OPEN ACCESS Freely available online

Mini Review

Journal of Psychology and Psychiatry

Technological Innovations and Digital Instruments in Mental Health

Archana Singhal*

Counselling Psychologist and Family Therapist, Founder - Mindwell Counsel, Delhi, India

***Correspondence to:** Archana Singhal, Counselling Psychologist and Family Therapist, Founder - Mindwell Counsel, Delhi, India, E-mail: info@mindwellcounsel.com

Received: September 18, 2025; **Manuscript No:** JPPC-25-4959; **Editor Assigned:** September 20, 2025; **PreQc No:** JPPC-25-4959 (PQ); **Reviewed:** September 23, 2025; **Revised:** September 30, 2025; **Manuscript No:** JPPC-25-4959 (R); **Published:** October 28, 2025.

Citation: Singhal A (2025) Technological Innovations and Digital Instruments in Mental Health. J. Psychol. Psychiatr. Vol.1 Iss.2, October (2025), pp:47-49.

ABSTRACT

Technological advances present an appealing way to mitigate India's substantial mental health treatment gap—estimated at 70–90% for numerous disorders—by surmounting obstacles associated with cost, distance, and stigma. This mini-review employs a narrative (scoping) review methodology, searching databases such as PubMed, Google Scholar, and Indian mental health journals with keywords including "digital mental health India," "teletherapy," "mental health apps," and "AI chatbots" for the span of 2019–2025 [1]. Following the application of inclusion and exclusion criteria, 45 articles and reports were incorporated. The findings indicate that teletherapy, mobile applications, AI chatbots, virtual reality, and wearables present unique benefits (e.g., accessibility, anonymity, early detection) while encountering obstacles related to the digital divide, privacy concerns, regulatory deficiencies, cultural alignment, and therapeutic profundity. The conversation highlights the implications for research, practice, and policy while integrating these findings with a cultural conceptual framework. The review concludes that India will greatly benefit from blended models that combine digital tools with humane care, as well as regulatory safeguards and culturally sensitive design. Boosting the availability of regional language resources, enhancing regulatory monitoring, and educating therapists on digital ethics are among the recommendations. Future studies should look at longitudinal effects, equity of reach across rural-urban divides, and the clinical outcomes of digital tools in Indian populations.

Keywords: AI chatbot; regulation; digital mental health; teletherapy; India and cultural adaptation

OVERVIEW

In India, long-standing obstacles to mental health care coexist with the country's fast digital transformation. Despite the proliferation of smartphones, internet access, and app ecosystems, there is still a significant disparity in mental health treatment (many estimates place it between 70 and 90 per cent). India has only about 0.75 mental health professionals per 100,000 people, which is significantly less than the global average, despite the National Mental Health Survey (2015–16) indicating that 14% of Indians need active mental health care. Research on digital mental health is still lacking in India, despite the underlying need [2]. This study tackles a fundamental issue: How can digital tools and technology be safely and successfully incorporated into mental health treatment in India while respecting cultural customs and reducing harm [3,4]

REVIEW OF LITERATURE

Five thematic domains are used to group the literature in order to organise the review:

Online counselling and teletherapy

The use of teletherapy increased during COVID-19 both internationally and in India. Research indicates that for a variety of conditions, remote therapy may be just as effective as in-person approaches. (Refer to overview, Lenartowicz, 2023) Stanford.edu/ojs Telecounseling frontline workers during COVID-19 proved feasible and beneficial for their mental health India. But in many situations, obstacles like inadequate internet access, restricted privacy in shared homes, and English-dominant platforms impede adoption [5].

Apps for Mental Health

One of the markets for mental health apps that is expanding the fastest is India. Apps available in Indian app stores are presently being mapped using a systematic review protocol. PMC+1 A tiered regulatory framework is required to ensure safety and efficacy, according to recent analyses of Indian app regulations, which show a lack of oversight. Cambridge University Press & Evaluation App security audits reveal that many apps have permissions or data handling flaws, which raises significant privacy concerns [6].

Conversational Agents and AI Chatbots

Chatbots such as Woebot and Wysa are becoming more popular. Teenagers in India prefer anonymity, text-based communication, and culturally relevant content, according to a recent mixed-methods study of teenagers (n = 278 survey; 12 interviews), which also revealed that although smartphone access is high, app usage is low. Limited personalisation, algorithmic bias, and emotional depth limitations are some of the challenges with the arXiv program.

Immersive Tools and Virtual Reality (VR)

Although VR research is less common in India, evidence from around the world suggests that it may be useful in treating stress, PTSD, and phobias. (Lenartowicz, 2023) Stanford.edu/ojs. Its use in India is currently restricted by cost, infrastructure, and a lack of Indian trials [7].

Digital Biomarkers & Wearable Technology

Digital phenotyping on smartphones and wearables are new field. While people value health tracking, adoption is hindered by low health/digital literacy, usability issues, and mistrust of digital platforms, according to a recent study on personal health informatics in India (n = 87 survey, n = 22 interviews). Xiv Self-monitoring and early detection are possible with these tools, but abuse or excessive monitoring may make anxiety worse.

METHODS AND DESIGN

This narrative scoping review of published reports and literature focuses on digital mental health in India and pertinent global insights [8,9].

Information Sources

Between May and July of 2025, searches were made in institutional repositories, Indian mental health journals, PubMed, Google Scholar, and grey literature (government documents, reports).

Keywords and Search Strategy

"Digital mental health India," "teletherapy India," "mental health apps India," "AI chatbot India," "wearables mental health," and the words "India," "psychology," and "psychiatry" were among the terms used [10-12].

Inclusion Requirements

- Printed from 2019 to 2025
- Indian-specific or applicable to Indian contexts
- Review, analysis, or commentary on the use of digital tools in mental health

Exclusion criteria include

- Non-English language papers;
- Only technical engineering papers without clinical or contextual discussion

Sample/Size

Forty-five articles and reports met the inclusion criteria after duplicates were eliminated [13-15].

ETHICAL CONSIDERATIONS

No ethical approval was needed for this review, which only used published works that were accessible to the public.

RESULTS

Theme	Key Findings	Challenges / Risks
Teletherapy	Improved accessibility, cost and time savings; useful in urban/rural linkages	Connectivity issues, privacy in shared living environments
Mental health apps	Many apps available; potential for self-help support	Poor regulation, data vulnerabilities, low usage in non-urban populations
AI chatbots	Appeal for anonymity, instant support, scalability	Limited emotional depth, cultural mismatch, lack of evidence in severe cases
VR / Immersive tools	Promising in phobia or exposure therapy contexts	High cost, limited trials in India
Wearables & biomarkers	Early detection potential (sleep, HRV)	Data privacy, risk of overreliance, health literacy barriers

Table 1: Thematic analysis of the 45 included works yielded the following key insights

Further cross-cutting observations

- There is no centralised oversight for mental health apps in India, which raises ongoing concerns about regulatory gaps. PMC + 2. Assessment+2 and Cambridge University Press. Table 1.
- Cultural and linguistic significance is important; employing regional language tools and using tactful metaphors boosts acceptability.
- There is still glaring disparity in digital adoption: older, low-income, and rural populations lag behind; an excessive reliance on technology may result in a disregard for human care and therapeutic nuance.

DISCUSSION

These results show both promise and caution. Particularly in settings with limited resources, teletherapy and apps democratise access; however, their efficacy is contingent upon contextual factors, such as connectivity, privacy, and familiarity with digital tools. While wearables and AI chatbots provide scalable augmentation, they cannot replace therapeutic

relationships, particularly in Indian contexts where familial, existential, and relational issues are frequently at the forefront.

A smart approach is to use a blended care model, which can include chatbot-based support, mood monitoring, and digital check-ins to supplement infrequent in-person meetings. This honours therapeutic depth as well as effectiveness. The regulatory and policy framework needs to change. For example, India's National Digital Health Mission should integrate clinical validation procedures, privacy laws, and mental health standards. The Mental Healthcare Act of 2017 offers a foundation based on rights, but it needs to be expanded to include digital spaces.

Digital ethics, digital literacy, and culturally sensitive design must all be covered in psychologists' training programs. Additionally, studies must look at longitudinal clinical outcomes and include rural, non-English, low-SES populations in addition to urban, English-speaking demographics.

LIMITATIONS

Selection bias may exist because this review is narrative rather than systematic. Many technologies are in their early or pilot stages, and there are still few empirical trials conducted in India.

CONCLUSION & SUGGESTIONS

India is at a turning point in its history: the gap in mental health care is growing, but digital tools present previously unheard-of opportunities. But technology won't be enough on its own. Integrative, culturally aware, morally sound tactics that maintain interpersonal relationships are the way forward.

Principal suggestions

1. Provide culturally relevant content for digital mental health tools in regional languages.

2. Establish a regulatory framework with risk and clinical evidence-based tiers for apps related to mental health.

3. Encourage blended models that incorporate both online resources and face-to-face counselling.

4. Educate medical professionals in online therapy techniques, design thinking, and digital ethics.

5. Provide funding for thorough trials of digital interventions in India for a range of demographics, including youth, older adults, and rural and urban populations.

REFERENCES

1. Mehrotra, S., et al. (2025). Mental Health Apps Available in App Stores for Indian Users.
2. Dar, M. A. (2023). The Intersection of Technology and Mental Health.
3. Halder, S. (2025). Developing Mental Health Support Chatbots in India: Opportunities and Challenges. Indian Journal of Social Psychiatry.
4. Choudhary, S. (2024). The Scope, Challenges, and Future of Digital Psychiatry in India.
5. Shakya, P. (2025). Telepsychiatry in Post-Pandemic India: A Mixed Methods Study.
6. Mehrotra, S., et al. (2025). Evaluating Characteristics and Quality of Mental Health Apps in India. JMIR Mental Health.
7. Varghese, M. A. (2024). Public Perception on Artificial Intelligence–Driven Mental Health Interventions in India.
8. Torous, J., et al. (2025). The Evolving Field of Digital Mental Health: Current Evidence and Future Directions.
9. Jolly, A. (2025). Modern Smart Gadgets and Wearables for Diagnosis and Monitoring of Mental Health Disorders.
10. Abuyadek, R. M. (2024). Acceptability of Tele-Mental Health Services Among Users and Providers: A Meta-Analysis.
11. Sethi, M. I. S. (2025). Mental Health Apps in India: Regulatory Landscape and Future Directions.
12. Hua, Y. (2025). Charting the Evolution of Artificial Intelligence Mental Health Interventions: A Systematic Review.
13. Xu, D. (2025). Virtual Reality in Adolescent Mental Health Management: A Randomized Controlled Experiment.
14. Abd-alrazaq, A. (2023). Wearable Artificial Intelligence for Anxiety and Depression: A Review. JMIR Mental Health.
15. Chakrabarti, S. (2025). Metaverse for Mental Health Disorders: Opportunities and Challenges.