK8aWAMQeQ0TxG_

Introduction and Overview

About ShareDNA

ShareDNA is a smart phone application (app) created by the UW Next Medicine Study team 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.

Study Preparation

Before designing and conducting the study with our target participants, we evaluated ShareDNA ourselves. Each member of our team had considered genetic testing and had a moderately high level of experience using downloading and using applications on a smartphone which made us ideal first candidates from the general population to explore ShareDNA's functionality and document initial usability impressions.

We performed a walkthrough of ShareDNA to familiarize ourselves with the app. This helped reveal what types of issues our participants might face when using ShareDNA.

Based on our experiences with the walkthrough and heuristic analysis, we were able to create a list of questions that helped guide us as we designed our study.

Our study was designed to answer the following questions:

1. Is the ShareDNA app easy to navigate, and easy to understand?
2. How much time and effort is required to download and start using the app?
3. Are there any critical errors or blockers to successfully downloading and using ShareDNA?
4. Can ShareDNA be successfully used to share genetic test results?
5. Is the ShareDNA app something that would be useful? How often would participants share genetic test results via the app? Would they recommend it to others?
6. Is there any additional information about genetic testing that should be included?
7. Are there any general concerns about using ShareDNA?
8. What were the participants overall impressions?

Participant Profiles

Based on our discussions with the Next Medicine team, we were able to identify the types of participants our study should target. It was preferred initially to be those who have either had genetic testing or considered having genetic testing and use a smartphone. The target age

range was 40-70. Gender was not specific however an even sampling was preferred. However, these were not absolute requirements; the Next Medicine team was also interested in learning what a younger demographic thought about ShareDNA. It was also understood that our participant group should be iPhone users with a moderate level of using apps on their smartphone. We initially preferred iOS users since the Android version of ShareDNA was not developed but we conducted several sessions on iOS with Android users to increase the quantity of participants.

With the above in mind, we created a list of key characteristics for our target participants:

1. Age 34-80
2. Smartphone user (preferably iOS)
3. Has considered genetic testing

Methodology

Overview

We conducted six task-oriented usability evaluation sessions between February 17th and February 24, 2018. We used video-recording devices to capture the participants' experiences as they attempted to complete each task. We sought to capture "think aloud protocol" (participants vocalizing their intentions, expectations, and reactions as they perform tasks), physical reactions, errors, and ease-of-use (especially downloading app and sending test results). We also video-recorded interviews with the user before and after their participation in the study to gather data on app using habits and their thoughts and attitudes towards ShareDNA.

Participant Recruitment

The Next Medicine group provided us with two participants approved by their Internal Review Board for our study. Both were females age 64 and 52 who had moderate levels of iOS experience and had genetic testing and thus results they could actively share during our study.

For our general population cohort, we used a screening questionnaire (Appendix 1) to confirm our general population contacts as viable participants and capture important data about their interest in sharing DNA and genetic test results.

Though we had a list of preferred key characteristics we only considered the following three to be absolutely required, based on feedback from the Next Medicine Group:

1. Over 18
2. Smartphone user
3. Has considered genetic testing

A smaller group of this general population was presented with one round of task-oriented think-aloud sessions while using the ShareDNA App.

Test Protocol

Our study centered around sets of tasks that we expected ShareDNA users to perform during setup and sharing interactions. We conducted sessions independently at the convenience of our participants and used a script to facilitate each session for consistency. We began each participant's session by having them sign a Consent & Recording Release (Appendix 5) and answering a brief screening questionnaire to gather data about app usage habits. We then explained the study procedure, and explained thinking aloud. We video-recorded all of this and the entire session which included a pre-interview with general questions about their app experience and interests (Appendix 4). Each participant was also informed that they could take a break or terminate the test at any time and that honest feedback was a priority.

Each participant was asked to complete a series of tasks, one at a time, by area of investigation with pauses for context setting or participant-driven breaks; there were 3 tasks total spread across three main categories: Downloading, Sharing via Text, and Sharing with two people via email. The tasks were ordered in a logical sequence based on how we thought the user might progress through ShareDNA. We video-recorded the user as they attempted to complete the task and asked them to think aloud. We observed their behavior and would often probe them with questions where we saw an opportunity.

Although preferred, it was not required for the user to complete all 3 tasks; the tasks were mainly used as a starting point to get the user to navigate through the app and think aloud about their experience. Given that the device was released within a week prior to our study, we anticipated a potential for catastrophic errors that would prevent task completion and we planned to reset the app to the appropriate starting spot for the next task should the participant be unable to complete the task. If any errors occurred or the user was unable to complete the task, we asked the user to try to work through the issue as they would if they were downloading and using the app on their own. If the user was unable to resolve the issue, we would often ask for expectations in an ideal scenario before pivoting to ask the user to complete another task. In the interest of making the most of our time with participants, we would also terminate tasks and move to the others in order to gather as much data as possible should functionality not behave as intended.

After the participants completed the task list, we conducted a post-study interview where we asked for their final thoughts about their experience with ShareDNA and whether the device met a need and was something they thought they might use in the future. We also asked our participants to gauge their comfort with sharing genetic results with ShareDNA and evaluate the security of sending their genetic results using ShareDNA.

Test Environment

We evaluated the ShareDNA app in private rooms within Schmitz Hall (4 participants), Sieg Hall (1 participant), and in the UW Health and Sciences Library (1 participant) using video and audio recorders, as well as, a digital note taking system (Appendix 3) and paper note taking systems. Participants brought their own phone to download and test the app. Both IRB participants used

their own phones during the study. 2 out of the 4 Genpop participants used their own phones while the other two used an iPad provided by our group.

Findings and Recommendations

Severity 1: An issue that blocks a substantial number of users from using the application. E.g., Users are unable to download app. Nearly impossible task during the initial experience.

Severity 2: An issue that blocks a substantial number of users from making use of an important feature or accomplishing an important task. E.g., Unclear solution. Undiscoverable Feature.

Severity 3: An issue that hinders some users from accomplishing a task or goal. E.g., Inconsistent or misleading text or icon. Users don't understand a non-essential aspect of the application or feature. Delays.

Severity 4: An issue that causes some users to become mildly frustrated or express minor complaints about a feature element. E.g., Suggested Feature. Minor or infrequent complaint.

Severity	Task	Observed Usability Concern	Recommendation
1	1	Registering for ShareDNA screen hangs up once you enter your email. There is no <Back button or Help button to take you back to the previous screen. This happened with two participants.	Add in a <Back button and Help button for these instances.
2	1	Create User Account intro screen caused some confusion.	Make Create User Account look less like a button. A pointing finger on top of the button may denote that it is an instruction versus a button.
3	1	Intro Screens didn't seem like an option.	Create a clear option for users on first screen such as "Get Started" or "How to use

			this App” allowing them to choose whether they are going start using the App or walk through a tutorial.
2	3	Users did not know if their email was actually sent.	A confirmation text box stating their email has been sent to the following recipients will help clear up confusion after clicking send email. Alternately: a preview of the message to be sent with a final “send” button could be presented.
3	3	There was concern about whether there would be an ability to send parts of their test results to specific people instead of the entire test results.	This may depend on how test results are written, but we recommend giving the user the ability to customize the result they wish to share.
2	1	Choose File button caused some confusion on the Register for ShareDNA screen.	Have a separate screen for loading and/or accessing Results to share. Then have a Choose Results button after you’ve selected who you’re sharing the results with.
4	1	Passphrase request created confusion.	Change “passphrase” to “password”.
2	3	List of relation does not appear directly below “choose relation” bar when you click the drop down arrow. (Currently clicking on the down arrow the list appears at the bottom of the screen.)	We recommend removing the arrow icon all together so that users will not look for a list directly below the arrow. Removing the down arrow will make the choose relation bar a button. Pressing a button means users are more likely to pay attention to the list appearing at the bottom of the phone screen.
3	1	Logging in with email is repetitive. After Registering for ShareDNA you are asked to input your email and passphrase again.	We recommend storing the entered log-in information after sign up so that the user does no need to enter it immediately after sign-up.
3	1	On the Login/Sign Up Screen there was a lack of	Results to share should be accessible to the user on all screens up till sending.

		clarity regarding what exactly is being shared.	
2	2, 3	When selecting a text or email recipient the drop down arrow for selecting relation to sender was difficult to click on	We recommend removing the blue drop down arrow because it is very tiny and misleading
3	3	When sending an email it was not obvious to users that they could personalize the email message.	Leave email text box blank but with just the link to the test results so that it's more apparent that a message can be personalized or provide instructions informing users they may modify the message.

Additional Findings

All participants completed the three main tasks with no particular difficulty (Appendix 7) . Only one participant (PA2 -IRB) believed she did not complete task three because she did not see a confirmation that her email was sent successfully. Overall user’s found the ShareDNA application to be a method only for sharing results and did not see any other way they could use the application. Fifty percent of the participants who tested the application responded through a post study survey that they would use the ShareDNA app to share their test results (Appendix 2). We found that the general population we surveyed wanted to see online resources about genetic conditions and general information about genetics (Appendix 1).

Recommendations For Next Steps

Successful Elements of the Study

Task Selection

The three tasks selected for the study encompassed nearly every interaction that could be performed in normal usage of the application. We felt the study was fairly comprehensive.

Recording Methodology

The configuration of our recording software and hardware performed without flaw during the duration of the study. The use of multiple cameras and direct recording of the mobile device into a single video allowed us to easily review user’s reactions and specific interactions with the app.

Study Elements to Improve

Participant Recruitment

With only two participants from the IRB cohort and four participants from the General Population cohort, we were not able to establish strong quantitative results.

Overly-Dramatic Warnings

Our initial study script included language that was reported as overly-dramatic by our first participant. This language was revised in the sessions with subsequent participants, but further iteration is needed to properly convey the risk of revealing the participants' study results to us, the researchers, and the unlikelihood of such a revelation occurring.

Lack of Context for General Population Participants

Despite providing context for the use of the app to the general population cohort both in an email sent prior to the study and verbally during the study, we observed participants of this group expressing confusion over why the app would be used and what would be shared with the app. Additional context-setting descriptions before each task would improve the understanding of the general population cohort.

Additional Areas for Exploration

Technological Sophistication of Participants

We sought participants with some familiarity with using smart phones, particularly finding, downloading, and installing apps. Since genetic test results could be available for any member of the public, regardless of their level of technological sophistication, a further study could seek participants who felt unfamiliar or uncomfortable with technology. Their opinions about privacy and expectations of app behavior could guide a more accessible design process.

Comparative Research into Using “Built-In” Sharing Methods of Mobile Devices

Some participants [B1 21:55, B2 39:15 — time denotes area within video to locate incident] questioned the utility of the app beyond the mobile operating system's built-in sharing methods. An additional study could examine the patterns and expectations of users who use these methods to share genetic test results. Of particular interest would be their concepts of security and privacy around these built-in operations.

The Concept of a “Secure Bank” of Results

A participant [B3 20:22] described their mental model of the application as being similar to online bank app. A further study could probe participants around this analogy to examine if this model helped align their expectations with the behavior of the app.

Sharing Results with Dozens of Recipients

Several [A1, A2] participants described situations where they would want to share genetic test results with dozens of recipients. This study only examined use cases of sharing with a single and pair of recipients. We expect that a task wherein a participant shared results with a dozen

recipients would expose additional usability issues unobserved in this study. While an app designed explicitly to share with this larger number of participants would most likely have additional features and interfaces to do so, a study with the current design could help reveal the expectations of users and how they mentally organize large numbers of recipients.

Security Concerns

The general population survey showed that most respondents were not likely to use a mobile app to share their genetic test results using a mobile app. Our post-test survey results showed only half of participants would feel comfortable using ShareDNA to share results. From our post-test interviews, we feel that a concern about the security of their results is the most likely cause for these results. A further area of study could confirm this hypothesis and explore the reasons for this concern.

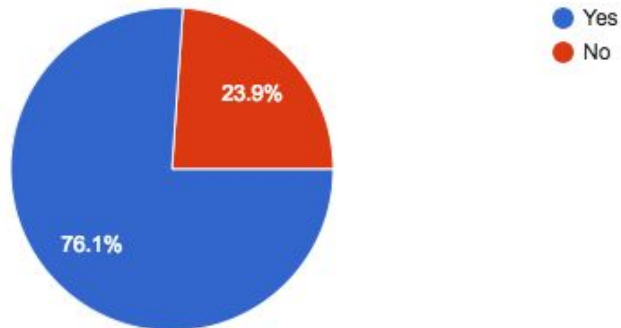
Appendix Listing

- Appendix 1 - General Population Survey Results
- Appendix 2 - Post Study Questionnaire
- Appendix 3 - Description of Recording Setup
- Appendix 4 - Usability Test Session Script
- Appendix 5 - Consent & Recording Release
- Appendix 6 - Task Descriptions and Success Criteria
- Appendix 7 - Task Success Rate & Task Ratings

Appendix 1: General Population Survey

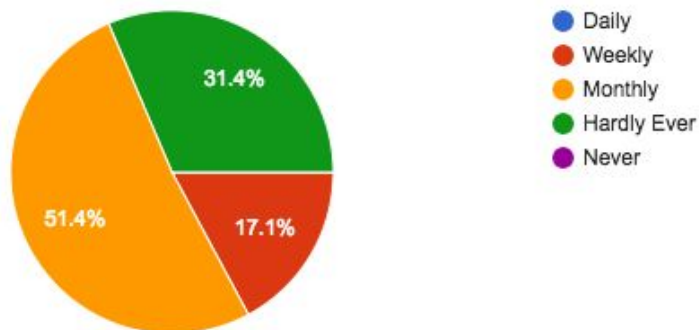
Have you considered genetic testing?

46 responses



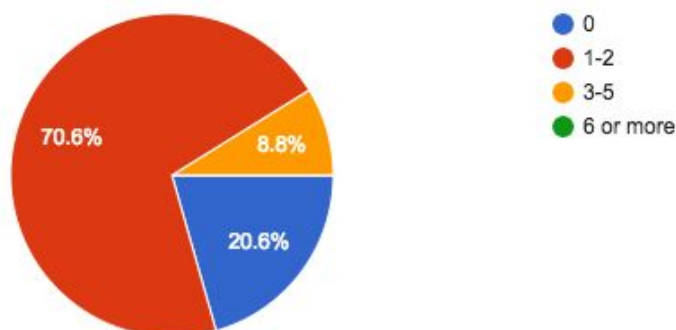
I download an app or app(s) to my phone...

35 responses



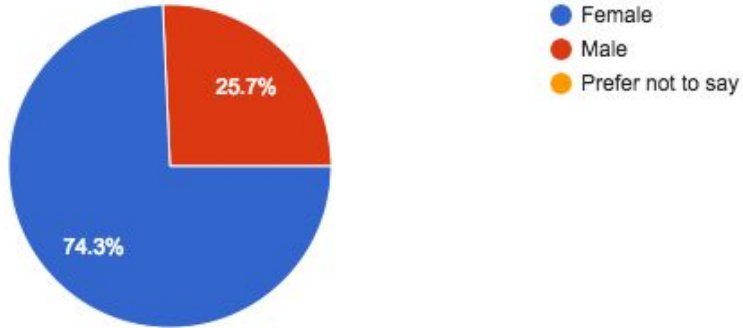
I download ____ apps a month.

34 responses



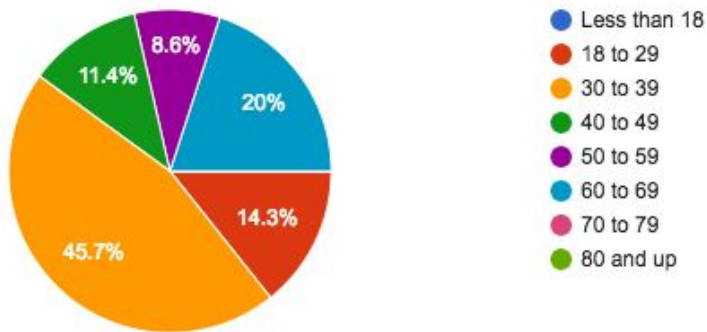
What is your gender?

35 responses



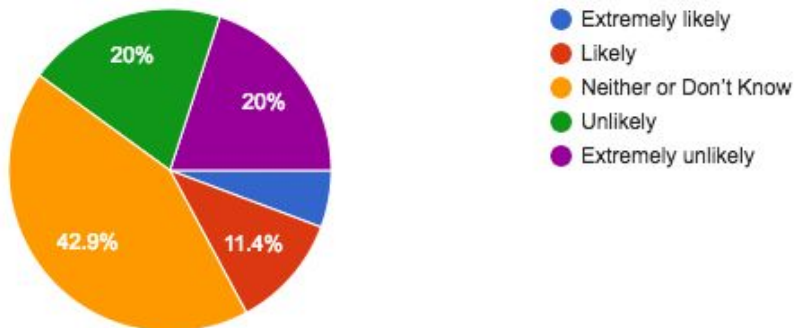
What is your age?

35 responses



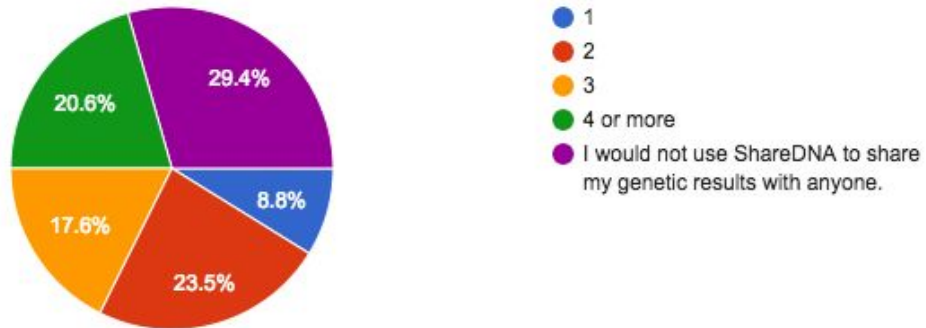
How likely are you to use a mobile app to share your DNA results with others?

35 responses

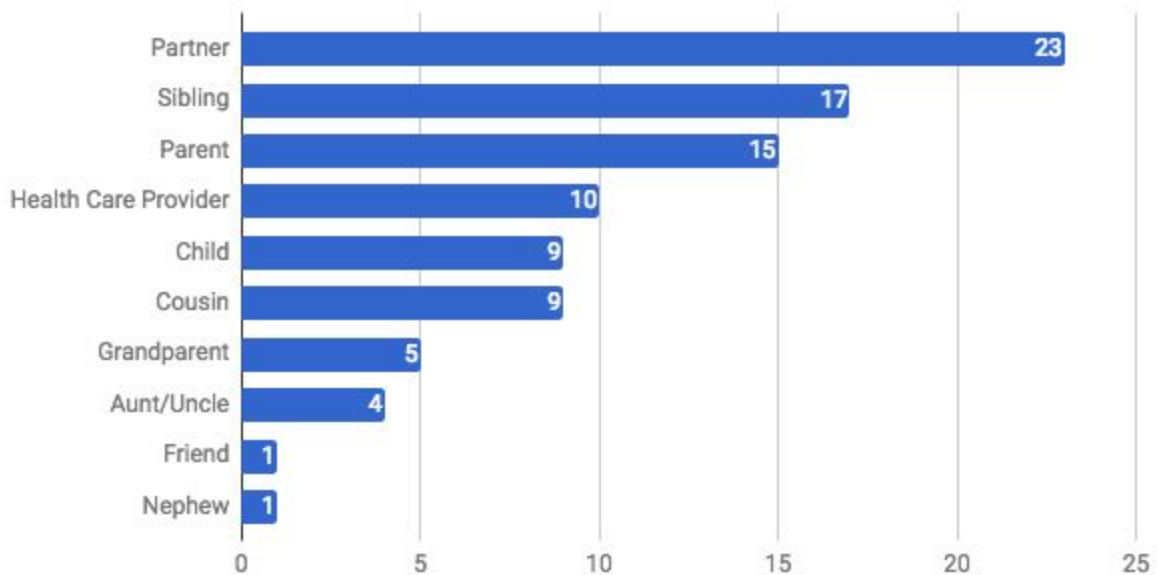


If you did use a mobile app, how many people would you share your genetic results with?

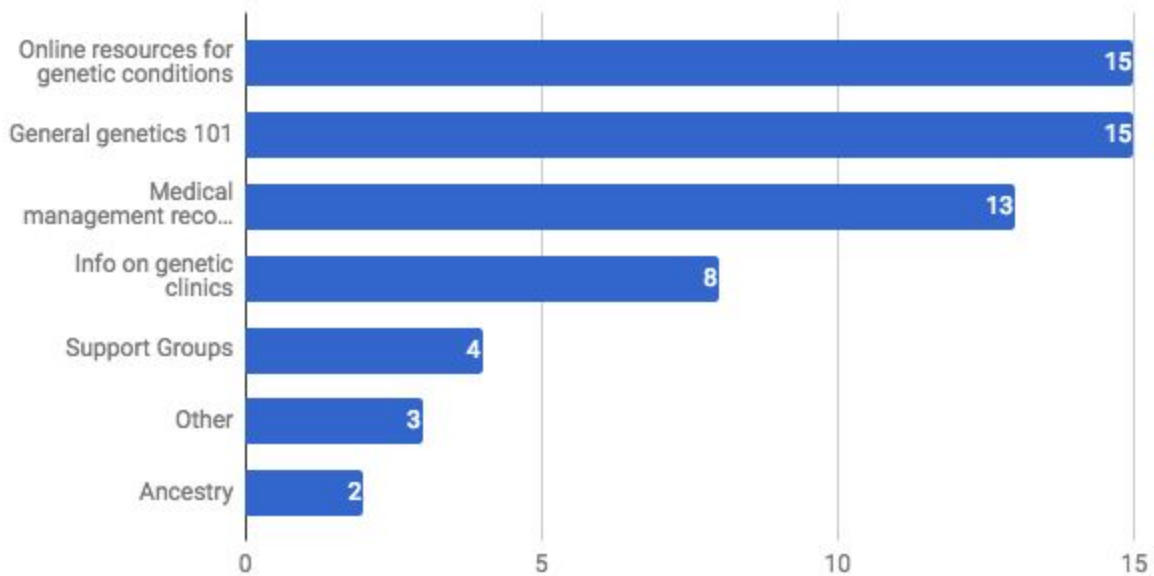
34 responses



What relationship do you have to the people with whom you would share your genetic results with using a mobile app?

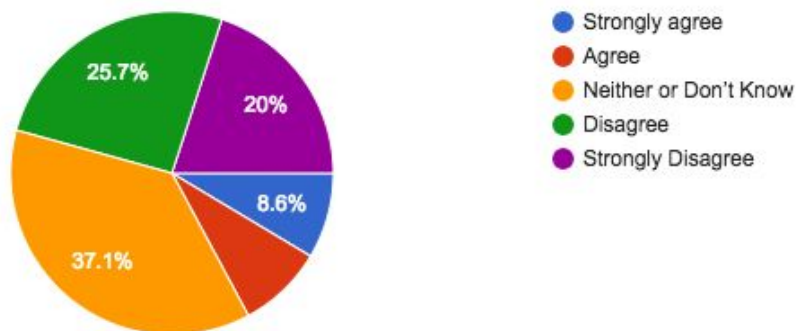


Other than genetic test results, what other information would you like to see in a mobile app for sharing those results?



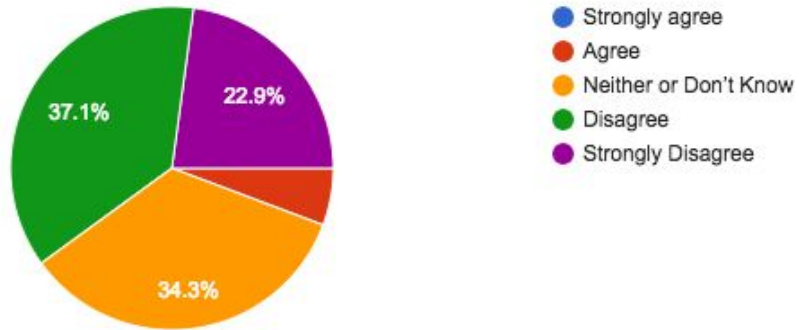
I would feel comfortable sharing my genetic results using a mobile app.

35 responses



I would use a mobile app to share all of my genetic results.

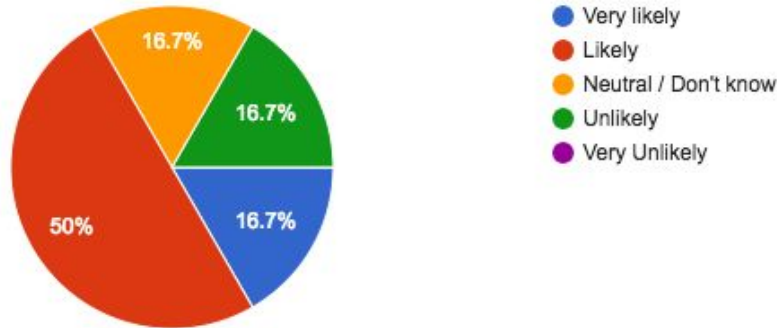
35 responses



Appendix 2: Post Study Questionnaire Results

How likely are you to use the ShareDNA app?

6 responses



Why?

I have many relatives who might be interested

I would want the ability to share with my doctor, potential researchers, and family information as it becomes available.

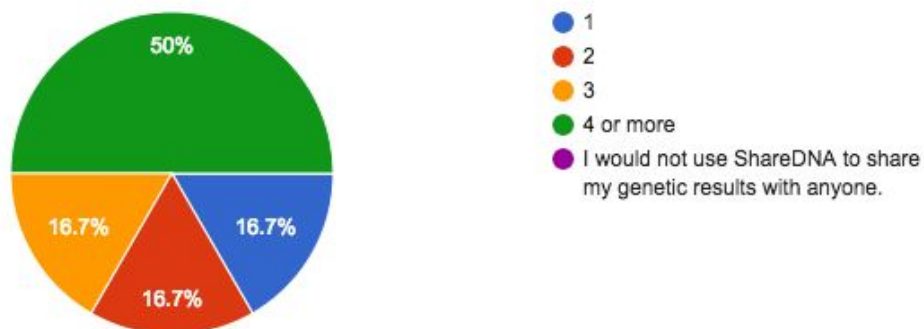
To share my dna test results

I like the application, very simple to use.

I would want to know more about security and privacy settings before sharing my genetic test results.

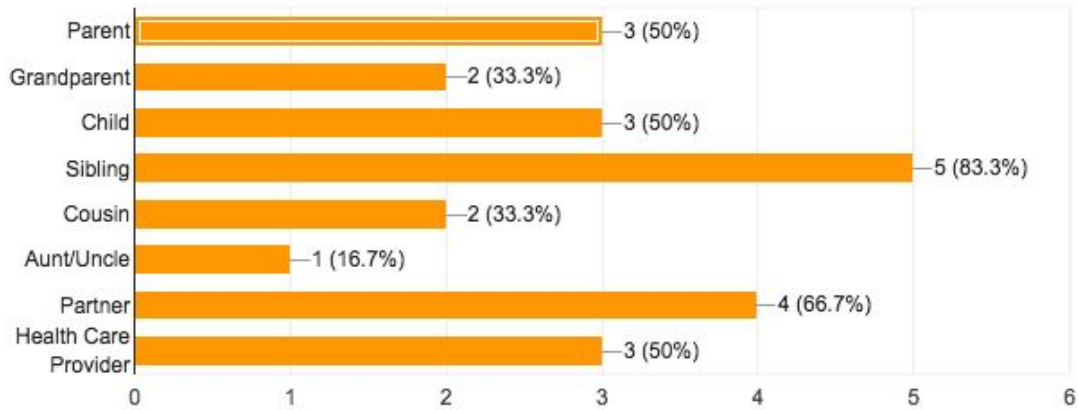
If you did use ShareDNA, how many people would you share your genetic results with?

6 responses



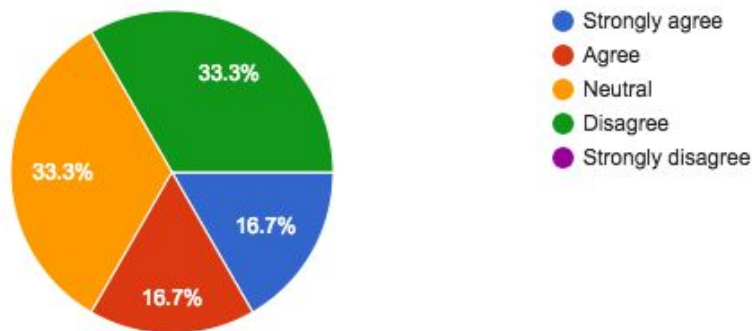
What relationship do you have to the people with whom you would share your genetic results with using ShareDNA? Check all that apply.

6 responses



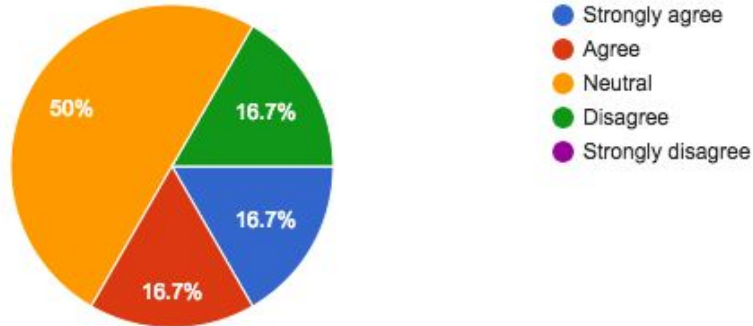
I feel the ShareDNA app is a secure way to send my genetic results.

6 responses



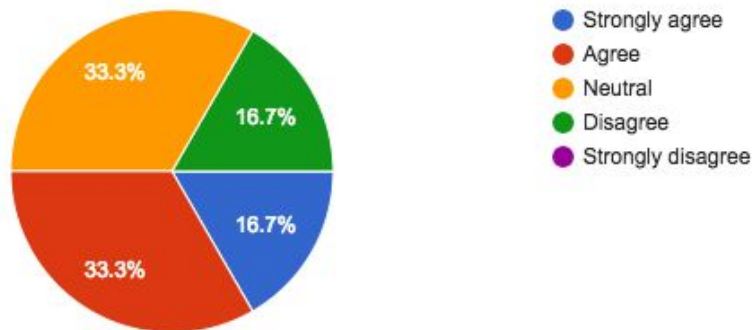
I would use the ShareDNA app to share all of my genetic results.

6 responses



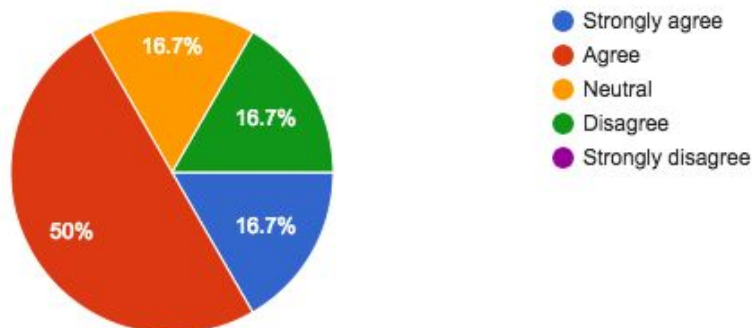
I feel comfortable sharing my genetic results with ShareDNA.

6 responses



I would recommend the ShareDNA app to other family members or friends.

6 responses



Appendix 3: Description of Recording Setup

Hardware

The hardware used to record the usability studies consisted of:

- (1) Apple Macbook Pro laptop
- (1) Blue Snowball USB microphone
- (2) Logitech C615 USB webcams
- (1) USB hub
- (2) tabletop tripods
- Assorted cables and power adapters

The cameras were attached to the tripods, with one arranged to record downwards to record the participant's mobile device and hand movements and the other arranged to record facial and body language. A 2 meter cable was attached to the mobile device the participant used during the test, allowing the device's screen to be directly recorded. The microphone is supplied with its own tabletop tripod which was arranged to capture the participant's voice. The microphone was set in its "omnidirectional" configuration in order to better record the test moderator's voice.

The cameras and microphone were attached via USB to the hub, which was then attached to the Macbook Pro. Due to software restrictions, the cable to the device was required to be connected directly to the laptop.

Software

The software used to record the test sessions was Open Broadcaster Software (OBS - <https://obsproject.com/>), an open source video recording software capable of recording from a large variety of sources, including webcams, desktop screen capture, mobile screen capture, and more. Additionally it is able to record from a variety of audio sources. It is able to record to disk and also to stream to TwitchTV, YouTube, and other stream sharing services. We did not make use of the streaming capabilities, and instead recorded all videos to disk for later upload.

Of particular use to our test setup was the ability to simultaneously record several sources at once and composite them into a single video. Therefore our test setup produced a single video with synchronized audio and video for each participant. We also made use of the versatile set of audio filters to improve the audio quality we recorded. We made use of a noise filter and dynamic compressor on all recordings.

Appendix 4: Usability Test Session Script

Script used during facilitation

Moderator: During this test we'll only be asking you to download the shareDNA app and send test results to someone. Although highly unlikely there is a possibility that we may see your test results when you send it. Is that okay?

Thank you. Every question in this study is optional; you can simply say "Pass" if you do not wish to answer. Also, if at any time you would like to end the session, you are welcome to do so. Okay?

Do you have any questions for me before we begin? *(answer questions asked)*

Great. Now for this entire session we'd like you to think out loud. This just means that we'd like you to tell us out loud what your thought process is for working through a task .

Moderator: Thank you. *(hand scenario sheet to participant)* This sheet contains 3 scenarios each with a specific task. Your first scenario is on your sheet of paper labeled Scenario 1. Please read it and let us know out loud when you will begin your task and when you have completed it. As you are going through the task please share your thought process out loud. *(Note taker begins timing the task)*

Participant: *(performs task & indicates when task is complete)* I'm done.

Moderator: *(asks post task questions)* On a scale of 1 - 5 , five being very easy and one being very difficult, how easy or difficult was downloading the app and logging into it?

Participant: *(states answer)* 1 2 3 4 5

Moderator: Can you point out anything particular on the app that made completing this task easy or confusing and then tell us why?

Participant: *(states answer)* _____

Moderator: Now you'll continue to scenario 2. Same as scenario 1 please let us know out loud when you begin the task and when you've completed it. Please share out loud your thought process. *(Note taker begins timing the task)*

Participant: *(performs task & indicates when task is complete)* I'm done.

Moderator: (asks post task questions) On a scale of 1 - 5 , five being very easy and one being very difficult, how easy or difficult was it to send your results via text and please tell us why you gave this rating?

Participant: (states answer) 1 2 3 4 5

Moderator: Can you point out anything particular on the app that made completing this task easy or confusing and then tell us why?

Participant: (states answer) _____

Moderator: Now you'll continue to scenario 3. Just like the previous scenarios, please let us know out loud when you begin the task and when you've completed it. Please share out loud your thought process. (Note taker begins timing the task)

Participant: (performs task & indicates when task is complete) I'm done.

Moderator: (asks post task questions) On a scale of 1 - 5 , five being very easy and one being very difficult, how easy or difficult was it to send your results via email and please tell us why you gave this rating.

Participant: (states answer) 1 2 3 4 5

Moderator: Can you point out anything particular on the app that made completing this task easy or confusing and then tell us why?

Participant: (states answer) _____

Moderator: (Explain post - test questionnaire) To conclude our test session we'd like you to fill out a quick questionnaire about your overall experience with this app.

Participant: (Fills out post-test questionnaire & indicates completion of questionnaire)

Moderator: Thank you [name of participant] for taking the time to test this app. We greatly appreciate your feedback. (Walk participant out to lobby)

Appendix 5: Consent and Recording Release Form

Consent

Thank you for agreeing to participate in our usability study. We appreciate the time and insights you will be sharing.

ShareDNA is an app developed for research-purposes only. ShareDNA will not collect your contact list information. This app will only keep track how you are related to the person/people you share your results with, but will not track their name(s), phone number(s), or email address(es).

When you share your genetic test results to people you choose, you are allowing them to view your personal information.

Please read the statement below and sign where indicated.

I understand that the ShareDNA app will only record the relationship to person/people who receive my genetic test results. I also understand that by sharing my results with the people I choose, I am giving them the right to view personal information.

Signature

Date

Appendix 6: Task Descriptions and Success Criteria

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.

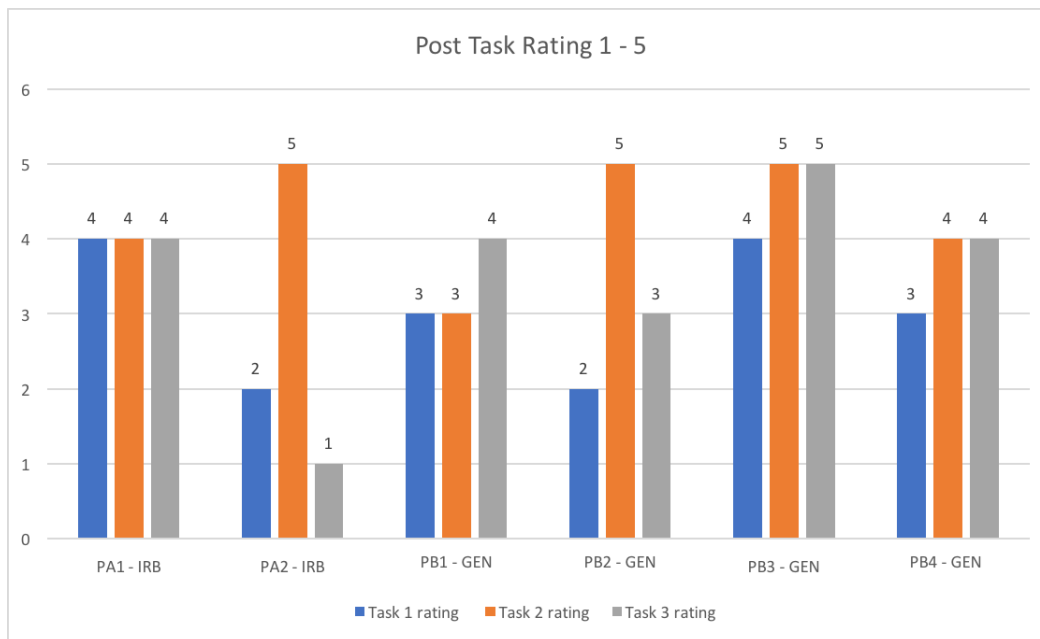
Successful Completion:

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

Appendix 7: Task Success Rate & Ease of Task Ratings

Tasks	PA1 - IRB	PA2 - IRB	PB1 - GEN	PB2 - GEN	PB3 - GEN	PB4 - GEN	Success Rate
Download and log into app	Y	Y	Y	Y	Y	Y	6 out of 6
Send results via text message	Y	Y	Y	Y	Y	Y	6 out of 6
Send results via email to two people	Y	N	Y	Y	Y	Y	5 out of 6

Successful completion of task was based on the success criteria set in appendix 6.



After each task participants were asked to rate on a scale of 1 - 5 how easy or difficult it was for them to complete the task, 1 being very difficult and 5 being very easy.