

# Chapter 4

## Digital Well–Being and AI: Navigating the Intersection Between Technology and Mental Health

**Sanchita Mandal**

 <https://orcid.org/0009-0001-7213-6092>

*Tata Institute of Social Sciences, India*

**Mahmoud M. Kh. Hawamdeh**

 <https://orcid.org/0000-0001-5321-2400>

*Al-Quds Open University, Palestine*

### ABSTRACT

*Artificial intelligence (AI) has become a transformative force in mental health and digital well-being, offering personalized wellness programs and AI-driven mental health applications. However, these advancements present significant ethical challenges, particularly regarding algorithmic bias and privacy. This chapter discusses the implications of algorithmic bias, where the underrepresentation of diverse demographics in AI models can lead to inequitable outcomes and privacy risks stemming from the misuse or mishandling of sensitive user data. Through real-world case studies, the chapter illustrates these challenges and their impact on equitable and trustworthy AI in mental health. It also proposes strategies to mitigate these risks, emphasizing fairness, transparency, and privacy in AI design. The chapter underscores the role of responsible digital citizenship, advocating for informed and ethical engagement with AI tools by users, developers, and policymakers for creating inclusive, ethical, and privacy-conscious AI systems to advance mental health and digital wellness.*

DOI: 10.4018/979-8-3693-9015-3.ch004

## INTRODUCTION

The rapid integration of artificial intelligence (AI) into various aspects of modern life has revolutionized how individuals interact with technology and manage their mental health. As societies increasingly depend on digital tools, AI has emerged as a powerful enabler of opportunities and challenges for digital well-being. Digital well-being refers to mindful and responsible engagement with technology to promote mental, emotional, and social health (Vanden Abeele, 2020). In this context, AI-powered systems, ranging from chatbots to predictive analytics platforms, have demonstrated the potential to transform mental healthcare by making it more accessible, personalized, and proactive (Smith et al., 2023). However, deploying these technologies raises profound ethical and practical concerns, including algorithmic bias, privacy violations, and unintended social consequences. AI's role in mental healthcare has diverse applications. This includes providing 24/7 mental health support through intelligent chatbots, detecting early signs of psychological distress using advanced analytics, and delivering personalized interventions through wellness platforms (Nguyen et al., 2020; Brown et al., 2021). For instance, machine learning models are increasingly being used to predict depressive episodes or suicidal ideation, enabling timely intervention (Jones & Patel, 2022). Similarly, digital therapeutics, such as Calm and Headspace, integrate AI algorithms to adapt their recommendations to individual users' preferences and behaviors, enhancing the efficacy of mindfulness practices (Thompson et al., 2022). These innovations underscore the transformative potential of AI in reshaping the conceptualization and delivery of mental healthcare.

Despite these promising developments, the deployment of AI in digital well-being is fraught with several challenges. An algorithmic bias is a significant concern, wherein AI systems may perpetuate or exacerbate existing inequalities owing to imbalances in training data or flawed model designs (Mehrabi et al., 2021). For example, studies have shown that mental health apps often perform poorly when applied to data from underrepresented demographic groups, leading to inequitable outcomes (Zhao et al., 2022). Furthermore, using sensitive user data in AI systems raises critical privacy issues because inadequate safeguards can result in unauthorized data sharing, breaches, or exploitation for commercial purposes (Huckvale et al., 2019). These ethical challenges necessitate robust governance frameworks and interdisciplinary collaboration to ensure that AI technologies are responsibly developed and deployed.

Another dimension of this discourse is the evolving concept of responsible digital citizenship. As users increasingly engage with AI-powered tools, there is a growing need for digital literacy initiatives that equip individuals with the skills to critically evaluate these technologies and advocate their ethical use (Livingstone &

20 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: [www.igi-global.com/chapter/digital-well-being-and-ai/370017](http://www.igi-global.com/chapter/digital-well-being-and-ai/370017)

## Related Content

---

### Challenges of Criminal Liability for Artificial Intelligence Systems

Ramy El-Kady (2025). *Exploration of AI in Contemporary Legal Systems* (pp. 1-42). [www.irma-international.org/chapter/challenges-of-criminal-liability-for-artificial-intelligence-systems/365941](http://www.irma-international.org/chapter/challenges-of-criminal-liability-for-artificial-intelligence-systems/365941)

### Revolutionizing Finance and Accounting Through AI-Driven Decision Making

S. Vaishnavi, J. Shobana, R. Renugadevi, Sakkaravarthi Ramanathan, K. Arthiand Kalpana A. V. (2025). *Convergence of AI, Education, and Business for Sustainability* (pp. 261-284). [www.irma-international.org/chapter/revolutionizing-finance-and-accounting-through-ai-driven-decision-making/371613](http://www.irma-international.org/chapter/revolutionizing-finance-and-accounting-through-ai-driven-decision-making/371613)

### Strategic Leadership for AI Integration in Higher Education

Zeina Hojeij (2025). *Prompt Engineering and Generative AI Applications for Teaching and Learning* (pp. 329-348). [www.irma-international.org/chapter/strategic-leadership-for-ai-integration-in-higher-education/372367](http://www.irma-international.org/chapter/strategic-leadership-for-ai-integration-in-higher-education/372367)

### A Multi Criteria Decision Making Method for Cloud Service Selection and Ranking

Rakesh Ranjan Kumar and Chiranjeev Kumar (2018). *International Journal of Ambient Computing and Intelligence* (pp. 1-14). [www.irma-international.org/article/a-multi-criteria-decision-making-method-for-cloud-service-selection-and-ranking/204345](http://www.irma-international.org/article/a-multi-criteria-decision-making-method-for-cloud-service-selection-and-ranking/204345)

### Unlocking the Potential of AI for Efficient Governance: Innovative Approaches of Bahrain

Zakir Hossen Shaikh, Mohammad Irfan, Naji M. Nomran and Satya Pavan Kumar Ratnakaram (2024). *AI-Driven Decentralized Finance and the Future of Finance* (pp. 115-142). [www.irma-international.org/chapter/unlocking-the-potential-of-ai-for-efficient-governance/355304](http://www.irma-international.org/chapter/unlocking-the-potential-of-ai-for-efficient-governance/355304)