Chapter 9
Ethical Considerations Surrounding the Use of AI–Interventions in Application of Mental Healthcare

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ABSTRACT

AI's integration into mental healthcare has opened new frontiers in the diagnosis, treatment, and management of mental disorders. This leap brings with it a host of ethical considerations. This chapter provides an analysis of the ethical dimensions of AI interventions in mental healthcare, examining the implications for patient autonomy, privacy, and the integrity of the therapeutic relationship. It discusses the challenges of ensuring informed consent in the context of complex AI systems, the risks of algorithmic bias, its impact on equitable care, and the importance of maintaining confidentiality in the face of expansive data requirements. The chapter

DOI: 10.4018/979-8-3693-3112-5.ch009

also explores the need for transparent AI algorithms that can be scrutinized and understood by both practitioners and patients. Furthermore, it addresses the ethical responsibility of AI developers and healthcare providers to prevent harm and ensure the beneficence of AI applications. By highlighting these ethical issues, the chapter aims to foster a responsible approach to the development and deployment of AI interventions.

INTRODUCTION

Envision the future where individuals have immediate access to tailored mental health care, and where artificial intelligence not only identifies and addresses mental health disorders but also anticipates their emergence. This is not a depiction of a distant future, but rather a description of the fast-advancing state of mental health care today. AI treatments have the capacity to fundamentally transform our comprehension, approach, and resolution of mental health issues. Artificial intelligence, sometimes known as AI, is a technology that enables computers and robots to imitate human intellect and problem-solving capabilities. Russel & Norvig (2021) provided a concise definition of AI as an agent that is deliberately created and equipped with the ability to interact with its surroundings, carrying out activities that directly influence the environment. The present period, termed as the "digital revolution," marks a significant shift in the fourth industrial age. This revolution is characterized by the integration of several technical types, after the mechanical, electrical, and internet eras (Pang et al., 2018; Schwab 2017). Artificial Intelligence (AI) has seen substantial transformations in recent years and is attracting worldwide recognition. Nevertheless, the discipline is expansive and resists simple categorization, since its extent is always evolving owing to swift advancements in this domain.

Artificial intelligence (AI) is revolutionising mental healthcare by offering novel approaches to identify, diagnose, and treat mental health conditions. Machine learning, a branch of artificial intelligence, has the ability to analyse human behaviour patterns, detect indications of mental health issues, identify risk factors, forecast the evolution of illnesses, and customise therapies (Thieme et al., 2020). AI is used in mental health care for several purposes. One use is computational psychiatry, which involves using quantitative methods to evaluate and treat mental disorders (Pandey & Misra, 2023). Another application is incorporating AI into mobile health apps to give mental health help (Graham et al., 2019). Moreover, the potential of artificial intelligence (AI) in mental health care involves using electronic health records, mood rating scales, brain imaging data, innovative monitoring systems like cell phones and video, and social media platforms to predict, categorise, or classify mental health disorders (Milne-Ives et al., 2022). The increasing accessibility of

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