Wellness Application: User Research Proposal

Ashlyn Cooper
Clemson University
Clemson, SC, USA
ancoope@clemson.edu

Charles Germany
Clemson University
Clemson, SC, USA

Evan Bondura
Clemson University
Clemson, SC, USA
ebondur@clemson.edu

Zachary Clay
Clemson University
Clemson, SC, USA
zclay@clemson.edu

Introduction

On December 20, 2020, Mills Griffin, a former Clemson engineering student and a fraternity brother to one of our team members, committed suicide in his own home at the young age of 23. Mills' tragic passing was a harsh reminder of the true severity and gravity of those who suffer from mental health problems. Furthermore, it illuminated how those around us, even those who seem the happiest, may be afflicted by serious mental health issues with little to no means of seeking help. Driven by these ideas, this team saw a clear need for more freely accessible tools, remedies, and other mental health treatments, and this notion ultimately gave birth to Appiness.

Appiness is a mobile wellness application designed to promote a positive interaction between users and their cellular devices. People everywhere suffer from mental health issues; the National Alliance on Mental Health has estimated that 1 out of 5 U.S. adults (ages 18 and up) suffer from mental illness every year, every 1 in 20 U.S. adults suffer from serious mental illness every year, and even 1 in 6 U.S. Youth (ages 6-17) experience some sort of mental illness every year [6]. As it is evident that people of all ages may be at risk of mental health issues, Appiness sets out to be a simple yet positive mobile application. Appiness seeks to remind users of their accomplishments, ranging from small daily accomplishments to major life goals, and to uplift their mood when they may be feeling stressed, anxious, or depressed through positive quotes, interactions, and various other methods. In summary, this team aims to bring its users happier moments, better days, and overall a more positive mood through their interactions with Appiness.

Rationale Behind Choice of Technology

Apps focusing on improving mental health are not a new concept. Currently there are dozens of apps on the market that aim to improve users mental health through therapy, anxiety reduction, meditation, sleep help, stress relief and more. Apps like Talkspace connect users to mental health professionals. Headspace guides users through meditation, and Moodkit is designed to help users track their moods [1]. However, many of these apps require monthly subscriptions or an upfront cost, like Headspace which requires a monthly subscription of $12.99 [1]. Along with the costs, many of these apps target specific mental health issues or needs like anxiety or depression and are less focused on mental wellness in general. This is where we believe there is a gap to be filled, by providing a free or low cost application aimed at boosting the general wellbeing of young people we are filling a void in the mental wellness app field.

As we thought through the best method of providing mental wellness services to the average young person, we landed on creating a mobile application as the final end product. An application that is available on a smartphone would have the widest reach and be most convenient for users to access on a daily basis at any time during the day. As of 2021, 95% of 18-29 year-olds have owned a smartphone in the past five years [2], meaning that a mobile application is easily attainable for a majority of people in our target demographic. Along with having a wide reach, a mobile application would allow the user to easily interact with the product at any time or place during the day. Whether they are at home or on the go, the users can have access to the app when needed. Finally, we wish to incorporate a notification system into our application. Notifications are a common feature of mobile apps that users would be familiar with. Having the application on a mobile device would also mean that notifications are more easily seen by the user.

Numerous articles have been published in the field of HCI dissecting the effectiveness of mental health applications. Many of these articles suggest that wellness applications have the potential to expand the availability and quality of mental health treatment [3] as well as be a useful interventional tool. They can also act as a

supplement to existing treatments [5]. However, research from the basis of an HCI perspective is limited in showcasing the efficacy of these apps as evaluating the efficacy of the applications is beyond the scope of HCI and requires research from medical, psychological, and other fields [4]. Some HCI research did suggest though, that high efficacy apps did have app patient engagement, a simple user experience, and self monitoring features [7], which we will keep in mind as we design the look and interactions within our application.

Research Methods
Target Demographic
Because our application focuses on improving mental health and wellbeing, our target demographic is students and young adults between the ages of 18-25. Our research methods will be designed around students and young adults, and their input will shape our product and prototype development.

Gathering and Analyzing Data
To gather information about our target demographic we will be using a questionnaire hosted on Google Forms and disseminated through the web. Google Forms will be convenient for our user group because most of them are already familiar with the software and have completed Google Forms in the past. The form will clearly indicate instructions on how to complete the questionnaire in order to avoid miscommunication or false data. The questionnaire will consist of both open and closed questions. For the closed questions, we will gather information on the users' demographics, gender, age and use the Likert rating scales for measuring users' attitudes, opinions, beliefs, and satisfaction towards a topic/scenario. The open questions will allow us to gauge information on what types of features are important to our targeted users.

In addition to the questionnaire, we intend to use a semi-structured interview on a small group of users (5-10 users). This interview will consist of mostly open-ended questions in order to allow the participants to freely express their thoughts without being contained to only a few answer choices. To gather data from the interview, we will be taking notes and recording audio so we can later listen and analyze the participants' responses.

To analyze our data, we will first look for common threads on what features people will be interested in within our application. This will include information such as what features they value, the type of design interface they prefer, and the type of notification system that would be most helpful for improving their mental health and wellbeing. After finding common threads, we plan to group those answers into categories based on the aforementioned topics, and based on these topics and the groupings we create, we will take those findings and use them to build and design our product. Our prototype will include the features and interfaces that match up with the data our target demographic provided as well as our own ideas that we feel are most important to the product.

Evaluation of End Product
To evaluate our end product, we will be conducting usability tests with participants from our target demographic. We plan for those participating in the tests to have also filled out our questionnaire or participated in an interview. We will give the participants a series of tasks to complete in our application and monitor them throughout the process. This will allow us to gather data on the usability and overall user experience of our product. Following the completion of our usability tests, we will then have the participants complete a post test survey in order to give us feedback on our design. Using this feedback, we can then refine our design to better match the needs of our target demographic and make other improvements now that we have real user experience with our app.

Team Resources
Since we will only be prototyping the user interface of the application and not a fully functioning app, with a working backend, we believe we have the skills necessary to complete this project. Each of us either brings in experience with some of the skills needed to complete this project or a willingness to learn new skills to further our professional development. Evan has some experience in mobile app design. Zach has experience with prototyping and user interface design. Ashlyn has conducted usability testing and user research before. Finally, Charles, along with the rest of us have a willingness to learn prototyping tools such as Adobe XD or Figma in order to create our prototype.
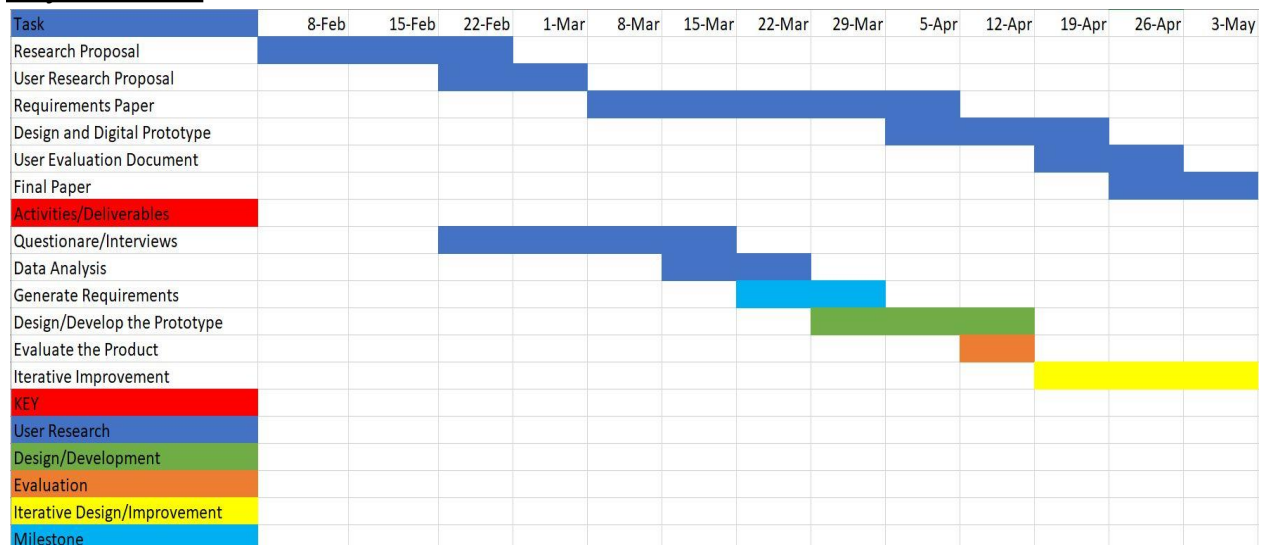
Participants for Research

As our target demographic is young people and students between the ages of 18-25, our research participants will be individuals from this demographic. Since we ourselves are within this demographic, we will create our participant pool through convenience sampling of the student population at Clemson. Each of us will interview one or two people in our own lives as well. As previously mentioned, we will also send out a questionnaire to reach a broader range of Clemson students.

Proposed End Product

Our plan is to create a mobile wellness app called "Appiness" that provides users with interactions meant to improve their daily lives and make them more cheerful people. The software's design will include positive coloring (yellows, reds, light blues…), effective and intuitive traversal throughout the program, and several different user interaction elements programmed to provide users with an overwhelmingly positive experience. The design of the app should align with the goals of the product. Not only should the functionality of the application attempt to make people happier, but the design along with the features should work together to provide a more fulfilling experience for our user base. A vibrant, well-designed app will help facilitate a positive experience between users and the software and further our goal of making users happier on a daily basis.

The application will include several different daily use features as well as other interactions intended to make our user base happier. One of the daily features we plan on implementing will be a positive daily quote intended to start our users' days off in an uplifting way. The app will also include a daily advice column which will provide meaningful, and helpful information on different aspects of mental health, and provide users with ways of dealing with stress or anxiety that they may be feeling. Users will be able to input their mood and the advice column can then be specifically tailored to their needs and feelings each day or week. A calming meditation section within the app will also provide users with a way of de-stressing and relaxing when they need it. Another feature that people may find beneficial is an interrupt or interrupts throughout the day that describe an activity they can complete in order to improve their mood or put them at ease. The frequency and types of activities the user is doing could also be tailored to each individual through a feedback system on whether or not they liked the activity they were given that day. The goal of our app is to provide users with different ways of coping on harder days where they may feel sad, uneasy, or worried. The several features outlined above will ensure a user positive experience for any person that downloads our app and will hopefully help people fulfill their goals in the long run by making them happier on a daily basis.

Project Timeline

Task	8-Feb	15-Feb	22-Feb	1-Mar	8-Mar	15-Mar	22-Mar	29-Mar	5-Apr	12-Apr	19-Apr	26-Apr	3-May
Research Proposal	███	███											
User Research Proposal			███										
Requirements Paper				███	███	███	███	███	███	███			
Design and Digital Prototype											███		
User Evaluation Document												███	
Final Paper													███
Activities/Deliverables (red)													
Questionare/Interviews			███	███	███	███							
Data Analysis						███	███	███					
Generate Requirements							▓▓	▓▓	▓▓				
Design/Develop the Prototype									▒▒	▒▒			
Evaluate the Product										░░			
Iterative Improvement											▓▓	▓▓	▓▓

KEY

User Research	(blue)
Design/Development	(green)
Evaluation	(orange)
Iterative Design/Improvement	(yellow)
Milestone	(light blue)

References

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