

Take Better Care of Your Health

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Introduction

Mental Health is a severe issue amongst many college students. Surveying 274 institutions, 88% of counseling center directors reported increases in psychological problems over the last 5 years. This survey also reported that these “severe psychological problems” included learning disabilities, self-injury incidents, eating disorders, substance use, and sexual assaults [1]. The same article wrote of the high-level reasonings behind college mental health problems. Firstly, they distributed college students into traditional college students and non-traditional college students. Traditional college students are those that go straight to college after high school. These students face more stress (on a high-level) due to having to take on adult responsibilities alongside school, which they most likely have not experienced prior. Non-traditional college students are those that are older and may have a spouse/family. These students have to keep up with meeting work and family obligations alongside the academic commitment. College mental health problems unfortunately are not only described by these high-level issues.

To go more in depth, the most common health problems amongst college students are anxiety disorders, depression, suicide, eating disorder, and ADHD. The article went into detail about the stats these different diagnoses have in terms of college mental health. Starting with anxiety disorders, 11.9% of college students suffer from an anxiety disorder. Anxiety disorders are also the most prevalent psychiatric problems. 7-9% of college students reported they suffered from depression. It is important to note that suicide is not a specific diagnosis, but it is the third leading cause of death among young adults. Among 8,155 students, 6.7% reported suicidal ideation, 1.6% reported having a suicide plan, and 0.5% reported making a suicide attempt in the

past year. Lastly, between 2 and 8% of college students suffer from ADHD. ¼ of students receiving disability services have ADHD [2].

These problems lead to drug use and abuse as a getaway from some of these problems. Most prevalent problems among college students are the presence of substance disorders. One in five students meet the criteria for alcohol use disorder. From here, 12.5% are alcohol dependent and 7.8% suffer from alcohol abuse. One in 20 students meet the “drug abuse criteria”. From here 4.2% abuse drugs and 1.4% are drug dependent. This issue that comes from this is that college students move towards alcohol and drug abuse as a way to cope with the mental health. College students simply move towards things that are easily accessible to cope with their health issues. Instead, if college students had a better way to cope with these things that were also easily accessible drug abuse and dependencies would not be as normal [2].

Outline of questions/problems addressed:

- What are the most pressing mental issues college students face?
- How do college students address their mental health right now?
- What are the most important things college students would like to focus on?
- How has student’s mental health changed since they have come to college?
- How has student’s physical health changed since they have come to college?
- What have you done thus far to help with your mental health?
- What have you done thus far to help with your physical health?
- What kind of application would users want to see in terms of helping them with their mental health?

Methods

Project Motivation:

Mental Health has always been an important topic in my life since freshman year of college. Coming into college, I felt a lot of pressure in terms of who I was, what I wanted to major in, and felt a lot of the “imposter syndrome”. The imposter syndrome is defined as “the persistent inability to believe that one’s success is deserved or has been legitimately achieved as a result of one’s own efforts or skills” (Oxford Languages). Freshman year, I lived on north, was a part of the engineering community, and was overwhelmed by the amount of extracurriculars available. This took a toll on both my mental and physical health. I gained weight, was easily stressed, and found comfort in going home more than staying on campus. Because of this, I often looked out to resources to help me cope with these things I was feeling. This however was difficult considering I did not know where to look for these resources and if I found one, I felt as if it was not tailored to me.

Fast forwarding to my senior year, I now live with 5 girls I met in college. Reflecting back to the way that we all met in college and have formed into family, we often share similar experiences we had our first year at college. Everyone was a little confused on where they fit in, how to cope with the feelings of imposter syndrome, and how to take care of their health – both mental and physical. After understanding this, I realized I was not alone in the feelings I had my freshman year, and a lot of college students face similar experiences. This saddened me as I was unaware that so many people felt this way and found finding resources just as difficult as I did.

Outside of personal motivations that came for this project, I enjoyed some of the classes I took in terms of UI/UX and design. In Fall of 2020, I took IOE 491. This class was listed as special topics IOE, however it focused on designing, UI/UX, and app development. In Winter of 2021, I took EECS 493 which was listed as User Interface Development. These classes combined taught me a lot about the process behind designing web-applications and applications to please the user's eye. It taught me the backend process of figuring out user needs, what is pleasing to the eye, and how to make placements for the best design. Through these classes, I understood a lot about design and enjoyed what I was learning. Growing up I have always had a creative side to me. I believe these classes were a bit different than my normal engineering classes and allowed me to explore the creative side a bit more and that was what captured my eye. After taking these classes and understanding the importance of mental health – I knew I wanted to capture these things into my capstone project.

After understanding these big ideas, I really thought about what was going to be the premise of my capstone project. Growing up in my generation, I have seen how easy social media plays a role in our lives. It is something that comes so easy to all of us, but at the same time is easy to help bring us down. There have been instances where my generation is thankful for social media in the way that it is able to bring old friends together and see what friends and family are up to. On the flip side, social media is so easy to hinder us. It is quick to start comparing with others and feel as if you are not capable enough or doing the best you can. Because of this, I wanted to combine the ease of social media use with our generation and combat the negative connotations it brings. After thinking this all through, I finally decided to design a social media application to help college students navigate through taking care of their mental health.

User Research:

1. Online Research

The project began with me conducting online research about the topic. I was aware of the importance of mental health in college students lives, however I was unaware of the specific facts, thus I started there. The bulk of the findings I found from online research were described in the introduction above.

2. Survey & Interviews

After conducting my online research, I wanted to interview and survey specific individuals to get a better understanding of the problem at hand. The surveys that were sent out to bulk groups of people asked questions similar to those I outlined above. I wanted a general understanding of whether people were feeling similar emotions during their college experience. After gaining general feedback from people during these surveys, I chose 4 people of different backgrounds to interview further. During these interviews, I asked about what sorts of things they experienced specifically, how they coped with it, and what things they would like to see in the future.

The basis of these surveys and interviews were the same in which they allowed for me to reiterate the findings from the online findings. Despite what people specifically faced, the biggest takeaway from these data collection methods allowed me to justify the importance of mental health for college students. One question that helped the most in designing this web-application was asking what are some features students would like to see in an ideal application that helped track and take care of health. I wanted to understand what students would want to see in an ideal application. From this question, I

learned that students were interested in suggestions on a morning routine, suggestions on what to do, a way to keep themselves motivated, a way to track progress and habits, and something that was interactive and personalized to them.

Whiteboarding:

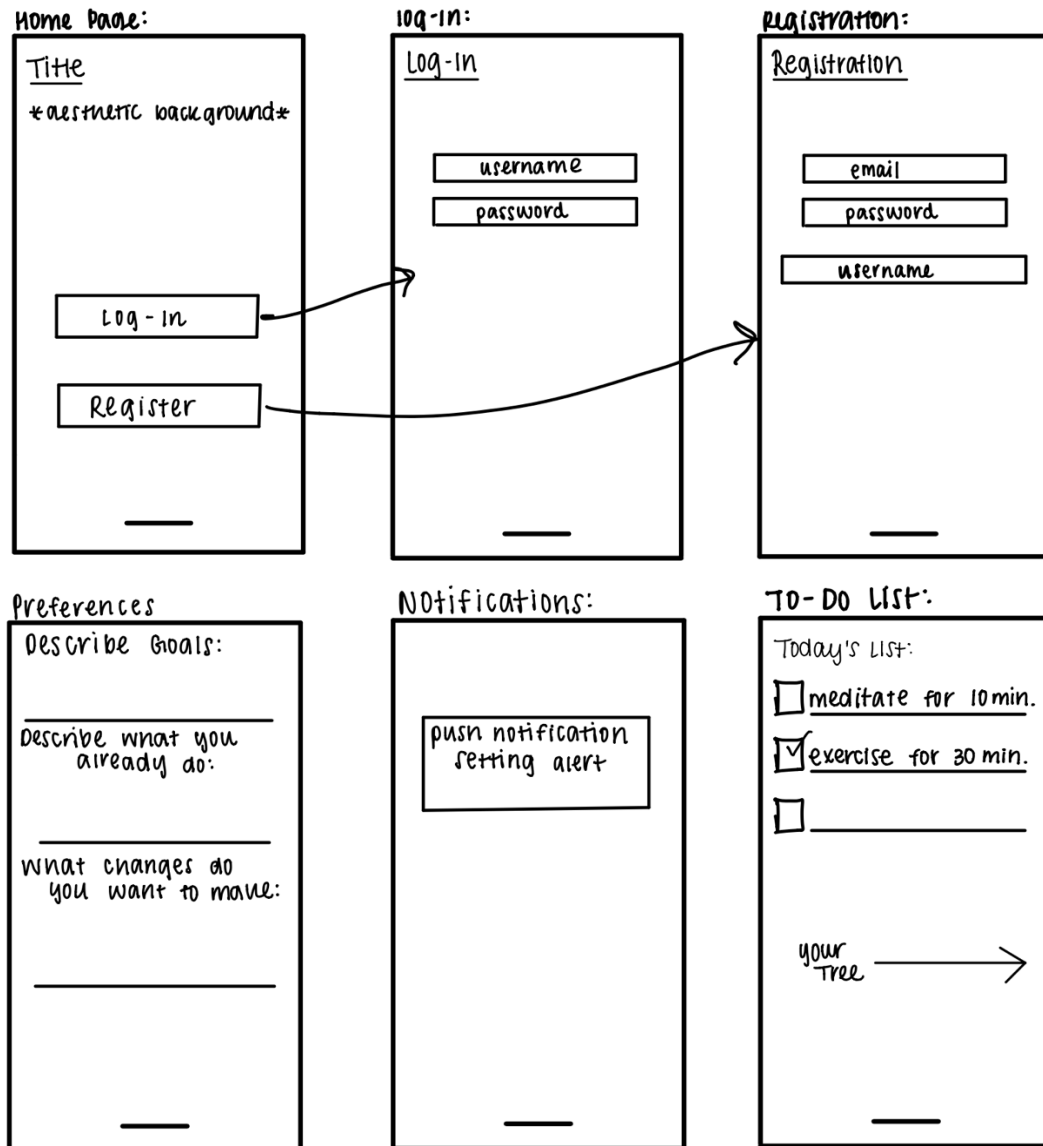
After going through with the online research and the user research, I conducted a whiteboarding session to examine the pain points of what the application would cover. The four main categories for my white boarding session were routine, motivation, resources, and personalization. These were the four main pain points interviewees brought up as things they would like addressed in the application that was being designed. This helped me in my planning as it allowed me to have four main areas to focus the design of the application on. In the figure below, you can see the specific questions/ideas that came up in terms of what things people were looking for in each of the main pain point categories.

Routine	Motivation	Resources	Personalization
How can I keep up a routine?	How do I stay motivated amidst all the school work I also have?	The school sometimes does not account for resources for my needs	Other apps are too general – I would like something for college students
Ensure I make time in my schedule	How do I keep wanting to practice better health without immediate results?	Get unmotivated from the lack of easily available resources	I never know what will help my specific situation the best
How can I make time for mental health and school?	How can I keep myself accountable?	Difficulty finding the right resources to use at the right time	I can never find something that will work for me and only me

Figure 1: White Boarding Session

Storyboarding:

After the white boarding session, I figured out what kinds of things I wanted to include in the prototype. From here I story boarded the low-fidelity prototype. This story boarding session allowed me to draw out the ideas I came up with from the research and whiteboarding sessions. The figures below outline the storyboarding I came up with.



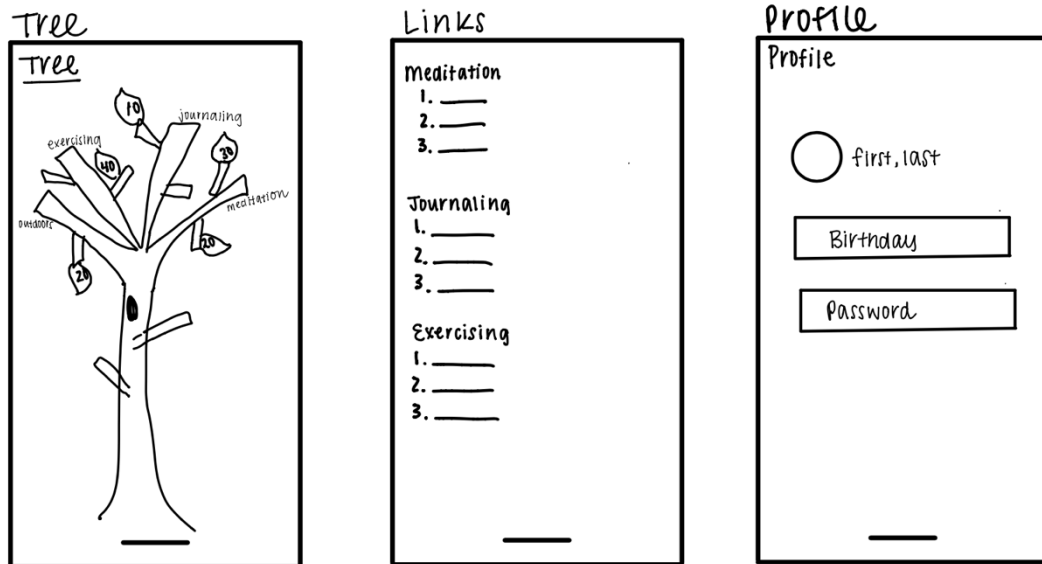


Figure 2: Story Boarding Session

Feedback & Expert Review:

After drawing out the low-fidelity prototype, I conducted some expert review sessions and gathered some feedback. Firstly, I conducted an expert review session using the Nielsen’s 10 Usability Heuristics. These heuristics were talked about in classes and were helpful in conducting review sessions and gathering usable feedback. The 10 heuristics are ranked from 1 – 5, 1 being the worst and 5 being the best. I conducted this review with two experts. The first expert was me and the second was a friend who was familiar with the project and the different heuristics. The scores and averages can be found below in Table 1.

Table 1: Expert Review

Nielsen’s 10 Usability Heuristics	Expert 1	Expert 2	Average
Visibility of system status	2	1	1.5
Match between system and the real world	3	3.5	3.25
Recognition rather than recall	2	3	2.5
Aesthetic and minimalistic design	3	1	2
Consistency and standards	2	2	2
User control and freedom	4	3.5	3.75
Flexibility and efficiency of use	2	3	2.5
Error prevention	3	2	2.5
Help users recognize, diagnose, and recover from errors	1	1	1
Help and documentation	1	2	1.5

From here I was able to clearly identify where I saw problem areas in my low-fidelity prototype. A lot of these low numbers were surrounding the prototype not having a lot of understanding of where you the user was in the app. This is why the ‘visibility of system status’, ‘help users recognize, diagnose, and recover from errors’, and ‘help and documentation’s lower averages come from. The other expert reviewer and I agreed that users were not aware of how to really navigate through the app and how to get from page to page. The other low numbers stemmed from other useful feedback. The ‘aesthetic and minimalistic design’ received a lower average because there was not much design present on the low-fidelity prototype. The ‘help and documentation’ received a lower average as we felt that users would not be able to receive a lot of help if they needed it.

From the expert review, I then went back to some of the users I interviewed and tried to gain general feedback. The feedback I received was useful in making changes prior to the high-fidelity prototype. Firstly, users expressed that they would have liked more navigation between the different pages. This would allow easier back and forth from one to another. Secondly, a user mentioned that it would have been nice to have more specific questions in terms of the “preferences” rather than the open-ended questions that were in the low-fidelity prototype. This was due to the fact that users really wanted the app to be for them and they were worried that if the questions were open-ended the app would not allow for it to make a personalized routine for them. Next, users wanted to keep up the motivation throughout the whole app. They wanted to be reminded of why they were doing this for themselves. In addition to this, they were interested in staying motivated on the different pages you could not see the entire tree. Lastly, users wanted to find a way to

connect to people similar to a social media platform. This was because some users felt that this would motivate them more and they would be able to keep friends accountable on their daily tasks.

Results

After the process was completed and I received feedback on the low-fidelity prototype, I was able to put everything together and create the high-fidelity prototype. The prototype can be seen in the figures below.





Figure 3: Functional Prototype Screenshots

Conclusion

Overall, this project has taught me a lot. For starters, I learned the importance of mental health more in depth. Clearly, from my project motivation, this topic was an important one for me. However, digging deeper I learned a lot about the importance it plays in college students as a whole. Through this, I also learned that mental health is not addressed as much as it should be in college and in the college of engineering especially. Next, I learned a lot through the whole process. This project's motivation stemmed from personal interest alongside some classes I took. Through that I saw how many different classes could come together and allow me to create something that was of interest to me, and I was proud of. Lastly, I learned a lot about interacting with others. From the interviews to receiving feedback, mental health is not something that is easy to talk about for students. I learned how to navigate through some of these hard topics and ask some of the questions to help navigate my project in the right direction. Finally, in terms of next steps, developing the back end of this project would have been ideal. In the future, with more time and knowledge, developing the back end and making it a workable app is what I would ideally want to do.

Overall, I am thankful to have done this project, for what I learned, and for what I gained from it. I would like to thank the honors community, Professor Jessie, and all those that helped me throughout this project. Remember, to always take better care of your health.

References:

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