International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 13 Issue: 10 | Oct 2026 www.irjet.net p-ISSN: 2395-0072

Digital Mental Health Support System

A. Devi[1], Chintalapudi Chandana Shilpa[2], Ms. G. Akshaya Goud[3], Mr. Agur. Karthik[4], Ms. Chidhruppa Shravani[5]

[1]Assistant Professor, Dept. of Computer Science and Engineering, HITAM, Telangana, India
[2345]Student, Dept. of Computer Science and Engineering, HITAM, Telangana, India

---

Abstract - *Mental health is an essential part of human well-being, but it is often neglected due to social stigma, lack of awareness, high consultation costs, and limited access to effective treatment. This paper proposes a Digital Mental Health Support System, a web-based platform designed to provide affordable, convenient, and anonymous mental health support and wellness assistance. The system uses Generative Artificial Intelligence to improve accessibility while maintaining user privacy. The proposed system consists of five major components: Mood Tracker, Psychometric Assessments, Generative AI Chatbot, Self-Care Advisor, and Security System. The Mood Tracker enables users to record and monitor their moods through a dashboard, helping them identify changes over time. Psychometric Assessments provide basic psychological evaluations to understand the user's current mental state. The Generative AI Chatbot answers common mental health questions, offers general guidance, and can suggest professional consultation when necessary. The Self-Care Advisor analyses mood and assessment information to recommend suitable wellness activities such as exercise, relaxation, and healthy routines. The Security System protects user information through encryption and securely stores emergency contact details for crisis situations. The system will be developed using HTML, CSS, JavaScript, Node.js/PHP, MySQL, and Generative AI technologies. Overall, the proposed platform aims to address accessibility, affordability, privacy, and awareness challenges in digital mental health services. However, it is intended as a supportive wellness tool and not as a replacement for professional mental health treatment.*

Key Words: Digital Mental Health, Generative AI, Mood Tracking, Psychometric Assessment, AI Chatbot, Self-Care Advisor, Mental Wellness

1. INTRODUCTION

Mental health is an essential component of the personality of any human being. It plays an important role in human beings' thinking, decision-making, and reacting. However, in today's world, individuals face number of challenges, including stress, anxiety, loneliness, academic and work-related pressures. At the same time, the human mentality is something that people are less likely to address due to social judgment, lack of knowledge, limited financial resources and limited access to professional help. In this regard, a web application that will provide an affordable and convenient solution to track and measure one's mental health is necessary. It can enable people to organize and assess their emotional condition and detect deviations in their psychological functionality. The application will utilize Generative Artificial Intelligence to make it interactive and engaging, thus helping people track and manage their mental health on a daily basis. The website will consist of multiple pages, including Mood Tracker, Psychometric Assessments, Generative AI Chatbot, and Self-Care Advisor. They will allow the users to monitor their mood, receive recommendations, and reduce stress through various methods. Provides anonymous contact with emergency services, the application will ensure the safety of personal data and provide psychological support when needed. So, the project will have a positive effect on people's perception of their mental health, as well as their ability to know relevant information about their condition.

1.1 BACKGROUND

Mental health is an important part of a person's overall well-being. It affects how people think, feel, make decisions, and deal with everyday situations. Today, many people experience stress, anxiety, loneliness, academic pressure, work pressure, and other emotional challenges. However, mental health is still not given enough attention. Social stigma, lack of awareness, expensive consultations, and limited access to mental health professionals often prevent people from seeking help when they need it.

1.2 PROBLEM STATEMENT

In a world where high-tech technologies are in great demand, artificial intelligence is an essential and integral part of any business. It is therefore necessary to implement such projects in the current realities since they enable the organization to optimize its work. However, it is also vital to understand that automation is only an auxiliary and additional means that may assist in increasing efficiency but cannot ensure success. At the same time, companies should give priority to the employees' continuous improvement and training so that they can benefit from such programs to the maximum.

1.3 OBJECTIVES

The main objective of the proposed Digital Mental Support system is to provide an easily accessible and convenient digital medium to support the end-users in maintaining their mental well-being. The objectives of the project include:

- Design a Mood Tracker for the users to keep track of the mood.
- Design a feature, 'Psychometric Assessments,' to provide an introductory understanding of the current state of mental well-being.
- Develop a Generative AI-Based Chatbot for offering mental health-related general information along with guidance and advice about consultation.
- Facility for Self-Care Advisor for suggesting relevant self-care resources.
- Security features for maintaining user's personal, mental health, and emergency-related information.
- An emergency feature for storing preferred emergency contacts in case of an emergency
- Raise awareness about the importance of mental health and the significance of monitoring along with seeking professional help if required.

2. LITERATURE REVIEW

Digital technologies have demonstrated great potential in mental health due to their ability to provide information to consumers, promote self-monitoring and self-management, and even deliver a certain level of care and support. A number of recent studies have shown that web and mobile-based applications can play a significant role in psychoeducation, treatment support, and the encouragement of healthy behaviors among clients. Therefore, it may be stated that such software products are very helpful, especially for those unwilling to seek traditional forms of treatment. Among the existing programs and applications, mood tracking tools and psychometric assessment software dominate due to their ability to monitor the emotional state of the user and determine the presence of specific mental health problems. The former type of programs allows users to keep track of their mood and better understand their emotions while the latter is used to assess the prevailing mental state and identify issues such as stress, anxiety, depression, or other. Both are very helpful for the majority of users as they address the most common concerns and allow individuals to monitor their progress and manage their emotions or treatment process. However, theapplicationsrarely provide the users with any further help or support in regards to their mental health and state. The use of Artificial Intelligence chatbots has also gained attention in recent years: AI allows for a more natural conversation with the individual, offers general advice, reminds the person to seek further professional help if needed, and is generally easier to use than other chatbots. In like manner, generative AI can be utilized to provide more personalized care and attention by being programmed and trained not to give out harmful or unhelpful information; however, many of the suggested solutions do not take into consideration the value of personal data to the individual and the necessity to protect and safeguard it. Encrypted data and limited access to it are some of the many steps that must be taken in order to design such a program. Based on the information provided in the sources reviewed, it would appear that most solutions only tackle one particular aspect of the issue: tracking of moods, evaluating, or providing a chatbot for day-to-day assistance with self-care. The suggested solution would consolidate these elements into a more comprehensive Self-Care Advisor while providing additional functionality for the individual's convenience and safety.

2.2MOOD TRACKING AND PSYCHOMETRIC ASSESSMENT

Mood tracking is commonly used in digital wellness applications to help users record their emotions and observe changes over time. Psychometric assessments can provide basic insights into a person's emotional and psychological state through structured questions. These features can help users become more aware of their mental well-being. However, assessment results alone may not provide enough guidance for users on what they should do next.

2.3 AI CHATBOTS IN MENTAL HEALTH

Artificial Intelligence chatbots are being explored as a convenient way to provide immediate conversational support. They can answer common questions, provide general information, and encourage users to seek professional help when necessary. Generative AI can make conversations more natural and interactive. However, AI-generated responses may not always be accurate, so such systems should provide general support rather than attempting to replace qualified professionals.

2.4 Self Care and Personalized Recommendations

Self-care activities such as exercise, relaxation, meditation, proper sleep, and healthy routines can support overall mental well-being. Digital systems can use information provided by users to suggest suitable activities. Personalized recommendations may be more useful than giving the same advice to every user. Combining mood information and assessment results can help the proposed system provide more relevant self-care suggestions.

2.5 PRIVACY AND SECURITY

Privacy is especially important in digital mental health systems because users may provide sensitive personal and emotional information. Secure databases, encryption, authentication, and controlled access can help protect this information. A reliable security mechanism can also increase user trust and encourage people to use the platform comfortably.

2.6 RESEARCH GAP

Existing digital mental health solutions often focus on individual features such as mood tracking, assessments, chatbots, or self-care resources. There is a need for an integrated platform that brings these features together in a simple and accessible environment. The proposed Digital Mental Health Support System addresses this gap by combining mood tracking, psychometric assessments, a Generative AI chatbot, personalized self-care recommendations, and security features in one web-based platform. The system is intended to provide supportive wellness assistance while directing users toward professional help when required.

3. PROPOSED METHODOLOGY

The proposed Digital Mental Health Support System is a web-based platform designed to provide users with accessible and convenient mental wellness support. The system combines mood monitoring, psychometric assessments, Generative AI-based interaction, self-care recommendations, and security features in a single platform. The methodology follows a user-centered approach in which the information provided by the user is processed to generate suitable wellness support.

3.1 SYSTEM OVERVIEW

The proposed digital mental health support system will be a web-based platform that will provide the users with an opportunity to benefit from an accessible, convenient, and affordable tool to address their wellness needs. The system will comprise five interrelated components, including Mood Tracker, Psychometric Assessment, Generative AI Chatbot, Self-Care Advisor, and Security Mechanism. After registering and logging in, the user will be able to utilize the Mood Tracker feature to monitor and record their mood and follow the progress in the dashboard. The system will also offer Psychometric Assessment tests to assist the users with analyzing their current state. The Generative AI Chatbot will provide the first-layer support, including the delivery of general information about mental health problems and symptoms. In addition, based on the input information, the Self-Care Advisor will offer recommended activities, including sport, relaxation, meditation, and other wellness-related suggestions. Overall, the system will ensure the security of users' data by utilizing advanced encryption and authentication mechanisms. .The chatbot will also help users to determine whether their symptoms require profession assistance in suiting with the capabilities of the system. As a result, the web-based platform will create an accessible and convenient environment for addressing the mental health issues of the users while being focused on providing general support and advice.

3.2 SYSTEM ARCHITECTURE

The proposed digital mental health support system is conceptualized based on a web-based application that consists of the presentation, application, database, and artificial intelligence (AI) layers. The presentation layer is designed as the system's interface, allowing the users to register, log in, monitor or update their mood, take assessments, chat with the chatbot, and view their recommendations. The application layer involves the system's core functions, such as recording users' mood, processing their assessment responses, responding to chatbot queries and generating appropriate recommendations. The system utilizes the MySQL database to store the user profiles, mood, assessment, recommendations, and emergency contact details. The AI layer implements generative AI to provide chatbot replies and mental wellness tips and recommendations. Self-Care Advisor analyzes the users' moods and assessments to generate appropriate recommendations. Simultaneously, the system's security layer provides encryption tools to ensure secure data transmission, storage, authentication, and access control. Notably, the system's general data flow starts when the user submits their data through the interface. The system's application process the inputs and stores the results in the database while responding to the user's queries. The data flow occurs between the presentation, application, and database. However, the AI component requires the application to invoke its functions to generate responses and recommendations. Overall, the system's conceptual framework is efficient and effective in meeting the objectives.

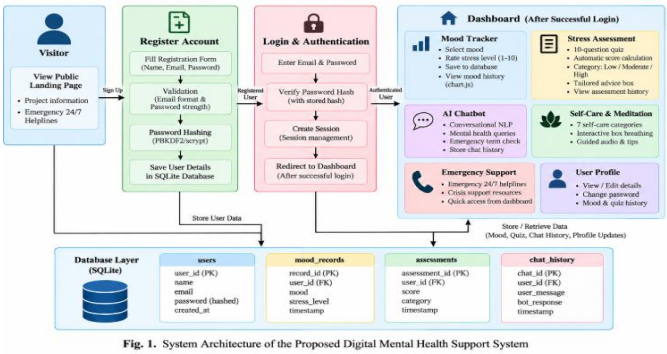

Fig. 1. System Architecture of the Proposed Digital Mental Health Support System

3.3 MOOD TRACKING MODULE

The Mood Tracking Module was created to enable the user to regularly log and track their mood. They can choose between happy, calm, neutral, sad, anxious, and stressed and add a brief description of their mood. The data is then stored in the database with the current date and time. The module later retrieves the information and displays it in graphical form so that the user can monitor their progress. The data can also help the Self-Care Advisor to look at and suggest the right things and remind the user to get professional help when

needed. The app is not intended to be used as a diagnostic tool but to raise awareness of the condition one has. The Mood Tracking Module appears to be a valuable tool for analyzing the user's patterns. The data gets saved quickly and effortlessly, and the graphical view helps the individual to see the changes in the mood. The user can better monitor their condition, and the information may be instrumental in detecting a problem at an early stage. The module raises awareness among the users and helps them improve their wellbeing.

3.4 PSYCHOMETRIC ASSESSMENT MODULE

The Psychometric Assessment Module is created to help the users evaluate their current state and track the changes. The software consists of multiple questionnaires based on the fundamental methods used in psychology. To respond to the questionnaire, one should choose the answer that seems more appropriate for them based on recent experience and current state of mind. After completing the task, the system analyses the results and provides a short summary of the outcomes in terms of the indicators that express the common level of stress, anxiety, depression, and other states. It can also be used to support the mood tracking functionality and provide the recommendations regarding self-care activities and lifestyle changes. The results of the assessment are useful in terms of determining the possible causes and signs of concern. Moreover, the tool can be utilized as a significant addition to the professional therapy since it will help the users establish the patterns that occur subconsciously. However, it should be remembered that the results provided by the system cannot replace the thorough investigation conducted by the expert. In the case of concerns regarding mental wellbeing, one should contact a professional therapist for individualized recommendations and assistance. Overall, the Psychometric Assessment Module represents an essential part of the software because it allows the users to track their emotional state in an accessible way. In addition, the system can be used to determine the reasons for concern and find the appropriate solution in cooperation with other tools and functions provided.

3.5 GENERATIVE AI CHATBOT

The Generative AI Chatbot would be an interactive element that would allow users to communicate with an entity that would offer general guidance and information regarding mental wellness. Through the chatbot, the users would be able to ask questions, share thoughts or express desires to obtain information or assistance pertaining to the most common issues affecting mental health. The chatbot, through the use of Generative Artificial Intelligence, would read the user input and reply in a natural language. The chatbot would be able to provide general information about stress, anxiety, emotions, relaxation and daily wellness, as well as recommend OTC activity or advise contacting a professional if the issue requires professional attention. It would be important that the bot does not assign any diagnostician functions, such as determining the presence of a mental disorder. Instead, it would act as an informative tool providing advice and general information. In addition, it would even be able to hold a conversation with the user, picking up from where it left off. A few additional safety measures can even be designed to identify extreme cases and encourage reaching out to other professionals. Overall, the Generative AI Chatbot would enhance the functionality of the suggested system by serving as a 24/7 mental wellness advisor, answering basic questions and providing general advice. This way, it would function as an entry into a bigger professional network, assisting the desperate users that require further additional help in finding the most relevant experts.

3.6 SELF CARE ADVISOR

The self-care advisor uses the information provided by the user namely, the mood tracking data and the results of the psychological assessment. Based on the collected data, it offers guidance about possible activities that could improve the user's well-being and contribute to curing depression, such as exercising, meditating, relaxing, getting enough sleep, and having a healthy social life. It classifies them into easy to implement or more demanding and gives relevant recommendations. The information is presented in a clear and straight forward manner so that the user can understand and use it in their day to day activities. The advisor aims to support the user in maintaining and developing their mental health and underline the importance of tending to their psyche. Nevertheless, if the information the user has inputted indicates that they may need additional help, the self-care advisor recommends contacting a professional for help.

3.7 EMERGENCY SUPPORT

The Emergency Support feature is designed to provide users with quick access to help during critical situations. Users can securely add emergency contact details that can be accessed when immediate support is required. The system can also display appropriate crisis guidance when a user's responses or interactions indicate a potentially serious situation. Instead of attempting to manage emergencies through AI, the platform encourages users to contact trusted people, qualified mental health professionals, or appropriate emergency services. This feature adds an additional layer of safety to the system while ensuring that the platform remains a supportive tool rather than a replacement for professional care.

4. SYSTEM IMPLEMENTATION

This is implemented as a web-based application that combines mental wellness monitoring, psychological assessment, AI-based support, and self-care guidance. The implementation is designed to provide a simple and user-friendly experience while maintaining the privacy and security of user information. The frontend allows users to register and log in, record their daily moods, complete psychometric assessments, interact with the Generative AI chatbot, and view self-care recommendations. The backend manages user requests, processes submitted information, and connects the different modules of the system. A MySQL database is used to securely store user details, mood records, assessment results, self-care recommendations, and emergency contact information. The Generative AI component is integrated with the application to provide general mental wellness guidance through conversational interaction. Security features such as authentication, access control, and data protection are included to prevent unauthorized access to sensitive information. The system is organized into four major implementation areas: technologies used, frontend development, backend and database development, and AI integration. Overall, the implementation combines web development technologies, database management, Generative AI, and security mechanisms to create a unified digital mental wellness platform. The system supports users in monitoring their well-being and provides general guidance while encouraging professional assistance when necessary.

4.1 TECHNOLOGIES USED

The proposed Digital Mental Health Support System will utilize web development, database, security, and Artificial Intelligence technologies. HTML programming language will be used to develop the basic structure of the web pages. Simultaneously, CSS will be used to design an informative, attractive, and user-friendly interface. JavaScript will be applied to develop client-side activities including mood pickers, forms validation, dashboards, and user interaction. The server-side scripts will be developed using either Node.js or PHP programming language to manage the application programming interface, logic, and communication with the database. MySQL will be used as the database management system to store user details, mood monitoring data, assessment results, and emergency contact information. In addition, generative artificial intelligence will be utilized to design the mental health chatbot and deliver wellness advice according to user requests. Finally, security technologies and techniques will be implemented to safeguard the system against attacks and ensure the confidentiality and integrity of the managed information.

4.2 FRONTEND DEVELOPMENT

The frontend of the proposed Digital Mental Health Support System is developed to provide a simple, interactive, and user-friendly interface.

HTML is used to structure the different pages and components of the system, including user registration, login, mood tracking, psychometric assessments, chatbot interaction, self-care recommendations, and emergency support. CSS is used to design the interface and maintain a clean and responsive layout that can be accessed on different screen sizes. JavaScript is used to add interactive functionality and handle user actions. It supports features such as mood selection, form validation, assessment input, displaying results, and interacting with the Generative AI chatbot. The dashboard provides users with a clear view of their mood history and relevant wellness information. Assessment results and self-care recommendations are presented in an easy-to-understand format. The frontend also provides suitable navigation between the different modules so that users can access required features without difficulty. Basic input validation is included to reduce incorrect or incomplete data submission. Overall, the frontend is designed to make the system accessible and convenient while providing a comfortable environment for users to monitor their mental well-being and access general support.

4.3 BACKEND AND DATABASE

The backend of the proposed Digital Mental Health Support System is responsible for managing application logic, processing user requests, and connecting the frontend with the database and other system components.

Node.js or PHP can be used for server-side development to handle operations such as user registration, login authentication, mood entry submission, psychometric assessment processing, chatbot requests, and self-care recommendations. The backend receives data from the frontend, processes it according to the required functionality, and sends the appropriate results back to the user. MySQL is used as the database management system to store and organize the information generated through the platform. The database can contain user account details, mood records, assessment responses and results, self-care recommendations, and emergency contact information. Proper database organization helps the system retrieve relevant information when required and maintain the user's records over time. Security is considered during backend and database development because the system handles sensitive mental health information. Authentication, authorization, input validation, encryption, and secure data handling techniques can be applied to reduce unauthorized access and protect stored information. Overall, the backend and database provide the core infrastructure required for

reliable data processing, storage, and communication between the different modules of the system.

4.4 AI INTEGRATION

The proposed system integrates Generative Artificial Intelligence (GenAI) to provide interactive and accessible mental wellness support. The main application of AI is the Generative AI Chatbot, which allows users to enter questions, describe their feelings, or ask for general information related to mental health and well-being. The AI processes the user's input and generates natural-language responses that are easy to understand. The chatbot can provide general information about stress, anxiety, relaxation techniques, healthy habits, and self-care activities. It can also suggest appropriate wellness practices based on the user's conversation. However, the AI is not designed to provide medical diagnosis, prescribe medication, or replace professional mental health services. AI can also support the Self-Care Advisor by using relevant mood and assessment information to provide more suitable wellness suggestions. Safety measures can be included to identify conversations that may indicate serious concerns and encourage users to seek professional or emergency assistance when necessary. Overall, AI integration improves the system's accessibility and interactive nature while providing users with immediate, general-purpose mental wellness guidance.

5. RESULTS

The proposed Digital Mental Health Support System provides a unified platform for basic mental wellness support and self-monitoring. Users can record their moods, complete psychometric assessments, interact with the Generative AI chatbot, and receive self-care recommendations. The dashboard presents mood information in a simple visual format, helping users observe changes over time. Assessment results provide general insights into their emotional well-being, while the chatbot offers immediate general guidance. The Self-Care Advisor provides suitable wellness activities based on available user information. The security mechanism protects user data and emergency contact information through authentication and secure data handling. Overall, the system demonstrates how different digital mental health features can be integrated into a single accessible web-based platform.

5.1 SYSTEM OUTPUTS

The Digital Mental Health Support System produces different outputs based on the user's activities and inputs. The Mood Tracker displays recorded moods through a dashboard, allowing users to observe their emotional patterns over time. The Psychometric Assessment module generates scores and general interpretations based on the user's responses. The Generative AI Chatbot provides conversational responses, general mental health information, and supportive guidance. The Self-Care Advisor generates wellness recommendations such as exercise, relaxation, meditation, and healthy routines based on available mood and assessment information. The system also provides secure access to emergency contact details when required. These outputs help users understand their well-being and take suitable self-care steps.

5.2 MODULE PERFOMANCE

The performance of the proposed Digital Mental Health Support System was evaluated based on the functionality and interaction of its major modules. The Mood Tracker successfully records daily mood information and presents it through a dashboard, helping users identify changes and patterns over time. The Psychometric Assessment module processes questionnaire responses and provides scores with general interpretations of the user's emotional state. The Generative AI Chatbot responds to common mental wellness queries and provides general supportive guidance in a conversational manner. The Self-Care Advisor uses available mood and assessment information to generate suitable wellness suggestions, including exercise, relaxation, meditation, and healthy routines. The Security Mechanism supports user authentication and protects sensitive information such as personal details and emergency contact data. The modules are connected so that relevant information can be used across different system functions. Overall, the individual modules perform their intended tasks and work together to provide an accessible and integrated digital mental wellness platform.

6. CONCLUSION

The proposed Digital Mental Health Support System provides a convenient and accessible web-based platform for supporting users in maintaining their mental well-being. The system integrates five major components: Mood Tracker, Psychometric Assessment, Generative AI Chatbot, Self-Care Advisor, and Emergency Support. These modules work together to help users record their emotions, understand their general psychological state, receive basic mental wellness guidance, and follow suitable self-care activities. The integration of Generative AI makes the platform more interactive by allowing users to communicate with a chatbot using natural language. At the same time, the Self-Care Advisor uses available mood and assessment information to provide relevant wellness suggestions. The system also considers the importance of privacy and security by protecting personal and emergency contact information through authentication and secure data handling. Overall, the proposed platform can help improve mental health awareness, encourage self-monitoring, and provide basic support in a convenient manner. However, it is designed as a

supportive wellness tool and does not replace professional diagnosis, counselling, or medical treatment. The system can therefore serve as a first-level digital resource while encouraging users to seek professional help whenever necessary.

6.1 FUTURE SCOPE

The proposed Digital Mental Health Support System can be further improved by adding advanced features and technologies. Multilingual support can be introduced to allow users to interact with the platform in their preferred language. A mobile application can also be developed for easier and continuous access to mental wellness services. The Generative AI Chatbot can be enhanced with improved models and safety mechanisms to provide more reliable and supportive responses. The Mood Tracker can use long-term mood analysis to identify recurring emotional patterns, while the Self-Care Advisor can provide more personalized recommendations based on user preferences and previous records. Integration with wearable devices could also support wellness monitoring through information such as sleep and physical activity. In addition, the system can be connected with qualified mental health professionals to help users access counselling when required. Stronger encryption, authentication, and privacy measures can further improve data security. These enhancements can make the platform more accessible, personalized, and effective for digital mental wellness support.

7. REFERENCES

1) Abd-Alrazaq, A., Alajlani, M., Alalwan, A. A., Bewick, B. M., Gardner, P., & Househ, M. (2020). An Overview of the Features of Chatbots in Mental Health: A Scoping Review.

2) Wang, K., Varma, D. S., & Prosperi, M. (2018). A systematic review of the effectiveness of mobile apps for monitoring and management of mental health symptoms or disorders.

3) Goldberg, S. B., Lam, S. U., Simonsson, O., Torous, J., & Sun, S. (2022). Mobile phone-based interventions for mental health: A systematic meta-review of 14 meta-analyses of randomized controlled trials.

4) Seegan, P. L., Miller, M. J., Heliste, J. L., Fathi, L., & McGuire, J. F. (2023). Efficacy of stand-alone digital mental health applications for anxiety and depression: A meta-analysis of randomized controlled trials. Journal of Psychiatric Research, 164, 171–183.

5) Almuqrin, A., Hammoud, R., Terbagou, I., Tognin, S., & Mechelli, A. (2025). Smartphone apps for mental health: systematic review of the literature and five recommendations for clinical translation.

6) Zhang, Q., Zhang, R., Xiong, Y., et al. (2025). Generative AI Mental Health Chatbots as Therapeutic Tools: Systematic Review and Meta-Analysis of Their Role in Reducing Mental Health Issues.