

# The Influence Pathway of Health Information Anxiety on Health Information Avoidance Behavior: A Grounded Theory Exploration

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## Abstract

With the release of the “Healthy China 2030 Strategy” and related initiatives, health information has emerged as a category of information of joint concern and importance to both the state and the public. However, issues such as health rumors and the overload of false health information, along with the resulting health information anxiety and health information avoidance behavior, undermine the enhancement of citizens’ health information literacy and the development of public health information services. Currently, there is a lack of in-depth research both domestically and internationally on the relationship between health information anxiety and health information avoidance behavior. This study employs the grounded theory method, conducting coding analysis on interview data to extract 83 initial concepts, 15 basic categories, and 6 main categories, and constructs a theoretical model by integrating the Cognition-Affect-Conation framework. The results demonstrate that health information anxiety and health information avoidance behavior mutually influence each other; cognitive factors indirectly affect health information avoidance behavior by influencing health information anxiety; and individual factors, information factors, and environmental factors influence health information avoidance behavior through three pathways: causal, mediating, and moderating.

## Full Text

### Research on the Influence Path of Health Information Anxiety on Health Information Avoidance Behavior: An Exploration Based on Grounded Theory

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## Abstract

With the promulgation of the “Healthy China 2030” strategy and related policies, health information has become a critical area of national and public concern. However, problems such as health rumors, false health information, and information overload have given rise to health information anxiety and subsequent health information avoidance behaviors, which impede the improvement of citizens’ health information literacy and the development of public health information services. Currently, the relationship between health information anxiety and health information avoidance behavior remains understudied. This study employs grounded theory methodology, extracting 83 initial concepts, 15 basic categories, and 6 main categories through coding analysis of interview data. By integrating the Cognition-Affect-Conation (CAC) framework, we construct a theoretical model. The findings reveal that health information anxiety and health information avoidance behavior mutually influence each other, with cognitive factors indirectly affecting avoidance behavior through anxiety. Individual factors, information factors, and environmental factors impact health information avoidance through three pathways: causal, mediating, and moderating effects.

**Keywords:** health information anxiety; health information avoidance; grounded theory; Cognition-Affect-Conation framework

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## 1. Introduction

At the 20th Party Congress, General Secretary Xi Jinping emphasized advancing the Healthy China initiative, prioritizing people’s health in strategic development, and improving health promotion policies. Under the “Big Health” concept, public attention to health issues has gradually increased, creating rapidly growing demand for comprehensive, high-quality, and accessible health information. During the COVID-19 pandemic particularly, due to the virus’ s rapid transmission and infectiousness, people experienced heightened anxiety and more frequently sought epidemic-related information and health prevention guidance through search engines and social media platforms.

Health information can provide essential knowledge to help address health concerns. However, in the process of accessing, acquiring, evaluating, and using health information, individuals often experience negative impacts from information volume, quality, and other factors, accompanied by information overload,

false information proliferation, and cognitive conflicts. Previous research has shown that information overload negatively affects health information search behavior, cognition, and emotional attitudes. False health information often exaggerates negative consequences, and individuals typically exhibit high willingness to share such health rumors, which can easily trigger health information anxiety. This anxiety creates negative experiences, generates psychological stress, and prompts individuals to make decisions to avoid such health information to reduce anxiety and maintain hope. However, avoiding health information may lead to neglecting potential health risks. Psychological theories suggest that excessive anxiety causes frustration, fear, and restlessness, leading people to avoid failure.

Moderate anxiety can help stimulate human potential and create desire for success. Meanwhile, individuals lacking relevant health knowledge may face hidden risks. Therefore, exploring the influence path of health information anxiety on avoidance behavior is crucial for reducing negative impacts, improving health information quality, enhancing health information services, and promoting health information literacy. Based on this, our study examines how individuals access, acquire, and use health information in online environments, aiming to enrich research in this domain and support Healthy China strategy implementation.

## 2. Literature Review

### 2.1 Health Information Anxiety

The concept of “Information Anxiety” was first introduced by Richard Wurman, who described it as a “black hole” between data and knowledge—when information cannot meet human needs, this black hole emerges. Domestic scholars widely adopt Li Yuling and Cao Jindan’s definition: a series of negative emotional reactions such as worry, fear, anxiety, and unease triggered during information acquisition and utilization due to external factors like information quality and retrieval quantity, as well as internal factors like information literacy and personality traits.

Health information anxiety represents a specific manifestation of this phenomenon. The “health information” component highlights that anxiety arises not only from the information itself but also from individuals’ processing of health-related information under the influence of objective external factors and internal characteristics. When bodily sensations or changes are interpreted as signs of serious illness, anxiety becomes a universal experience. Factors such as information sources, information overload, and information ambiguity also generate health information anxiety.

Most studies on health information anxiety focus on its causes and effects during health information searching. Some research indicates that high levels of health anxiety drive individuals to pay excessive attention to bodily changes and search for information frequently. If health anxiety becomes too intense, people may avoid information describing diseases, thereby reducing doctor visits. However,

disease uncertainty and panic can also motivate cross-source health information searching, potentially developing into hypochondriasis. Health anxiety can positively promote health information search behavior because it may erode trust in information, triggering more extensive searches or online posting of health-related content. Through frequent, large-scale health information searching, individuals can acquire more health information, increase understanding, reduce anxiety, and seek self-comfort.

Table 1 summarizes studies showing that health information anxiety positively affects health information avoidance behavior.

## 2.2 Health Information Avoidance Behavior

Information avoidance behavior has been defined by various scholars with different formulations but consistent core meaning: the intentional act of avoiding or delaying information that individuals do not need. As a branch of information avoidance, health information avoidance refers to avoidance behavior occurring at any stage of the health information lifecycle, either actively or passively. Common avoidance strategies include avoiding information sources, controlling attention, delaying acquisition, forgetting, and denying information.

In the health information context, since such information often indicates potential disease possibilities and triggers negative emotional reactions, many researchers have incorporated emotions into their analytical frameworks. Studies have examined how information, environmental, and cognitive factors influence avoidance behavior. For instance, Peng Lihui et al. integrated the SOR framework with grounded theory to investigate influencing factors among middle-aged and elderly populations, identifying internal factors (psychological elements, perceptual elements, capability elements) and external factors (information elements, environmental elements, media elements).

However, existing research has limitations: (1) studies typically treat health information anxiety as an emotional reaction without deeply examining its manifestations, types, and characteristics; (2) although emotional factors' effects on avoidance have been studied, the causal complexity and specific influence paths remain underexplored. Therefore, using grounded theory to explore the manifestations and characteristics of health information anxiety and avoidance, and analyzing their specific influence paths, is essential.

## 3. Research Methods

### 3.1 Data Collection

This study employed semi-structured interviews for data collection. The process is illustrated in [Figure 1: see original paper]. We invited participants and revised the interview outline based on feedback about content accessibility and reasonableness. The interview guide primarily considered: whether participants experienced anxiety when accessing health information; whether such anxiety

affected their emotions; whether they exhibited health information avoidance; whether their avoidance impacted information acquisition, evaluation, and utilization; and their specific health information needs.

### 3.2 Sampling

Grounded theory utilizes purposive sampling to select research subjects. This study focuses on health information anxiety and avoidance, so recruitment criteria included: (1) experiencing tension, anxiety, or other negative emotions due to health information overload or rumors; (2) exhibiting avoidance behaviors such as refusing to view, blocking, or skipping health information; and (3) voluntary participation.

### 3.3 Data Collection Process

Data collection spanned seven months, yielding 22 high-quality interview records (labeled p1, p2...p22). Due to pandemic restrictions, some interviews were conducted online (via WeChat voice calls) while others were face-to-face. Before each interview, we explained the purpose and obtained consent for recording. To protect privacy, we anonymized participants. Recordings were transcribed into over 100,000 words of text data, with 19 transcripts used for theoretical saturation and the remaining for validation.

## 4. Data Analysis

### 4.1 Grounded Theory Approach

Grounded theory is not a single theoretical framework but a systematic process comprising open coding, axial coding, and selective coding to thoroughly excavate information from data and develop theory. Widely applied for feature analysis, factor exploration, and model construction, this approach is well-suited for exploratory research on health information anxiety and avoidance. This study had no pre-existing hypotheses, making it more aligned with grounded theory requirements.

### 4.2 Open Coding

Open coding involves analyzing raw data sentence-by-sentence, abstracting it into concepts. In this stage, we excluded concepts mentioned fewer than three times, ultimately extracting 83 initial concepts. After conceptualization, we synthesized categories based on similarity and relevance, resulting in 15 basic categories. Table 3 presents examples of the open coding process.

### 4.3 Axial Coding

Axial coding examines relationships among open coding results to identify connections between categories. We analyzed each basic category's relationships

and grouped related categories into main categories. The 15 basic categories were consolidated into 6 main categories: information infrastructure, health information type, self-health efficacy, health information anxiety manifestations, health information anxiety types, and health information avoidance motivations. Table 4 details these categories.

Using NVivo12.0 for axial coding, we found different mention frequencies across categories. Higher mention frequencies indicate greater influence, with the distribution shown in [Figure 2: see original paper].

[Figure 2: see original paper]

#### 4.4 Selective Coding

Selective coding involves deep analysis of relationships among the six main categories to develop a theoretical framework that comprehensively explains the research question. We constructed three “storylines” : First, cognitive factors directly affect health information anxiety, which in turn triggers avoidance behavior. Second, environmental, information, and individual factors cause certain psychological or physical discomfort when processing health information, leading to avoidance to reduce such discomfort. Third, these factors have causal, mediating, and moderating effects on avoidance behavior.

Based on these storylines, we identified “health information avoidance” as the core category. Table 5 presents typical relationships and raw data excerpts.

In the first storyline, cognitive factors → health information anxiety → health information avoidance aligns with the Cognition-Affect-Conation (CAC) framework. The CAC model posits that cognition directly influences affect, which then drives conation. Drawing from grounded analysis and the CAC framework, we constructed a theoretical model of health information anxiety’ s influence path on avoidance behavior, as shown in [Figure 3: see original paper].

[Figure 3: see original paper]

#### 4.5 Theoretical Saturation

Theoretical saturation means no new concepts or categories emerge during data analysis. Through continuous comparison, our model achieved saturation, indicating that the constructed theoretical framework is comprehensive.

## 5. Discussion

### 5.1 Characteristics and Mutual Influence of Health Information Anxiety and Avoidance

Analysis of interview data reveals that health information anxiety primarily manifests as: fear of disease possibility, panic about uncertain outcomes, and annoyance from false information. The anxiety types include short-term anxiety,

intermittent anxiety, and search anxiety. Short-term anxiety is brief; intermittent anxiety involves fear that subsides after a few days; search anxiety reflects a tendency to seek information confirming subconscious beliefs.

Regarding avoidance behavior characteristics, we identify two motivations: maintaining self-belief and managing information. In self-belief, individuals avoid health information to maintain a positive self-view despite knowing more information might be beneficial. In information management, they resist excessive exposure to unreliable information to reduce anxiety. Avoidance strategies divide into physical avoidance (blocking, skipping, exiting) and psychological avoidance (attention shifting, biased interpretation). Outcomes include success (reduced anxiety, improved understanding) and failure (persistent anxiety).

Importantly, the relationship is bidirectional: health information anxiety can lead to avoidance, while avoidance behaviors can reduce anxiety by shielding individuals from disturbing information. However, massive exposure to false information increases annoyance and anxiety, making avoidance more likely.

## 5.2 Influence Path of Individual Factors

Individual factors comprise personality traits, health literacy, and information literacy, affecting avoidance through causal, mediating, and moderating pathways. (1) Different personalities show varying preferences, thinking patterns, and behaviors. Patient, optimistic, and tolerant individuals are less prone to anxiety and avoidance. (2) High health literacy individuals are self-aware, confident, and proactively seek health information, experiencing less anxiety. When feeling unwell, they actively search for the latest information to maintain health. (3) Information literacy—knowing when and how to effectively acquire, evaluate, and use information—also matters. Lower information literacy correlates with higher anxiety and avoidance.

## 5.3 Influence Path of Information Factors

Information factors include health information type and information framing, operating through causal, mediating, and moderating pathways. (1) Common health information types include causes, symptoms, diet, and exercise. Special information (e.g., about serious diseases) triggers more avoidance than general health tips. (2) Information framing significantly impacts avoidance. People are not entirely rational when processing information; decision preferences are influenced by presentation formats. This study employs gain-loss framing. Many participants mentioned that certain presentation styles—overly affirmative or exaggerated—trigger 反感 and avoidance. Appropriate framing can promote understanding and improve health information services.

## 5.4 Influence Path of Environmental Factors

Environmental factors encompass information infrastructure and information services, affecting avoidance through three pathways. (1) With new informa-

tion technologies, health information is increasingly cross-platform distributed. Participants reported difficulties navigating multiple platforms, encountering numerous rumors and advertisements, and questioning search engine credibility. Poor information infrastructure increases anxiety and avoidance, while good infrastructure facilitates searching. (2) Although health communities and mobile apps make information searching convenient, complex content and confusing displays hinder users. User-friendly services promote health information seeking, while unfriendly services increase anxiety and avoidance.

### 5.5 Influence Path of Cognitive Factors

Cognitive factors comprise perceived information, perceived risk, and self-health efficacy, directly influencing avoidance. (1) Regarding perceived information, participants cared about quality indicators like professional medical endorsement and background information reliability. They distrusted information from non-expert bloggers. Poor information quality and exaggerated content caused psychological panic and avoidance. (2) Perceived risk also matters; higher perceived risk of health threats increases anxiety and avoidance. (3) High self-health efficacy enables individuals to use health information to improve self-management without anxiety. Conversely, low self-health efficacy—feeling incapable of changing unhealthy behaviors—breeds anxiety and avoidance.

## 6. Conclusion and Contributions

This study clarifies concepts and connotations of health information anxiety and avoidance through literature review, providing theoretical guidance for future research. Previous studies often examined the overall relationship between anxiety and avoidance but lacked investigation into specific influence paths and mechanisms. Using grounded theory, we explored these paths and constructed a theoretical model. The findings show that health information anxiety and avoidance mutually influence each other. Cognitive factors indirectly affect avoidance through anxiety, while individual, information, and environmental factors impact avoidance through three pathways: direct effects, moderation, and mediation via anxiety.

### Limitations and Future Directions

This study interviewed 22 participants but could expand to more diverse user groups. Future research should combine primary and secondary data, employ big data analytics, and utilize natural language processing and machine learning for deeper analysis. Mixed-methods approaches and large-scale quantitative validation would strengthen the findings.

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Gu Dongxiao: Conceptualized research, supervised writing and revision;

Sun Jiayue: Drafted and revised manuscript;

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Zhang Mingyu: Organized interview data.

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