



Lux: Usability Testing

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Usability Test One

Participant: Male Information Technology Student who experiences SAD symptoms.

Environment: Basement group collaboration lab with fluorescent lights and no windows.

We chose this participant because they fell precisely within our primary user group. We chose this environment in part out of convenience and in part because the participant spends a lot of time in environments like this one. However, he usually works independently with little noise around him, which is in slight contrast to this group lab.

Roles: Megan - Facilitator, Eric - Observer, Reggie - Computer

Test Protocol:

1. Give participant an overview of our project
2. Give participant a scenario that they can imagine themselves in
3. Give participant the task of viewing their mood/sunlight trend
4. Give participant the task of setting today's mood
5. Give participant the task of setting a daily exposure goal
6. Give participant the task of setting a treatment reminder
7. Make the puppy react to the reminder and the daily exposure goal
8. Congratulate the user on completing their tasks and mitigating their SAD symptoms

Notes about the test:

- We struggled to adequately communicate to the participant the scenario that he was in and the subsequent actions that he should take.
- We could probably have been more organized in terms of using the paper pieces. Occasionally, there was more delay in switching screens than would have been acceptable even though the interactions were on paper.
- We also think that hiding the other screen components while doing the test will help the participants keep their minds on the current task instead of seeing the other screens and potentially making choices based on what those other screens may show

Revisions:

Between our first test and the one documented below, we made fairly significant content organization changes which included the addition of another tab in the application, grouping of content that followed gestalt principles more closely, and a hardware feature change on the puppy itself. We also wrote out a more detailed testing protocol to follow that included intermittent scenarios in order for the user to better understand why they are doing the tasks that they are doing. Having a few questions at the end to get a general perspective on how the user felt will also help.

Usability Test Two

Participant: Female Accounting Major who has family members who deal with SAD

Environment: Mary Gates Commons Area.

This participant was chosen because we think that there is a potential user base of people who worry about their loved ones and want to participate in solutions that their loved ones are participating in, in order to motivate them. The Mary Gates commons area was chosen because it also lacks windows

(like much of the study locations on campus do) and a busier noisier setting is what our participant is used to experiencing.

Roles: Megan - Observer, Reggie - Facilitator, Eric - Computer

Test Protocol:

1. Give participant an overview of our project
2. Give participant a scenario that they can imagine themselves in
3. Give participant the task of setting a daily exposure goal
4. Give participant the task of viewing their mood/sunlight trend
5. Further develop the participant's scenario
6. Give participant the task of appeasing the puppy when an alarm goes off
7. Give participant the task of using the nose light
8. Further develop the participant's scenario
9. Give participant the task of setting a treatment reminder
10. Give that participant the task of recording today's mood
11. Congratulate the user on completing their tasks and mitigating their SAD symptoms
12. Ask questions about overall experience

Notes about the test:

- The participant has initial struggles treating the paper prototypes as her cell phone. When asked to set her exposure goal, her first reaction was to use her fingers to write the numbers in the boxes instead of tap them for a list of numbers to choose from.
- The test protocol went more smoothly through the beginning tasks, it still seems that we may need to elaborate on the intermittent scenarios in order to help the users understand why they are doing the subsequent tasks.
- The paper prototypes use iconography on the tabs to separate and identify content, the user naturally went to the right tab when we asked her to complete tasks that were contained on those other tabs, however, she did not understand the meaning of the icon that was representing the "today's stats" tab (this icon was a daily calendar icon).
- The participant felt that the connections between the puppy and the application were pretty straightforward and that the actions of the puppy were logical based on her interactions with the application.
- The participant felt that the graph information was meaningful because of the iconographic smiley faces. She said, "just a lame line plot wouldn't really mean much to me".

Revisions:

For the next test, we decided to explain in more detail the purpose of the test so that the participant understands what to do. We also decided to reorder our testing protocol because we had trouble keeping a good flow. Also from a suggestion in class, we decided to use puppy noises from a phone instead of note cards.

Usability Test Three

Participant: Male who does not suffer from sad, and no family members suffer from sad

Environment: Cafe

We wanted an outsiders perspective on the project. Everyone we have asked to participate in the process of developing our project has somehow been involved or affected by SAD. We thought at this point it would be good to get some input from the other side of the map. A cafe was chosen because it is a busy and noisy setting that our participant is used to experiencing.

Roles: Megan and Evan-Observer Eric-facilitator Reggie-computer

Test Protocol:

1. Explain to participant the purpose of a usability test
2. Give participant an overview of our project and some details about SAD
3. Give participant a scenario that they can imagine themselves in
4. Give participant the task of setting a daily exposure goal
5. Give participant the task of setting a treatment reminder
6. Further develop the participant's scenario
7. Give participant the task of appeasing the puppy when an alarm goes off
8. Give participant the task of using the nose light
9. Further develop the participant's scenario
10. Give that participant the task of recording today's mood
11. Give participant the task of viewing their mood/sunlight trend
12. Congratulate the user on completing their tasks and mitigating their SAD symptoms
13. Ask questions about overall experience

Notes about the test:

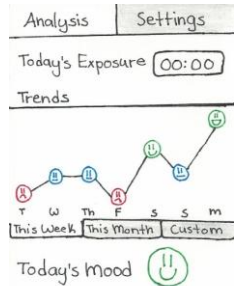
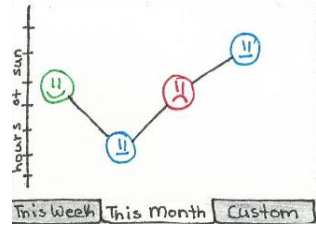
- The participant pointed out that while having the puppy automatically follow you everywhere has its advantages, there are going to be times where it will be unnecessary for it to follow you. A situation such as going out to dinner. As a group we subconsciously made the assumption there would be some sort of on/off button, but never explicitly showed it.
- Conversation led to the mention of a lack of information with our mood selector.
- He enjoyed how the data was laid out and represented.



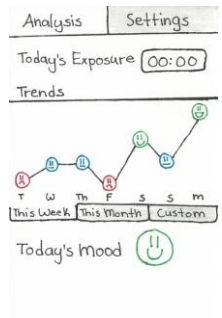
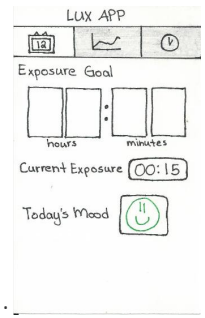


Revisions:

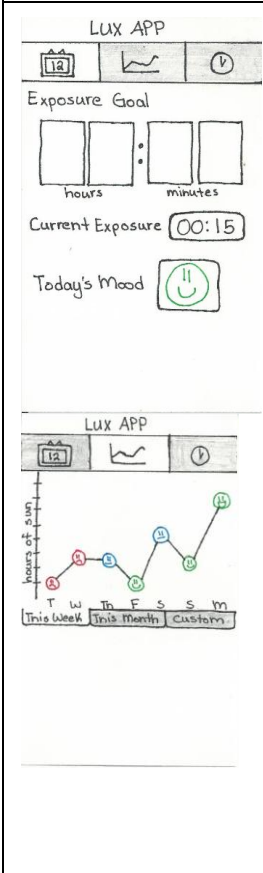
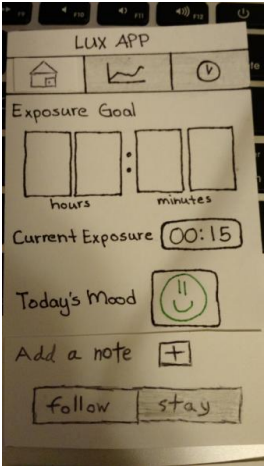
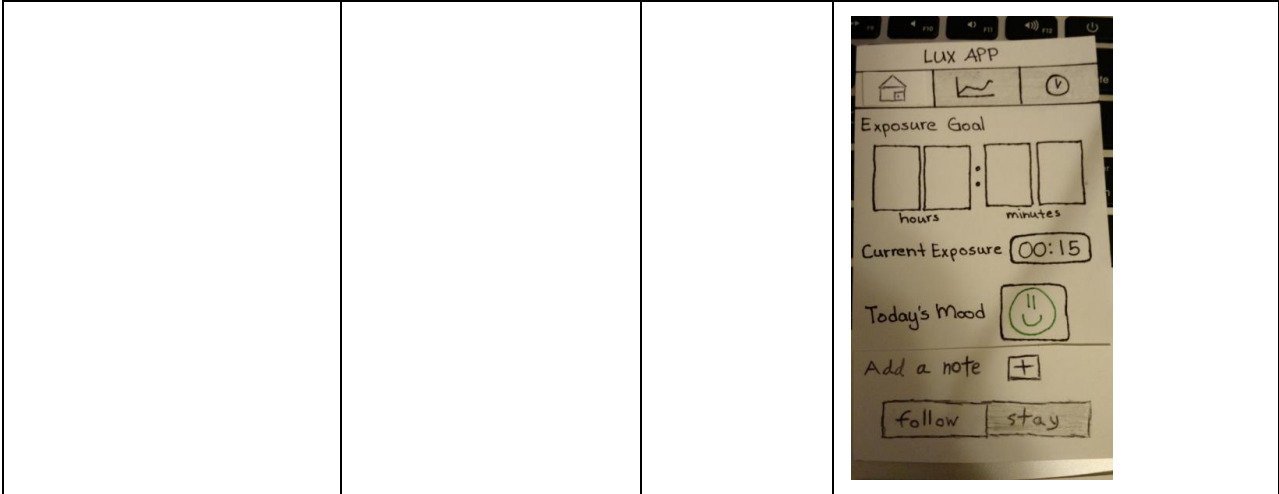
In order to solve the lack of information, we decided to add some sort of "note" functionality so you can input more details about recording your mood. i.e. instead of simply inputting your mood on a scale you'd be able to add text saying "I had a bad day today because of xyz...".

In doing this we thought of allowing the user to click on specific data points in graph the, which would allow the user to see information about that specific day.

Critical incidents

Prototype image	Incident	Negative Severity	Revision Image
	<p>The participant was confused about the graphing area. He wasn't aware that the graph was trying to show both mood and sun exposure, he thought that it was just charting mood.</p>	<p>3</p>	<p>Added axis to indicate the light exposure measurement.</p> 

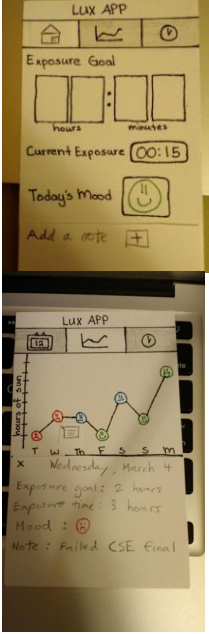
	<p>The participant could not figure out how to turn the alarm on the puppy off. We had included a snooze like button for the case where a user could not do the task the puppy wanted right at that moment, but we did not include any kind of button for just turning the alarm off when the user agrees to do the task the puppy wanted.</p>	<p>3</p>	<p>We decided to take out a snooze function to reduce confusion, instead petting on the head will just stop the alarm.</p> 
	<p>Confusion about setting mood when changing graph. Did not know if changing the daily mood on the screen would affect the data on the graph</p>	<p>2 - it was making it hard to understand the content structure of our app</p>	<p>Added a third tab and reorganized</p> 
	<p>“today” tab iconography was confusing to the user</p>	<p>2 - impeded user’s ability to understand how to navigate our application</p>	<p>We changed the icon to a more recognizable symbol</p> 
<p>There initially was no way to set the dog’s following actions on or off, it simply always followed.</p>	<p>The user pointed out that there was no way to stop the puppy from following the user</p>	<p>3 - Not being able to essentially turn off the system is definitely a major usability problem.</p>	<p>Added a radio button to set the dog’s following actions in the home section</p>



The user indicated a lack of information from the daily mood selector.

3 - Just collecting a single mood value is pretty lossy, and is limiting to what the user can do with the app.

We put an option to allow the user to add a note to describe their mood. This can then be viewed along with other information in the analysis tab



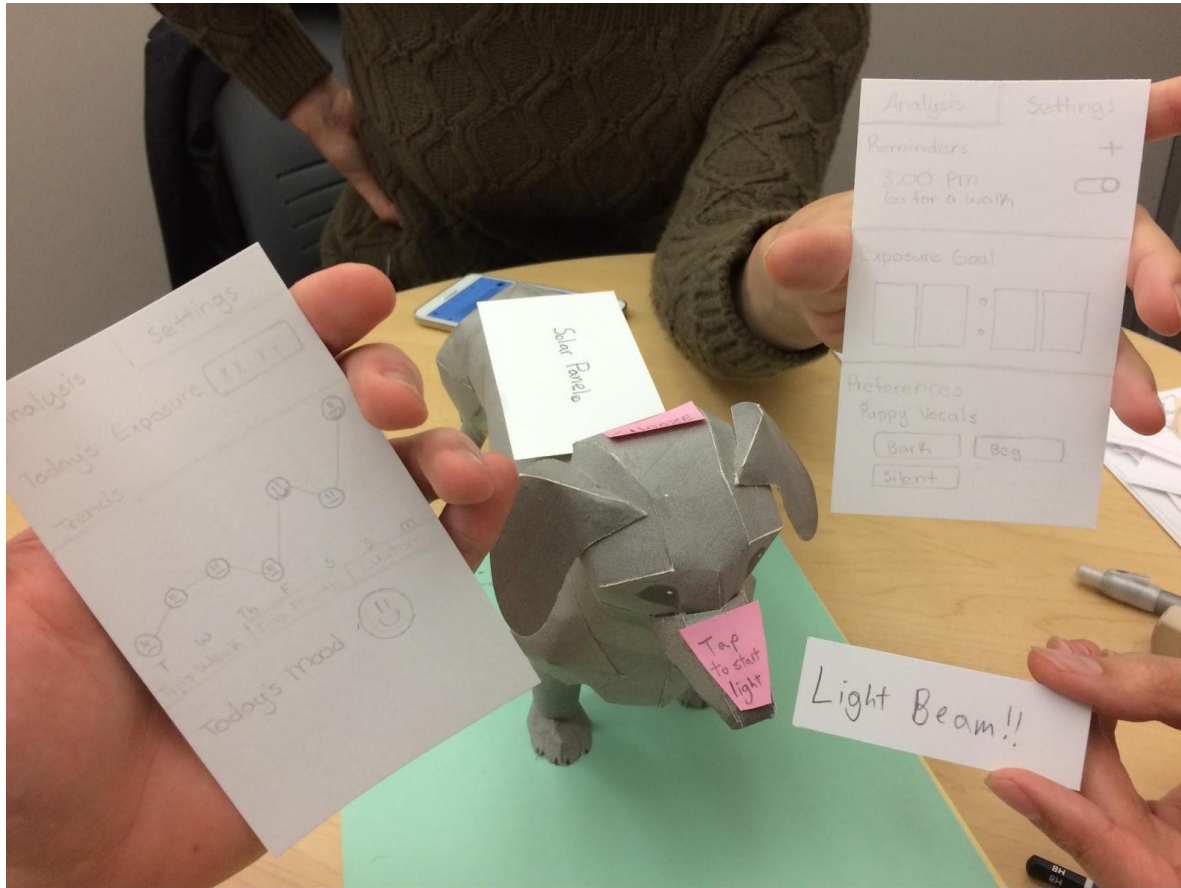
User felt that the mood tracking lines were meaningful because of the smiles

0 - was a positive incident

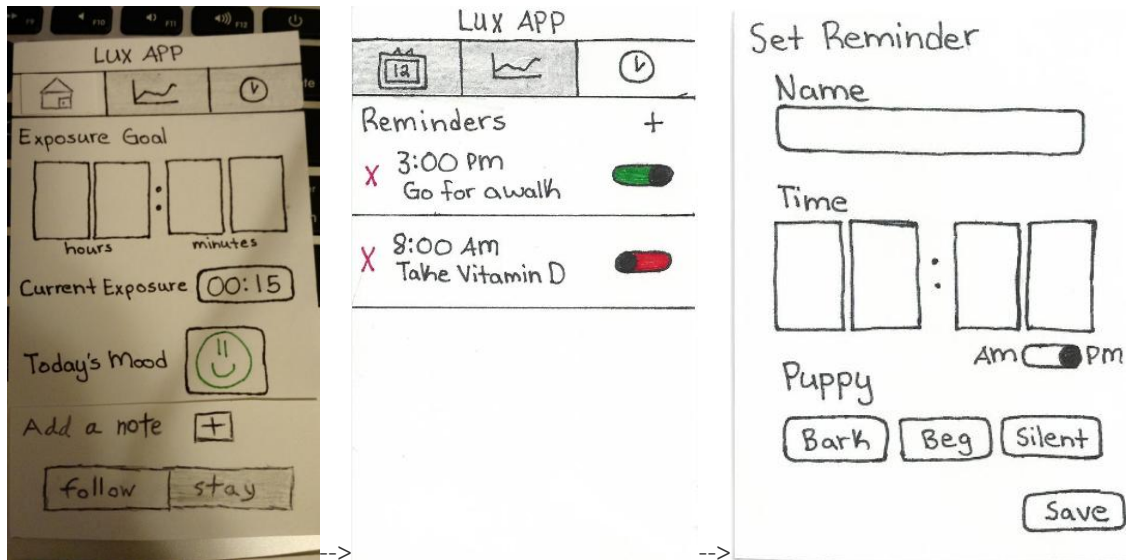
User understood how the dog's actions followed from the app interaction

0 - was a positive incident

Overview image:



Walkthrough task one: (reminder to either get the sunlight exposure levels needed or maintain a treatment regimen)

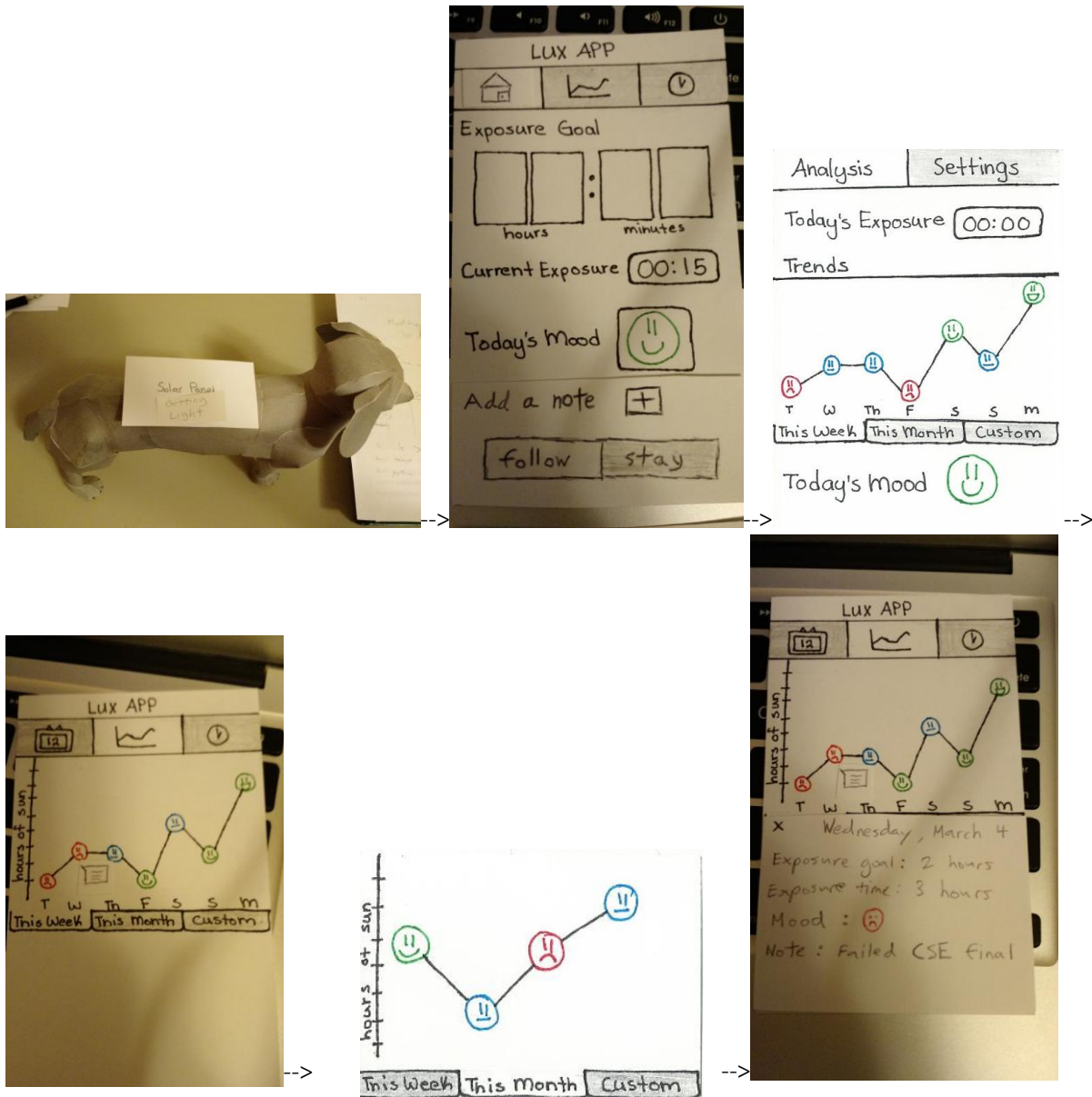


First a user will set an exposure goal on the main tab and then click on the reminders tab. On this tab, the user will tap the '+' plus button to add a new reminder. This will popup a new page to set a new reminder with an appropriate name, time, and notification type. Save.



At the time set for the reminder, the dog will then start barking/begging as a reminder to the user. The user will then pat the dog on the head to stop the alarm. To start the light therapy, the user will tap the dog on the nose.

Walkthrough task two : (see the correlation between sunlight exposure and mood or general happiness)



The solar panels on the dogs back tracks daily sunlight exposure. The user then records their mood for the day. The correlation between sunlight exposure and happiness is then computed and the user will press the analysis tab to display the weekly, monthly, or custom time frame. Additionally, the user can press on the graph to pop up a description of the sunlight exposure and their mood for that specific day.

Most Important Revisions:

The first revision we found to be important was our change to the tabs. Initially, we had two tabs- analysis and settings. Things were a bit confusing and weren't properly modularized and separated. So we added another tab and renamed the existing ones. There are now 'today', 'analysis', and 'reminders' tabs for the user to switch back and forth. Fixing this issue of slight confusion seemed to add elegance to the flow of the interaction the user has with the user interface.

The second revision we believe is important is offering a "do not follow" option. We added a button in the UI so for the user to make the dog not follow along. This is important to our design because we don't want the puppy being a burden by injecting themselves into every activity of users life such as social activities on the weekend.

The third revision we believe is important is adding the functionality to let the user input a brief excerpt of their mood if they felt the need. For example, if they input they're in a terrible mood but its 100% percent from losing a personal belonging, we think its a good idea to give that mood input a qualifier. We wanted the analysis to show the correlation between sun exposure and mood in general terms, and allow the specific events that impact mood be specified.