



# A Mobile Application for Anxiety and Dementia Patients: Cogni Care

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## Abstract-

The escalating prevalence of anxiety and dementia in India and globally is a concerning phenomenon, exacerbated by the challenges surrounding access to adequate mental health care. Despite the escalating need, not all individuals are equipped to seek help, nor are they sufficiently supported in their pursuit of mental health care. This paper addresses these critical issues by presenting an innovative solution in the form of a dedicated mobile application. As a solution, we have created CogniCare, a mobile application whose primary objective is to extend free assistance and support to individuals grappling with anxiety and dementia, bridging the gap between their needs and accessible care. In addition to providing valuable resources, the app serves as a pivotal link connecting users with qualified medical professionals when required. This research paper sheds light on the pressing need for comprehensive mental health care solutions, introduces the novel application as an impactful intervention, and underscores the significance of an inclusive approach in addressing the mounting challenges of anxiety and dementia.

**Keywords**—Anxiety management, Dementia care, holistic care, Mobile application, CogniCare

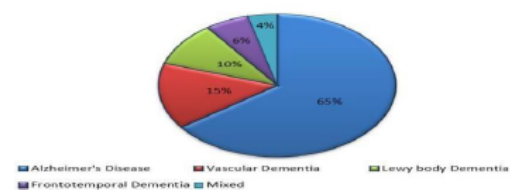
## I. INTRODUCTION

In an era where technology plays an increasingly pivotal role in our lives, harnessing its power to address critical healthcare challenges is not just an opportunity but a responsibility. Anxiety and dementia, two profound conditions that affect millions of adults worldwide, demand innovative solutions that extend beyond traditional medical interventions. Enter our groundbreaking mobile application, a comprehensive mental health companion designed to empower individuals suffering from anxiety and dementia and provide them with the knowledge, support, and tools they need to navigate their unique journeys.

mind games designed to provide respite and alleviate symptoms for those suffering from anxiety and dementia. These engaging activities not only offer mental relief but also contribute to cognitive stimulation, a critical aspect of dementia management. Fig 1.1 we can see the number of people affected by dementia

One of the app's standout features is its direct access to certified healthcare professionals. In moments of need, users can reach out to qualified doctors, ensuring that their concerns are addressed promptly and professionally. This feature fosters a sense of security and reassurance, crucial for individuals battling these conditions.

TYPES OF DEMENTIA BY PERCENTAGE



In this, we embark on a journey through the multifaceted features and offerings of our mental health app, each carefully designed to improve the quality of life for adults grappling with anxiety and dementia. We believe that technology, when harnessed compassionately and knowledgeably, can serve as a beacon of hope for those in need, providing them with the tools and the community to navigate the uncharted waters of

mobile applications, as each app tended to focus on specific aspects of care, leaving a void in offering a holistic solution. To bridge this gap, we have engineered an integrated platform that amalgamates various functionalities crucial for patient



At its core, this app is a beacon of understanding and assistance. It serves as a trusted source of expert knowledge, offering a multitude of sections dedicated to unraveling the complexities of anxiety and dementia. Users can explore these sections to gain a deep understanding of these conditions, their symptoms, and the myriad strategies to minimize their mental and physical impact. This knowledge, delivered in an accessible and user-friendly format, empowers individuals to take control of their well-being.

But knowledge alone is not enough. The app recognizes the importance of holistic care, and thus, it integrates an array of

A noticeable gap was identified in the existing landscape of

As per recent studies, anxiety disorders have shown a consistent prevalence across various age groups, affecting approximately 18.1% of the global population in 2022. These disorders tend to manifest more frequently in younger age brackets, with individuals aged 18-34 being particularly susceptible.

As per The Logical Indian, about 38 million grapple with various forms of anxiety disorders.

On the other hand, dementia, predominantly affecting older populations, has seen an escalating trend due to aging demographics. Globally, an estimated 50 million individuals were living with dementia in 2020, and this number is projected to triple by 2050.

Alzheimer's being the most common type of dementia, is the sixth-leading cause of death in the United States, affecting over 6 million Americans aged 65 and older.

In the realm of healthcare, addressing the needs of individuals facing anxiety and dementia has become an imperative task. This study presents the development of an innovative mobile application designed to provide comprehensive support for anxiety and dementia patients.

In the II<sup>nd</sup> segment, diverse efforts concerning the aid and assistance provided to patients dealing with anxiety and dementia have been outlined and summarized. Moving onto the III<sup>rd</sup> segment, a detailed description of the envisioned application and its operational mechanisms is presented. Subsequently, in the IV<sup>th</sup> section, our strategic approach towards realizing our objectives is expounded upon.

Shifting to the V<sup>th</sup> part, a comparative analysis with existing systems is offered, followed by the VI<sup>th</sup> section that delves into our prospective aspirations and conclusions. Finally, a bibliography section is provided to reference the sources used in this endeavor.

## II. RELATED WORK

Several initiatives have been undertaken in the realm of mental health assistance and support. Numerous projects and platforms have emerged to provide aid to individuals grappling with mental illnesses, recognizing the significance of a comprehensive approach to well-being. Some of the projects are:

support.

Aiming to fill the identified gaps, our app "CogniCare" has been meticulously crafted to encompass the entire spectrum of patient needs. By leveraging cutting-edge technologies such as Flutter, AI, and ML, CogniCare is poised to be the ultimate companion for those traversing the challenges of anxiety and dementia. This application acts as an empathetic friend, combining personalized interactions, community engagement, professional medical assistance, and cognitive engagement through quizzes and articles.

- Calm - a renowned mindfulness app, empowers users to manage stress through sleep, meditation, and relaxation. Whether you're new or experienced, the app offers guided meditations for varying durations. It includes a mood check-in, providing personalized mood reports.

## III. PROPOSED SYSTEM

Our proposed methodology introduces an application named "CogniCare," derived from "cognitive care," with the primary objective of serving as an all-encompassing solution for individuals grappling with anxiety and dementia, seeking comprehensive assistance and support.

The basic features offered by the application are as follows:

- **EmoGuide**  
A pivotal feature within this application is the integration of a chatbot named "EMOGUIDE," designed to function as an emotional companion for patients, akin to a trusted confidant, guiding them through the intricacies of their emotional journeys.
- **CommunityHub**  
Another noteworthy component is the establishment of a community center, providing patients an avenue to engage with peers who are also navigating similar challenges, thereby fostering a supportive environment.

- **MindProbe Challenges**  
Further enhancements encompass a set of quizzes in the MindProbe Challenges section of the app, intended to gauge the user's current psychological state in relation to anxiety and dementia.

- **MindDigest**

Additionally, the application offers an array of informative articles on its homepage, affording users the opportunity to expand their understanding of these respective ailments.

- **Connect with care**  
Concurrently, the app facilitates connections with care options, enabling users to locate and evaluate doctors in their vicinity, complete with ratings and contact information.



- What's Up? A Mental Health App -it integrates effective techniques rooted in Cognitive Behavioral Therapy (CBT) and Acceptance Commitment Therapy (ACT). This free app encompasses a comprehensive diary feature, enabling users to record daily moods and behaviors. It empowers users to establish goals related to cultivating healthy practices such as meditation, journaling, and exercise.
- Shine- The Shine app, developed by Women of Color, focuses on addressing anxieties unique to their communities. It provides meditation, podcasts, an extensive audio library, and community forums for managing anxiety independently or with culturally similar support.

- 1ranquiPlay  
Enriching the user experience, the application features an enjoyable space where users can engage in calming activities to unwind and alleviate stress, aligning with the app's emphasis on mental relaxation and well-being.
- MeditaZen  
This word combines "meditate" and "zen," encapsulating the essence of calming mindfulness that the section aims to provide. The application incorporates a meditation module, affording users the opportunity for daily meditation sessions.

Fundamentally, this application embodies a holistic fusion of indispensable components essential for the betterment of individuals grappling with anxiety and dementia.

#### IV. DESIGN AND IMPLEMENTATION

Our proposed approach presents the "CogniCare" application, coined from "cognitive care," as its focal point. The primary aim is to establish a comprehensive remedy for individuals contending with anxiety and dementia, catering to their multifaceted needs for extensive aid and guidance.

The application's foundation rests upon the utilization of the following technologies:

- Figma—for UI/UX
- Flutter—for frontend and backend development
- Python—for machine learning integration.

The subsequent visuals depict the app, accompanied by their corresponding descriptions:

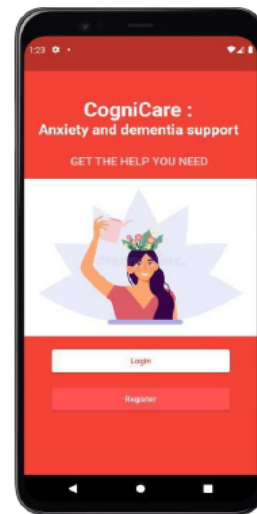
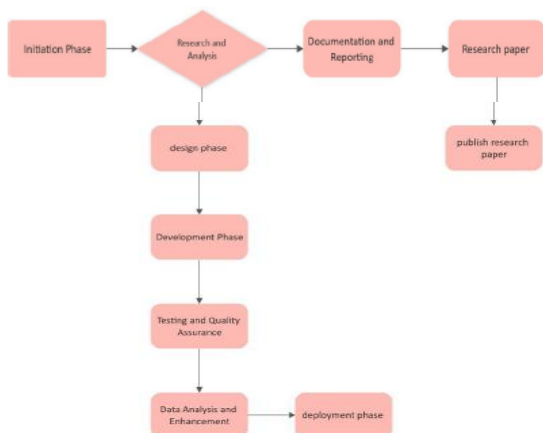


Fig4.1  
The image portrays application's login page



Fig4.2  
The image captures the app's inviting homepage



Fig4.3

The image captures the app's Mind Digest



Fig4.5

The image showcases "EMOGUIDE," the empathetic chatbot



Fig4.4

The image captures the app's Mind Digest



Fig4.6

The image displays the app's user-friendly menu interface

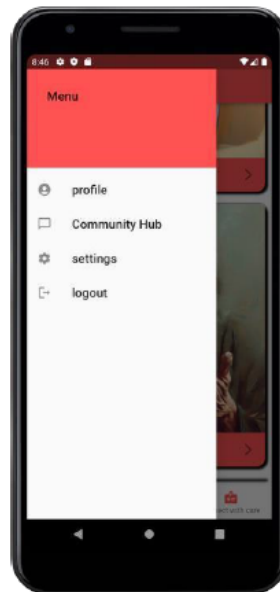




Fig4.7

The image offers a peek into the "MeditaZen" section



## V. CONCLUSION

In conclusion, "CogniCare" emerges as a poignant response to the escalating challenges posed by the growing prevalence of anxiety and dementia in our contemporary society. Our unwavering commitment to holistic well-being drives the essence of this innovative application. As these conditions continue to impact the lives of many, our dedication to providing a comprehensive solution becomes even more resolute.

Through "CogniCare," we endeavor not only to address the multifaceted needs of individuals battling anxiety and dementia but also to elevate their quality of life by fostering emotional support, knowledge dissemination, and vital connections within a thriving community. As the landscape of healthcare and technology evolves, so will our commitment to enhancing this platform. In the pursuit of realizing our vision, we remain steadfast in our goal of continuously improving "CogniCare." Among the upcoming features are emergency buttons for immediate assistance and a voice assistant to further facilitate user interaction. These enhancements, rooted in user feedback and evolving research, will amplify the effectiveness of our application, ensuring that it remains a steadfast ally for those navigating the complex terrains of anxiety and dementia.

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