



Usability Testing

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Project Overview

Goals

The goal of this test is to understand how real users interact with the noise control smartwatch app. The primary purpose of this usability test is to gather the data needed to identify usability issues and improve the app's design.

Research Questions

The following are the main research questions we set out at the beginning of the project. This usability test aims to validate our solutions for these research questions.

1. What insights are valuable to teachers?
2. How are gyms in primary schools designed in terms of size, equipment, and location?
3. What medium is best to present the visual solutions for the end users?
4. How can valuable gained insights be presented to the end users?

Product to be tested

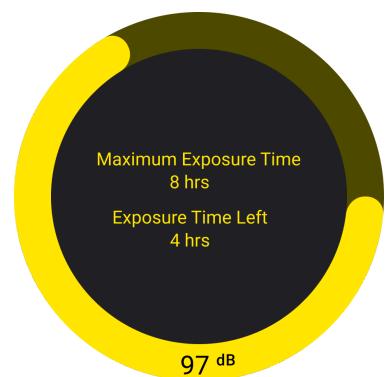
Figma link

Screens to be tested

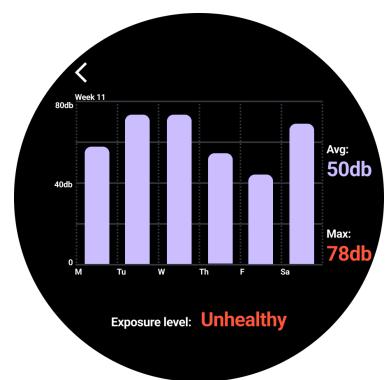
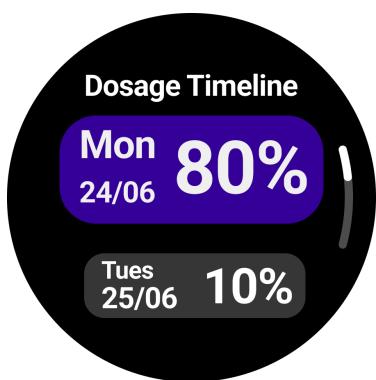
1. Home screen
 - a. Safe space
 - b. Quick settings



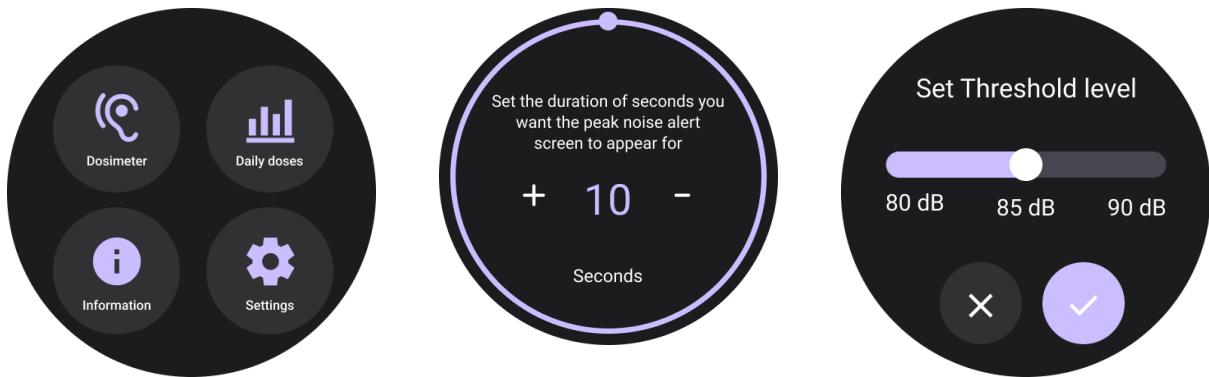
2. Dosimeter



3. Daily dosing



4. Settings



Tools

The tools we will be using for the testing are Useberry & Figma

Useberry

The testing will occur within the Useberry environment. The figma prototype will be embedded within Useberry. Useberry itself will do screen recordings and record metrics such as heatmaps, user flows, completion time, etc.

Figma

Figma will have the interactive prototype. The interactive prototype will be shown within Useberry, and the test participant will also be able to see touch hotspots.

Participants

Target Users	Type of user
Friends	Regular / Normal user

Facilitator

Name	Role	Responsibilities
Yusmen Kadir	POC	Communication with test participants

Test Plan

Intro

We are Fontys media design students working on a project in collaboration with Sorama for helping PE teachers get more insight into the sound levels and stress during the class. With this smartwatch prototype, we aim to provide information about high sound levels that occur in the gym. This smartwatch prototype focuses on making it easier for PE teachers to understand how their hearing is getting affected due to exposure to high sound levels and provide daily & weekly metrics of the same. To first get to know the app, we would like you to navigate through and check out the different screens to familiarise yourself with it. Once you are ready to get started, just click "I'm ready!".

Tasks

Intro

1. Which of the following words describes the first impression of the prototype?

• Fresh	• Approachable	• False	• Modern
• Cold	• Distant	• Masculine	• Classic
• Professional	• Minimal	• Feminine	• Light
• Personal	• Handmade	• Childish	• Serious
• Friendly	• Slick	• Sophisticated	• Charming

Home Screen

- A/B testing of the home & noise alert screens. Which is more intuitive?

Tasks	Goal / Output
To use this screen, click anywhere on the watch to trigger the animation flow.	To understand whether the visual representation of the information is comprehensible to the end user.
Once the sound is too loud, look at the screen and look at the information on the screen. Afterwards, tap to continue.	To understand whether the visual representation of the instructions is comprehensive to the end user.
Once the screen comes up, read the information and follow the instructions.	To understand whether the textual instructions are comprehensive to the end user

Daily dose

Tasks

Tasks	Goal / Output
To use this screen, click anywhere on the watch except the percentage number. When you are done, click the "Next task" button.	To understand whether the visual representation of the dosimeter is comprehensible to the end user.

Questions

Questions	Question Type
What are your first impressions of the screen?	Open-ended
How intuitive is the concept of using colour to represent the percentage value? Does it feel natural?	1-5 Scale
How confident do you feel in understanding the significance of the different colours and their corresponding levels of exposure?	1-5 Scale
Is the dosimeter (ear) visually appealing and easy to read on the smartwatch screen?	1-5 Scale
How would you rate the overall usability of the dosimeter on a scale of 1 to 5?	1-5 Scale

Exposure limit

Questions	Question Type
What are your first impressions of the screen?	Open-ended
How intuitive is the concept of using colour to represent the db value?	1-5 Scale
Are the exposure limit regress bar and values clear and understandable?	1-5 Scale
How would you rate the overall usability of the exposure limit on a scale of 1 to 5?	1-5 Scale

Dosage Timeline

Tasks	Goal / Output

Tasks	Goal / Output
View Tiles and view further data of each day tile	To asses whether the navigation of the flow is easy and understandable

Questions	Question Type
What are your first impressions of the screen?	Open-ended
How confident do you feel in understanding the significance of the different colours and their corresponding levels of exposure?	1-5 Scale
Are the percentage shown for each daily clearly understandable?	Open - Ended
How would you rate the overall usability of the Dosage Timeline on a scale of 1 to 5?	1-5 Scale
Are the data graphs presented easy to read and understand?	1-5 Scale

Settings

Tasks	Goal / Output
1. Change the threshold level to 90db and save	The user successfully locates the option to change the threshold level and sets it to 90 decibels.
2) Change the notifications settings	The user navigates to the notification settings and successfully enables notifications.
3) Change the vibration settings	The user navigates to the vibrations settings and successfully adjust the vibration intensity to a level that he wants.
4) Change the alert screen timeout duration to 10s and save	The user navigates to the "Alerts Screen Timeout" option in the settings, adjusts the duration to 10 seconds, and successfully saves the changes.

Questions	Question Type
1. What are your initial impressions of the settings screen flow and its organisation?	Open ended

Questions	Question Type
1. How easy or difficult was it for you to find the specific options you were looking for within the settings screen? Please rate your experience on a scale of 1 to 5.	1-5 Scale
How would you rate the level of challenge or confusion you encountered while navigating through the settings flow?	1-5 Scale
What is your rating, on a scale of 1 to 5, for the layout and design of the settings screen? Does it feel intuitive and visually appealing to you?	1-5 Scale
Overall, what is your opinion on the usability and user-friendliness of the settings flow in the app?	1-5 Scale

Outro

Questions

Questions	Question Type
I think that I would like to use this app frequently.	1 - 5 scale Strongly disagree 1-5 Strongly agree
I found the app unnecessarily complex.	1 - 5 scale Strongly disagree 1-5 Strongly agree
I thought the app was easy to use.	1 - 5 scale Strongly disagree 1-5 Strongly agree
I think I would need the support of a technical person to be able to use this app.	1 - 5 scale Strongly disagree 1-5 Strongly agree
I found the various functions in this system were well integrated.	1 - 5 scale Strongly disagree 1-5 Strongly agree
I thought there was too much inconsistency in this app.	1 - 5 scale Strongly disagree 1-5 Strongly agree
I found this app very difficult to use.	1 - 5 scale Strongly disagree 1-5 Strongly agree
I felt very confident using this app.	1 - 5 scale Strongly disagree 1-5 Strongly agree

Questions	Question Type
I needed to learn a lot of things before I could get started with this app.	1 - 5 scale Strongly disagree 1-5 Strongly agree
What feedback would you like to share with us about this app?	Open ended

Documentation

Screen recordings



To view the screen recordings login to the Useberry account

Findings

Heat maps (*Click tracking*)

Home Screen





Daily Dose (Dosimeter)





Exposure Limit





Dosage Timeline





Settings





Analysis

Home Screen

Daily Dose (Dosimeter)

Questions

Question 1 - Short Text

What are your first impressions of the screen?

12 out of 12 answered

Looks nice

Professional, thorough, clean

It looks beautiful and the message is understandable.

Nice and neat design, but it wasn't exactly clear to me what the whole daily dose meant.

Nice colours , elements are visible

It was unclear as to how the percentage scale should be interpreted. What does "Daily Dose" mean in that context? Is it a case where the lower the number is, the more one's exposed to loudness levels and risks getting tinnitus? That's how I personally interpreted the flow, but that didn't come intuitively.

I'm not sure what it's supposed to represent. There's a percentage being shown and a color associated with specific thresholds, but it's not obvious what "Daily dose" means.

It is understandable and clear to see with one quick look. I like the colors that underline the usage.

The overall design seems very user-friendly. The concept is a bit unclear at the beginning, but I suppose if the watch comes with instructions it should be sufficient.

I like the different circles and that you can touch them to see the different things. However I think that it may be a bit hard to choose the right circle because our fingertips are a bit too big for it

Looks like a Samsung watch

It looks very beautiful, and the message is very clear/understandable.

Question 2 - Opinion Scale

How intuitive is the concept of using colour to represent the percentage value? Does it feel natural?

12 out of 12 answered

0 - Too confusing

0% (0) responses

1

0% (0) responses

2

0% (0) responses

3

9% (1) responses

4

59% (7) responses

5 - Very intuitive!

34% (4) responses

Question 3 - Opinion Scale

How confident do you feel in understanding the significance of the different colours and their corresponding levels of exposure?

12 out of 12 answered

0 - Not confident at all.

0% (0) responses

1

9% (1) responses

2

9% (1) responses

3

25% (3) responses

4

17% (2) responses

5 - Very confident!

42% (5) responses

Question 4 - Opinion Scale

Is the dosimeter (ear) visually appealing and easy to read on the smartwatch screen?

12 out of 12 answered

0 - Too complicated.

0% (0) responses

1

9% (1) responses

2

0% (0) responses

3

9% (1) responses

4

17% (2) responses

5 - Easy peasy!

67% (8) responses

Question 5 - Opinion Scale

How would you rate the overall usability of the dosimeter on a scale of 1 to 5?

12 out of 12 answered

0 - Too complicated.

0% (0) responses

1

0% (0) responses

2

0% (0) responses

3

17% (2) responses

4

25% (3) responses

5 - Easy peasy!

59% (7) responses

Preference Test

Preference Test

Which of the two screens make the most sense to you?
12 out of 12 answered

Option	Group	Percentage	Responses
Incremental	Group 97 (1)	58%	(7) responses
Decremental	Group 98	42%	(5) responses

Incremental Decremental



Most Preferred - Incremental

Exposure Limit

Dosage Timeline

Settings

Design Recommendations

Findings	Recommendations	Design Need