

Mind Matters

CSCI 4620U: Project Part 2b

Stakeholder Needs & System Requirements Report

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Part 1: Project Concept (10%)

To design an app that will successfully help most people overcome their loneliness by incorporating various features that will aim to eliminate the problems most of our participants have faced. Our app is aimed towards those who have been going through a tough time during this pandemic, those who don't have anyone to talk to or doesn't have easy access to in person or online therapies. Those who feel that they don't share the same interests as anyone. Our stakeholders are those who want to find a solution for all these problems that have been affecting their mental health. We believe that most participants will like the idea of our app since this app will have features that will combat many of the issues that people have been facing. While doing some research on mental health problems caused during the pandemic, our group brainstormed the most common problems and the solutions to those problems. We decided to implement certain features in our app that would eliminate those problems. For example, a big issue we came across was that people are not being able to make friends during this pandemic because they can't go out and meet people due to the content lockdowns. Our solution for this problem is that we will be implementing a chat feature where people can connect with those with similar interests as them. All you would have to do is type a few of your interests and you will automatically be connected to others with the same interests. After going through the questionnaire completed by our participants, we have analyzed that many participants have been dealing with loneliness and lack of interaction with others during this pandemic, while others don't always feel connected or share the same interests with those around them.

Part 2: Field Study Report (25%)

The target stakeholders in this study were interested in finding a solution for many mental health-related issues caused during the pandemic such as anxiety, depression, and loneliness. The focus was on individuals of various ages to receive a solid understanding of the affected range. To conduct the field studies, two research instruments were used: the questionnaire which focused on the most affected mental health-related issues (depression, anxiety and loneliness) and their symptoms whereas the semi-structured interviews focused on finding a way to help people with their mental health and receiving a more detailed response. This study aided this research in coming to a conclusion on what solutions should be implemented to help people who are struggling with their mental health using the reasons and data accumulated.

This study was administered to 23 people in total of which 19 of the participants conducted the questionnaire and 4 of them were interviewed. Analyzing the questionnaire's results it is shown that the study accumulated the age groups between 20 - 26 years old and had about 62.5% males and 37.5% females in the target audience which correlated to the results found in the questionnaire. Observing the most affected mental health issues (charts in appendix) shows that individuals who were affected by depression the most were 18.8%, and loneliness closing into 25% were less in comparison to anxiety which most people were affected by at 50%. Analyzing the data provided the outcome that individuals who were affected by depression and loneliness were less in comparison to those who are affected by anxiety.

Analyzing further into each of the symptoms it can be seen how 57.9% of people are unable to reach out and communicate with peers and families while 52.6% would go to their friends for mental support, these numbers show correlation in which individuals during the pandemic are struggling to get mental health support as 57.9% struggle with sleeping on most days, 42.1% have trouble eating most of the time, 47.4% have had a panic attack, 43.8% have had trouble relaxing and 63.7% have gotten easily annoyed/ irritable at times.

Observing the semi-structured answers (appendix) it was conducted with 4 individual interviewees known as Person 1, 2, 3 and 4, these individuals would have difficulties sleeping mostly due to stress, not having enough time to do things they enjoy, like to talk to people as it helps sort out their feelings especially if they have support. Analyzing the responses focused on therapies received it was shown that the current technology used for therapies are not as effective unless emotion and gestures are involved as Person 1 mentioned "In some cases they are effective, but the therapist needs to use body language and tone of voice to create that in person connection." When observing the reasons of technology's therapies effectiveness it was shown that there can be privacy concerns yet flexibility and comfort of space. Inquiring at the aspect outside therapy it was shown that there are other ways to combat mental health besides therapy as Person 3 mentions "Group listening sessions or a mental health partner would be more effective than therapy." This goes in relation to what Person 2 says about therapy being inaccessible and expensive. Analyzing the pros and cons of therapy itself, group sessions or a mental health partner would be an effective yet inexpensive way outside of professional therapy which would result in an increase of individuals seeking therapy as Person 1 mentions "There would be an increase in the number of people wanting to get access to mental health interventions as it is online and easier to get treatment options.". Hence the outcome of the research provided the study on what solutions are to be implemented to help people who are struggling with their mental health using the reasons and data accumulated.

Part 3: Task Analysis (15%)

0. In order to see a therapist

1. Book an appointment

1.1 Call therapist office

1.2 Use online booking system

2. Wait for appointment date

3. Travel to the therapist's office

4. Speak to the therapist

Some issues with this HTA is that it can often be daunting to go through the process of booking an appointment with a therapist. It is already a big step for someone who struggles with mental health issues such as anxiety or depression to decide to see a therapist and having all those steps to book an appointment, wait for your appointment date to arrive, then travel and actually speak to a therapist can put someone off of the idea of seeing a therapist. There are likely many

people who decide they want to speak to a therapist but begin to have second thoughts once they begin the process. Our concept would provide instant access to resources and help for people who struggle with mental illness and there won't be as much hassle to get the support needed. Our concept could also be an important first step for someone to find the courage to book an appointment with a therapist and would still provide support while that person was waiting for their appointment date, making it less likely that a person rethinks their decision based on fear and anxiety.

Part 4: Persona (15%)

Primary persona representing a key user with their goals, behaviors, and attitudes:

Sophie

- Age 22
- A fourth-year student in mechanical engineering
- Works part-time job on weekends at Walmart, two 8 hour shifts
- Has been stressed recently due to the large workload
- Has little time for social activities
- Difficulty spending time with friends/family
- Unable to eat healthy since they don't have enough time to cook a proper meal
- Owns an iPhone
- Tries to unwind by watching an hour of TV before bed
- Gets 6 hours of sleep a day during the week, less on weekends

Part 5: Scenarios (20%)

Day-in-the-life scenario

Sophie is a fourth-year student studying mechanical engineering. She wakes up Monday morning at 7 am to get ready for her first lecture of the day. She is tired from her late-night shift at Walmart the night before and stressed due to the constant assignments and midterms. After her lecture, she quickly grabs a snack and begins to study for her midterm. Her friend messages her and asks if she would like to hang out. Sophie knew she didn't have enough time to get ready, drive over, and spend time with her friend so she had to decline, then continued studying. Once she was all done with studying it was already midnight, she was exhausted and didn't have the time to make herself dinner, so she quickly warmed up some frozen pizza. She ate and decided to unwind with some TV before bed. Once she finishes watching TV, she heads to her bedroom, sets an alarm for 7 am, and goes to sleep.

Story scenario (Sophie's point of view)

I spend most of my days working and studying. This results in me losing lots of valuable time that I could otherwise spend with friends. A more accessible and quick way to socialize with others during my very busy schedule is something I constantly look for. I find it quite helpful to

just spend time and talk to others. However, it currently takes too much effort to do that. A better option would be something that I can participate in during my scarce free time. Having to get prepared to go out, plan outings, and physically be present is not something that I'm able to commit to on a daily basis due to time constraints. So, having an alternative that doesn't require me to go through so much effort would be ideal. I have tried to make it work online with friends but it is very difficult for us to get anything planned due to scheduling issues since I work late at night and study most of the evenings. I have also attempted to make online friends but I find it difficult getting any sort of connection going, I can't seem to find people that have similar interests as me. This all results in me feeling more lonely and distant. It's difficult to just make friends nowadays and especially, the kind of friends that have similar interests and scheduling compatibility.

Part 6: Requirements (15%) [see Module 10]

Requirements:

1. stakeholder needs : Someone who is having trouble finding in person therapy to attend. Feelings of loneliness due to not being able to visit friends/ families, or not having someone to talk to because of not being able to share the same interests. Someone who wants to relieve their stress and anxiety. During the interviews some of our participants have mentioned that they used to attend in-person therapy which later switched to online, other participants have mentioned that they have not been able to attend any therapies because they are expensive and inaccessible. 47.4% of the participants who completed our questionnaire have said that they experienced anxiety attacks and 43.8% have trouble relaxing.
2. environmental requirements: Being able to go to therapy sessions in person is not very accessible due to the current circumstances caused by the pandemic. It is hard to make friends due to the lockdown. 57.9% of the people who completed the questionnaire have said that it is very hard for them to be able to reach out and communicate with those around them due to the pandemic.
3. functional requirements: Able to choose what option you want to do ie. chat with an agent, play a game, join a community group chat. 3 out of 4 of the people interviewed said that they like to talk to people around them to sort out their emotions. The 4th person said that they don't have anyone to talk to because no one can relate to them or understand them. The functions in the app will allow you to connect to other people who share the same views as you which will help solve this problem that some people face.
4. technical requirements: Requires a mobile device. This mobile app will not be possible to use without a device. The app will be able to run on IOS or Android.
5. usability requirements: You need to know how to use a phone in order to use the app. The User Interface is clear and understandable. All the main features will be on

the main screen. Anyone will be able to use it with no trouble as long as you know how to work a phone.

Graphs

How often do you feel depressed?
16 responses

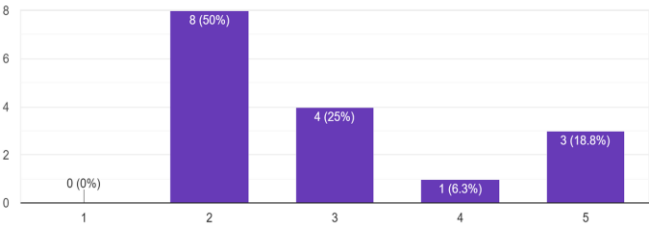


Chart 1 :
Depression

How often do you feel lonely ?
16 responses

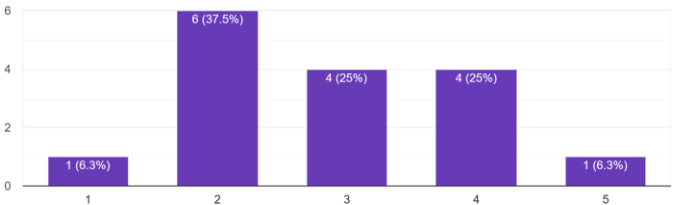


Chart 2 :
Loneliness

How often do you feel anxious ?
16 responses

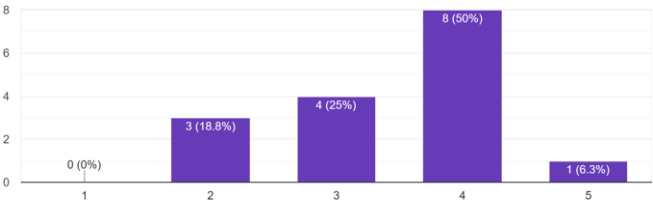
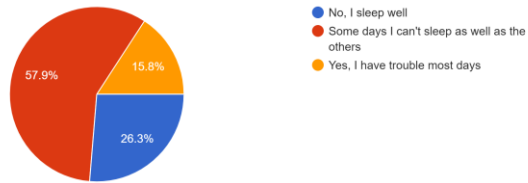


Chart 3 :
Anxiety

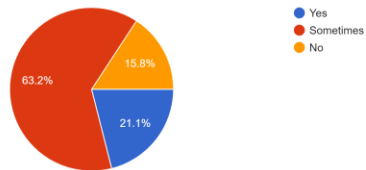
Do you have trouble falling asleep, staying asleep, or sleeping too much?

19 responses



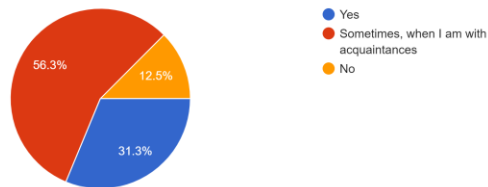
Do you see yourself becoming easily annoyed or irritable?

19 responses



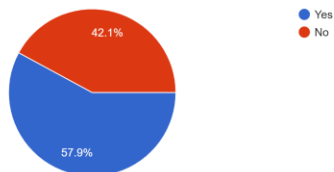
Do you feel you have lots in common with those around you?

16 responses



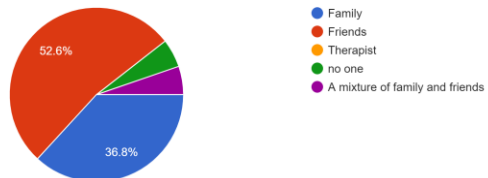
Do you feel like you are unable to reach out and communicate with those around you due to the pandemic ?

19 responses



Who do you go to when you require mental support?

19 responses



Semi-Structured Interview Answers

Have you had experience with therapies online and face to face?

Person 1: Yes, before covid it was face to face and after it switched to online

Person 2: No I have not

Person 3: No

Person 4: Yes

Are therapies which are delivered through digital technology as effective as those delivered face-to-face?

Person 1: In some cases they are effective, but the therapist needs to use body language and tone of voice to create that in person connection

Person 4: No

What made/didn't make it as effective?

Person 1: Therapists face to face hard to make time to go see them in person but after COVID hits it is more effective as it offers the comfort of space and flexibility.

Person 4: When you're face to face, there's more of a personal relationship and it's more serious/engaging. Less trustworthy because you don't know what they are doing on the other side of the camera (recording, violation of privacy, etc).

Do you believe there is a better way to combat mental health besides therapy?

Person 2: I think therapy is a great way to combat mental health issues however it is inaccessible and expensive.

Person 3: Yes, group listening sessions or a mental health partner would be more effective than therapy.

If existing treatment options were to be combined with technology mental health interventions, how can the treatment outcomes increase?

Person 1: There would be an increase in the number of people wanting to get access to mental health interventions as it is online and easier to get treatment options.

Tell me about your sleeping habits over the past few months. Have you noticed any changes? Difficulty sleeping? Restlessness?

Person 1: Sleeping really late and feeling restless due to stress.

Person 2: Yes I have found myself sleeping much more. I think the change is due to stress since I have a lot more stuff on my plate right now my body just refuses to get out of bed

Person 3: When I am working, I have good sleep but when I'm in school I have bad sleeping habits.

Person 4: Yes, having difficulty sleeping often

Describe how 'supported' you feel by others around you – your friends, family, or otherwise.

Person 1: Supported by family and friends

Person 2: Yes I feel supported by all my friends and family. Something what helps me is talking to people I trust to sort through my feelings otherwise emotions stay unresolved

Person 3: Yes, my friends can usually tell when I'm not feeling well and are there to help me get better.

Person 4: I don't feel supported by others around me. Others have difficulty relating to my problems.

Are you having trouble focusing at work or school?

Person 1: Yes, it is hard to organize and be on top of everything

Person 2: Well my school is all online right now so I have difficulty focusing at home.

Person 3: No, I have pretty good focus.

Person 4: Yes, I am able to focus better at home where I don't have to worry about external factors.

Can you concentrate on the things you want to do?

Person 1: No not really, it gets tough.

Person 2: No I cannot because whenever I try and focus on tasks I enjoy I feel guilty not spending time doing more productive stuff

Person 3: No, my mind wanders often and I can't focus.

Person 4 : No, because I am stressed about other undone tasks.

Do you find pleasure in things that usually make you happy?

Person 1: At times but gets tired of it really fast.

Person 2: Yes

Person 3: Not really, school is making it difficult.

Person 4: Yes