

Design of a Mobile Application to Consult Virtual Psychology and Emotional Support Aimed at University Students in Peru

Carlos Jacinto La-Rosa-Longobardi¹, Djamila Gallegos-Espinoza²

^{1,2} *Escuela de posgrado, Universidad Nacional de Educación Enrique Guzmán y Valle, Lima-Perú.*

Date of Submission: 11th October 2023 Revised: 24th November 2023 Accepted: 06th December 2023

How to Cite: Carlos Jacinto La-Rosa-Longobardi, Djamila Gallegos-Espinoza (2024), Design of a Mobile Application to Consult Virtual Psychology and Emotional Support Aimed at University Students in Peru. *International Journal of Applied Engineering and Technology* 6(1), pp.7-11.

Abstract - The present research work focuses on the design of a mobile application aimed at providing virtual psychological consultations and emotional support aimed at university students in Peru. Given the growing concern for mental health in this demographic, we seek to provide an accessible and effective tool that addresses the emotional challenges students face. The design of the application considers crucial aspects such as cultural adaptation, privacy, therapeutic quality and the integration of educational resources. With a focus on interdisciplinary collaboration and user feedback, this project aims to improve the emotional well-being of university students and contribute to the development of effective solutions in the field of mobile mental health. For the development of the research, a RUP methodology was used for a better performance in showing the solution found. It was concluded that technology can be very useful to solve problems where the emotional well-being of university students is affected.

Index Terms - Hybrid application, survey, research, Design Thinking methodology.

INTRODUCTION

College student psychology is an important field of study that focuses on understanding and addressing the psychological and emotional challenges students face while pursuing their undergraduate studies. The situation may vary based on geographic location, college culture, and other factors, but in general, there are some common trends that have been observed in college students around the world.

It is for this reason, college students often face high levels of stress related to academic load, exams, projects, and performance expectations. This stress can affect your emotional and mental well-being. Anxiety and depression are common mental health problems in college students. Academic, social, and personal pressures can contribute to these disorders [1].

In addition, many students experience a difficult transition from high school to college, which may include the need to learn new study skills, manage their time effectively, and adapt to greater independence.

The financial burden of tuition, accommodation and other university expenses can be overwhelming and affect students' mental health [2][10].

In this way, technology can play an important role in helping college students manage their emotional and mental well-being, there are numerous mobile applications designed to provide support in managing stress, anxiety, depression and other mental health issues [3].

Teletherapy or online therapy is a convenient option for students who may have difficulty accessing in-person mental health services. On the other hand, teletherapy platforms such as BetterHelp or Talkspace connect students with licensed therapists through video calls or chats [4].

Some apps and platforms allow students to track their emotional well-being over time. They can record your moods, stress levels, and other factors, allowing them to identify patterns and take proactive steps to maintain your mental health.

There are some universities that offer online chat services with counselors or trained volunteers who can provide emotional support and resources to students in need [5].

Some mental health professionals use virtual reality as a therapeutic tool to treat disorders such as post-traumatic stress disorder or phobias. Virtual therapy can offer an immersive way to address mental health issues [6].

The design of a mobile application to provide emotional support to college students must be carefully thought out to be effective and useful.

Developing an ovil app to provide psychological consultations and emotional support to university students in Peru can be an effective way to address the mental health needs of this population.

The main objective of the research is to design a mobile application for virtual psychological consultations and emotional support aimed at university students in Peru.

The work is structured as follows in section II is the literature review, III methodology, IV discussion and V conclusion.

LITERATURE REVIEW

The author [7] describes how psychological telecare works and is carried out for university students with ET who present anxiety, depression and psychotic episodes. The process was detailed, mentioning strategies, techniques, instruments and technological resources, in addition to identifying benefits and limitations. The research was descriptive and was conducted with university students with ASD in a private educational institution in Lima. Psychological telecare proved useful in identifying the causes of critical episodes and allowing the application of cognitive-behavioral therapy techniques remotely, involving parents. It was concluded that assessment tools adapted for ASD are needed and that this form of assistance can be applied in different contexts and modalities, contributing to the development of skills for the population with ASD.

Likewise, the author [8], points out that, in the field of mental health, the use of mobile applications (apps) is being integrated into evaluation and treatment to improve the process and therapeutic results. The purpose of this research is to analyze the availability of applications in Spanish for the evaluation and treatment of mental health in both clinical and non-clinical population. To carry out this study, a review of the scientific literature published in the last five years in Scopus, PubMed and PSYCinfo was conducted. Articles that examined the performance of apps in Spanish-speaking adults in the context of mental health were chosen.

Of the 193 articles identified, 11 were selected for systematic review. The results are presented by dividing the studied population into two categories: general population and clinical population. In addition, within the clinical population, the specific symptoms treated are analyzed. In conclusion, although the use of applications in Spanish in the field of mental health is limited, encouraging results are observed that indicate the importance of continuing research in this area to improve the quality and effectiveness of mental health care.

On the other hand, the author [9] infers Mobile applications focused on the practice of mindfulness represent a means to take advantage of the multiple benefits both psychological and physical associated with mindfulness. The purpose of this study is to propose a prototype of a mindfulness mobile application. To carry out this, we will carry out a thorough review of the mindfulness applications available on Android and iPhone, in order to analyze their characteristics, quality and their suitability for use in educational contexts, using metrics such as the Mobile Application Evaluation Scale (MARS).

To carry out this analysis of the applications currently available on the market, a search was carried out both in the Android application store, known as "Play Store", and in the iOS application store, called "Apple Store". In total, nine applications were identified that exceed the minimum acceptance score, set at 3.0, of which only three obtained an average score higher than four.

It concludes that there is a shortage of mindfulness apps designed specifically for secondary education, as most of them are aimed at early childhood and primary education. This indicates an area of significant improvement in this field.

METHODOLOGY

To carry out this research work, a RUP methodology will be used, the phases of the methodology will be detailed as follows.

a) Beginning

The design of a mobile application for virtual psychological consultations and emotional support aimed at university students in Peru can have an important objectives and scope, which are.

- *Virtual consultations:* The app will allow students to schedule and conduct virtual psychological consultations with mental health professionals.
- *Chat and messaging:* Offer real-time chat and messaging to provide ongoing emotional support and quick access to advice.
- *Self-help resources:* Provide a library of resources such as articles, videos, and practical exercises to help students manage their mental health.
- *Support groups:* Facilitate the creation of online support groups where students can share experiences and provide mutual support.
- *Tracking and logging:* Allow users to track their emotional progress and record their experiences
- *24/7 Access:* Ensure the app is available 24/7 so students can seek help at any time.

b) Elaboration

The architecture of the system can be seen in Figure 1, where we see that those involved are the users, psychologists, all this support will be given through a mobile application that will be connected to the internet since its different modules require it and all the registered information will be loaded into the cloud.

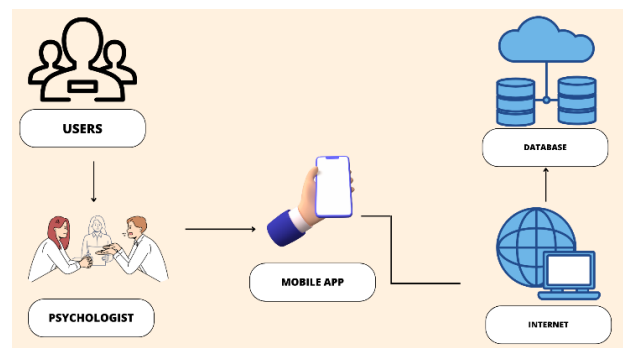


Fig. 1 System architecture

c) Construction

We can observe the prototypes that our mobile application design will take. In this way, Figure 2 shows the main screen that has a username and password, it is important that each user is registered since a record will be kept in the database for better control of the psychological help that will be provided to university students in Peru.



Fig. 2 Home Screen

Graphical user interface Automatically generated description. On the other hand, Figure 4 shows the form module where each user must answer 10 questions, these questions will be based on a psychological test to see how the mental health status of each user is.

In Figure 5, the chat module is observed where the user will be able to converse with an online psychologist, it is expected that by implementing this module the user can have non-direct contact to gain confidence and talk about how he has been doing during the week or if he has any problems.



Fig. 3 Modules



Fig. 4 Form module

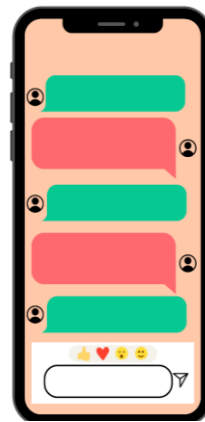


Fig. 5 Chat

Figure 6 shows the information module where the user can view campaigns, talks that the university will provide to help each student psychologically. The information will be updated according to the events that will be provided on the campus of the university.

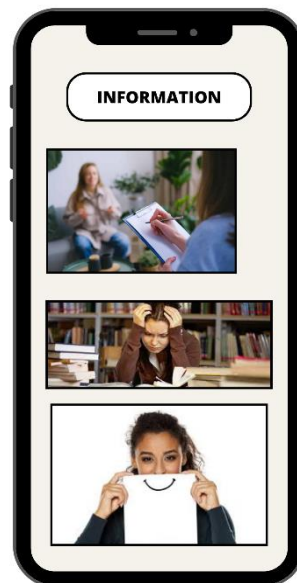


Fig. 6 Information

Figure 7 shows the last module which is a forum where users can exchange experiences, talk about topics they would like to talk about or announce any event that would help the university community with psychology issues.

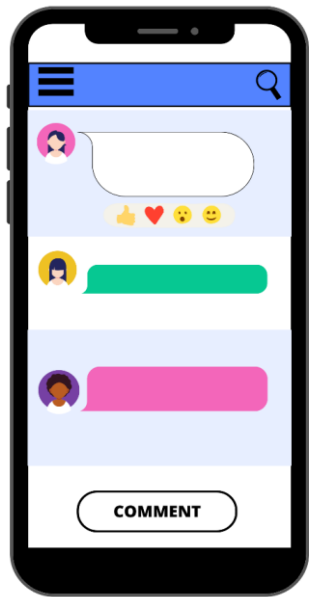


Fig. 7 Foro

d) Transition

A survey was conducted to 15 university students of different careers, to ask the following questions:

1) *Technology*: Do you think technology could help college students with psychology issues? By asking this question it is expected that students can give their point of view as technology could solve and contribute to psychological issues. Figure 8 shows the results.

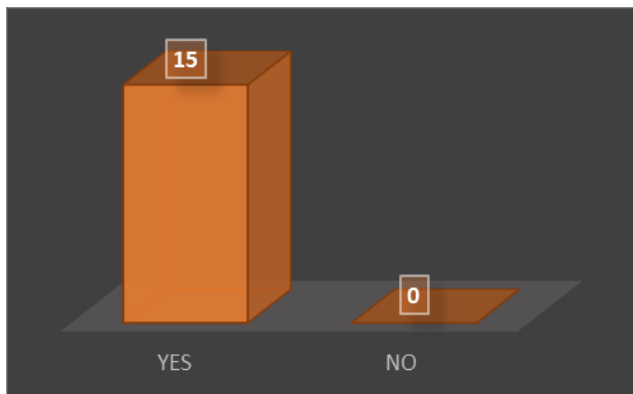


Fig. 8 Technology

2) *USE*: Would you be willing to use a mobile application for psychological consultations and emotional support? This question was asked to find out if students would be willing to use a mobile app for help and emotional support.

In Figure 9, we see that 100% of respondents answered that they would be willing to use a mobile application as emotional and psychological support.

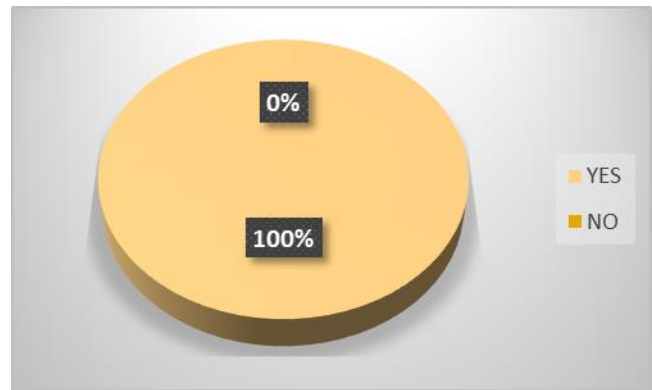


Fig. 9 Use of the mobile application

3) *Notifications*: Would you like to receive reminders or notifications to check your emotional well-being regularly? By relating this question, it is expected that university students through palliation can find emotional support and can solve their problems of stress, anxiety or depression. Figure 10 shows the results where everyone agrees to receive notifications.

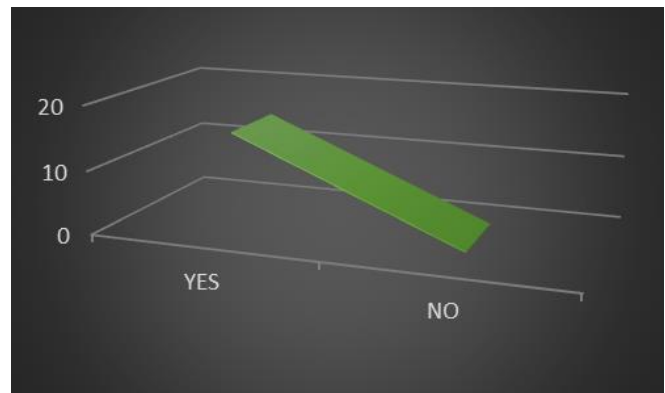


Fig. 10 Notifications

DISCUSSION

The author [7], describes psychological telecare for university students with ASD and the proposal to develop a mobile application to provide emotional support in Peru raises the opportunity to improve accessibility to mental health services and the development of emotional skills in an academic context. The effectiveness of telecare, adaptation to cultural needs, and ethical and technological considerations must be carefully addressed to ensure that this initiative benefits the student population in a meaningful and sustainable way. The interdisciplinary approach and collaboration between mental health professionals and technologists are critical to addressing these challenges holistically.

Likewise, the author[8] infers from an integration of mobile applications in the evaluation and treatment of mental health, particularly in the context of the Spanish-speaking population, raises relevant questions in relation to the feasibility and effectiveness of a mobile application designed for virtual psychological consultations and emotional support aimed at university students in Peru. The results of the research indicate that, although there are limitations regarding the availability of applications in Spanish in the field of mental health, encouraging results have been obtained in the evaluation of their performance. This suggests that the development of a mobile application could be beneficial for Peruvian university students, as long as the lessons learned from the systematic review are taken into account and the application is designed effectively.

For the design of the mobile application, it would be crucial to consider cultural and linguistic adaptation to the Peruvian population, as well as the inclusion of assessment and treatment tools relevant to the most common mental health problems among university students in this context. In addition, the experience and best practices identified in the systematic review, such as the focus on specific symptoms and the segmentation of the clinical and non-clinical population, could be leveraged. Collaboration with mental health professionals and conducting pilot studies to evaluate the effectiveness of the application in the Peruvian context would be essential steps to ensure its usefulness and effectiveness.

The discussion around the creation of a mindfulness mobile app [9], based on a comprehensive review of existing apps, raises several points of interest regarding the use of technology to foster mindfulness and the psychological and physical benefits associated with this practice. First, the proposal to develop a mindfulness app suggests a recognition of the growing importance of this technique in the field of mental health and well-being. Mindfulness has been shown effective in reducing stress, anxiety, and improving concentration and overall well-being. The availability of a mobile app could expand access to these therapeutic tools, allowing a wider audience to experience their benefits.

CONCLUSIONS

The design of a mobile application aimed at providing virtual psychological consultations and emotional support aimed at university students in Peru represents a promising initiative to address growing concerns about mental health in this population.

If implemented effectively and considering key aspects such as accessibility, therapeutic quality, privacy, cultural adaptation and sustainability, this application could become a valuable tool for the well-being of university students in the country. However, it is critical to approach these aspects carefully and ensure that the application is part of a comprehensive approach to mental health that involves mental health professionals and educators, with an ongoing commitment to evaluate its effectiveness and improve it over time. Ultimately, the success of this initiative will depend on interdisciplinary collaboration, attention to ethics, and dedication to providing effective emotional support to a population that can benefit significantly from these types of resources.

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