

Community Reception of Student Developed App to Help Community Members in Mental Health Crisis

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Abstract

Approximately two years ago, three students developed an app under the guidance of a faculty mentor. The goal of this app was to digitize the school's Red Folder in an effort to raise awareness of on campus resources for students experiencing a mental health crisis with students, faculty, and staff. The app was designed to work natively with both iOS and Android devices. Prior to the start of the Fall 2021 semester, the app was deployed to both the Google Play Store and the Apple App Store as a free download for students, faculty, and staff. The app was well received by the campus community with many applauding it. The school paper was also interested in the app as well prompting an article from the student run newspaper to be written and published. This paper seeks to examine what has happened in terms of adoption on campus over the past two years.

This paper will begin by restating the initial problem as well as the background research and materials and methods used to complete the app development. The app design will also be discussed. Once this is done, there will be a discussion of the advertising done in the first year and the resulting number of downloads. Afterwards, the advertising and resulting downloads for the second year will be examined. Following this, the discussion will analyze the results from the first two years. The paper will look at the successes and failures as well as the lessons learned from the past two years and what the strategy is moving forward.

1.0. Introduction

Approximately two years ago, three students under the direction of a faculty mentor and with the aid of two outside experts created an app to replace the school's Red Folder. The original Red Folder was designed as a resource for faculty to address mental health situations that may occur in the classroom and was based off what came out of the University of California [1]. This folder while beneficial had a few shortcomings including:

1. Only being distributed to select groups on campus (faculty and staff)
2. It could be easily misplaced or damaged
3. Not being in a form that was always available

Given these shortcomings it was obvious there was room for improvement. Moreover, given the negative impact poor mental health can have on post-secondary education [2] as well as the increased difficulties students have faced due to the COVID-19 pandemic [3], the need for this information to be made available to everyone on campus and not just a select few was clear. Under faculty guidance these students created LionHELP with the explicit goal of correcting the deficiencies listed above. In this paper, the development of the original tool will be discussed as well as the adoption on campus over the two years after the app's release.

2.0. Background

To be clear, the app discussed here is not the only app in this space. There are other apps that look to help with mental health concerns on campus. The article by Alkhouri includes a few in this space including "YOU at College", "B Well UAB", and "Unmasked" [4]. Apps like "YOU

at College” and “B Well UAB” can be beneficial as they include ways of self-assessing and also information on resources available on campus [5] [6], but require an internet connection on the user’s device in order to work / provide information. This was seen as a hinderance since an internet connection may not always be available during a mental health crisis. The information should be available with no reliance on connectivity whatsoever.

Unmasked is another app in this space, but serves more as a way for students to give one another advice anonymously with some oversight from admins to ensure nothing serious / life threatening is discussed on their platform [7]. While it is helpful for students to be able to support one another anonymously, the preferred approach was to get students connected to professional resources available on campus who are trained to handle mental health issues.

3.0. Implementation

3.1. Development

The development of this app was done by three students, two were studying Computer Science and the other was studying Software Engineering. A member of the school’s Computer Science and Software Engineering faculty served as their advisor. It was determined that in order for this project to be successful two additional advisors would be needed. The first was a member of the school Counseling Center who served as a subject matter expert on mental health. The second was a member of the school’s English faculty to ensure the most appropriate language was used in this app.

Once the team was in place, the next step was to select the tools to develop the app. While web app tools and frameworks were considered, the team ultimately chose to go with a native phone app given the previously discussed concerns around connectivity. While there are tools available to create multiplatform apps, the team decided to instead do native app development. While this created two code bases, this meant the apps would be able to take full advantage of features found in iOS and Android both for version one as well as for any future versions down the road. On top of this, when it came to ensuring students with disabilities could use the app the native development facilitated the use of assistive technologies found on both platforms.

3.2. App Overview

The resulting app, LionHELP, serves as a digital version of the school’s Red Folder. The app is divided into four sections: Recognize, Respond, Refer, and Resources. The app home screen shown in figure one displays these four sections, each with a brief description of the information it contains. Note that for this writing the iOS version of the app was captured and the Android version contains the same functionality.

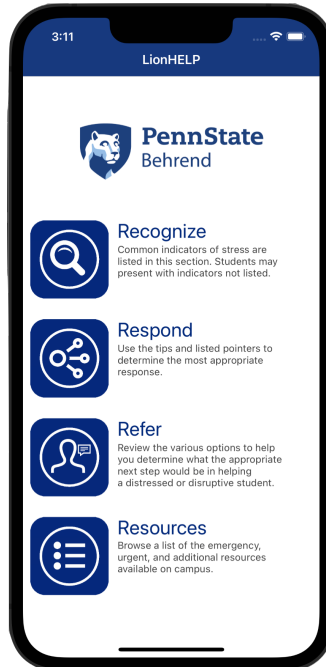


Figure 1: Home Screen for LionHELP

The Recognize section was designed to be an interactive survey. Users select the symptoms they are exhibiting or someone they are concerned about is exhibiting. At the end of the survey, the user is presented with a screen that summarizes how many symptoms they selected in each category. The screen also shows how many symptoms were selected out of the total number possible. It is important to note here the app does not attempt to make any diagnosis regarding mental health based on this survey, this is purely to trigger introspection in the user. Figure two shows the survey as well as the finalized screen.

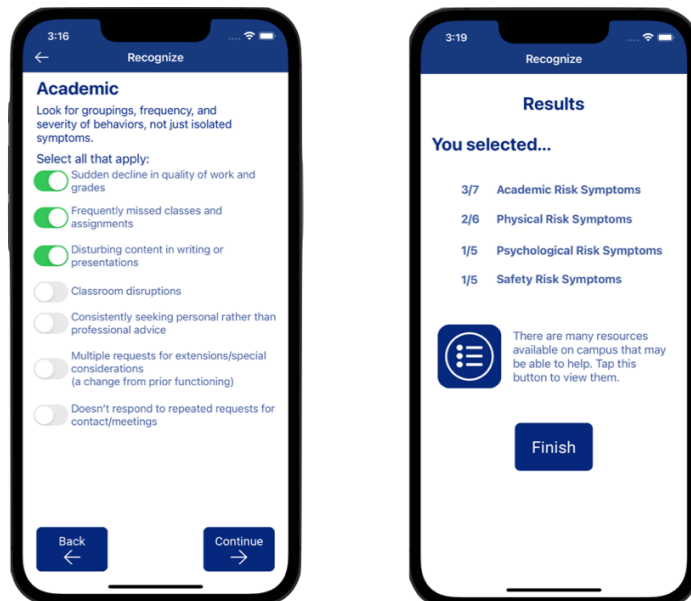


Figure 2: Recognize Survey

After Recognize is Respond. This section is designed to provide guidance on talking to someone who is potentially having a mental health crisis. The outside expert from the English department proved pivotal here as the language needed to be updated to be more inclusive given the change in audience from just faculty and staff to the entire campus community.

Refer is the third section of the app. This section is designed to assist when someone does not know who the correct resource on campus is for a given situation. The user is presented with a question and the possible answers to that question. Based on their selection either more questions are asked or a suggestion is made.

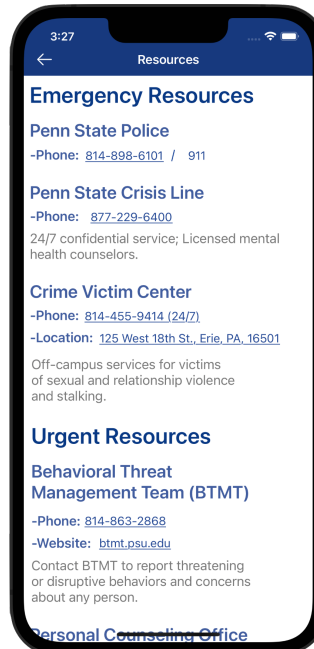


Figure 3: Resources list

Lastly is Resources, a section listing all the available resources both on and off campus that can be leveraged in the event of a mental health crisis. Given the app is built natively for iOS and Android the full API for each platform is available. This includes the APIs for the maps application, email client, and phone. Because of this all physical addresses, email addresses, and phone numbers found in this section (and elsewhere in the app) are interactive and tapping on them takes the user to the appropriate app. For example, if a user selects an address for a resource in town they are brought to the maps application for their device and that location is highlighted on the screen.

4.0. Adoption

	Fall 2021	Spring 2022	Summer 2022 (June – July 2022)	Fall 2022	Spring 2023 (to date)
iOS [8]	108	38	83	129	25
Android [9]	63	12	32	31	8
Total	171	50	115	160	18

Table 1: App Downloads

4.1. First Academic Year

In the first academic year the number of downloads was over 200. This is comprised of a total of 171 downloads in the Fall semester and another 50 in the Spring semester. It is worth pointing out there was little on campus advertising done during this time. All advertising was done strictly by word of mouth from a few faculty members on campus and through an article in the campus newspaper. This hurt adoption as not every student was made aware of this app. Given a campus population of students and faculty totaling 5,250 this results in an adoption percentage of three percent which was clearly insufficient.

4.2. Summer 2022 and Second Academic Year

After the less-than-ideal start in the first academic year, it was clear a stronger advertising push was needed. To help increase awareness an advertising campaign was created along with discussion of the app in first year orientation sessions. Door hangars were also created and placed on each dorm room door. These door hangars also included a QR code to facilitate easy download of the app. With this new advertising push, the total downloads now exceeds 514 units. This results in a total campus adoption of over nine percent. While this is a three times improvement over the performance from the past year, it is still far from where adoption should ideally be.

4.3. Usage

Due to confidentiality, it is unknown if the app is increasing traffic to services available on campus (ex. counseling). Despite this, the developer portals provided for both iOS and Android provide usage statistics. Over the past two years, this app has had an average of twenty-four active sessions on iOS per month [8]. This information does not appear to be available for Android currently [9]. Despite the lack of data from the Android developer portal, it stands to reason that if students are downloading the app they are potentially seeking mental health related services for themselves or a peer on campus.

5.0. Plan Moving Forward and Conclusion

While nine percent adoption is not the desired result, the advertising campaign that has been undertaken has improved the adoption of LionHELP. By continuing this marketing strategy of introducing students to LionHELP as incoming freshmen with time all students on campus will at least have awareness this app exists and (ideally) will have the app downloaded to their device. Even though the number of downloads right now is not high, the fact that there are downloads clearly people on campus who see the benefit of this app and understand how it can be useful to themselves or others on campus.

Of course, right now the app has one singular focus...mental health. Ideally with time more sections can be added to this app to assist other groups who may need it including students with learning disabilities and students in the LGBTQIA+ community. Additionally, it is possible that more functionality could be added to provide more tools to help students in dealing with mental health issues.

6.0 Works Cited

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