

## **Abstract**

The integration of digital technologies in healthcare and public health has rapidly transformed how information is communicated, services are delivered, and emergencies are managed. This shift became especially critical during the COVID-19 pandemic, which underscored the need for efficient, accessible, and responsive digital health systems. The purpose of this study was to examine the role of digital tools—such as artificial intelligence (AI), mobile health (mHealth) applications, social media platforms, and telemedicine—in enhancing public health strategies and healthcare delivery. A two-part methodology was used. First, a literature review was conducted to evaluate the strengths and limitations of digital health tools based on five key scholarly sources. Second, a survey-based study involving 35 undergraduate students from a data analytics course was carried out to assess user perspectives on digital technology in education, offering comparative insights into broader digital adoption trends. The results of the literature review indicated that digital technologies improved diagnostic accuracy, remote monitoring, and public engagement, but also revealed challenges such as data privacy, misinformation, and unequal access. Survey responses reflected similar concerns, highlighting issues like digital fatigue, access inequality, and the importance of hybrid delivery models. These findings suggest that while digital health tools hold significant promise, their successful implementation depends on addressing regulatory, ethical, and infrastructure-related barriers. Future efforts should focus on ensuring equitable access, improving digital literacy, and strengthening privacy protections. By adopting inclusive and responsible digital strategies, healthcare systems can better respond to public health challenges and enhance patient outcomes.