
Original Research Article

Short-video platforms' health information dissemination logic and user trust construction mechanisms

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Abstract: This study investigates the dissemination logic of health information on short-video platforms and analyzes the mechanisms through which users develop trust toward such content. As short-video platforms increasingly function as major channels of public health communication, understanding how information is produced, organized, and transmitted—And how users evaluate and internalize it—Is essential for improving the quality of online health ecosystems. Drawing from communication theory, trust construction models, and platform governance studies, this paper constructs an integrated analytical framework involving content attributes, algorithmic mediation, social interaction patterns, and user cognition. It identifies the structural asymmetry between content supply and user interpretation, reveals how algorithmic amplification shapes information visibility, and explains how credibility cues interact with personal involvement to generate trust. Research findings indicate that users' trust formation results from a dynamic interplay between platform-level signals, creator credibility, narrative strategies, and communal endorsement. The study contributes to a systematic understanding of digital health communication and proposes a set of strategies to enhance reliability, transparency, and user empowerment in short-video environments.

Keywords: short-video platforms; health information; dissemination logic; user trust; credibility cues; algorithmic governance

1. Introduction

Short-video platforms have rapidly become influential public information infrastructures, reshaping how individuals access, interpret, and evaluate health-related knowledge. Their communication characteristics—High immediacy, visual immersion, interactive participation, and algorithmic personalization—Distinguish them from traditional media and long-form digital channels. Although these platforms significantly lower the threshold for health knowledge dissemination, they also pose challenges such as information overload, uneven content quality, fragmented cognition, and heightened risks of misinformation. As users increasingly rely on short-video content for health advice, trust becomes a central factor influencing behavioral acceptance, emotional responses, and decision-making. Existing research has examined credibility cues, platform algorithms, creator professionalism, and social endorsement independently, but lacks a comprehensive framework integrating dissemination logic with trust construction. This study addresses that gap by exploring how platform mechanisms shape the flow of health information and how users develop trust through a combination of cognitive, affective, and social processes.

2. Dissemination logic of health information on short-video platforms

The dissemination of health information within short-video environments follows a multi-layered logic shaped by technological affordances, creator behaviors, and user interaction patterns. At the structural level, algorithmic recommendation systems play a central role in determining content visibility. These systems rely on engagement-based metrics—Such as watch time, sharing frequency, and comment activity—To optimize content distribution. As a result, health information that is emotionally appealing, visually intensive, or narratively condensed tends to gain algorithmic advantage. This mechanism encourages creators to adopt simplified explanations, scenario-based demonstrations, and dramatized storytelling to capture attention.

At the semantic level, health messages are often reframed into easily digestible visual narratives. The

platform's short-duration format requires creators to prioritize clarity and immediacy, thus favoring heuristic cues over elaborated exposition. Complex biomedical concepts are transformed into image-driven metaphors, concise claims, or sequential steps, highlighting benefits and risks through intuitive representation rather than technical precision.

At the social level, dissemination is shaped by collective engagement. Comment sections, duets, stitched videos, and community hashtags enable users to co-construct meanings and reinterpret messages. This participatory process facilitates rapid diffusion but may also amplify misunderstandings or reinforce selective biases. The integrated dissemination logic therefore reflects a convergence of algorithmic optimization, creator adaptation strategies, and user-generated interactions.

3. Key influencing factors in health information production

Health information on short-video platforms is shaped by several interrelated factors. Creator identity and expertise level strongly influence content style and accuracy. Professional health practitioners generally exhibit higher informational rigor but may generate less entertaining content compared to lifestyle influencers, who attract broader audiences through relatable narratives and appealing aesthetics. This divergence creates a tension between accuracy and attractiveness.

Platform governance mechanisms also play a significant role. Content review guidelines, misinformation labels, and risk-warning overlays serve as regulatory filters, yet their visibility and effectiveness vary. Platforms often prioritize growth metrics, which may inadvertently allow borderline content to receive amplification before moderation occurs.

Monetization incentives further shape production. Creators motivated by commercial gain may selectively emphasize sensational claims, promote unverified products, or employ fear appeals to increase engagement. Conversely, creators driven by professional ethics or institutional mandates tend to focus on factual accuracy and evidence-based explanations.

In addition, audiovisual editing tools influence message construction. Visual emphasis, background music, pacing, and facial expressions become persuasive elements that affect viewer perception. This multimodal composition allows health information to function both cognitively and emotionally, reinforcing certain attitudes while simplifying complex judgments.

4. User cognitive processing and trust development mechanisms

User trust toward health information in short-video environments is constructed through cognitive, affective, and social pathways. From the cognitive perspective, users rely on heuristic cues—Such as creator appearance, tone of voice, video production quality, and perceived professionalism—To assess credibility. These cues substitute for systematic verification processes, especially under conditions of limited health literacy.

Affective mechanisms also play an essential role. Emotional resonance generated through storytelling, empathetic language, and relatable scenarios strengthens users' psychological engagement and increases perceived authenticity. Videos that evoke comfort, reassurance, or personal relevance commonly foster stronger trust responses.

Social mechanisms are grounded in communal validation. Comments expressing agreement, endorsement from peers, and visible indicators such as likes and shares serve as social proof, influencing users' confidence in the information. Community discourse may either reinforce credibility or challenge accuracy, highlighting the dialogic nature of trust formation.

The interplay of these mechanisms reveals that trust is not solely based on informational accuracy but emerges from a multi-dimensional evaluation shaped by perception, emotion, and social reinforcement. Users thus construct trust dynamically as they navigate between platform signals, creator cues, and community interpretations.

5. Algorithmic mediation and its impact on trust formation

Short-video algorithms influence trust formation by shaping exposure, interpretation, and perceived

consensus. Personalized recommendation systems create a tailored informational environment where users repeatedly encounter similar content, strengthening familiarity and perceived relevance. This repetition may produce an "echo-trust effect," in which users interpret frequent exposure as implicit credibility.

Algorithmic filtering also affects the plurality of viewpoints users encounter. When health information is presented through a narrowed set of perspectives, cognitive diversity diminishes, potentially fostering overconfidence in incomplete or biased content.

Additionally, algorithmic ranking orders information spatially, elevating certain creators or narratives while marginalizing others. This classification system functions as a credibility signal, guiding users toward videos appearing early in search results or recommended feeds.

However, algorithmic opacity undermines user trust when individuals perceive content distribution as manipulative or commercially driven. Without transparent indicators of recommendation rationale, users may misinterpret popularity as accuracy. Thus, algorithmic mediation introduces both opportunities and vulnerabilities in trust construction, requiring interventions that enhance transparency, control, and informational diversity.

6. Toward a systematic framework for strengthening trustworthy health information ecosystems

A comprehensive approach is required to enhance trust while maintaining platform dynamism. At the platform level, integrating accuracy-oriented recommendation strategies can balance engagement metrics with reliability. This can be achieved by embedding credibility assessments, such as source validation scores, historical accuracy indicators, and algorithmic cross-checks, into ranking mechanisms. Increasing the visibility of expert-verified content, elevating authoritative channels, and reducing algorithmic amplification of ambiguous information further contribute to a healthier information environment. These adjustments help ensure that user engagement does not overshadow content quality, allowing trustworthy health information to circulate more effectively.

At the creator level, establishing standardized disclosure practices—including credential verification badges, explicit references to scientific literature, methodological notes, and transparent production procedures—enhances perceived trustworthiness. Creators who clearly articulate their expertise boundaries and cite verifiable evidence foster stronger audience confidence. In addition, structured training programs for health communicators can improve their narrative clarity, ethical sensitivity, and ability to translate technical knowledge into accessible explanations. By nurturing professionalism and accountability, platforms can gradually cultivate a more reliable creator ecosystem.

At the user level, digital health literacy initiatives are essential. Interactive tutorials, contextual warnings attached to potentially misleading content, and user-controlled verification tools can empower audiences to evaluate information critically rather than passively consume it. Features such as pop-up explanations of medical terminology, guided fact-checking prompts, and simplified evidence-grading indicators help users navigate complex health information landscapes. As users develop stronger evaluative skills, their vulnerability to misinformation diminishes, and their trust becomes grounded in informed judgment rather than superficial cues.

At the societal level, collaborative governance involving platforms, health institutions, and regulatory frameworks ensures the creation of a stable and accountable environment for reliable digital health communication. This includes developing oversight mechanisms for high-risk content categories, encouraging participation from accredited medical organizations, and establishing transparent reporting systems for misinformation incidents. Public education campaigns can further raise awareness of the risks associated with unverified health claims, promoting a culture in which accuracy is valued over virality.

The systematic integration of these measures fosters a resilient trust ecosystem capable of withstanding rapid information flows, emerging health crises, and evolving platform dynamics. By strengthening reliability at multiple layers—Platform, creator, user, and society—Digital health communication can achieve sustainable development, ensuring that trustworthy knowledge remains accessible and influential in an increasingly complex media environment.

7. Conclusion

This study analyzed the dissemination logic of health information on short-video platforms and identified key mechanisms shaping user trust. Findings reveal that platform algorithms, multimodal message design, creator credibility cues, and social endorsement act collectively to shape users' perceptions of reliability. Trust formation is a multifaceted process involving cognitive heuristics, emotional resonance, and communal validation, further mediated by personalized recommendation systems. Enhancing the credibility of online health information requires joint efforts across content governance, algorithm design, creator training, and user empowerment. Future research should examine cross-cultural variations in trust formation, investigate long-term behavioral impacts of repeated exposure to digital health content, and explore computational methods for detecting and mitigating misleading health narratives.

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