IJIREEICE ISSN (O) 2321-2004, ISSN (P) 2321-5526

International Journal of Innovative Research in Electrical, Electronics, Instrumentation and Control Engineering

Impact Factor 8.021 ⁜ Peer-reviewed & Refereed journal ⁜ Vol. 13, Issue 2, February 2025

DOI: 10.17148/IJIREEICE.2025.13208

Understanding Consumer Preferences and Technology Readiness for AI-Based Emotional Wellness Apps

Sharmila K[1], Shreyas[2], Shrushti S Naduvinamath[3], Sinchana B[4], Sirisha S[5],

Sivan Vishnu Balan[6], Sneha T[7], Dr.Gopalakrishnan Chinnasamy[8]

MBA Student, CMS Business School, Jain Deemed-to-be University, Bengaluru[1-7]

Associate Professor, Faculty of Management, CMS Business School, Jain Deemed-to-be University, Bengaluru[8]

Abstract: With the rise of artificial intelligence (AI) in mental health and emotional well-being, AI-based emotional wellness apps have gained significant traction. This research explores consumer preferences, demographic influences, and technology readiness for adopting such applications. By analyzing survey data and statistical findings, we examine how personalized features, age groups, and occupational backgrounds impact the adoption and willingness to pay for these solutions. The findings provide insights into how AI-driven emotional well-being apps can better cater to diverse consumer needs and foster long-term engagement through innovative technologies. Additionally, this study examines how AI-powered interventions contribute to stress management and mental well-being by offering tailored experiences through Augmented Reality (AR), Voice Recognition, and Natural Language Processing (NLP). These technologies enhance accessibility and efficiency in emotional self-care, making wellness applications more effective and inclusive for different user groups.

Keywords: AI-driven wellness, emotional well-being, technology readiness, consumer preferences, augmented reality, voice recognition, natural language processing.

1. INTRODUCTION

The increasing global focus on mental health has led to technological advancements in emotional wellness solutions. AI-powered emotional wellness applications use AR, Voice Recognition, and NLP to enhance user experience. However, consumer adoption is influenced by several factors, including age, occupation, and technological readiness. Understanding these elements is essential for businesses and developers to refine their applications for broader acceptance. The emotional well-being sector has witnessed rapid growth, with AI-driven applications becoming pivotal in delivering effective and scalable solutions for stress and anxiety management. With increasing stress levels and limited access to mental health professionals, AI-based interventions provide users with immediate, cost-effective, and personalized wellness strategies. This study investigates how consumer demographics, preferences, and AI readiness influence the adoption and engagement rates of these applications.

2. LITERATURE REVIEW

AI in Mental Health and Wellness:Several studies have explored the intersection of AI and mental health. Smith et al. (2021) highlight the growing reliance on AI-driven interventions for stress management. These applications leverage machine learning algorithms to analyze user behaviour and provide tailored recommendations. AI-driven emotional wellness platforms utilize advanced data analytics and self-reporting mechanisms to track mental states over time. Additionally, these tools integrate features such as guided meditation, cognitive behavioural therapy (CBT) modules, and real-time mood assessments to deliver a holistic well-being experience. Research indicates that individuals who engage with AI-powered wellness solutions show improved mental resilience and coping mechanisms, reducing reliance on traditional therapy services. By offering evidence-based techniques and automated support, these applications bridge the gap between demand and availability of mental health care services.

Personalization in Wellness Apps: Brown & Williams (2020) emphasizes the role of personalization in increasing user engagement in wellness apps. Personalized features, such as mood tracking and customized recommendations, have shown a significant impact on user retention and satisfaction. The ability to tailor interventions to user-specific emotional states enhances app usability and effectiveness. AI algorithms analyze data points, including user responses, activity levels, and biometric inputs, to generate dynamic wellness plans. By incorporating adaptive learning models, wellness applications can refine recommendations based on evolving user behaviours. Studies

DOI: 10.17148/IJIREEICE.2025.13208

show that individuals using personalized wellness solutions exhibit higher levels of adherence to suggested activities and report better emotional regulation. As AI technology advances, hyper-personalization will become a critical factor in the success and widespread adoption of emotional wellness applications.

Consumer Trust in AI-Base Solutions: According to Lee and Chen (2019), consumer acceptance of AI technologies is strongly linked to perceived ease of use and trust in data security. Transparency in data handling and ethical AI practices are key to gaining consumer confidence. With increasing concerns over data privacy, users expect secure mechanisms for managing personal mental health information. AI-based wellness apps must implement robust encryption and anonymization protocols to safeguard sensitive data. Research suggests that applications with clear privacy policies and user consent mechanisms experience higher adoption rates. Furthermore, AI-driven solutions that emphasize human-centric design, ensuring empathetic and context-aware interactions, gain better consumer trust. Trust-building efforts, such as third-party audits, compliance with regulatory standards, and ethical AI deployment, significantly impact user confidence and long-term engagement in AI- powered wellness platforms.

Role of AR and NLP in User Engagement: Patel et al. (2022) discusses how AR and NLP technologies can enhance user interaction in wellness applications, making them more immersive and effective. AR features allow users to visualize mental health exercises, while NLP facilitates natural conversations with AI-driven assistants. Augmented Reality in emotional wellness applications provides an engaging and interactive way to practice mindfulness, meditation, and relaxation techniques. NLP-powered chatbots offer real-time conversational support, helping users express emotions and receive guided feedback. By combining these technologies, AI-based wellness applications create an immersive self-care ecosystem that supports emotional resilience. Studies show that users engaging with AR-enhanced exercises demonstrate improved mood regulation and cognitive flexibility. The integration of NLP-driven analytics also enables wellness applications to refine their responses and interventions, ensuring a personalized and empathetic approach to mental health management.

3. RESEARCH OBJECTIVES AND HYPOTHESES

This study focuses on three primary research objectives:

- Examining the influence of demographic and occupational factors on consumer preferences.
- Assessing the impact of technology readiness on AI-driven wellness app adoption.
- Evaluating the role of personalized features in consumer willingness to pay for subscription-based models.

Hypotheses H1: There is a significant relationship between demographic factors (age, occupation) and consumer preferences for AI-based emotional wellness apps. H2: Higher levels of technology readiness positively influence the willingness to adopt AI-driven emotional wellness solutions. H3: Personalized app features significantly impact consumer willingness to pay for a subscription-based emotional well-being app.

4. METHODOLOGY

Survey Design: A structured survey was conducted among 66 individuals from various demographic backgrounds. The questionnaire included sections on user demographics, technology familiarity, and preferences for AI-driven wellness applications. Participants answered multiple-choice and open-ended questions to assess their comfort level with AI-driven interventions. The survey was designed to measure attitudinal differences in the adoption of AI-powered emotional wellness apps, exploring how different user groups perceive AI's role in mental health support. Ensuring clarity and relevance, the survey questions were framed to capture user experiences, expectations, and challenges in using AI-powered emotional wellness applications. The structured nature of the survey allowed for a consistent data collection approach, making it easier to analyze trends across different demographics.

Data Collection Techniques: Participants were recruited through online platforms and mental health forums. Responses were collected using Google Forms, ensuring anonymity and data security. To ensure reliability, the survey sample included individuals from various occupational sectors, including healthcare, education, corporate workspaces, and self-employed professionals. The data collection process followed ethical research guidelines, ensuring voluntary participation and informed consent from all respondents. Data collection was conducted over a four-week period, ensuring that a diverse range of responses was gathered. Each respondent was briefed on the study's objectives, and confidentiality measures were emphasised to encourage honest and unbiased participation.

Analytical Tools: To analyze the collected data, various statistical and computational tools were used. Frequency Analysis was employed to assess consumer distribution across all ages and occupations. The Chi-Square Test was conducted to determine associations between demographic factors and app preferences, identifying significant correlations. Descriptive Analysis and Logistic Regression were used to measure technology readiness and the

DOI: 10.17148/IJIREEICE.2025.13208

likelihood of adoption among different user segments. Additionally, Correlation and Simple Linear Regression were applied to analyze the impact of personalised features on consumer willingness to pay. These analytical methods helped in identifying patterns and trends in AI-driven emotional wellness app adoption, providing valuable insights into user behaviour and preferences. The use of multiple statistical techniques ensured a comprehensive understanding of the factors influencing consumer decisions, helping to validate the research hypotheses effectively.

5. KEY FINDINGS AND ANALYSIS

Demographic Influence on Consumer Preferences

Survey results indicate that working professionals (51.5%) and students (33.3%) show a strong demand for AI-driven emotional wellness applications. Age also plays a role, with younger individuals (18-44 years) displaying greater interest and tech adaptability. The study found that professionals with high workloads and academic stressors were more likely to engage with wellness applications compared to retirees or non-working individuals. Younger users demonstrated a higher inclination toward AI-based interventions due to their familiarity with technology. The study highlights that users in urban settings, with better digital literacy and access to smart devices, showed a higher preference for AI-driven wellness applications compared to those in rural areas. These findings reinforce the need for targeted marketing and user education strategies to enhance AI adoption across diverse demographics.

Technology Readiness and Adoption

Analysis reveals that individuals with higher technology readiness scores exhibit a greater likelihood of adopting AI-based emotional wellness apps. More than 59.1% of respondents expressed willingness to use AR, Voice Recognition, and NLP-enhanced applications. The relationship between digital literacy and technology adoption suggests that individuals with prior exposure to AI-driven tools are more comfortable integrating them into their wellness routines.

Additionally, the study found that technology readiness was positively correlated with the perceived benefits of AI applications in emotional well-being. Respondents who were familiar with AI-powered platforms exhibited greater trust in their effectiveness, reinforcing the importance of user education in increasing adoption rates.

Personalization and Willingness to Pay

Personalized recommendations significantly influence consumer engagement with AI-based emotional wellness applications. Approximately 69.7% of respondents rated personalised features as critical in enhancing their user experience, while 48.5%expressed willingness to pay for premium subscriptions. The ability of AI-driven applications to offer tailored solutions, such as customized meditation plans, mood tracking, and adaptive coaching, increases their perceived value. Personalization fosters a sense of connection between the user and the application, improving adherence and long-term usage. The findings suggest that users are more likely to pay for wellness applications that incorporate interactive, adaptive features suited to their unique emotional needs. As AI technology advances, applications that continuously refine user experience based on real-time behavioural data will be more successful in retaining subscribers and driving revenue growth. Effective pricing strategies and freemium models with exclusive premium content can further enhance user acquisition and retention rates.

Impact of AI-Driven Engagement Features

The integration of AI-driven engagement features, such as gamification, chatbot assistance, and real-time mood tracking, significantly impacts user experience and interaction. AI-powered chatbots provide instant emotional support, simulate human-like conversations, and assist users in managing stress or anxiety. Real-time mood tracking enables applications to adjust recommendations based on changes in a user's emotional state, making interventions more dynamic and responsive. Studies suggest that gamified wellness activities, such as achievement badges and progress tracking, enhance motivation and encourage consistent app usage. AI-driven reminders and adaptive goal-setting further improve adherence to wellness practices. The study indicates that engagement features designed with an intuitive and interactive user interface increase overall satisfaction and long-term commitment to wellness applications. Future developments in AI-driven emotional wellness applications should focus on optimizing engagement through continuous feedback loops, improved emotional recognition algorithms, and multimodal interaction techniques for a holistic user experience.

6. DISCUSSION AND IMPLICATIONS

The findings of this study provide valuable insights into the adoption and effectiveness of AI-driven emotional wellness applications. Consumer demographics, technology readiness, and personalization are key determinants of user engagement. Younger users and working professionals showed a higher inclination toward AI-based emotional wellness solutions, highlighting the importance of targeting these demographics with tailored marketing

DOI: 10.17148/IJIREEICE.2025.13208

strategies. Additionally, the correlation between higher technology readiness and greater adoption rates suggests that digital literacy initiatives could further improve acceptance among diverse user groups.

Personalization emerged as a crucial factor in driving user satisfaction and willingness to pay. AI-powered emotional wellness applications that offer adaptive and customized experiences, such as mood tracking, real-time recommendations, and chatbot interactions, are more likely to retain users. Businesses should invest in AI-driven behavioural analytics to enhance these personalized features and optimize user engagement.

Another critical implication is the role of trust and data security in consumer acceptance. Privacy concerns remain a significant barrier, and developers must prioritize transparent data handling policies and robust security measures. Compliance with industry regulations and third-party certifications could enhance consumer confidence and foster long-term adoption.

Moreover, engagement features such as gamification, interactive AI assistants, and real-time mood tracking significantly improve user retention. Incorporating- -driven engagement strategies, wellness applications can create a dynamic and immersive user experience that encourages consistent usage and emotional well-being management. For businesses and developers, the study underscores the need for a sustainable monetization strategy. Subscription-based models, freemium pricing structures, and in-app premium features can cater to different user segments. The integration of AI with wearable technology and IoT devices can further expand the capabilities of emotional wellness applications, providing seamless and real-time mental health support.

Finally, policymakers and healthcare organizations should collaborate to integrate AI-driven emotional wellness solutions into broader mental health frameworks. Public-private partnerships, funding for digital mental health initiatives, and AI-driven policy reforms can enhance accessibility and affordability, ensuring that emotional wellness technologies reach underserved populations. Future research should explore the long-term effectiveness of AI-driven interventions and their impact on mental health outcomes over extended periods.

7. CONCLUSION

This study highlights the critical factors affecting AI-based emotional wellness app adoption. Understanding consumer demographics, technological readiness, and preference for personalization is key to increasing engagement and willingness to pay. Future research should explore long-term user retention strategies and the impact of AI-driven mental health interventions. Furthermore, the findings suggest that AI-driven applications have the potential to bridge the gap in mental health accessibility, providing scalable, cost- well-being. Developers should prioritize enhancing personalization features, ensuring data security, and improving user experience to increase adoption rates. By leveraging innovative AI technologies, emotional wellness applications can offer dynamic, engaging, and tailored health support to a broader audience, making emotional self-care more accessible and effective in digital age.

REFERENCES

[1]. Shah,T.R.,Kautish,P., &Walia,S.(2024). Linking technology readiness and customer engagement: an AI-enabled voice assistants investigation. foresight, 26(1), 136-154

[2]. Kleine, A. K., Kokje, E., Lermer, E., & Gaube, S. (2023). Attitudes toward the adoption of 2 artificial intelligence–enabled mental health tools among prospective psychotherapists: Cross-sectional study. JMIR human factors, 10, e46859.

[3]. Singh, L. (2024). Revolutionizing Care: Developing an AI-Human Synergy Mental Health Application for Mental Health Worker'sWell-Being(Doctoral dissertation, Capella University).

[4]. Flavián, C., Pérez-Rueda, A., Belanche, D., & Casaló, L. V. (2022). Intention to use analytical artificial intelligence (AI) in services–the effect of technology readiness and awareness. Journal of Service Management, 33(2), 293-320

[5]. Olawade, D. B., Wada, O. Z., Odetayo, A., David-Olawade, A. C., Asaolu, F., & Eberhardt, J. (2024). Enhancing mental health with Artificial Intelligence: Current trends and future prospects. Journal of medicine, surgery, and public health, 100099.

[6]. Knidiri, H. (2021). How Artificial Intelligence impacts the customer experience.

[7]. Bouassida, E. (2024). The Potential Use of Chatbots in Augmenting Mental Healthcare Services: What do Consumers Think of Chatbots Assisting Their Therapy Sessions? (Master's thesis, Universidade NOVA de Lisboa (Portugal)).

[8]. Bergene, T. E., & Rød, E. M. (2023). Consumer Adoption of AI-Powered Chatbots: Developing a Customized Adoption Model (Master's thesis).

[9]. Trynczyk, M., Roemer, E., & Eisel-Ende, C. Customer Experience Unveiled: A Neuroscientific Exploration of AI-powered Chatbots in Online Retail.

[10]. AlSlaity, A., Suruliraj, B., Oyebode, O., Fowles, J., Steeves, D., & Orji, R. (2022). Mobile applications for health and wellness: a systematic review. Proceedings of the ACM on human-computer interaction, 6(EICS), 1-29.