

Mind Note – Application for Mental Health Support

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Abstract. This paper presents a mobile application supporting mental health combining techniques to detect different mental health disorder symptoms. It provides different interactions, using affirmations, emotions, based on unloading techniques such as writing, drawing, and monitoring associated emotions, providing modalities to save and track progress.

Keywords. Mobile application, database, mental health, anxiety.

1. Introduction

Nowadays, more and more people suffer from different forms of mental health disorders, but since the COVID pandemic started, global prevalence of mental health disorders has increased significantly. Depression and anxiety disorders are one of the most common diagnoses and often go hand in hand. Depressive disorder (also, known as depression) is a common mental health disorder. This implies a general depressed mood (sadness, irritability, inner emptiness, anxiety), or loss of pleasure and interest in activities for a prolonged period of time [1]. Depression is about 50% more common in women than in men [1]. Anxiety is a normal feeling of fear or worry about certain triggering events. It normally appears shortly before this factor and disappears after it passes, or it is understood. When this feeling of anxiety persists, is chronic, and affects quality of life, both psychologically and emotionally, as well as physically, they have various anxiety disorders, such as social anxieties, phobias, and generalized anxiety [2].

Mobile applications have significant potential to deliver highly effective mental health interventions. Given the global shortage of psychiatrists and the lack of access to mental health care in rural regions, apps have emerged as a viable tool to bridge the mental health treatment gap. Technology is already at the point at which it can transform the way mental health treatment is delivered and accessed, but this transformation requires the combined mobilization of science, regulation and design. There are in the market different applications for mental health such as: eMoods [3], Calm Health [4], Bearable [5], Moodfit [6].

The first version of this mobile application aiming to improve the mental health of people, uses different techniques to combat anxiety, panic attacks, by using techniques

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to improve self-esteem and encouraging positive thinking through the use of affirmations, techniques to unload emotions such as writing, drawing and monitoring associated emotions, and also providing a way to save and track progress.

2. Material and methods

The Mind Note application is a mobile application developed in Android Studio using Java programming language and Firebase for database. Version 1 features of the Mind Note application are: creating and using a user account to save and track progress; techniques for dealing with anxiety and panic attacks, both written as instructions and guided animations; techniques for unloading and monitoring emotions, such as writing, drawing, tracking, saving associated emotions; techniques to improve self-esteem and encourage positive thinking through the use of affirmations. Figure 1 presents some print screens from the Mind Note application.



Figure 1. Mind Note application interfaces.

3. Conclusions

This paper presents the first version of the project Mind Note, the mobile application which main focus is on techniques used for anxiety relief, but in the second version more modules will be added, which will be focused on depression disorder. The modules intended for the second version will provide a Smartwatch used by the user, which will send data about heart rate, movement, stress levels and sleep to a mobile device. This data will be used to establish if the user has an anxiety or panic attack, also if the anxiety affects the quality of sleep and if the medication had an effect in improving the symptoms of anxiety and depression. The user will receive a notification and suggestions on what to do to improve their mental health. For getting better results Machine Learning techniques will be used to analyze the data received from the Smartwatch.

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