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Use of Mental Health Applications in Real Life

Shreya Sundkar[1[0000-1111-2222-3333]] and Shipra Shetty[2[1111-2222-3333-4444]] and Janice Mascarenhas[3[2222-3333-4444-5555]] and Vishakha Sancheti[4[3333-4444-5555-6666]] and Mahesh Bhandari[5[4444-5555-6666-7777]]

[1] *MIT World Peace University, Pune 411038, Maharashtra, India*
[2] *MIT World Peace University, Pune 411038, Maharashtra, India*
[3] *MIT World Peace University, Pune 411038, Maharashtra, India*
[4] *MIT World Peace University, Pune 411038, Maharashtra, India*
[5] *MIT World Peace University, Pune 411038, Maharashtra, India*

ABSTRACT
In the pandemic situation of Covid19, it is so obvious of getting mental health problems, due to whatever reason. Mental disorders or illnesses refers to a condition that affects your feeling, thinking, behavior, and mood. They may be long-lasting (chronic) or occasional. They can affect your ability to relate to others and function each day.It is very necessary to take proper treatment on proper time.Treatment depends on the type of mental illness you have and how grave it is. You and your psychologist will plan a treatment suitable for you. It generally involves some type of therapy but you may also be required to take medicines. Some people also need education and social support on managing their condition.The utility of Metal Health Apps for the treatment is a good option.

Keywords: Mental health, disorders, treatment, mental health application, therapy

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I. INTRODUCTION

Mental or psychological health refers to behavioral, logical, and psychological well-being in humans. A psychological state of a person is all about how they think, experience, and behave. And each one of these terms tends to affect the daily life, relationship and health of a person. [1]

Looking after condition, taking proper care of it can maintain a person's capability to relish life. Various status disorders like depression, anxiety and stress can affect psychological states and disturb an individual's routine. Mental health is often known as a condition of well-being within which a person recognises their own abilities, can work productively, can handle the traditional stresses of life, and is in a position to form a contribution to the community.

The most frequent varieties of psychopathy are:

Anxiety disorders: People with anxiety have some reasonably fear or anxiety due to some incident or happening in life. People having such issues will try to keep away from exposure to situations or people that trigger their anxiety. People may also encounter physical symptoms, such as restlessness, weakness, tense muscles, and disturbed sleep.

Mood disorders: These are either depressive disorders or affective disorders. People with mood disorders will have notable changes in mood, typically involving either mania, which might be a period of great energy and happiness or depression. For example, Major depression; during which a person experiences a relentless bad mood and is not interested in anything. They'll feel sadness in whatever work or activities they're doing.

Depression: The depression treatment options won't end in complete reduction of symptoms, and sometimes fail to handle post-treatment, sub-clinical or residual depression symptoms. [2]

In the century we board, Technology has reached almost every area, resulting in a surge in the number of mobile apps available for diagnosis and treating of status disorders or symptoms. Internet-based "E-health" technologies have determined efficiencies and advantages within the domains of health development, avoidance, early interference, and prolonged treatment. Using the features of such technologies, we are beginning to create a more responsive and efficient mental healthcare system. [3]

Mobile-based status apps represent a special opportunity for expanding the treatment of condition problems, the amount of mobile health applications

focused on the mental state has increased rapidly. In a survey of 15,000 apps conducted in 2015, the World Health Organization (WHO) revealed that about 29% of the apps focuses on mental health problems and their treatment. [4]

These applications basically aim at a wide range of mental disorders and differ in functionality and design. Mental health applications are classified into six categories supported by their functionality: self-management, social support, cognition improvement, skill coaching, tracking symptoms, and passive data collection. These apps can include several stages of clinical services, including diagnosis, psychotherapy, avoidance, primary treatment, alternative to in-person therapy, and after treatment symptom management. Mobile apps are an honest choice for treatment of psychological disorder in comparison to other platforms due to (I) high hedonic motivation, (II) low effort expectancy, and (III) easy habit.

Because the users generally use apps at their convenience with no clinical oversight, they have to be inspired to interact with the app. Patient engagement has improved through gamified interactions; usage reminders; real-time engagement. Features that allow users to keep track and monitor their mood by making a note of their actions, behaviors, and thoughts can increase emotional self-awareness. [5]

Mobile status support is incredibly simple yet effective. New technology is also wrapped into a very sophisticated app for mobiles or tablets. If the app detects a switch in behavior, its visiting provides an indication that assistance is required before a crisis occurs. Some applicationss are stand-alone programs that guarantee to reinforce memory or thinking skills. Others help the users to connect with a peer counsellor or to professional help.

Excitement about the massive range of opportunities has led to a explosion of app development. There are thousands of psychological state apps available in iTunes and Android app stores, and thus the quantity is growing annually. However, this new technology frontier has plenty of uncertainty. [5]

II. RECENT TECHNOLOGIES USED IN MENTAL HEALTH APPS

Nowadays with the availability of huge data, new technology such as applications are able to analyse people with mental wellness issues.[6] With an increase in innovation and technology, it is well attainable for phones or various other gadgets to detect at some point when patients are feeling low, for example when people are feeling high levels of stress or anxiety. These applications can likewise quantify the actual level of pain and stress, like fluctuations in adrenaline, hormones and actions. Applications can then predict high risk of danger to certain people by analysing situations at particular time, place, or action. They can then send calming messages to patients to naturally control their stimuli and help them reach a better state of mind.[7]

Innovation organizations are creating versatile based man-made consciousness chatbot applications that utilization proof based methods, like cognitive behavioural treatment (CBT), to give early mediation to help psychological well-being and passionate prosperity difficulties. Artificially intelligent (AI) text-based applications conveyed safely and secretly over phones can scale worldwide and offer logical and consistently accessible help. A recent knowledge study,[8] issued in the research journal JMIR mHealth and uHealth, which utilized an AI-based truly brilliant adaptable innovation called Wysa, when compared to the less drawn in clients, there was a significantly larger normal increase in manifestations of despondency and a high positive response to in-app exposure among the more associated with clients of the application.

The use of cognitive therapy (CBT) in the development of mobile apps is a growing field of study.[9] Ongoing analysis on self-rated mental state (SRMH) involves survey analysis that begins with a matter asking respondents to get their overall mental or eager welfare on a scale of unhealthy to wonderful. [10] According to the findings of the SRMH report, 62% of people who have an emotional well-being problem consider themselves to be in good mental health. Those who graded their psychological well-being as outstanding had a 30% lower chance of developing an emotional wellbeing issue later in life than those who rated their mental well-being as mediocre. Individuals with a psychological well-being problem who saw their psychological well-being in a better light by pronouncing a good overall mental or enthusiastic health improved without medication, according to this study. The respondents who appraised their psychological wellness as great when contrasted with those with poor emotional well-being, had 30% lower chances of having an emotional wellness issue at a development. This examination exhibited that without treatment, individuals with a psychological well-being issue improved in the event that they saw their psychological well-being in a positive manner by pronouncing a decent by and large mental or enthusiastic wellbeing.[10]

In the field of medical care, mHealth is particularly important in the fields of psychological and emotional well-being. New mechanical arrangements, such as distributed computing, can influence how patients use mobile applications, and therefore future mHealth arrangements, from a

imaginative standpoint. One of the most difficult aspects of designing mHealth arrangements is determining the situational contexts of usage. Among the most important sociocultural factors to consider before designing any mHealth solution are innovation recognition and appropriation, the role of clients in planning administrations and arrangements, and regional and social contrasts. [11]

Another application created by Spanish business HealthApp is TCApp. It is a mHealth instrument designed to analyze patients with eating disorders in time frames between clinical discussions. It is available to download from App Store and Google Store. It is available in four different languages like English, Spanish, French and Catalan and it currently has over 1000 active clients. Patients may use the TCApp to keep track of their thoughts, habits, emotions, and anything else their doctors' think is necessary for their care. The application can be redone for every persistent as per treatment prerequisites. The application's main goal is to substitute traditional records with online data, as the traditional way sometimes causes patients anxiety.[12] Furthermore, the application employs a gamification approach,[13] including gifts, rewards, and recommendations to enhance patients' engagement.

Sometimes both well being experts and patients of the mHealth research intervention faced issues in agreeing with the defined goals, objectives and principles. One reason for this was the way that patients, generally the individuals who were at that point getting a requesting treatment at their emergency clinic (day emergency clinic), felt over-burden with the Internet-based errands that they needed to perform continually. Another issue was that ED subject matter experts, generally those working in open clinics, as a result of their responsibility or taking care of crises and different needs, watched out for not give quick reactions to their patients' Internet-based messages. Responses about the concerns about the patient safety and privacy were sometimes provided by various experts and doctors who were available at that point in time. [14]

III. CASE STUDY

We created a survey to determine how many people feel that an online mental health app can be fruitful in helping people deal with the stress and depression they face in their day to day life. We also asked them what features they feel would be ideal for a good mental health app. About 50 participants had taken this survey. Majority of the participants were aged between 15-25 years and about 50% of the participants were female. Based on our previous research and the survey that we had conducted, the following patterns of usage was found:

3.1 Acquiring a Skill

Some people used the platform to learn or conquer an activity they felt was efficient to improve their mental health such as exercising or meditation, which helped them gain skills such as relaxation techniques which in turn helped them remain motivated and also improved their ability to focus.

3.2 Connecting with People

Some people used the platform to interact with people as communicating and expressing their feelings made them feel happier. Those who found it difficult to open up to their loved ones felt more comfortable interacting with people online as they felt that the strangers wouldn't judge them as much as their family or friends would.

3.3 Trying Out Of Curiosity

Some people used the platform that they heard of, or was recommended to them not because they needed any help, but only out of curiosity. They agreed that these apps could have a positive influence on the people using it.

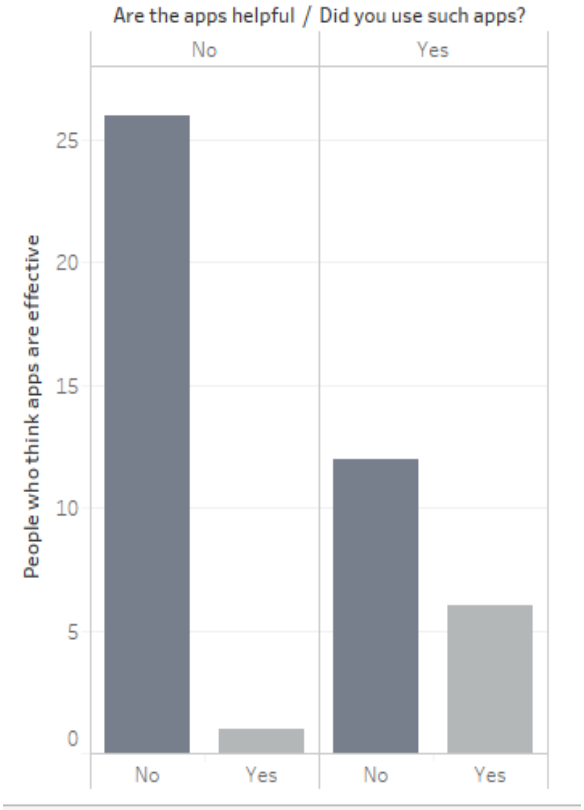

Fig 3.1 Graph for people who used mental health app and for those who believe it is helpful.

The graph is used to show the count of people who have used an app for mental health and the count of people who feel that the mental health apps are useful. The column on the left indicates the count of people who believe that mental health apps are not as effective as traditional therapy. Most of them never used a mental health app. The column on the right indicates the count of people who think that a mental health application can be a good alternative to traditional therapy. Almost 50% of the people have used a similar platform before.

3.4 Safety Measure

Some people who had previously used a mental health app but were no longer using it hadn't deleted the app from their phones. They instead kept it as a safety measure just in case they felt their symptoms returning back and needed the help of the app again.[15]

While a lot of people felt that online mental health platforms cannot completely replace traditional therapy since the involvement of a professional therapist and face to face interaction and connection is essential for improving one's mental health, they acknowledge that it can be a good alternative and can be helpful to some extent if a person is not able to get professional help for any reason.

On being asked about desirable features which could make the app more useful the following was observed:

3.5 Mood Tracker

Keeping a track of our mood can help us recognize what recurring events lead to negative emotions and what activities help us relax and maintain a positive attitude.

3.6 Diversion From Stressful Thought

People wanted a tool that could offer relief from the stress they were experiencing and help them relax by acting as a distractor such as games or quizzes.

3.7 Uplifting Effect

The tool must produce a elevating effect in order to uplift one's mood in the short term. This can be done through funny jokes, inspirational quotes or wholesome stories.

3.8 Overcome Negative Emotion

The ideal tool had to contain features for dealing with negative emotions either by suggesting general known methods or asking the user of their mood and activity preferences.

3.9 Sensitive to privacy

The user's personal data must be safe. And if the users are minors, then there should be parental involvement to some extent in-case of serious risk of self-harm.

3.10 Communication

Interacting with other people in order to get their support was a highly desired aspect of the tool. People either wanted to share their feelings with other people or therapists. [16]

IV. RISKS AND ETHICAL CONSIDERATIONS

The capability and complexity of mobile technologies are growing all the time.

As a result of new applications, people's experiences are changing. The use of wireless and electronic technology for health-related uses which is also known as mHealth, has the potential to lower health-care costs while improving quality, given the extensive use of mobile phones, laptops, and desktop computers. In addition to that it reduces stigma and makes healthcare more accessible around the world. [21]

Collaboration between computing researchers and mental health professionals is rapidly evolving. As a result of which there is a rise in the number of mobile application software or apps that are being made.

Mental health practitioners, on the other hand, should be mindful of the dangers and possible ethical breaches which come with using electronic devices and apps with people who have mental illnesses. These applications for mental wellbeing come with a variety of obligations. In the study, growth, and incorporation of these innovations into clinical care and society, careful steps must be taken to assess acceptable ethical standards. [20] To balance the issue or concern against relevant advantages, principles, and cultural norms, thorough analysis of current requirements that are relevant for these technologies should be conducted. Various applications claim that they do not provide diagnosis or care in order to escape responsibility, but then continue to provide material that discusses mental health problems.

Professional bodies such as the National Institute for Health and Clinical Excellence (NICE) in the United Kingdom and the Food and Drug Administration (FDA) in the United States evaluate the safety of medical devices and serve as a guide to clinicians. When the number of digital mental health resources grows, the issue of whether they will be accepted arises. Various assessment organizations, including the non-profit PsyberGuide and the for-profit ORCHA, offer mental health application assessments and advice. Despite working at a quicker rate than most specialist organizations, they generate a small number of well-balanced recommendations.

We need knowledge about which applications are commonly available and approved. A very small percentage of mental health applications are focused on proven research and are created by healthcare professionals. The bulk of these apps are created by people and organizations who aren't mental health experts or practitioners. It is important to emphasize that users can use these mobile applications but, at their own risk. This is due to the fact that there are no formal protections or certifications in place to ensure the application's safety. [21]

One of the most common issues faced when we use mobile devices for mental health applications is, limitations of technology as a medium. Computer malfunctions, battery errors, and an insecure or weak Internet link are all examples of such limitations. There is also the risk of the device being lost, stolen, or malfunctioning, which could have significant implications if sensitive data is not kept in a secondary location that is easily available. The growing use of mental health applications that store computerized medical health records and a database of medical data has raised a slew of ethical concerns about privacy. [17]

Most mental health apps ask for a lot of personal information, such as the user's name, age, gender, email address, phone number, and photographs. Users can also keep track of information about their diagnoses and treatments. There are usually no rules in place to ensure the protection and privacy of users' personal health details.

We conducted a case study where we had asked the participants if they would be comfortable with the mental health applications gathering their personal data. Out of the 50 participants who had participated in this study 11 refused to share any kind of personal details, 16 were okay with sharing their details and 23 were skeptical.

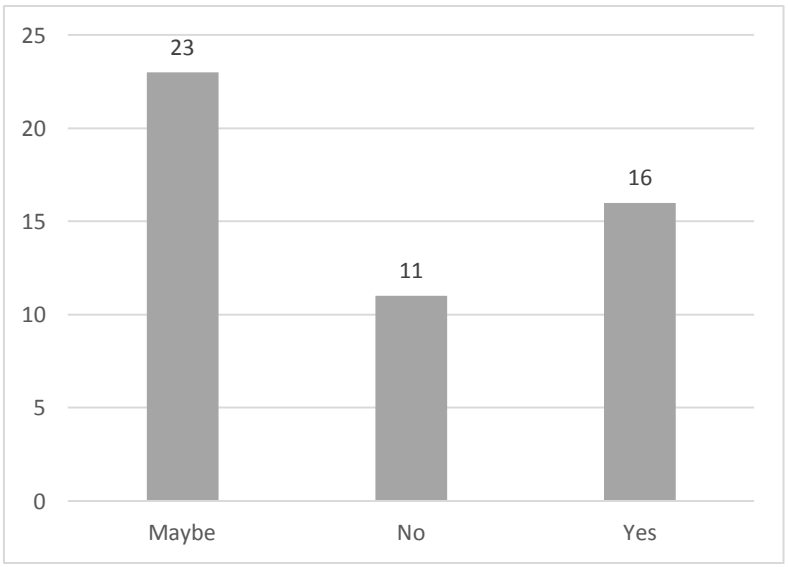

Fig 4.1 Responses of participants when asked if they would share personal information on mental health applications

This shows that about 68% of the participants were either refusing or were skeptical about sharing personal and sensitive information on the mental health applications. As a result, integrating the use of information technology with patient care requires special attention.

V. CONCLUSION

Mental health apps are used only if match with the user preferences and treatment goals. Although mental health apps cannot replace traditional therapy, it still can be helpful to some extent and useful for those who cannot go to an actual professional, either due to financial or mobility issues, or any other personal reason. Although there is very little evidence for the effectiveness of individual apps, patients are drawn towards the apps that promote habits known to reduce the symptoms of depression.

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