

ARTICLE

Coping Mechanisms and Privacy Concerns in Digital Health on Social Media

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Abstract

Background: Digital platforms, particularly social media sites like TikTok, have emerged as influential tools for health communication and peer support. However, they present challenges, including the possible spread of misinformation, privacy concerns, and limited professional oversight.

Aim: This review investigates the coping mechanisms patients and healthcare providers adopt to manage the risks and challenges encountered on social media platforms within digital health environments.

Methods: A scoping review was conducted using PubMed, Google Scholar, and Scopus literature. Studies were selected based on relevance, quality, and methodological rigour, focusing on strategies addressing misinformation, privacy protection, and professional accountability.

Findings: Digital platforms facilitate health information sharing and community support but also expose users to risks such as unverified content and privacy violations. A lack of consistent verification mechanisms for healthcare professionals and insufficient regulatory frameworks increases users' vulnerability to misinformation and unethical practices.

Conclusion and Recommendations: To improve safety and outcomes in digital health spaces, the review recommends stricter social media guidelines for healthcare providers, increased efforts to improve digital health literacy, and enhanced privacy protections. Strengthening regulatory oversight is essential to ensure the credibility and safety of health information shared online.

Keywords: Digital Health; Coping Mechanisms; Misinformation; Privacy Protection; Social Media Platforms; Healthcare Providers; Health Literacy; Professional Accountability

1. INTRODUCTION

The rapid digitalisation of healthcare has fundamentally altered traditional modes of patient-provider engagement, ushering in a new era of virtual health interactions. With the increasing integration of telemedicine platforms, health applications, and social media into daily life, patients can now easily obtain medical advice. This shift is consistent with international public health priorities such as the pursuit of Universal Health Coverage (UHC), as the World Health Organization [1] advocates. Nevertheless, the democratisation of medical advice through digital channels has introduced significant challenges, particularly around the regulation and reliability of information.

Digital platforms have become central to healthcare communication, enabling virtual consultations, self-monitoring, and information exchange between patients and professionals. Technological advances, the ubiquity of smartphones, and pandemic-driven adoption have accelerated this transformation [2]. However, this shift has also led to concerns about information quality, data privacy, and practitioner accountability. As healthcare delivery moves into the digital realm, examining how these interactions affect patient outcomes, and the integrity of medical practice becomes crucial.

Despite the advantages of digital accessibility, a growing volume of health-related content is now generated by non-experts on social media platforms such as TikTok, Facebook, and WhatsApp. While these spaces may foster community support and health advocacy, they also serve as breeding grounds for misinformation, notably when advice lacks clinical grounding. Studies have shown that unverified

content can lead to inappropriate self-diagnosis, medication misuse, or delayed treatment [3]. This tension between increased access and diminished oversight forms the crux of the current debate around digital healthcare advice.

Digital health solutions have bridged critical service gaps in low-resource settings, providing informational and consultative resources where physical infrastructure is limited. Yet, the absence of standardised protocols for online medical advice risks service quality and public trust. Health apps hold significant potential for supporting self-management and advancing universal health coverage in sub-Saharan Africa. Still, the scarcity of regulatory standards and guidance poses a major barrier to their safe and effective integration into healthcare systems, underscoring the need for robust, context-specific regulatory frameworks [4].

Many platforms operate independently of national regulatory bodies, making it challenging to ensure ethical compliance or clinical accuracy (5). Integrating digital health technologies presents challenges in both technological adaptation and institutional response, compounded by complex legal issues related to cross-border digital communication. The decentralised nature of the Internet further complicates the establishment of clear legal responsibility, creating uncertainty for both users and practitioners. As patients increasingly seek health advice online, governance frameworks that balance ethical standards and innovation become essential. Building on insights from Mumtaz et al. (6) and Nittas et al. (7), this paper highlights the importance of stakeholder involvement, infrastructure development, and cultural adaptations in addressing digital health disparities while emphasising the need for ethical research and evidence-based frameworks to ensure the effectiveness and equity of digital health interventions. Given the challenges in ensuring ethical compliance and clinical accuracy across digital health platforms, the study aims to explore the evolving landscape of medical advice dissemination, focusing on the impact of digital transformation on regulation, user trust, and the overall effectiveness of digital health interventions.

2. STUDY AIM

This study examined the coping mechanisms adopted by patients and healthcare providers within digital health environments, emphasising the risks and challenges posed by social media platforms such as TikTok. The review sought to explore how these stakeholders navigate issues related to misinformation, data privacy, and the absence of professional oversight and to identify strategies that promote resilience, safety, and accountability in digitally mediated health interactions.

3. LITERATURE REVIEW

Digital platforms have significantly broadened access to healthcare, facilitating timely interactions between patients and providers. However, this expansion has also introduced complex ethical concerns and opportunities for the spread of misinformation. Research highlights that the unregulated nature of many digital health interactions, particularly on social media, raises concerns about accountability and patient safety (8). Although calls for professional verification and digital patient safeguards are growing, consistent enforcement of these standards remains elusive across platforms (9). The evolution of digital health has been extensively examined, beginning with Eysenbach's (10) foundational concept of "eHealth," which framed internet-based tools as transformative for healthcare delivery. The COVID-19 pandemic accelerated the mainstream adoption of telemedicine, with virtual consultations becoming standard practice in many contexts (11,12). Nevertheless, the quality of online information varies widely, especially in unregulated or user-generated content zones, where peer-to-peer exchanges often lack scientific grounding (13).

Studies show that most online health information is anecdotal or misleading, particularly on platforms like TikTok and Facebook. These sites have come under scrutiny for their role in disseminating false or unverified health claims, especially during health crises such as the COVID-19 pandemic (14,15). Unlike traditional healthcare systems, which are subject to institutional oversight, social media lacks structured gatekeeping, thereby elevating risks for users, particularly those with limited health literacy or poor access to verified resources (16).

Against this backdrop, the objectives of this study were fourfold: first, to analyse existing best practices in delivering medical advice online; second, to assess the practical challenges and limitations encountered by both healthcare providers and patients; third, to examine current regulatory and policy frameworks while identifying critical gaps; and finally, to propose recommendations aimed at enhancing the safety, reliability, and ethical standards of digital health advisory services. The literature further reveals how online health information influences health-seeking behaviour, with many individuals using digital content to guide decisions without verifying its accuracy (17). This trend emphasises the urgency of ensuring that digital advice is credible and contextually relevant. Moreover, disparities in digital access, especially among marginalised or rural populations, have been shown to exacerbate existing healthcare inequities (18). Patients and providers face increasing uncertainties without robust legal frameworks for digital malpractice and consent. Nonetheless, when grounded in strong regulation and ethical oversight, digital platforms can enhance care continuity and patient empowerment, supporting a more inclusive and responsive healthcare ecosystem.

4. THEORETICAL FRAMEWORK

This study draws on the Health Belief Model (HBM) and the Diffusion of Innovations theory. The HBM helps explain how individuals perceive and respond to health advice online, particularly concerning perceived severity, susceptibility, and benefits of acting (19). This is crucial in understanding why some patients accept advice from informal sources rather than licensed professionals. The diffusion of Innovations theory, as proposed by Rogers (20), explains how new ideas and behaviours spread within communities. On social media, health trends, whether medically accurate or not can quickly go viral. This theory provides insights into how misinformation becomes normalised in digital health spaces and highlights the role of influencers and viral content in shaping health behaviours.

5. METHODS

The research methodology employed in this study consisted of a scoping review of existing literature on coping mechanisms within digital health environments, with a particular focus on the challenges encountered by healthcare professionals and patients on platforms such as TikTok and other social media (4,21,22).

A comprehensive scoping review followed PRISMA-ScR guidelines (23), covering literature from January 2013 to December 2023 across databases including PubMed, Scopus, and Google Scholar. Peer-reviewed and grey literature, such as policy documents and reports, were included to broaden the scope and reduce publication bias. Only English-language sources were considered, acknowledging the potential for language bias. A two-stage screening process with independent reviewers ensured rigorous selection. Data extraction and thematic analysis focused on coping strategies in digital health related to misinformation, privacy, and accountability. The distribution of source types is summarised in Table 1.

Table 1. Types of Sources Included in the Review

Source Type	Description	Number of Sources	Percentage (%)
Peer-Reviewed Journal Articles	Empirical studies, systematic reviews, conceptual analyses	30	65%
Grey Literature	Policy reports, organisational publications, guidelines	7	15%
Legal & Regulatory Documents	Acts, regulations, legal reviews, government gazettes	5	11%
Online Articles & Web Resources	Online commentaries, informational webpages, blogs	2	4%
Books & Book Chapters	Textbooks, foundational theory, monographs	2	4%

This review examined published studies, guidelines, and reports that addressed the psychological and practical dimensions of coping with misinformation, data privacy concerns, and the absence of professional oversight within these digital spaces. The purpose was to synthesise findings from diverse

sources to develop a comprehensive understanding of how stakeholders, both patients and healthcare providers, navigate digital health ecosystems and the strategies they adopt to mitigate associated risks (13,9).

To support this objective, a systematic search was conducted across databases including PubMed, Google Scholar, and Scopus, utilising keywords such as “digital health,” “coping mechanisms,” “social media platforms,” “misinformation,” and “privacy.” Studies were selected based on their relevance, methodological rigour, and overall contribution to the topic, ensuring that only high-quality literature was included (21). However, the heterogeneity of study designs presented limitations, particularly in terms of generalisability, and publication bias emerged as a potential concern, as studies reporting adverse outcomes related to digital health platforms were likely underrepresented (9,24).

Despite these limitations, the review offered valuable insights into the multifaceted nature of coping strategies adopted within digital health contexts. By synthesising the available evidence, the study provided critical recommendations to enhance patient safety, strengthen professional accountability, and improve privacy safeguards across digital platforms (5).

While preparing this manuscript, the author utilised Grammarly and QuillBot for language editing, polishing, and plagiarism. All outputs generated by these tools were critically reviewed and edited by the author, who takes full responsibility for the final content presented in this publication.

6. THE ROLE OF DIGITAL PLATFORMS IN HEALTHCARE SUPPORT AND INFORMATION SHARING

Digital platforms, such as TikTok, have become pivotal in facilitating the exchange of health-related information, allowing patients to share experiences and receive peer support. These platforms foster a sense of community, especially in support groups where individuals with similar conditions can provide mutual encouragement and advice (13). Sharma and Gahane (26) emphasise the transformative role of social media and online communities in healthcare, improving patient education, empowerment, and support while highlighting challenges such as misinformation and privacy risks. They recommend that healthcare providers and policymakers prioritise the ethical use of digital health technologies, focusing on privacy protection, combating misinformation, and ensuring accountability.

6.1 Verification and Professional Accountability

Verification mechanisms for healthcare professionals on digital platforms are often inconsistent. Guraya et al. (26) highlight healthcare professionals’ growing use of social media, revealing concerns regarding unprofessional behaviours, blurred professional identities, and patient privacy violations. The study underscores the need for consistent verification mechanisms. It emphasises the importance of developing clear guidelines and educational programs to uphold digital professionalism and help healthcare professionals and students navigate the digital era’s boundaries between personal and professional identities. While some platforms may allow professionals to provide valuable insights, the absence of robust systems to authenticate the qualifications of these individuals increases the risk of unauthorised persons dispensing potentially harmful advice (13). The lack of oversight means unverified sources may mislead patients, leading to misinformation, incorrect self-diagnosis, or unproven treatments. This highlights the need for a more stringent regulatory framework to ensure that only qualified professionals offer medical guidance in these spaces (9).

6.2 Privacy and Data Protection

As digital technologies increasingly integrate into healthcare systems, enhancing patient care, quality monitoring, and clinical support, privacy and data protection have become critical concerns, with Paul et al. (27) highlighting both the benefits and the substantial challenges related to privacy and security. They also address significant privacy and security challenges associated with these advancements. Privacy and data security are major concerns in the context of digital health platforms (28). Platforms like TikTok often lack sufficient measures to secure sensitive health information, raising issues around data protection and user privacy (5). The importance of protecting personal information on social and digital platforms cannot be overstated, as many users freely share their health experiences without fully understanding the risks, including unauthorised data access and breaches (19). These gaps in data security not only expose individuals to privacy violations but also raise concerns about non-compliance with critical privacy regulations, such as the General Data Protection Regulation (29) and the Protection of Personal Information Act (31,32).

6.3 Legal Jurisdiction and Liability

The increasing reliance on digital platforms for health-related content raises complex legal liability concerns. Although digital health technologies hold promises for enhancing healthcare systems, existing regulatory frameworks in the EU and the US lack sufficient provisions for trust, privacy, validation, and oversight underscoring the pressing need for more robust and adaptive legal structures to support value-based care (33).

There is a lack of clear legal frameworks to address situations where a misdiagnosis, incorrect treatment advice, or patient harm results from interactions on these platforms. The challenge is further compounded by the global nature of social media and digital health spaces, as cross-border consultations or advice may make it challenging to enforce jurisdictional laws (16,34). This absence of clarity poses a significant challenge in holding individuals accountable for medical advice provided in online spaces (35). Key findings indicate that social media has been widely utilised for diverse health purposes. New applications have emerged since 2013, such as advancing health research, facilitating social mobilisation, and supporting offline health-related services. However, gaps remain in evaluating its strategic use and impact on health interventions (13). Building on these key findings, the next section explores the challenges associated with misinformation on social media and its impact on health literacy, highlighting the need for effective strategies to address these issues in digital health spaces.

6.4 Misinformation and Health Literacy

The rapid spread of unverified and potentially misleading health information on digital platforms is a pressing issue (36). Users, often lacking health literacy, may struggle to discern between credible medical advice and harmful misinformation. This challenge is particularly evident on social media platforms like TikTok, where viral trends may promote unverified or anecdotal health claims, contributing to declining health literacy (37-39).

Misinformation can lead to patients making poor health decisions or foregoing necessary medical care, ultimately exacerbating health risks (13). Therefore, platforms must monitor and curate health-related content more actively to ensure users are exposed to credible, scientifically backed information.

6.5 Self-Disclosure of Health Status on Digital Platforms and Regulatory Gaps

The self-disclosure of health status on digital platforms presents significant challenges, particularly due to the insufficient regulatory frameworks that are meant to safeguard patient data. In South Africa, privacy and data protection in healthcare are governed by a complex legal framework, including the Constitution, POPIA, the National Health Act, and the Health Professions Council's guidelines, all aiming to balance the need for patient data sharing with the responsibility of safeguarding it to maintain trust and ensure ethical, secure healthcare practices (40-42,31). However, the Act's provisions are generally broad and may not fully account for the specific challenges posed by digital health consultations, which could lead to gaps in patient data protection.

Patients increasingly turn to peers for medical advice based on personal experiences rather than consulting qualified healthcare professionals. This reliance on anecdotal advice raises the risk of misinformation, as the qualifications of those providing guidance are often unverified. The absence of clear, sector-specific regulations governing informal health consultations on digital platforms further exacerbates these risks, leaving patients vulnerable to unqualified advice. While regulatory bodies such as the Health Professions Council of South Africa (HPCSA) and the National Health Act have established guidelines for professional healthcare providers, there are no explicit frameworks in place to regulate informal online health interactions (43,44). As a result, patients may inadvertently receive misleading or harmful advice, which can seriously affect their health.

The table (Table 2) below summarises the key advantages and disadvantages of disclosing health status on digital platforms. While self-disclosure can offer benefits such as emotional support, increased awareness, and access to diverse health information, it also presents risks, including misinformation, privacy breaches, lack of regulation, and potential exploitation. These challenges emphasise the need for a more structured regulatory framework to safeguard patient interests while facilitating informed and secure health discussions.

Table 2. Advantages and Disadvantages of Disclosing Health Status on Digital Platforms

Advantages	Disadvantages
Emotional support from others with similar conditions	Risk of receiving wrong or harmful advice
Raises awareness and reduces stigma	Privacy concerns and data breaches
Easier access to health information	Lack of rules to protect users online
Empowers people to share their story	Risk of being exploited by fake services
Helps connect with healthcare experts	Legal and ethical issues with sharing sensitive info

Sources: [27,40,41-44]

7. DISCUSSION

This study explored how patients and healthcare providers navigate the many risks and challenges that come with using digital health platforms, focusing mainly on misinformation, privacy concerns, and professional accountability. Using the HBM as a guiding framework, it aimed to uncover how people's health beliefs shape how they interact with informal health advice and digital consultations.

Our findings reinforce key ideas from the HBM, such as perceived susceptibility, severity, benefits, barriers, cues to action, and self-efficacy and show how these play a crucial role in how individuals process health information online. For example, when users underestimate their vulnerability to misinformation or the seriousness of privacy breaches, they are more likely to take risks, like sharing sensitive health details or trusting unverified medical advice. This echoes earlier work by Smailhodzic and colleagues (16), who pointed out how users in poorly regulated digital spaces can be vulnerable. On the other hand, users who are more aware of these risks tend to seek out credible sources and professional guidance, demonstrating the "cue to action" described by the HBM.

While much of the existing literature highlights the fragmented nature of digital health regulations, especially concerning informal advice shared on social media (13,16), our study brings out additional layers of complexity. For example, even where formal telehealth regulations exist, such as in South Africa through the Health Professions Act and National Health Act (DLA Piper, n.d.[45]), enforcement in online spaces is inconsistent. This gap is further complicated by a general lack of public understanding about what constitutes legitimate professional advice in digital settings, an aspect that has been underemphasised in previous research. Additionally, regulations around traditional healers and unqualified digital advisers remain unclear, creating further grey areas (44).

Misinformation remains a persistent and dangerous problem, especially highlighted during the COVID-19 pandemic (46,47). Our study confirms that misleading information can seriously undermine people's health decisions and trust in formal healthcare. Although digital platforms offer valuable peer support and information-sharing opportunities, which can boost perceived benefits and confidence, they expose users to unfiltered and sometimes harmful content. This dual nature has been widely noted (13,16), but our findings suggest that the impact varies greatly depending on factors like demographics, health literacy, and cultural context. This highlights a limitation in broad-brush conclusions from previous research and calls for more detailed, context-aware studies.

Smailhodzic et al.'s (16) six-category framework of social media use helped us interpret our findings, where we also observed positive effects, such as better self-management and emotional support, alongside negatives like addiction and privacy risks. Our study adds a deeper understanding of how these categories intersect with health beliefs and digital literacy, influencing behaviour in complex ways. For instance, people with higher digital health literacy showed greater confidence (self-efficacy). They were more selective about the health information they engaged with, suggesting that literacy acts as a bridge between belief and action.

Importantly, we echo Guraya et al. (26) in recognising how the absence of professional oversight and verification on digital platforms can erode patient trust and safety. However, we also observed that users are not passive; they often develop their ways of coping, such as peer moderation and selective

sharing. These user-driven strategies, while helpful, can also create new challenges like reinforcing echo chambers or clusters of misinformation issues that have received little attention so far.

This study contributes a richer, more context-sensitive perspective on digital health risk behaviours through the HBM lens. It highlights the interplay between individual perceptions, the regulatory environment, and digital literacy and stresses the need for policies that combine strong regulation with education and literacy programs. Moving forward, research should continue to explore these relationships over time and across diverse populations to tailor better interventions that promote safe and informed digital health engagement.

8. LIMITATIONS

This study is limited by its reliance on secondary sources and the absence of primary empirical data. Future research should incorporate interviews, platform analyses, and patient feedback for comprehensive insights. Another limitation is the variability of digital health regulations across jurisdictions, which restricts the generalizability of findings. Comparative studies may provide deeper insights into regional differences and effective models. Additionally, the rapidly evolving nature of digital platforms means that findings may quickly become outdated. Continuous monitoring and updates to research frameworks are needed to maintain relevance. The scope of this paper did not cover specialised domains such as mental health apps or AI-driven diagnostics, which may present unique challenges. Future work should examine these niches in greater detail.

9. RECOMMENDATIONS

While this study highlights critical challenges such as regulatory gaps, misinformation, and the digital divide, these limitations underscore the urgent need for targeted strategies to safeguard users and enhance the quality of digital health interactions. In response to these findings, the following recommendations are proposed to address these issues comprehensively across scholarly, business, policy, and patient domains.

From a scholarly perspective, research and education should focus on bridging the digital divide by developing tailored digital health literacy programs for both high- and low-income countries. Scholars must also emphasize ongoing training for healthcare providers on digital ethics, with particular attention to the authentication and validation of professional advice shared online.

From a policy perspective, policymakers are tasked with creating comprehensive regulatory frameworks that mandate the accreditation and validation of digital health providers. Regulations should clarify legal responsibilities and require verification of professional credentials before individuals can disseminate medical advice online. Collaboration among regulators, public health institutions, and private sector stakeholders is vital to enforce these standards and promote accountability. Policymakers must also support public health campaigns that enhance digital health literacy, empowering patients to critically assess both the advice and the source's legitimacy.

From the patient perspective, individuals should be educated and empowered to recognize accredited platforms and verified healthcare providers, encouraging cautious engagement with online health information. Patients should be encouraged to confirm the qualifications of those offering advice and to prioritize consultation with validated professionals to ensure safe and reliable health decision-making.

10. CONCLUSION

The self-disclosure of personal health information and reliance on peer-shared medical advice on social media platforms present a growing concern. While these interactions can provide valuable emotional support and shared experiences, they also pose serious risks to privacy, well-being, and health outcomes. Many users without formal medical training may unintentionally spread unverified or inaccurate information, leading to potentially harmful health behaviours. Additionally, the provision of medical advice by unqualified individuals raises significant issues related to accuracy, privacy violations, and legal accountability.

The impact of digital health platforms must be understood in the context of the global digital divide. Disparities between high- and low-income countries affect access to technology, digital literacy, and the ability to critically evaluate online health information. Users in low-income regions are often more vulnerable to misinformation and privacy risks due to limited infrastructure, regulatory oversight, and health education.

Although digital platforms have the potential to democratize health information access, the lack of clear regulation and professional oversight can facilitate malpractice and the unchecked spread of misinformation. This is especially problematic in settings where users have limited skills to critically assess information.

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