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Understanding credibility: toward a networked evidence model of health information

Karen Joy and Tawfiq Ammari

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Abstract

Introduction. Severe health issues trigger urgent information needs, yet digital environments complicate judgments of what counts as credible evidence. Traditional authority rooted in medical expertise now intersects with peer testimony, platform structures, and algorithmic curation.

Method. We analysed qualitative interviews with 23 parents whose children contracted COVID-19, extending Uncertainty in Illness Theory (UIT) by reinterpreting the concept of ‘credible authority’ through a new theoretical lens.

Analysis. Using an abductive, theory-building approach and a crystallisation immersion method, we examined how parents enacted epistemic practices in digital health contexts.

Results. We propose the networked evidence model (NEM), which shows that health information is actively organised, validated, circulated, and trusted within socio-technical systems. Evidence was shaped through alignment across institutional expertise, testimonial resonance, and platform signals.

Conclusion. NEM reframes credible authority as a networked accomplishment, advancing information science and informing the design of systems that promote equitable, transparent, and trustworthy access to health knowledge.

Introduction

The COVID-19 pandemic created an unprecedented landscape of health uncertainty for parents, particularly those caring for children who tested positive for the virus (Link et al., 2022; Liu et al., 2025). Prior work has shown that parents turned to digital platforms and social media for information and support, and that these socio-technical spaces shaped their experiences of uncertainty (Clayton et al., 2018; Mertens et al., 2024; Michelson et al., 2021). Building on Mishel's Uncertainty in Illness Theory (UIT) (Mishel, 1981, 1990; Mishel and Braden, 1988), recent research demonstrated how socio-technical factors such as algorithms, moderation, and online communities intersect with biological, psychological, and social aspects to shape coping and adaptation during illness uncertainties (Joy et al., 2025).

Within the UIT framework, credible authority has historically been positioned as a '*social factor*' – the role of healthcare professionals, institutions, or recognised experts in reducing uncertainty. Yet, our data suggests that the pandemic profoundly reshaped how credible authority is constructed, shifting from a unidirectional model (doctor to patient) toward a networked process involving peer testimony, moderation cues, and algorithmic signals alongside institutional sources.

This paper extends the '*credible authority*' component of Uncertainty in Illness Theory (UIT) to introduce the networked evidence model (NEM), a framework for understanding how parents source, validate, circulate, and trust health information in digital environments. The NEM provides a novel organising structure that emphasises the inclusion of institutional, testimonial, and platform signals when it comes to trust in healthcare information. Drawing on 23 interviews with U.S.-based parents of children who contracted COVID-19, we examine how they enacted epistemic practices that defined what counted as evidence. While prior research has highlighted how socio-technical systems shape uncertainty trajectories on social media, we shift attention to the co-creation of credibility itself—how evidence is collaboratively constituted within networks. Guided by this perspective, we ask: How do parents source, validate, circulate, and trust health information about their children?

Related work

Credible authority in UIT and health information

Mishel's Uncertainty in Illness Theory (UIT) has been foundational for understanding how individuals experience health-related uncertainty, highlighting '*social support*', '*credible authority*', and '*event familiarity*' as '*antecedents*' in the original UIT framework. Antecedents are factors that mitigate uncertainty levels. Social support, credible authority, and event familiarity had the most significant influence on diminishing the level of uncertainty (Y. Zhang, 2017). Specifically, credible authority proved primarily efficacious in alleviating the perceived complexities associated with diagnosis, treatments, and caregiving (Z. Zhang et al., 2024). UIT echoes health communication literature which grounds credible authority in credentials and institutional legitimacy (Broadbridge et al., 2023; Mishel and Braden, 1988), where the belief in the credible authority of trusted professionals or institutions reduces uncertainty by providing reliable information (Mishel, 1990).

Various studies have adapted UIT and empirically tested variables such as symptom patterns, event familiarity, and structure-provider variables such as education, social support, and credible authority. Studies have found that credible authority significantly influences levels of uncertainty, especially by reducing complexity regarding treatment and the healthcare system (Broadbridge et al., 2023; Mishel and Braden, 1988; Venetis et al., 2009). Other studies focused on how interpersonal communication in family and health settings anchors expectations and perceptions of authority, legitimacy, and trust (Campos-Castillo et al., 2016; Simon et al., 2022). While studies touch on how families communicate and rely on institutional as well as trust-based sources, their focus has been

more descriptive and less on the practices people use to validate or negotiate credible authority in digital spaces (Brashers et al., 2006).

However, existing work overlooks how digital social networks reshape parents' views of professional credibility and redefines evidence-based information. Our study fills this gap by showing how online networks influence how parents define, evaluate, and trust health professionals and institutions.

Online health information, information picking, search and avoidance

Research in information science has long examined how individuals evaluate health information online. Wilson defines Information Behavior as '*the totality of human behavior in relation to sources and channels of information, including both active and passive information seeking, and information use.*' (Wilson & Maceviciute, 2012) This includes, but is not limited to, active seeking, passive exposure, browsing, avoidance, and the many micro-decisions people make about what information to engage with or ignore (Wilson & Maceviciute, 2012). Health information seeking, however, is described as a more purposive, goal-oriented action in response to some felt need, i.e., desiring knowledge, resolving uncertainty, searching for symptoms, etc. (Wilson & Maceviciute, 2012).

Studies also explain negative behaviors that follow, such as anxiety (Broadbridge et al., 2023) and, stress (Chaney et al., 2016) when people find information that threatens them psychologically or if they foresee negative illness outcomes. Similarly, research by scholars like Griffith, 2022 aligned with search and avoidance paradigms. They show that people sometimes avoid health-related information because it's contradictory to their beliefs or because of their distrust of certain sources.

Strained patient-provider relationships are another reason why information seeking has transitioned to online contexts (Neely et al., 2021). Studies have highlighted that, when applied to health contexts, patients, caregivers, and families rarely follow linear '*query-answer*' models when confronted with illness and adopt their own personal searching, picking (Bates, 1989), avoiding, and evaluating methods with outcomes such as behavioral effects, trust, anxiety, and decision-making. Science and Technology Studies (STS) scholarship has argued that credibility is socially distributed: knowledge is produced within epistemic cultures and often depends on testimonial knowledge from peers. For parents, especially in high uncertainty contexts, testimony from '*similar others*' can be as persuasive as medical expertise. Concepts such as epistemic injustice highlight how marginalised voices are often discredited, while peer communities may serve as counterpublics that elevate experiential authority (Ammari et al., 2025; Senteio & Ackerman, 2024).

Methods

After IRB approval, we interviewed and analysed a dataset of n=23 U.S.-based parents whose children contracted COVID-19 during the pandemic. Some of these children also had existing health conditions. The dataset consists of 18 mothers and 5 fathers. Participants were recruited online through a survey, and selected individuals were vetted via a brief 5-minute pre-interview phone call. Additional recruitment was conducted in the waiting rooms of pediatric clinics with the support of two pediatricians. All parents reported using social media platforms such as Facebook, X (formerly Twitter), Instagram, Reddit, LinkedIn, YouTube, Snapchat, TikTok, WhatsApp, Pinterest, Telegram, and Discord to find COVID-related information.

In this paper, we adopted an abductive, theory-building approach to re-interpret the same data with a focus on epistemic practices. We analysed the audio recordings and interview transcripts using a crystallisation-immersion approach (Borkan, 2022; Crabtree & Miller, 2023). This method involves a horizontal strategy of interpretation characterised by multiple close readings of each transcript while remaining attentive to the lived experiences embedded in the text and open to

emergent insights. As Crabtree and Miller note, ‘a single immersion often yields only superficial findings; repeated engagement with the data is necessary to capture depth and nuance’ (Crabtree & Miller, 2023). Through this iterative process, we developed a richly contextualised understanding of participants’ orientations toward online health information and the ways these shaped their broader healthcare experiences. Themes that emerged showed specific actions that formalised NEM. Parents described how they found information through various online sources, validated it using certain strategies, circulated it with their family or practitioners, and if they trusted or did not trust the health information. This analysis allowed us to foreground the processes through which ‘credible authority’ was negotiated beyond institutional expertise, which we explore in the subsequent sections.

Findings

Sourcing evidence: institutional meets experiential

Parents described sourcing information from a mix of institutional authorities, such as the CDC, Mayo Clinic, and healthcare professionals. They also utilised sources such as Google Scholar and employed cues like domain names (.edu, .org) and references to reputable institutions.

Parents mentioned that experiential testimony was valuable, including input from other parents, online groups, and WhatsApp group chats. For some parents, experiential accounts carried equal or greater weight than institutional sources. This was especially true when such accounts matched their child’s specific circumstances and were compared to the experiences of another child. Parents whose children had similar experiences were often treated as credible sources, offering evidence grounded in lived experience. ‘Credibility’ was not solely based on the source but was also determined by how well it resonated with lived experience.

Respondents noted that credibility was also often judged in relation to how well the information aligned with their prior knowledge or expectations, which also exposed them to the risks of getting caught in algorithmic filter bubbles and falling prey to the persistence of misleading claims.

Much of the existing literature treats credibility as a fixed attribute of a source or piece of information. Our findings showed that credibility is actively produced through interaction with various sources. Online communities provided distributed validation, allowing parents to trust evidence when it was backed by both institutions and the community. For the participants, credibility rarely rested on a single authority; instead, it was constructed through a network of sources, signals, and relationships that together shaped what was accepted as ‘trustworthy’ to the parent.

Validating evidence: distributed and outsourced

Validation was described as a distributed practice rather than an individual task. Parents initially reported fatigue from repeatedly checking domain names, crossreferencing information across platforms, or searching academic articles on their own. To manage this cognitive load, they increasingly outsourced validation to their online communities, where moderators and peers collectively took on the role of fact-checkers. For instance, Participants described posting links in their Facebook groups and relying on others to verify whether the information could be trusted.

Over time, this outsourcing developed into the community’s definition of ‘evidencebased’. The online groups implicitly established standards for what counted as a valid contribution, such as citing an institutional source, avoiding overly emotional language, or referencing lived experiences that closely matched others in the group. Content that failed to meet these standards was ignored or actively challenged, while information aligned with community norms circulated more widely. Parents also interpreted platform affordances as validation signals. Moderator comments, pinned posts, or even visible engagement (likes, shares, supportive comments) were seen as cues that information had passed a form of collective review. Unlike individual fact-checking, this process

was iterative, making it possible for a claim to gain credibility as it resurfaced in different conversations, reappeared across platforms, or was endorsed by multiple group members.

Altogether, these practices reframed validation of information as more than the act of verifying a discrete fact by a healthcare provider. Instead, validation became the ongoing work of sustaining a network of evidence, where credibility was produced through the interplay of community labor, social norms, and platform-level cues.

Circulating evidence: community as epistemic infrastructure

Parents not only consumed information; they actively circulated it across their networks, transforming personal experiences and external resources into collective knowledge. Circulation was not random but scaffolded by trust: information shared by a peer who had *'done the homework,'* gone through a similar illness, or referenced institutional sources was more likely to be adopted and re-circulated within groups. In this way, trust in the person often preceded trust in the content. Importantly, the predominant discourse was not solely centered on the child's health or recovery, but also encompassed parenting practices considered effective by other parents in comparable circumstances—for example, which clinics to call first, what over-the-counter treatments to try, or how to advocate for a pediatric appointment. Parents also shared links to online sources they trusted, embedding them with personal commentary that lent the information greater social credibility.

Circulation also functioned as a form of personal archiving. Parents described online groups, especially WhatsApp group chats, as a living journal or diary – they documented experiences of hospital visits, treatment attempts, or provider interactions, knowing these posts could later be revisited by themselves or others when a similar situation resurfaced. Over time, these circulating accounts created a layered evidence base within communities, where credibility accumulated not just through repetition but through resonance with both lived experience and institutional references.

Rather than simply spreading information, circulation in these networks constituted epistemic infrastructure—a shared repository of stories, resources, and advice that parents could draw upon repeatedly. This exemplifies how circulation is not just about transmission but about building durable networks of evidence that shape what counts as credible knowledge.

Trusting evidence: negotiated alignment

Trust was not derived from any single authority but was constructed through the convergence of multiple signals. Parents described aligning three domains when deciding whether to trust information: (1) institutional authority – e.g., a source linked to the CDC or a university or a hospital, (2) testimonial resonance, i.e., the lived experiences of other parents in similar circumstances, and (3) platform signals such as upvotes, moderator enforcement, pinned posts, or other engagement metrics. When these signals reinforced one another, information gained credibility, and when they diverged, parents were more likely to express doubt or repeat the cycle by seeking further validation.

Trust also operated at the network level by building a collective that others could draw upon when making decisions. For example, several participants found that the network of parents experiencing similar issues became not only a space of emotional support but also a referral hub: 6 of the 23 respondents were referred to participate in our study through one group. Three of the participants visited the same pediatrician.

Thus, trust was less about absolute authority and more about the networked alignment of institutional, experiential, and technological signals. The convergence of these domains illustrates how credibility emerges relationally, through the interdependence of multiple actors and systems, rather than being anchored in any single expert or source.

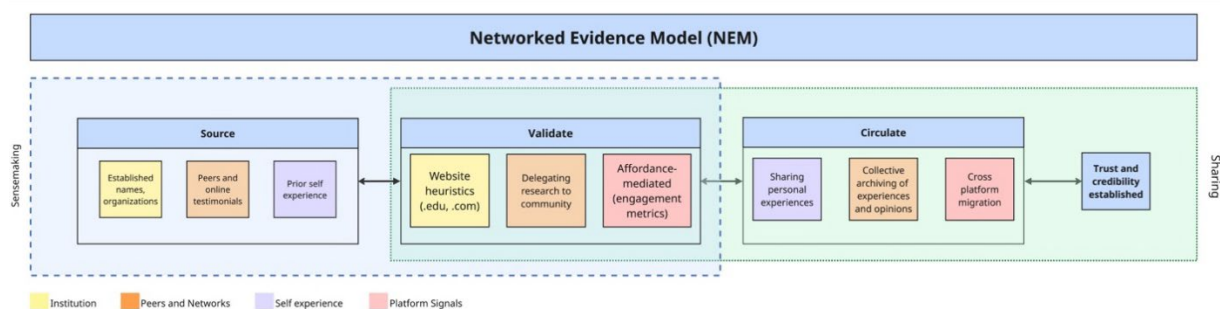


Figure 1. The NEM illustrates how parents construct credible health information through four interconnected stages: Source, Validate, Circulate, and Trust. The left dotted box indicates the stages where sensemaking primarily occurs (Source through Validate), while the right dotted box highlights where information sharing takes place (Validate through Trust). Color coding indicates the type of epistemic input at each stage: yellow represents institutional cues (e.g., CDC, hospitals, .edu domains); orange represents testimonials from peers and online networks; purple represents self-experienced events and prior knowledge; red represents platform signals (e.g., engagement metrics, moderation, pinned posts). Credibility emerges through alignment across these domains rather than from one authoritative source.

Discussion: the networked evidence model

Across health information and information-seeking literature, we lack a model that integrates institutional expertise, testimonial knowledge, and platform signals into a unified account of how credible authority is enacted in practice. This paper addresses this gap by proposing the networked evidence model (NEM) as an extension of UIT's '*credible authority*' component. Rather than treating credible authority as a static attribute of experts such as healthcare providers, NEM conceptualises evidence as a networked phenomenon, produced through interlocking practices of sourcing, validation, circulation, and trust among multiple stakeholders and systems as shown in Figure 1.

Source: Parents drew simultaneously on institutional expertise, online groups, peer testimonials, and personalised algorithmic recommendations.

Validate: Parents employed source heuristics such as .edu, etc., while also outsourcing fact-checking to their online communities, redistributing epistemic labor across the network.

Circulate: Experiential evidence was shared, archived, and transformed through parents' networks, often carrying more weight than advice received directly from healthcare providers.

Trust: Credibility emerged most strongly when institutional, testimonial, and platform signals converged, producing confidence through alignment across domains. NEM argues that credibility is not something information inherently '*has*'; rather, it is something patients, communities, and platforms create together in practice, depending on context and relationships. By centering this convergence, NEM extends UIT to theorise credibility and credible authority as a relational accomplishment across networks.

This shift highlights how authority is not simply accepted but actively constructed and technologically mediated. Moderation policies and interface cues (e.g., flagged content, posts with lower engagement) serve as epistemic signals that facilitate convergence, underscoring the significance of socio-technical infrastructures in influencing credibility. Consequently, platform designs that support credible evidence may include transparent moderation practices,

community-based verification tools, or indicators of testimonial expertise (e.g., ‘peer with lived experience’ badges).

NEM also bridges information practices, such as everyday searching (Wang et al., 2021), filtering (Andalibi & Garcia, 2021), and sensemaking (Campbell, 2023), with insights on epistemic authority. Our findings show that parents are not passive consumers of information but epistemic actors who co-construct what counts as evidence. As Wilson’s concept of the ‘totality of behavior’ suggests, and as Bates’ berrypicking metaphor illustrates, information seeking is iterative, relational, and infrastructural. Within the NEM, these behaviors converge into a framework where health information’s credible authority is networked, not hierarchical, and evidence is co-produced, not possessed.

NEM is theoretically aligned with work on distributed credibility and epistemic networks (Torres et al., 2018), but differs by explicitly theorising convergence of the signals which are brought into alignment through everyday information practices. Unlike information worlds (Yu, 2012), which emphasise bounded social contexts, NEM foregrounds the cross-context, and socio-technical production of credibility.

Limitations and future work

NEM is introduced here as an early-stage conceptual model rather than a fully validated theory.

NEM may be less applicable in contexts where information access is highly centralised or where institutional authority is largely uncontested, such as in tightly regulated clinical settings. Similarly, environments with limited digital engagement or fewer peer interactions may offer fewer conditions for networked convergence of signals described in the model.

Additional empirical work is needed to test NEM’s explanatory power, refine its components, and examine its applicability across a broader range of health contexts.

Future research should also apply NEM to chronic illness management, and even non-health domains to identify potential extensions and limitations.

Taken together, these limitations highlight the generative potential of NEM. By reframing credibility and credible authority as a product of multiple factors, this paper offers a strong foundation for subsequent work to expand.

Conclusion

Health challenges often disrupt traditional hierarchies of authority, compelling patients and caregivers to navigate complex, uncertain information landscapes. Extending Mishel’s Uncertainty in Illness Theory, this paper introduces the networked evidence model (NEM), which conceptualises evidence as emerging through the convergence of institutional, testimonial, and platform domains. By examining how people source, validate, circulate, and trust information, NEM reframes credibility as a relational accomplishment rather than a fixed property of experts or institutions. This perspective enriches understanding of digital health information practices and provides a theoretical foundation for designing socio-technical systems that foster equitable, transparent, and trustworthy knowledge exchange across diverse health contexts.

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About the authors

Karen Joy is a PhD Candidate at the Rutgers University School of Communication and Information. Her research focuses on how individuals navigate and assess health information in digital environments, particularly in contexts of uncertainty, credibility, and AI-mediated systems. She can be contacted at kj461@scarletmail.rutgers.edu

Tawfiq Ammari is an Assistant Professor in the School of Communication and Information and a mixed methods researcher who combines critical theory values from STS with computational social science techniques to advocate for equity and progressive social change in online contexts. She can be contacted at tawfiq.ammari@rutgers.edu

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