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Health Information Quality in Digital Health Campaigns

MAJIDATUL FARHANA NOOR ADZMEE
ROSMIZA BIDIN*
SHARIFAH SOFEA SYED ZAINUDIN
Universiti Putra Malaysia

MOHD FEROZ SHAH DE COSTA
Kuala Lumpur University of Science & Technology (KLUST), Malaysia

ABSTRACT

The growing reliance on social media and digital platforms for public health communication has intensified concerns regarding the quality, reliability, and trustworthiness of health information disseminated through online campaigns. Despite increasing scholarly attention to misinformation and credibility issues, research examining health information quality specifically within structured digital health campaigns remains fragmented. This study employs a Systematic Literature Review (SLR) guided by the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) protocol. Peer-reviewed articles were retrieved from Web of Science, Scopus, Emerald, and ScienceDirect using predefined keywords related to health information quality, reliability, accuracy, trustworthiness, social media, and digital campaigns. After screening and eligibility assessment, relevant studies were analysed thematically. The review identifies three principal dimensions shaping health information quality in digital campaign contexts: (1) message-related factors, including accuracy, clarity, and completeness; (2) source-related factors, particularly credibility and institutional trust; and (3) audience evaluation processes, such as perceived usefulness and engagement. The findings reveal that while misinformation has been widely studied, relatively few investigations focus explicitly on the strategic design and evaluation of information quality within organised digital health campaigns. This review consolidates existing knowledge and highlights theoretical and methodological gaps in the literature. It underscores the need for more integrative models linking information quality to behavioural outcomes in digital campaign settings. The findings offer practical implications for health authorities and campaign designers seeking to enhance the effectiveness of digital health communication strategies.

Keywords: *Health information quality, digital health campaigns, social media communication, Systematic Literature Review (SLR), PRISMA.*

INTRODUCTION

Health literacy plays a pivotal role in how individuals interpret and use online health information. Patients with higher health literacy are better equipped to navigate the complexities of medical information and can more effectively discern credible sources from unreliable ones (Nutbeam, 2000). However, resonating with today's digital age, while the internet can provide valuable information, it can also lead to confusion and harm if not approached with caution. Efforts to improve health literacy, such as educational programs and resources, can empower individuals to make informed health decisions based on quality information.

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LITERATURE REVIEW OR RESEARCH BACKGROUND

Quality of Information (QOI)

QOI is widely recognized as a key determinant of information adoption in online environments. Users are more likely to accept and utilize information that is perceived as accurate, relevant, complete, timely, and useful (Sussman & Siegal, 2003; Cheung et al., 2008; Erkan & Evans, 2016). Within the Information Adoption Model (IAM), QOI serves as a central-route factor that influences users' cognitive evaluation of information and subsequently affects information acceptance, attitudes, and behavioural intentions (Petty & Cacioppo, 1986; Bhattacherjee & Sanford, 2006). Consequently, information with higher perceived quality is more likely to generate positive responses and encourage information adoption.

In the context of digital health communication, QOI has become increasingly important due to the growing reliance on online platforms as sources of health-related information. The accessibility of digital media enables individuals to obtain health information quickly and conveniently, supporting informed decision-making and active participation in health management (Rowley et al., 2017). Furthermore, online health information can enhance communication between patients and healthcare providers by encouraging greater engagement during consultations and facilitating discussions regarding treatment options and preventive care (Park et al., 2024; Tan & Goonawardene, 2023).

Despite these advantages, concerns regarding the quality of online health information remain significant. The widespread availability of health content on digital platforms has increased the risk of misinformation, inaccurate advice, and non-evidence-based recommendations. Previous studies have shown that many individuals experience difficulties in distinguishing credible information from unreliable sources, which may lead to inappropriate health decisions, delayed treatment, heightened anxiety, and resistance to recommended health interventions such as vaccination (Ghazali et al., 2023; Li et al., 2022; Swire-Thompson & Lazer, 2020; Wang et al., 2023). These challenges highlight the importance of ensuring that health information disseminated through digital channels meets high standards of quality and credibility.

Health literacy further influences individuals' ability to evaluate and utilize online health information. According to Nutbeam (2000), individuals with higher levels of health literacy are better equipped to locate, understand, evaluate, and apply health information effectively. Higher health literacy enhances users' capacity to assess information quality and differentiate reliable sources from misleading content, thereby increasing the likelihood of informed health decision-making.

Within online stunting prevention campaigns, QOI refers to the extent to which campaign messages provide accurate, relevant, comprehensive, and timely information regarding child nutrition, growth monitoring, maternal health, and preventive practices. When parents and caregivers perceive campaign information as credible and useful, they are more likely to trust, adopt, and act upon the recommendations provided. This, in turn, contributes to improved health-seeking behaviour and supports the effectiveness of stunting prevention initiatives (UNICEF/WHO/World Bank Group, 2023). Therefore, QOI is considered a critical predictor of information adoption and campaign effectiveness in digital health communication, particularly within online stunting campaigns.

METHODOLOGY

This study employs a SLR to examine how health information quality is addressed within digital health campaigns. The SLR approach was selected because it enables a systematic, transparent, and structured process for identifying, evaluating, and synthesising existing research findings. This method is particularly suitable for emerging and interdisciplinary areas such as digital health communication, where research remains fragmented across multiple fields. Recent studies emphasise the importance of evidence synthesis in understanding issues related to information quality, credibility, and user engagement in digital environments (Wang et al., 2023; Park et al., 2024; Edo et al., 2023).

The review process was guided by the PRISMA framework, which ensures methodological rigour through four key stages: identification, screening, eligibility, and inclusion. Although PRISMA remains a foundational guideline, its continued application in recent health communication research demonstrates its relevance in ensuring transparency and reproducibility in systematic reviews (Park et al., 2024).

Search Strategy

This study employs a SLR guided by the PRISMA protocol. Peer-reviewed articles were retrieved from Web of Science, Scopus, Emerald, and ScienceDirect using predefined keywords related to health information quality, reliability, accuracy, trustworthiness, social media, and digital campaigns. The search string used was (("health information quality") OR ("health information reliability") OR ("health information accuracy") OR ("health information integrity") OR ("information trustworthy*") AND ("social media") OR ("social network") OR ("online platform") OR ("digital media") AND (campaign) OR (advertisement) OR (program*) OR (project*)).

Overview of Selected Studies

Ninety-two published studies were identified through the systematic database search process. After applying the predefined inclusion and exclusion criteria, a final set of 28 articles was selected for detailed review and analysis. Figure 1 presents the PRISMA flow diagram illustrating the systematic review protocol used in this study.

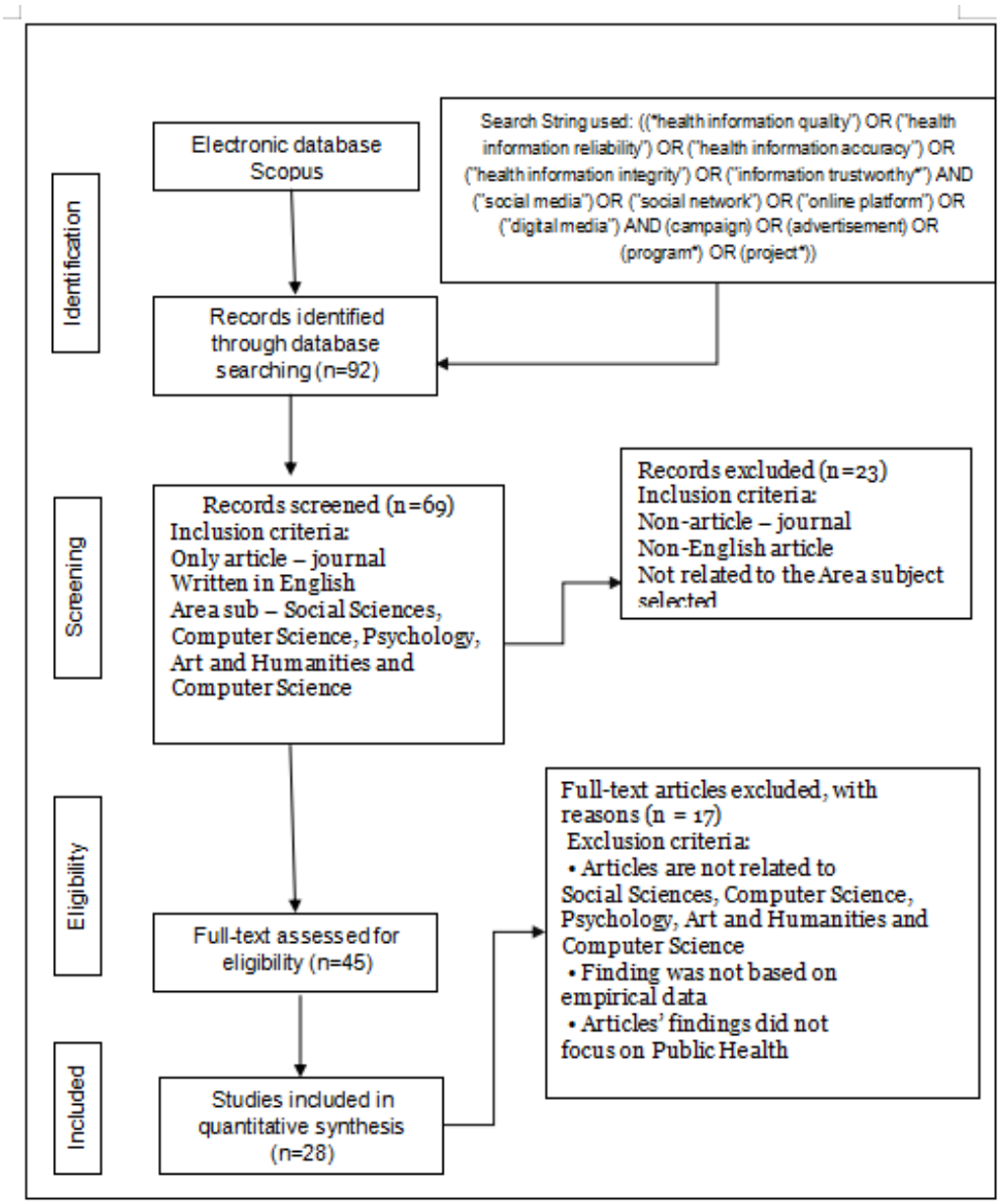

Figure 1: PRISMA flow diagram for systematic review protocol
Source: Adapted from Moher et al. (2009)

Inclusion and Exclusion Criteria

The systematic review process consisted of three main phases: identification, screening, and eligibility assessment. In the identification phase, 92 articles were initially identified through database searching. During the screening phase, inclusion criteria were applied: only journal articles written in English, published in 2013 and later, and categorized under Social Sciences, Computer Science, Psychology, Arts, and Humanities were included. A total of 23 articles were excluded based on these criteria, resulting in 69 records screened.

In the eligibility phase, 45 full-text articles were assessed for eligibility. Articles were excluded if they were not related to the selected subject areas, findings were not based on empirical data, or findings did not focus on public health. After this process, 17 articles were excluded, and 28 studies were included in the final qualitative synthesis.

Quality Assurance

All confirmed articles were subjected to a quality assurance process using the PRISMA checklist, following the updated PRISMA 2020 guidelines (Page et al., 2021). The evaluation was conducted by four reviewers with expertise in areas such as organizational communication and brand studies. For an article to be included in the analysis, consensus among the evaluating members was required. Any disagreements were discussed thoroughly until a final decision was reached regarding the eligibility of the articles. This rigorous screening and consensus process ensured that only studies meeting the predefined criteria were included, thereby enhancing the transparency and reliability of the systematic review process (Haddaway et al., 2023; Almeida et al., 2023).

Data Analysis

The selected studies were analysed using thematic analysis. This approach is particularly suitable for synthesising findings from diverse research designs and identifying recurring patterns across studies (Jiang et al., 2021; Park et al., 2024). Through iterative coding and comparison, the findings were organised into key themes related to health information quality in digital campaign environments. The themes included message-related quality factors, source credibility factors, and audience evaluation processes.

Overall, this methodological approach ensures a rigorous, transparent, and replicable review process. By prioritising recent empirical studies and applying systematic analytical procedures, the study provides a reliable and up-to-date synthesis of the key factors influencing health information quality in digital health campaigns.

RESULTS AND DISCUSSION

Geographical Distribution

As for the geographical area covered, it has been identified that five previous studies were conducted in China (Zhang et al., 2020; Jiang et al., 2021; Li et al., 2022; Wang et al., 2023; Song et al., 2021), four studies were conducted in the United States (Corrales et al., 2018; Introne et al., 2020; Tao et al., 2017; Chen et al., 2018), two studies were conducted in Australia (Schlichthorst et al., 2019; Williams et al., 2019), and two studies were conducted in South Korea (Park et al., 2024; Jin et al., 2018). In addition, one study each was conducted in Pakistan (Nisar & Shafiq, 2018); India (Rejikumar et al., 2022); Ireland and the United Kingdom (Escañuela Sánchez et al., 2020); Israel (Hayat et al., 2019); Italy (Lo Presti et al., 2019), Saudi Arabia (Hidayat-ur Rehman et al., 2021); Kuwait (Alajmi & Alotaibi, 2020); and West Africa (Edo et al., 2023). Furthermore, several studies adopted cross-national contexts, including China and Sweden (Tang et al., 2024), the United States and South Korea (Bae & Yi, 2019), and the United Kingdom and the United States (Ma & Atkin, 2016). Table 1 presents the geographical distribution, focus areas, and findings of the selected studies.

Table 1: Geographical distribution, study focus and findings of selected articles

Authors	Area of Study Covered	Country/ Region	Findings
Corrales et al. (2018)	Internet use and anxiety among gynecologic oncology patients	USA	The majority of patients used the internet to search for cancer-related information. However, those who sought information more frequently reported significantly higher levels of anxiety.
Wang et al. (2023)	Information normalization in online healthcare consultation	China	Normalization significantly improves user trust in online healthcare platforms, reduces perceived uncertainty regarding health conditions, and enhances overall satisfaction with online consultation services.
Zhang et al. (2020)	Health information seeking and psychological well-being (WeChat)	China	Seeking health information on WeChat enhances psychological well-being, but this relationship is mediated by several factors, including the perceived usefulness of the information, social support received from online communities, and feelings of empowerment.
Nisar & Shafiq (2018)	Social media utilization in healthcare sector	Pakistan	Strategic use of social media can significantly improve patient education, facilitate timely information dissemination during health emergencies, enhance patient-provider engagement, and reduce inefficiencies within the healthcare system.
Edo et al. (2023)	Adoption of digital health technologies (TAM & UTAUT integration)	West Africa	Perceived usefulness, ease of use, social influence, and facilitating conditions are significant predictors of both intention to adopt and actual use of digital health technologies.
Song et al. (2021)	Online health information source selection among students	China	Students rely heavily on search engines and social media platforms for health information and often lack the skills to critically evaluate online health information
Rowley & Johnson (2013)	Trust formation in digital information (Wikipedia)	United Kingdom	Users' trust in Wikipedia depends on multiple factors, including perceived credibility, information accuracy, expertise of contributors, transparency of the editing process, and consistency of information across different articles.
Escañuela Sánchez et al. (2020)	Evaluation of health website quality (stillbirth information)	Ireland & UK	The analysis revealed significant variation in content quality across different websites. Many sites lacked comprehensive, evidence-based information that could adequately support affected families during difficult times.
Hidayat-ur Rehman et al. (2021)	consumer adoption of healthcare devices	Saudi Arabia	Perceived usefulness, hedonic motivation, and performance expectancy as the most critical predictors of adoption intention.

Tang et al. (2024)	Behavioural skills and online health information adoption	China & Sweden	Stronger behavioural skills—including self-efficacy in evaluating health information, goal-setting abilities, and information management capabilities—directly enhance users' perceived usefulness of online health information and their intention to adopt it in health decision-making.
Bae & Yi (2019)	Persuasive elements in online STD-related Q&A	USA & South Korea	Significant cultural differences in persuasion strategies. U.S. answers emphasized emotional appeals and personal experiential narratives, while Korean responses relied more heavily on authority-based arguments and factual credibility.
Introne et al. (2020)	Design change in online health support communities	USA	Strategic interface modifications and improved moderation practices increased member participation and facilitated emotional support exchanges. However, excessive or poorly implemented changes could disrupt community cohesion.
Hayat et al. (2019)	Credibility assessment and social ties	Israel	Having varied social connections reinforces information credibility through an independent reinforcement mechanism, whereby multiple independent sources confirm similar information.
Mathavan et al. (2024)	Adoption of fitness wearable devices	Asia-Pacific	Perceived usefulness, hedonic enjoyment, and social value significantly predicted adoption intention. Additionally, cost considerations moderated the relationship between perceived value and purchase intention.
Rejikumar et al. (2022)	Online herd behaviour and risk aversion	India	Individuals with low cognitive complexity and high risk aversion are more likely to follow others' online opinions and recommendations without independent evaluation.
Rowley et al. (2017)	Gender, information seeking, and trust	United Kingdom	These gender differences suggest the need for tailored health communication strategies that address distinct information-seeking patterns and evaluation criteria.
Park et al. (2024)	quality-controlled YouTube content, health literacy and behavioural intention	South Korea	Exposure to verified, well-structured, and evidence-based YouTube health content significantly improved participants' health literacy levels and strengthened their intention to engage in healthy behaviours.
Ma & Atkin (2016)	User-generated content and credibility evaluation of online health information	United Kingdom and United States (cross-national)	Source credibility, message quality, and platform reputation are consistently significant determinants of perceived information reliability and adoption across different contexts and populations.

Jiang et al. (2021)	Information quality, adoption behaviour on social media review platforms, perceived risk	China	Higher information quality significantly enhances users' adoption intentions. However, perceived risk moderates this relationship—when users perceive high risks associated with health decisions, the positive effect of information quality on adoption is weakened.
Alajmi & Alotaibi (2020)	System use and effectiveness in digital library contexts	Kuwait	System quality, information quality, and user satisfaction significantly influence actual system use. UTAUT factors such as performance expectancy and facilitating conditions play key roles in explaining digital library adoption and continued use.
Li et al. (2022)	Feature-based recognition of fake health information on Chinese social media	China	linguistic cues (such as sensationalist language), source verification indicators, and sentiment patterns effectively distinguish misinformation from credible content.
Lo Presti et al. (2019)	Digital transformation and sustainability in healthcare systems	Italy	Effective digital engagement can improve operational efficiency, enhance patient interaction quality, and contribute to long-term system sustainability.
Schlichthorst et al. (2019)	Using Facebook to engage men in conversations about masculinity and suicide	Australia	Relatable personal narratives, authentic storytelling, and interactive post formats significantly increased engagement and encouraged help-seeking behaviour among men.
Bae & Yi (2017)	User preferences of answers about STDs	United States and South Korea (comparative)	Results revealed that users favoured answers offering empathy, credibility, and personal experience, with cultural variations between Western and Eastern respondents.
Williams et al. (2019)	Trust in traditional and non-traditional health information sources	Australia	Findings indicated higher trust in traditional medical sources, but social media was valued for accessibility and peer relatability.
Jin et al. (2018)	Media influence on risk-averse behaviours, the role of blogs in health communication	South Korea	Individuals' perception that blogs influence others' behaviours increased their own behavioural intentions, demonstrating the social perception component of media influence.
Chen et al. (2018)	Health literacy and use and trust in health information	United States	Results showed that individuals with higher health literacy demonstrated greater trust in scientific and medical sources, whereas those with lower literacy relied more on social and informal sources for health guidance.

Tao et al. (2017)	Information quality dimensions for health websites targeted at educated young adults	China	Emphasized four core quality indicators: accuracy of medical information, readability and comprehensibility, website usability and navigation, and trustworthiness of sources.

Principal Themes

Based on the comprehensive analysis of the 28 selected articles, six major themes and their associated sub-themes were established. These themes represent the core dimensions through which health information quality is conceptualized, evaluated, and operationalized in digital campaign contexts.

The first major theme, Information Quality and Evaluation Mechanisms, focuses on the intrinsic attributes that determine how digital health information is assessed and judged by users. This theme encompasses several critical dimensions, including information accuracy (the extent to which content aligns with scientific evidence and medical consensus), completeness (whether information covers all relevant aspects of a health topic), clarity and comprehensibility (how easily users can understand and interpret the information), structural quality (logical organization and presentation), and contextual relevance (alignment with users' specific needs and circumstances). Studies within this theme emphasize that high-quality information must be evidence-based, clearly communicated, regularly updated, and appropriately contextualized for diverse user populations. The evaluation process involves both systematic cognitive assessment and heuristic judgment, particularly in social media environments where users must rapidly process large volumes of information from diverse sources.

The second theme, Trust and Credibility in Digital Health Sources, concentrates on the complex mechanisms through which users develop trust toward online health information providers and platforms. This theme encompasses multiple interconnected factors, including institutional authority (reputation of organizations providing information), professional expertise (qualifications and credentials of content creators), transparency (disclosure of information sources, funding, and potential conflicts of interest), social validation (peer endorsements and recommendations), and consistency (alignment of information across multiple sources). The findings reveal that trust formation in digital environments is influenced not only by traditional credibility indicators such as professional credentials and institutional endorsements but also by newer forms of social proof, including user ratings, comments, shares, and recommendations from personal social networks. Social media platforms introduce additional complexity to credibility assessment, as user-generated content and peer recommendations play increasingly important roles alongside traditional authority-based credibility cues.

The third theme, Online Health Information Seeking and Psychological Outcomes, focuses on the emotional and psychological effects associated with exposure to and engagement with digital health information. This theme includes several important dimensions such as anxiety and worry (concerns triggered by health information exposure), uncertainty (confusion or doubt about health conditions or treatments), psychological well-being and empowerment (positive outcomes from successful information seeking), emotional support and reassurance (comfort derived from online health communities), and information

overload (stress resulting from excessive or conflicting information). The reviewed studies reveal a complex and sometimes contradictory relationship between online health information seeking and psychological outcomes. While access to health information can empower individuals and enhance their sense of control over health decisions, excessive or unverified information seeking may increase anxiety and distress, particularly among vulnerable patient populations facing serious health conditions. Conversely, well-designed digital health interventions and supportive online communities can provide significant emotional benefits and enhance psychological well-being.

The fourth theme, Digital Health Technology Adoption, focuses on the determinants and processes influencing individuals' acceptance and sustained use of digital health tools, platforms, and applications. This theme incorporates theoretical constructs derived from established technology acceptance frameworks, including perceived usefulness (the extent to which users believe technology will help them achieve health goals), perceived ease of use (simplicity and user-friendliness of digital tools), social influence (normative pressure from peers and reference groups), facilitating conditions (availability of resources and support for technology use), hedonic motivation (enjoyment and pleasure derived from technology use), and value perception (assessment of benefits relative to costs). The studies in this category demonstrate that functional benefits alone are insufficient to drive widespread adoption and sustained engagement with digital health technologies. Instead, successful adoption depends on a combination of practical utility, social acceptability, ease of use, and experiential value.

The fifth theme, Persuasive Communication and Behavioural Intentions, examines how message design characteristics and persuasive elements influence users' intentions to adopt health information, change attitudes, or engage in preventive and health-promoting behaviours. This theme encompasses several key constructs, including behavioural skills development (self-efficacy, goal-setting abilities, and action planning), risk perception (awareness and evaluation of health threats), message framing (positive versus negative presentation of information), emotional appeals (use of fear, hope, or empathy in health messages), narrative persuasion (storytelling and personal testimonies), and cultural adaptation (tailoring messages to specific cultural contexts and values). The findings highlight that effective persuasive health communication in digital environments requires careful attention to both message content and structural features, as well as alignment with users' cultural backgrounds, health beliefs, and communication preferences.

The sixth theme, Health Misinformation and Detection Mechanisms, addresses the critical challenge of identifying, evaluating, and mitigating false, misleading, or unverified health information circulating in digital environments. This theme includes several important components such as algorithmic detection models (computational approaches to identifying misinformation), feature-based recognition systems (identifying linguistic and structural characteristics of false information), fact-checking and verification mechanisms (processes for validating health claims), user education and critical literacy (empowering individuals to recognize misinformation), and platform governance (policies and practices for managing misinformation). The studies within this theme emphasize that addressing health misinformation requires multi-faceted approaches combining technological solutions, user education, platform accountability, and regulatory frameworks.

The 28 selected articles examine health information quality, credibility, and adoption in digital/social media contexts. Most used quantitative methods (surveys, SEM, experiments), some qualitative (thematic analysis), and a few mixed methods, reflecting the topic's complexity. Three key dimensions emerged across themes: message quality factors,

source credibility/trust, and adoption/behavioural outcomes. These form a model explaining how users evaluate, trust, and use health information in digital campaigns.

Message-Related Quality Factors

The reviewed studies consistently emphasize message characteristics as primary determinants of health information quality. Accuracy and alignment with current scientific evidence remain foundational, with recent research showing that users strongly prefer evidence-based content over anecdotal claims (Park et al., 2024; Wang et al., 2023). Completeness, covering symptoms, risks, and treatment options, is equally important, as incomplete information can mislead users and negatively influence health-related decision-making (Jiang et al., 2021; Tao et al., 2017).

Clarity is especially critical in today's fast-paced social media environment, where the use of technical jargon can limit accessibility for individuals with varying levels of health literacy; conversely, the use of simple, everyday language has been shown to improve understanding, trust, and user satisfaction (Park et al., 2024). Relevance to personal contexts further enhances user engagement, with tailored health messages consistently outperforming generic communication. In addition, timeliness remains a key concern, as outdated information can quickly erode credibility and reduce the effectiveness of digital health communication (Wang et al., 2023).

Collectively, these findings reinforce that content quality remains a central and irreplaceable pillar in digital health communication effectiveness, particularly within structured campaigns and platform-mediated dissemination. This is consistent with research highlighting the importance of well-designed digital health communication strategies in enhancing message effectiveness and audience engagement (Ayub et al., 2024; Febrina et al., 2024). While factors such as source credibility and social validation are important, they cannot compensate for fundamentally poor quality content; therefore, effective digital health initiatives must prioritize the development of accurate, complete, clear, relevant, and up-to-date information to achieve their communication objectives.

Source Credibility and Trust Mechanisms

The second overarching dimension addresses the complex processes through which users evaluate source credibility and develop trust in digital health platforms, applications, and content providers. Source credibility is a multidimensional construct encompassing institutional reputation, professional qualifications, transparency regarding potential biases, and social validation.

Contemporary research shows that users rely on both systematic processing such as actively verifying credentials and evidence and heuristic processing, including cues like institutional affiliations or platform design, when judging credibility (Zhao et al., 2024). In digital health environments, information verification behaviour is further influenced by awareness of misinformation and network trust (Zaremohzzabieh et al., 2025).

Endorsements from reputable institutions continue to significantly enhance perceived trustworthiness, while professional credentials remain influential in digital spaces (Kessler & Martin, 2022). Simultaneously, social media has amplified the role of peer validation, where recommendations, reviews, and shares within personal networks reinforce trust (Erkan & Evans, 2016).

Transparency regarding methodologies, funding sources, and potential biases further strengthens user confidence in health information (Courtney et al., 2026). Notably, demographic and contextual factors moderate these evaluations; for instance, gender differences in critical assessment, cultural variations in preference for authoritative versus peer-based sources, and heightened reliance on systematic processing in high-risk health situations all shape how credibility cues are interpreted (Kessler & Martin, 2022).

Information Adoption and Behavioural Outcomes

The third overarching dimension examines the critical question of how information quality perceptions and source credibility assessments ultimately translate into actual information adoption, attitude change, and health behaviour modification. While exposure to high-quality, credible health information is necessary, it is not sufficient to ensure that individuals will integrate that information into their health beliefs, share it with others, or act upon it in ways that improve health outcomes. Understanding the mechanisms linking information exposure to adoption and behaviour change is essential for designing effective digital health interventions.

Perceived usefulness strongly predicts adoption; relevant tools yield benefits (Zainal et al., 2026). Ease of use reduces barriers, boosting engagement (Edo et al., 2023). Hedonic value such as enjoyment drives sustained use beyond utility (Rejikumar et al., 2022). Social norms via networks influence intentions (Park et al., 2024; Introne et al., 2020). Persuasive elements like framing, narratives, and adaptation impact outcomes (Song et al., 2021). Behavioural skills, self-efficacy, and planning mediate action (Kwasnicka et al., 2016). Misinformation studies highlight detection needs (Li et al., 2022). Gaps persist: few links quality to behaviours via longitudinal designs; multilevel models are needed (Jiang et al., 2021).

Perceived usefulness remains a strong predictor of adoption, as users are more likely to engage with digital health tools that demonstrate clear and relevant benefits (Hidayat-ur Rehman et al., 2021; Mathavan et al., 2024). This is supported by research demonstrating that emotionally engaging and well-designed health communication content can enhance audience understanding and influence behavioural responses (Shamsiah & Anitawati, 2025). Ease of use further reduces barriers to engagement, significantly enhancing user acceptance and continued interaction with health technologies (Edo et al., 2023). Beyond functional value, hedonic factors such as enjoyment and user experience play an increasingly important role in sustaining long-term use (Rejikumar et al., 2022). Social norms, particularly those shaped through online networks and communities, also influence user intentions and behaviours (Park et al., 2024; Introne et al., 2020).

In addition, persuasive communication elements including message framing, storytelling, and content personalization have been shown to significantly impact user outcomes in digital health contexts (Song et al., 2021). This is supported by research demonstrating that emotionally engaging and well-designed health communication content can enhance audience understanding and influence behavioural responses (Shamsiah & Anitawati, 2025). Behavioural factors such as self-efficacy, planning, and skill development further mediate the translation of intention into actual health behaviour (Zhang et al., 2020). At the same time, growing concerns around misinformation highlight the need for improved detection and critical evaluation skills among users. Despite these advances, important gaps remain, particularly the limited use of longitudinal designs to examine how information

quality influences behaviour over time, as well as the need for more comprehensive multilevel models to better capture the complexity of digital health engagement (Chen et al., 2023).

Discussion

This comprehensive systematic literature review has identified and synthesized evidence regarding three principal dimensions that shape health information quality in digital campaign contexts: message-related factors including accuracy, clarity, completeness, relevance, and currency; source-related factors particularly credibility indicators, institutional trust, transparency, and social validation; and audience evaluation and adoption processes such as perceived usefulness, ease of use, social influence, hedonic value, and behavioural skills. These dimensions collectively provide an integrative framework for understanding how health information is evaluated, trusted, and utilized in contemporary digital environments.

The synthesis of 28 empirical studies conducted across diverse geographical regions, health topics, and digital platforms reveals several important patterns with significant theoretical and practical implications. First, information quality remains foundational, as no amount of source credibility or persuasive design can compensate for inaccurate, incomplete, or unclear content. Second, trust mechanisms in digital environments are multifaceted, combining traditional authority-based credibility with newer forms of social proof and peer validation. Third, the pathway from information exposure to behaviour change is complex and mediated by multiple psychological, social, and contextual factors that must be addressed in intervention design.

The findings offer several practical implications for public health authorities, campaign designers, healthcare organizations, and digital platform developers seeking to enhance the effectiveness and impact of digital health communication strategies. Health campaigns should prioritize the development of evidence-based, comprehensible, and contextually relevant content as the foundation for communication effectiveness. Credibility can be enhanced through transparent disclosure of sources, qualifications, and funding, as well as through strategic partnerships with trusted institutions and influencers. Digital platforms should implement design features that facilitate critical evaluation, social support, skill development, and sustained engagement rather than merely information transmission.

The means and channels through which online health information is accessed and consumed have diversified considerably in recent years, offering patients and the general public an unprecedented range of resources to enhance their understanding of health-related topics. Websites maintained by health institutions, social media platforms enabling peer-to-peer information exchange, mobile health applications providing personalized tracking and feedback, and telehealth services facilitating remote consultations collectively represent a complex and evolving digital health information ecosystem. While these diverse channels provide valuable opportunities for health education, empowerment, and engagement, they simultaneously present significant challenges related to information quality variability, misinformation propagation, credibility assessment complexity, and digital literacy requirements.

It is increasingly essential for individuals to develop comprehensive health literacy skills that extend beyond understanding medical terminology to include critical evaluation capabilities for digital information sources. Individuals must be equipped to assess source credibility, recognize persuasive techniques and potential biases, identify misinformation warning signs, and integrate information from multiple sources to make informed health

decisions. By developing these digital health literacy competencies, patients and consumers can more effectively navigate the complex landscape of online health information and make decisions that protect and promote their health and well-being.

Given the substantial and well-documented risks associated with low-quality or misleading online health information, it is crucial for users to adopt critical evaluation practices when consulting digital sources. Healthcare providers can and should play a pivotal role in supporting patients' digital health information seeking by proactively recommending trusted websites and applications, providing guidance on credibility assessment strategies, discussing information that patients encounter online during clinical consultations, and addressing misconceptions or concerns arising from online research. By integrating digital health literacy support into routine clinical practice, providers can help mitigate risks associated with online health information seeking while preserving and enhancing the empowerment benefits of patient access to health knowledge.

This systematic review also identifies several important gaps and limitations in the current literature that should guide future research directions. First, while numerous studies have examined information quality perceptions and credibility assessments, fewer have rigorously evaluated the downstream effects of information quality on actual health behaviours and clinical outcomes. Future research should employ longitudinal designs and objective outcome measures to establish these critical linkages. Second, most research has focused on individual-level factors while giving less attention to organizational, platform, and policy-level determinants of information quality in digital environments. Future work should adopt multilevel analytical frameworks to understand how different levels of influence interact. Third, there is a need for more integrative theoretical models that simultaneously incorporate message, source, channel, audience, and contextual factors rather than examining these elements in isolation. Fourth, intervention research testing specific strategies for improving information quality and enhancing critical evaluation skills remains relatively limited and should be prioritized.

Ultimately, fostering a culture of critical evaluation, quality standards, transparency, and accountability regarding health information in digital environments is essential for realizing the promise of digital health communication while protecting against its risks. This requires coordinated efforts across multiple stakeholders, including researchers who generate evidence about effective strategies; public health agencies that develop and disseminate quality health information; healthcare providers who guide patients' digital information seeking; technology platforms that design features and policies to promote quality and combat misinformation; educators who build health and digital literacy skills; and policymakers who establish appropriate regulatory frameworks. Only through such comprehensive, multilevel, and sustained efforts can we ensure that digital health information serves to genuinely improve population health outcomes and reduce health disparities.

Research Implications

The findings of this review provide several implications for digital health communication. The study shows that the quality of health information in digital campaigns is influenced by factors such as accuracy, clarity, and completeness of the message. Therefore, organisations and health authorities should ensure that information shared through social media and other digital platforms is accurate, clear, and easy for the public to understand.

The results also highlight the importance of source credibility. Information coming from trusted institutions or recognised health organisations is more likely to be accepted by the public. In addition, the way audiences evaluate information, including whether they find it useful or engaging, can influence how health messages are received. These findings can help health organisations and campaign planners improve the design and delivery of digital health campaigns.

Recommendations for Future Research

Future research could examine how the quality of health information in digital campaigns influences public behaviour, such as health awareness or decision-making. Researchers may also explore how different digital platforms affect the way people evaluate health information. In addition, future studies could use surveys, interviews, or experiments to better understand how audiences respond to digital health messages. Research involving different populations or cultural settings may also provide broader insights into how people assess the quality and credibility of health information online.

CONCLUSION

This study reviewed previous research on health information quality in digital health campaigns using a systematic literature review approach. The findings suggest that three main aspects influence the quality of health information in digital campaigns: message-related factors, the credibility of the information source, and how audiences evaluate the information. Although many studies have discussed misinformation and credibility issues, fewer studies focus specifically on how information quality is designed and evaluated in organized digital health campaigns. Overall, this review helps to summarize existing knowledge and identify gaps in the literature. The findings may also assist health organisations and campaign designers in improving digital health communication by providing clear, accurate, and trustworthy information to the public.

BIODATA

Majidatul Farhana Noor Adzmee is a postgraduate student at the Faculty of Modern Languages and Communication, Universiti Putra Malaysia, 43400 Serdang, Selangor Darul Ehsan, Malaysia. Email: Majidafana286@gmail.com

Rosmiza Bidin is a Senior Lecturer at the Department of Communication, Faculty of Modern Languages and Communication, Universiti Putra Malaysia, 43400 Serdang, Selangor Darul Ehsan, Malaysia. Email: rosmizabidin@gmail.com

Sharifah Sofiah Syed Zainudin is a Senior Lecturer (PhD) at the Department of Communication, Faculty of Modern Languages and Communication, Universiti Putra Malaysia, 43400 Serdang, Selangor Darul Ehsan, Malaysia. Email: sharifahsofiah@upm.edu.my

Mohd Feroz Shah De Costa is an Associate Professor at the Communication Department, Faculty Business, Information and Human Sciences (FBIHS), Kuala Lumpur University of Science & Technology (KLUST), Kajang, Selangor. Email: mohdferozshah@klust.edu.my

REFERENCES

Alajmi, M. A., & Alotaibi, J. H. (2020). Integration of UTAUT and IS success models to redefine system use and effectiveness in digital library contexts. *Journal of Information Science*, *46*(3), 345–362. https://doi.org/10.1177/0165551519837198

Almeida, F., Gouveia, A., & Santos, J. D. (2023). The role of transparency and reliability in systematic literature reviews: A methodological approach. *International Journal of Research in Business and Social Science*, *12*(5), 450–462.

Ayub, S. H., Author, A. A., Author, B. B., & Author, C. C. (2024). Examining organisational competencies in managing health lifestyle campaigns on social media. *Jurnal Komunikasi: Malaysian Journal of Communication, 40*(2), 328-344.

Bae, B. J., & Yi, Y. J. (2017). What answers do questioners want on social Q & A? User preferences of answers about STDs. *Internet Research*, *28*(2), 434–453. https://doi.org/10.1108/IntR-08-2016-0245

Bae, B. J., & Yi, Y. J. (2019). Identification and comparison of the persuasive elements present in "best answers" to STD-related questions on social Q&A sites: Yahoo! Answers (United States) versus Knowledge-iN (South Korea). *International Journal of Communication*, *13*, 2516–2534.

Bhattacherjee, A., & Sanford, C. (2006). Influence processes for information technology acceptance: An elaboration likelihood model. *MIS Quarterly*, *30*(4), 805–825. https://doi.org/10.2307/25148755

Chen, C., Ding, S., & Wang, J. (2023). Digital health for aging populations. *Nature Medicine*, *29*(7), 1623–1630. https://doi.org/10.1038/s41591-023-02391-8

Chen, X., Hay, J. L., Waters, E. A., Kiviniemi, M. T., Biddle, C., Schofield, E., Li, Y., Kaphingst, K., & Orom, H. (2018). Health literacy and use and trust in health information. *Journal of Health Communication*, *23*(8), 724–734. https://doi.org/gsm2j2

Cheung, C. M. K., Lee, M. K. O., & Rabjohn, N. (2008). The impact of electronic word-of-mouth: The adoption of online opinions in online customer communities. *Internet Research*, *18*(3), 229–247. https://doi.org/10.1108/10662240810883290

Corrales, D. M., Wells, A. E., Breitkopf, C. R., Peña, G., Kaplan, A. L., King, L. S., Robazetti, S. C., & Dinh, T. A. (2018). Internet use by gynecologic oncology patients and its relationship with anxiety. *Gynecologic Oncology*, *150*(1), 123–128. https://doi.org/rcxc

Courtney, A., Sullivan, R., Maxwell, S., McLean, C., Lawson, K., & Health Data Research UK Working Group. (2026). *Improving transparency in data access processes: Developing best practice standards and promoting system-wide change*. Health Data Research UK.

Edo, O. C., Ang, D., Etu, E. E., Tenebe, I., Edo, S., & Diekola, O. A. (2023). Why do healthcare workers adopt digital health technologies - A cross-sectional study integrating the TAM and UTAUT model in a developing economy. *International Journal of Information Management Data Insights*, *3*(2), Article 100186. https://doi.org/rcr9

Erkan, I., & Evans, C. (2016). The influence of eWOM in social media on consumers' purchase intentions: An extended approach to information adoption. *Computers in Human Behavior*, *61*, 47–55. https://doi.org/10.1016/j.chb.2016.03.003

Escañuela Sánchez, T., Meaney, S., & O'Donoghue, K. (2020). Stillbirth and risk factors: An evaluation of Irish and UK websites. *Journal of Communication in Healthcare*, *13*(3), 196–203. https://doi.org/10.1080/17538068.2020.1807887

Febrina, R., Saleh, A., Suhaeti, R. N., & Muljono, P. (2024). Ideation factors for health behaviour to prevent non-communicable diseases (NCDs). *Jurnal Komunikasi: Malaysian Journal of Communication*, *40*(4), 343-360. https://doi.org/qgxz

Ghazali, W. N. W. M., Shaari, A. S., Husaini, A. M., Mohamed, S., Yusoh, M. H., Nasir, N. S. M., & Safian, N. A. (2023). The view of maqasid al-shari'ah on vaccination: A systematic literature review. *Journal of Islamic, Social, Economics and Development (JISED)*, *8*(54), 61–70. https://doi.org/10.55573/JISED.085407

Haddaway, N. R., Page, M. J., Pritchard, C. C., & McGuinness, L. A. (2023). PRISMA 2020: An R package and Shiny app for producing PRISMA-compliant flow diagrams. *Systematic Reviews*, *12*, Article 1. https://doi.org/10.1186/s13643-023-02158-7

Hayat, T., Hershkovitz, A., & Samuel-Azran, T. (2019). The independent reinforcement effect: The role diverse social ties play in the credibility assessment process. *Public Understanding of Science*, *28*(2), 201–217. https://doi.org/ggk2r3

Hidayat-ur-Rehman, I., Ahmad, A., Akhter, F., & Aljarallah, A. (2021). A dual-stage SEM-ANN analysis to explore consumer adoption of smart wearable healthcare devices. *Journal of Global Information Management*, *29*(6), 1–30. https://doi.org/g7s938

Introne, J., Erickson, I., Semaan, B., & Goggins, S. (2020). Designing sustainable online support: Examining the effects of design change in 49 online health support communities. *Journal of the Association for Information Science and Technology*, *71*(4), 379–394. https://doi.org/10.1002/asi.24250

Jiang, G., Liu, F., Liu, W., Liu, S., Chen, Y., & Xu, D. (2021). Effects of information quality on information adoption on social media review platforms: Moderating role of perceived risk. *Data Science and Management*, *1*(1), 13–22. https://doi.org/pcfj

Jin, B., Chung, S., & Byeon, S. (2018). Media influence on intention for risk-aversive behaviors: The direct and indirect influence of blogs through presumed influence on others. *International Journal of Communication*, *12*, 2443–2460.

Kessler, T., & Martin, L. (2022). The role of professional identity and credentials in digital health adoption. *Health Communication*, *37*(4), 512–520.

Kwasnicka, D., Dombrowski, S. U., White, M., & Sniehotta, F. (2016). Theoretical explanations for maintenance of behaviour change: A systematic review of behaviour theories. Health Psychology Review, 10(3), 277–296. https://doi.org/gftpxj

Li, Y., Fan, Z., Yuan, X., & Zhang, X. (2022). Recognizing fake information through a developed feature scheme: A user study of health misinformation on social media in China. *Information Processing & Management*, *59*(1), 102769. https://doi.org/gnmxf8

Lo Presti, L., Testa, M., Marino, V., & Singer, P. (2019). Engagement in healthcare systems: Adopting digital tools for a sustainable approach. *Sustainability*, *11*(1), Article 220. https://doi.org/10.3390/su11010220

Ma, T. J., & Atkin, D. (2016). User generated content and credibility evaluation of online health information: A meta analytic study. *Telematics and Informatics*, *34*(5), 513–523. https://doi.org/10.1016/j.tele.2016.09.009

Mathavan, B., Vafaei-Zadeh, A., Hanifah, H., Ramayah, T., & Kurnia, S. (2024). Understanding the purchase intention of fitness wearables: Using value-based adoption model. *Asia-Pacific Journal of Business Administration*, *15*(4), 548–572. https://doi.org/rcsb

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & PRISMA Group. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *PLoS Medicine*, *6*(7), Article e1000097. https://doi.org/10.1371/journal.pmed.1000097

Nisar, S., & Shafiq, M. (2018). Framework for efficient utilisation of social media in Pakistan's healthcare sector. *Technology in Society*, *56*, 31–43. https://doi.org/gg8htc

Nutbeam, D. (2000). Health literacy as a public health goal: A challenge for contemporary health education and communication strategies into the 21st century. *Health Promotion International*, *15*(3), 259–267. https://doi.org/10.1093/heapro/15.3.259

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Forbes, A., & PRISMA Group. (2021). The PRISMA 2020 statement. *BMJ*, *372*, Article n71. https://doi.org/10.1136/bmj.n71

Park, Y., Kim, S. H., & Yoon, H.-J. (2024). Quality controlled YouTube content intervention for enhancing health literacy and health behavioural intention: A randomized controlled study. *Digital Health*, *10*, 1–11. https://doi.org/10.1177/20552076241263691

Petty, R. E., & Cacioppo, J. T. (1986). *Communication and persuasion: Central and peripheral routes to attitude change*. Springer-Verlag.

Rejikumar, G., Asokan-Ajitha, A., Dinesh, S., & Jose, A. (2022). The role of cognitive complexity and risk aversion in online herd behavior. *Electronic Commerce Research*, *22*(4), 1361–1391. https://doi.org/10.1007/s10660-020-09451-y

Rowley, J., & Johnson, F. (2013). Understanding trust formation in digital information sources: The case of Wikipedia. *Journal of Information Science*, *39*(4), 494–507. https://doi.org/10.1177/0165551513477820

Rowley, J., Johnson, F., & Sbaffi, L. (2017). Gender as an influencer of online health information-seeking and evaluation behavior. *Journal of the Association for Information Science and Technology*, *68*(1), 36–47. https://doi.org/10.1002/asi.23597

Schlichthorst, M., King, K., Reifels, L., Phelps, A., & Pirkis, J. (2019). Using social media networks to engage men in conversations on masculinity and suicide: Content analysis of Man Up Facebook campaign data. *Social Media + Society*, *5*(4), 1–11. https://doi.org/10.1177/2056305119880019

Shamsiah Abd Kadir, & Anitawati Mohd Lokman. (2025). The emotional dimensions of prediabetes prevention video communication in Malaysia. *Jurnal Komunikasi: Malaysian Journal of Communication, 41*(2), 297-318. https://doi.org/rcxb

Song, X., Liu, C., & Zhang, Y. (2021). Chinese college students' source selection and use in searching for health-related information online. *Information Processing & Management*, *58*(2), Article 102489. https://doi.org/10.1016/j.ipm.2021.102489

Sussman, S. W., & Siegal, W. S. (2003). Informational influence in organizations: An integrated approach to knowledge adoption. *Information Systems Research*, *14*(1), 47–65. https://doi.org/10.1287/isre.14.1.47.14767

Swire-Thompson, B., & Lazer, D. (2020). Public health communication in a time of misinformation: The challenge of consumer trust in the digital age. *Annual Review of Public Health, 41*, 433–451. https://doi.org/gg8966

Tan, S. S., & Goonawardene, N. (2023). Internet health information seeking and the patient-physician relationship: A systematic review of the literature. *Journal of Medical Internet Research*, *25*, Article e40213.

Tang, Z., Zhang, P., Li, Y., & Hansen, P. (2024). Tell me what to do first: How behavioural skills drive users' intention to adopt online health information. *The Electronic Library*, *42*(5), 811–826. https://doi.org/10.1108/el-12-2023-0296

Tao, D., LeRouge, C., Smith, K. J., & De Leo, G. (2017). Defining information quality into health websites: A conceptual framework of health website information quality for educated young adults. *JMIR Human Factors*, *4*(4), e25. https://doi.org/gb29hr

UNICEF/WHO/World Bank Group. (2023). *Levels and trends in child malnutrition: Key findings of the 2023 edition of the Joint Child Malnutrition Estimates*. World Health Organization. https://www.who.int/publications/i/item/9789240073791

Wang, X., Huang, T., Zhang, W., Zeng, Q., & Sun, X. (2023). Is information normalization helpful in online communication? Evidence from online healthcare consultation. *Internet Research*, *33*(7), 184–207. https://doi.org/10.1108/INTR-05-2023-0348

Williams, S. L., Ames, K., & Lawson, C. (2019). Preferences and trust in traditional and non-traditional sources of health information – a study of middle to older aged Australian adults. *Journal of Communication in Healthcare*, *12*(2), 133–142. https://doi.org/10.1080/17538068.2019.1642050

Zainal, N. H., Wang, V., Garthwaite, B., & Curtiss, J. E. (2026). What factors are related to engagement with digital mental health interventions (DMHIs)? A meta-analysis of 117 trials. *Health Psychology Review*, 20(1), 151-171. https://doi.org/p49k

Zaremohzzabieh, Z., Ghazali, A. H. A., Ismail, I. A., Arshad, M. M., & Zawawi, J. W. M. (2025). Determinants of health information verification: Mediating roles of fake news awareness and network trust. *Jurnal Komunikasi: Malaysian Journal of Communication, 41*(1), 87-106. https://doi.org/10.17576/JKMJC-2025-4101-06

Zhang, L., Jung, E. H., & Chen, Z. (2020). Modeling the pathway linking health information seeking to psychological well-being on WeChat. *Health Communication*, *35*(9), 1101–1112. https://doi.org/10.1080/10410236.2019.1613479

Zhao, Y., Zhang, L., Zeng, C., Chen, Y., Lu, W., & Song, N. (2024). Factors influencing online health information credibility: A meta-analysis. *Aslib Journal of Information Management, 77*(4), 701-732. https://doi.org/10.1108/AJIM-05-2023-0155