

Review of Foreign Research on Health Information Avoidance Behavior: Postprint

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Abstract

[Purpose/Significance] To analyze the status quo and trends of overseas research on health information avoidance, thereby providing references for studies on health information avoidance behavior and related user behaviors in China. [Method/Process] First, the boundaries and characteristics of health information avoidance behavior are defined. Based on this, relevant literature is retrieved, traced, and screened as research data. A detailed analysis is then conducted on the research topics, conclusions, and methodologies employed in previous studies. Finally, limitations and future research directions are discussed. [Results/Conclusion] Avoidance motivation and influencing factors constitute the current research focus, yet await the development of an authoritative theoretical model. The mechanisms of influencing factors, avoidance processes, strategies, outcomes, and coping responses represent future topics with greater practical application value. Expanding the contexts of health information avoidance and hybridizing or introducing modern data collection and analysis methods are expected to become innovative breakthrough points for research.

Full Text

Preamble

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Abstract: [Purpose/Significance] This paper analyzes the current status and trends of foreign research on health information avoidance, providing reference for health information avoidance behavior and related user behavior research in China. [Method/Process] Firstly, the boundaries and characteristics of health information avoidance behavior are defined. Then, based on this definition, relevant literature is retrieved, traced, and screened as research data. The paper

provides a detailed analysis of the research topics, conclusions, and methods employed in previous studies. Finally, limitations and future research directions are discussed. [Result/Conclusion] Avoidance motivation and influencing factors constitute current research hotspots, though an authoritative theoretical model has yet to be formed. The mechanisms of influencing factors, avoidance processes, strategies, outcomes, and coping responses represent more practically valuable topics for future research. Expanding health information avoidance scenarios and incorporating mixed or modern data collection and analysis methods may become breakthrough points for research innovation.

Keywords: health information behavior; health information avoidance; influencing factors; avoidance strategy; avoidance consequence; avoidance response

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Health information can regulate people's health beliefs, enabling them to form new concepts about health behaviors, and guiding them to maintain, enhance healthy behaviors, or change unhealthy ones [1]. Therefore, providing targeted health information and services to individuals is considered to have promising prospects for health behavior intervention research and practice [2]. However, in real life, people are not always willing to acquire and use health information in every situation. For example, many cancer patients do not want to know about disease progression from their doctors after seeking medical treatment [3], and a considerable number of people, while recognizing the value of genetic sequencing technology, are unwilling to use it to understand their own or their family's risk for genetic diseases [4-6]. To maintain uncertainty about health issues and enjoy pleasant emotional experiences while avoiding changes to health behaviors, people may even actively avoid relevant information. This phenomenon is referred to by scholars as health information avoidance [7].

Health information avoidance first appeared in psychology and communication studies, where it was considered an external manifestation of psychological defense when facing perceived stress and threats, related to selective exposure. In health information behavior research, relevant theoretical discussions emerged early in the Comprehensive Model of Health Information Seeking proposed by J.D. Johnson and H. Meischke [8], which introduced perceived control and self-efficacy as influencing factors, indirectly indicating that when individuals perceive control beyond their capacity and have insufficient self-efficacy, patients and their families tend to avoid health issues and health information needs, exhibiting avoidance behavior. Later, D.R. Longo's synthesis of status variables regarding health information seeking and use in a comprehensive model [9] provided corroboration. However, for a long time, health information avoidance behavior did not receive attention from researchers as an independent topic, instead appearing more frequently as a sub-variable in information seeking or selection studies—possibly related to assumptions such as “information can reduce uncertainty” and “the desire for knowledge is human nature.” Around 2005, D.E. Brashers et al. [7] explored health information avoidance behavior, includ-

ing its motivations and strategies, based on uncertainty management theory. D.O. Case et al. [10] reviewed literature on health information behaviors related to genetic testing and cancer, systematically elaborating on the concept of information avoidance behavior and its causes using theories from psychology, communication, and information behavior studies, pointing out that information avoidance is not equivalent to selective exposure or neglect behaviors but is merely related, and that it needs to be studied as an independent category of information behavior. Subsequent health information avoidance research in the information science field has been influenced by this work to varying degrees.

Around 2010, as countries increasingly emphasized health information strategies, health information avoidance behavior began to receive attention as an independent topic internationally across multiple disciplines including psychology, communication, medicine, and information science, generating a series of research findings. Research populations and health information types gradually diversified, with topics ranging from causes to impacts and coping strategies. Representative researchers include J.A. Shepperd and J.L. Howell. Studies have found that while the objective existence of health information avoidance has certain rationality and inevitability, it also brings negative effects. For example, avoidance of cancer screening results may cause people to miss optimal treatment opportunities [11-13], and avoidance of infectious disease information may facilitate the spread of contagious diseases [14], which is detrimental to health management and promotion and hinders the realization of health information value.

In China, as Healthy China information services have been listed as a major strategic task, reducing the occurrence of health information avoidance behavior and avoiding its negative impact on people's health maintenance and promotion should become an important research topic for the implementation of the Healthy China strategy. Searching CNKI and Wanfang databases with "health information avoidance" or "health information evasion" as subject terms yields only nine relevant studies. These studies involve college students [15-16], older adults [17-18], pregnant women [19], and people with disabilities [20]; most content is generalized, with only individual studies focusing on specific topics [21]; and research is mainly concentrated in the last three years. This indicates that domestic scholars have begun to pay attention to health information avoidance phenomena but remain relatively behind. In fact, reviewing existing domestic health information behavior research findings, sub-variables or independent themes such as neglect, withdrawal, burnout, and negative use have also emerged in recent years, and relevant conclusions can provide reference for health information avoidance behavior research. However, most focus on the category of health information seeking research. As D.O. Case et al. stated, they are only related to health information avoidance behavior, not equivalent to it. Therefore, systematically investigating and analyzing international health information avoidance behavior research has certain value for domestic scholars to conduct independent research and innovate research perspectives. Based on defining the characteristics of health information avoidance behavior,

this study conducts a literature review and content analysis from two aspects—research topics and research methods—systematically 梳理 ing previous research problems, conclusions, data collection and analysis methods in foreign health information avoidance research, and discussing relevant limitations and research prospects to provide reference for subsequent research.

2 Conceptual Understanding and Definition

In publicly available literature, current health information avoidance research is mainly conducted under the conceptual framework of information avoidance, and a conceptualized definition has not yet been formed. There is no unified and clear definition of information avoidance. Researchers interpret the concept of health information avoidance from different theoretical perspectives and starting points, focusing on behavioral manifestations, causes, and behavioral stages. Overall, these can be divided into three categories:

2.1 Conceptualized Descriptions of Avoidance Phenomena in Information Behavior

These definitions consider information avoidance behavior as one element in the set of information behavior decisions when people face information sources, opposite to non-response and active seeking, manifested as the decision to actively avoid specific information and consciously take measures to avoid learning about or being exposed to information [10]. Regarding proactivity, R. Golman et al. [23] believe that two behavioral prerequisites—“knowing that information is available and usable” and “being able to obtain information freely or at no cost”—can be used to determine whether information avoidance is active behavior. However, psychology researchers believe that information avoidance is a reaction when perceived autonomy is threatened, and experiments have proven that this reaction is not only a conscious and deliberate behavior but may also be a subconscious and spontaneous one [24-25].

2.2 Conceptual Description and Differentiation of Information Avoidance

J.B. Barbour et al. [26] believe that information avoidance is a reaction to uncertainty, aimed at increasing, maintaining, or reducing uncertainty. Psychologist K. Sweeny [27] defines information avoidance as any behavior aimed at preventing or delaying the acquisition of useful information that is accessible but not desired, noting that usefulness may refer to the behavior subject themselves or others; avoidance may be long-term or temporary behavior. Based on this, D. Melnyk [28] emphasizes that information avoidance does not include non-seeking behavior due to time, interest, and energy reasons; Jiang Tingting et al. [29] emphasize that when avoiding information, people’s cognition of the specific content of the information is vague, and they only subjectively believe it contains content they do not want.

2.3 Defining Information Avoidance as an Information Behavior

T.D. Wilson's information behavior theory divides externalized information behavior into seeking, processing, and utilization stages [30]. Current conceptualized descriptions mainly focus on the "non-exposure" stage opposite to seeking, as in the two definitions above. Only a few scholars involve the absorption and utilization stages, such as T. Neben [31], who believes that avoidance may occur in any of these stages, and that information avoidance includes three sub-categories: exposure avoidance (actively or passively refusing to seek decision-relevant information), absorption avoidance (not conducting or only conducting low-level cognitive processing of decision-relevant information), and utilization avoidance (limited use or non-use of relevant information in the decision-making process). Some scholars directly locate information avoidance behavior before contact with information, believing it is not related to information processing and utilization [28], and does not include behaviors such as information neglect, distortion, and reasoning avoidance when already in an information situation.

Based on an in-depth summary of existing information avoidance connotations, this study believes that information avoidance behavior is a complex phenomenon that may occur in any link of the full lifecycle of information behavior and has the following characteristics and manifestations: In terms of psychological motivation, it emphasizes "not wanting" rather than "not needing" or "not being interested," although the behavior subject does not know the specific content of the information; In terms of perceived behavioral control, it may be conscious perceptual avoidance or subconscious spontaneous avoidance; In terms of information-related subjects, it may be the behavior subject themselves or their close relationships, such as spouses or parents;

In terms of behavioral manifestations, it includes physical non-contact and escape, cognitive psychological neglect and distortion, and deeper-level non-utilization, often intertwined with information seeking, processing, and utilization behaviors; In terms of duration, it may be temporary or repeatedly occurring persistent behavior.

Accordingly, this study provides the following general description based on the behavior subject's psychology and the general process of information behavior: any behavior aimed at preventing or delaying information acquisition, processing, and utilization. Health information avoidance is avoidance behavior in the context of health information themes, that is, information avoidance behavior with health information as the avoidance object in task contexts such as health problem solving, health decision-making, and health behavior change. Health information here broadly refers to information related to people's physical and mental health, diseases, nutrition, health preservation, etc. [32]. Behavior object, perceived behavioral control, behavior subject, behavioral manifestation, behavior stage, and duration can serve as 细分 dimensions for information avoidance and health information avoidance behavior research.

3 Research Data

3.1 Literature Collection and Screening

Through literature retrieval and reading, it was found that the English expressions for avoidance are mainly “avoidance” and “avoiding,” with a few focusing on specific behavioral stages expressed as “non-seeker” and “non-use.” Accordingly, this paper used TS=(“information avoid” OR “avoid information” OR “information non-seek*” OR “information non-use”) AND TS=health to conduct subject searches across all databases on the Web of Science platform, limiting document type to “Article” and retrieval date to September 11, 2020, obtaining 119 initial documents. After reading and screening, 51 documents were obtained as main research data. During analysis, 15 relevant documents were obtained through reference and citation expansion searches; ultimately, 66 English documents constitute the core research literature list for this study. Literature screening criteria included: full text of formal journals, conference papers, and dissertations; avoidance scenarios related to health information (excluding advertisements) and conforming to the definition of information avoidance behavior; studies with health information avoidance as the main research theme, excluding literature that simply reveals health information avoidance phenomena or uses it as a dependent variable in information seeking research.

3.2 Basic Literature Characteristics

In terms of publication year (see Figure 1 [Figure 1: see original paper]), health information avoidance literature showed significant growth after 2012, with a sustained overall growth trend, reaching 10 publications in 2019. This indicates that health information avoidance has increasingly attracted scholars’ attention in recent years.

Research literature was mainly published in 36 source journals including health communication, information research, behavioral medicine, sociology and medicine, health informatics and library science, health psychology, patient education and counseling, preventive medicine, and cancer nursing. Journals with two or more publications are shown in Table 1, covering multiple fields such as medicine, communication, psychology, sociology, informatics, library and information science, and decision science, reflecting the interdisciplinary characteristics of health information avoidance research.

The subjects of health information avoidance behavior research mainly revolve around behavior subjects and health information content. In terms of age, they are mainly concentrated among adults, including young adults (college students and young people in society), middle-aged people, and young older adults, possibly because their cognitive interaction abilities are relatively strong, and research data is relatively easy and reliable to obtain. In terms of health status, they can be roughly divided into four categories: major disease patients, non-major disease patients, disease-susceptible populations, and healthy populations. Major disease patients are mainly cancer patients, while non-major dis-

ease patients include those with infectious diseases and chronic diseases. Health information in avoidance scenarios includes both specific topics such as diseases, genetics, medication, and physical exercise, as well as generalized health themes. Some representative research findings are shown in Table 2 .

4 Research Topics

Literature analysis shows that current health information avoidance behavior research mainly revolves around four topics: reasons, strategies, outcomes, and coping, addressing the following specific research questions: Reasons for avoidance: What causes health information avoidance behavior? Behavioral strategies: How is health information avoidance implemented? Behavioral outcomes: What impacts does avoidance behavior produce? Behavioral coping: How can avoidance behavior be effectively intervened? Among these, avoidance reasons have become the current research hotspot, accounting for over 80% of the literature. Since mature theoretical models for information avoidance behavior and health information avoidance research are still lacking, this study proposes the internal logical framework for health information avoidance behavior research shown in Figure 2 [Figure 2: see original paper] and uses it to summarize and analyze current foreign information avoidance research findings.

4.1 Reasons for Avoidance

4.1.1 Theoretical Foundations Cognitive dissonance theory, emotion-cognition theory, impression management theory, uncertainty management theory, self-efficacy theory, risk perception theory, and coping theory constitute the main foundational theories for current information avoidance motivation research. Table 3 outlines the core ideas of these commonly used theories and their application in health information avoidance behavior research.

4.1.2 Motivational Factors Research on individual behavioral motivations in health information avoidance contexts includes internal and external motivations.

Internal motivations mainly revolve around three dimensions: emotion, cognition, and behavior. Emotion regulation: mainly manifested as avoiding negative emotions such as anxiety, fear, disappointment, and regret for oneself or close others, and maintaining pleasure and optimism. Researchers generally believe that emotion regulation is an important motivation for health information avoidance behavior, with fear and anxiety being the main emotional factors driving people to avoid health information in daily life [40], stemming from the perceived uncontrollability of health information consequences, such as the absence of good treatment options [5]. Cognitive consistency: mainly manifested as avoiding cognitive dissonance and maintaining self-consistency. For example, when patients perceive prescription information as inconsistent with their medication experience, they feel fear and tension, and simultaneously resolve

the dissonance through both information seeking and avoidance [41]. Behavioral invariance: that is, refusing expected behavior changes indicated by health information or only accepting limited behavior changes. “Maintaining current lifestyle and health behavior habits” and “accepting limited behavior changes” constitute the main motivations for health information avoidance among college students and adults [26]; diabetic patients do not want to learn about diabetes treatment information because they do not want to change their dietary habits and increase exercise [42]. In real life, health information avoidance intentions and behaviors are often driven jointly by these three types of motivations [43].

External motivations are directly manifested as health impression management [44], essentially protecting personal health privacy and avoiding emotional, economic, or social status threats caused by changes in others’ impressions due to health information, such as causing embarrassment, losing health insurance or increasing premiums, being discriminated against, or receiving negative evaluations. Sometimes they are also driven by altruism, avoiding emotional fluctuations and economic burdens for close others [45], and maintaining family harmony and stability. In some health information avoidance contexts (such as public settings), external motivations have a stronger driving effect on avoidance behavior [5].

4.1.3 Subject Factors Research on the impact of subject factors on health information avoidance behavior mainly involves demographic characteristics, coping resources, and cognition.

- (1) Demographic characteristics. Gender, age, education level, race, health status, disease history, economic status, and health insurance are commonly used basic variables in many health information avoidance behavior characteristic distribution studies. Except for disease history, which has different moderating effects on individual health information avoidance [6, 46], other research conclusions are generally consistent: males show stronger avoidance intentions than females; older adults have more significant health information avoidance intentions and behaviors; those with better education, economic status, and health status often show stronger information threat coping abilities; stable health insurance can weaken individual health information avoidance motivations; race is not significantly related to individual health information avoidance intentions.
- (2) Coping resources. Resources that individuals have or may obtain to cope with health information threats directly affect their self-efficacy and perceived control over health information threats, and are negatively correlated with health information avoidance. Existing research mainly focuses on individual resources such as personality traits, individual experience, health literacy, health information literacy, and health information preferences, as well as social resources such as social networks and social support.

Personality traits make people’s behavior tend toward specific patterns. Com-

pared with optimistic individuals and self-monitors, individuals with trait anxiety and blunterners are more likely to avoid health information [12, 47]. Individual experience includes direct and vicarious experience, which affects health information avoidance intentions through influencing individual attitudes and beliefs toward health information behavior: negative health information seeking experience, medical experience, and information disclosure experience have all been proven to positively influence individual information avoidance intentions [13, 48]. Health literacy mainly includes health knowledge and health skills, affecting avoidance behavior by influencing individual abilities to seek, process, and utilize health information: lack of health knowledge makes patients unable to correctly understand health issues such as genetics and gene sequencing, making them more likely to form health information avoidance attitudes [49]. The correlation between health information literacy and avoidance behavior is mainly manifested in the moderating effect of health information literacy on perceived accessibility and perceived ease of use, with low-level health information literacy leading to high-probability health information avoidance [50]. Health information preferences trigger health information avoidance behavior by affecting individual information source selection and attention allocation [6].

Social networks refer to interpersonal relationships needed for individuals to implement positive health information behavior, including professional relationships (such as medical staff [47]) and ordinary relationships; social support refers to the spiritual, material, and instrumental support individuals can obtain through family and social relationships. Both represent external coping resources that individuals can obtain when facing expected health information threats [51], significantly affecting individual threat control and coping perceptions. Lack of external resources is significantly related to information avoidance intentions and behaviors [47-48]. Studies show that patients lacking professional health personnel in their interpersonal relationships are more likely to avoid disease information, and people experiencing social exclusion or lacking social support are more likely to avoid health information [52].

- (3) Individual cognition. Research on the impact of individual cognition on health information avoidance behavior mainly focuses on four aspects: health beliefs, health information behavior perceptions, perceived control, and self-efficacy. Health beliefs. Individuals' views, opinions, and judgments about health issues can effectively explain and predict health behaviors. Research on the impact of health beliefs on health information avoidance focuses on health worldviews and perceived threats in avoidance contexts. Individuals holding a fatalistic health worldview believe that people are powerless to reverse health problems and tend to avoid health information, especially in contexts of major diseases like cancer [53]. Perceived severity and perceived susceptibility are two aspects of perceived threat. Perceived severity refers to individuals' expectations about the seriousness of threats brought by health information, while perceived susceptibility refers to expectations about the likelihood of threats. Threat content includes health, emotion, economy, and other aspects [46,

54], with perceived disease severity and perceived disease susceptibility belonging to its subcategories. In existing research conclusions, perceived severity is significantly correlated with health information avoidance behavior tendencies [28], but research conclusions on the correlation between perceived susceptibility and avoidance behavior are inconsistent [6, 51, 53], possibly due to differences in other variables under research contexts, indicating to some extent that the effect of perceived threat on health information avoidance behavior is moderated by other factors in specific health information avoidance contexts. Health information behavior perceptions. Individuals' perceptions of the difficulty of acquiring, understanding, or utilizing health information affect their choices of health information avoidance behavior. The greater the perceived difficulty, the stronger the health information avoidance intention. Perceived accessibility [55], perceived usefulness [56], perceived ease of use [55-56], and information overload [54, 57] have all been proven to be significantly correlated with people's health information avoidance behavior to varying degrees. For example, cancer information overload perception and cancer worry levels among health information avoiders are significantly higher than other behavior groups [57]. Perceived control. Individuals' perceptions of their ability to control potential threats from health information affect their health information behavior choices. The weaker the perceived control ability, the more likely they are to avoid health information. Perceived control is often related to individuals' coping resources and health issue nature [58]. Facing the same health threat, fewer coping resources lead to lower perceived control; with the same coping resources, more serious health problems lead to lower perceived control [51]. Self-efficacy. Self-efficacy refers to individuals' confidence in their ability to cope with health information threats or risks, generally positively correlated with their coping resources. Under normal circumstances, it can significantly moderate the relationship between perceived threat control and health information avoidance behavior [53], but under high-risk perception, the moderating effect of self-efficacy is not significant [12, 59].

4.1.4 Information Factors Information factors belong to the object factors affecting individual health information avoidance behavior, mainly influencing individual health information beliefs, emotions, and cognition [60]. If health information causes negative judgments and perceptions such as information overload, difficulty in acquisition, poor usability, and poor reliability, forming negative health information behavior experiences, individuals tend to avoid health information. Related research measurements mainly focus on two aspects: health information dissemination and information quality.

Information dissemination factors include health information presentation forms [51, 55, 58], language use [58], and communication channels [61], which trigger avoidance intentions or behaviors by causing cognitive, technical, and economic barriers. For example, for colorectal cancer screening information, compared

with popular language and graphical presentation, professional language and pure text presentation are more likely to cause cognitive barriers, leading older adults to avoid health follow-up and cancer screening, especially those with low health literacy [58]; compared with interpersonal communication, the possibility of avoiding online health information is higher [61].

Research on the impact of information quality on health information avoidance mainly focuses on the authority and consistency of information content. Doubtful information sources, ambiguous content, and inconsistent information reduce people's perceptions of health information reliability and utility [26, 48], causing them to feel at a loss, triggering information anxiety, obtaining negative experiences, forming negative information beliefs and attitudes, and thus negatively reinforcing avoidance intentions and behaviors.

4.1.5 Contextual Factors Contextual factors affecting the emergence and persistence of individual health information avoidance behavior include both macro-level task characteristics, medical technology levels, and social public health services, as well as meso- and micro-level family environments, behavior venues, and information audiences.

- (1) Macro context. Task characteristics in existing research mainly revolve around the nature of health problems (concentrated on disease nature), which together with contemporary medical technology levels affect avoidance behavior [45], essentially functioning through perceptions of disease curability and preventability—difficult-to-prevent and incurable characteristics significantly affect people's avoidance behavior [12]. With the development of medical technology, the curability and preventability of the same disease may change in different eras, so the impact of the same task characteristics on avoidance behavior also differs in different temporal and spatial contexts. Social public health service policies and levels determine the coping resources individuals can obtain from society to some extent. Having stable social insurance and access to continuous medical care services can weaken people's health information avoidance intentions and behaviors [46, 49].
- (2) Meso- and micro context. The family environment largely represents the coping resources individuals can obtain externally when facing threats, such as family income levels and debt status representing economic coping resources, which function by influencing individuals' threat control perceptions. Behavior venues trigger avoidance behavior by causing privacy protection, impression management, and emotion regulation motivations. 61.3% of people are unwilling to learn about their personal health information in public settings, especially embarrassing information (such as poor hygiene habits) [62]. The impact of information audiences on avoidance behavior is related to the threats they may bring. When perceiving that health information audiences may bring economic, employment, and other threats, individuals tend to avoid health information; avoidance in-

tentions are positively correlated with the threat capability of information audiences. For example, between researchers, employers, and insurance companies, people tend to conceal health information from the latter two because employers and insurance companies have the ability to affect their employment and medical insurance costs, bringing them economic losses.

4.2 Avoidance Strategies

The proactive nature of information avoidance indicates that people often consciously adopt certain avoidance strategies and methods [63]. Therefore, while studying health information avoidance motivations and influencing factors, some scholars also pay attention to how people consciously avoid information. Overall, researchers have conducted research and summarization of health information avoidance strategies mainly from three levels: physical, cognitive, and linguistic.

4.2.1 Physical Avoidance The goal of physical avoidance is to stay away from health information sources by avoiding any people, institutions, or carriers that may provide health information. In reality, this is often manifested as avoiding medical staff [45], refusing examinations [5], medical treatment [48], obtaining health reports [40], visual isolation (such as placing cigarette packs with warning labels where they cannot be seen [55]), closing health message windows, and turning off or changing TV channels [26].

4.2.2 Cognitive Avoidance If health information has been actively or passively acquired, or if one is in a health information context, in addition to controlling communication to avoid others' health information output by changing topics or exiting conversation situations [26], people also adopt cognitive avoidance strategies such as selective attention, denial, reconstruction, and suppression to refuse information acceptance and absorption at the cognitive level [64]. Specifically, people control attention allocation to consciously neglect unwanted information; they conduct cognitive suppression by not thinking about or reasoning about attended information; they rationalize health risk information through cognitive reconstruction to maintain emotional pleasure and self-consistency, such as smokers reinforcing the belief that "smoking a few cigarettes per month won't harm health" to form a cognition that "smoking is harmful to health" is irrelevant to them [26].

4.2.3 Linguistic Avoidance Linguistic avoidance is manifested as people's conscious concealment of personal information such as inner thoughts, behavioral experiences, and health status from others in oral or written communication, not just passive avoidance, belonging to the category of self-concealment strategies. Self-concealment is a psychological tendency and behavior to actively conceal painful or negative individual information from others [35], and the concealed information is not limited to factual information but also includes

real information that individuals can clearly perceive as potentially threatening or negative. Facing cancer health information surveys, many people choose to respond negatively, and selecting “don’t know” may also be a manifestation [65-66].

In specific health information avoidance contexts, people implement the above avoidance strategies around two dimensions: information scope and time. In terms of the scope of avoided information, people may avoid all information sources, i.e., complete avoidance; they may also avoid some information sources, i.e., selective avoidance, with the latter being more common [41-42], possibly related to humanity’s essential desire for knowledge. In terms of behavioral timing, people also adopt procrastination strategies, consciously delaying health information acquisition [40], which mostly occurs in contexts where people cannot immediately process information due to cognitive or emotional reasons but rationally know that the avoided health information is meaningful and valuable to them [29].

4.3 Avoidance Outcomes

Currently, there are very few studies specifically examining the impact of health information avoidance on behavior subjects. A few studies focus respectively on the impact of health information avoidance on patients’ self-rated health status satisfaction [56], health information service satisfaction [67], health questionnaire response [65], and health risk information dissemination effects [68], with inconsistent results: some positive or neutral conclusions, such as finding that the health information service satisfaction of subjects with high avoidance tendencies is higher than that of seeking groups [67], and that avoiding information about “red meat consumption increasing cardiovascular disease and cancer risk” did not affect people’s health behaviors [68]; there are also negative findings, such as patients with avoidance characteristics having higher self-rated health status satisfaction [56], health information avoidance characteristics being positively correlated with negative responses to health questionnaires [65], which is not conducive to health promotion and health knowledge popularization surveys. Additionally, R.F. McClold found in a study on the relationship between avoidance intentions of “smoking is harmful to health” warning graphics and related health information seeking intentions and smoking cessation intentions among socioeconomically disadvantaged smokers that for light smokers with strong negative emotional reactions, avoidance intentions are positively correlated with seeking intentions and smoking cessation intentions [55].

More studies only discuss the impact of health avoidance on people’s health behaviors and health outcomes in background and results analysis. Overall, compared with positive impacts such as avoiding cognitive dissonance and negative emotion regulation, there are more concerns and findings about negative impacts: not conducive to disease monitoring, prevention, and early detection [11-13], facilitating the spread of infectious diseases [14], affecting patient medication compliance [41]. These concerns and findings about negative impacts

have, to some extent, promoted health information avoidance research.

4.4 Avoidance Coping

The goal of health information avoidance coping research is to reduce avoidance behavior occurrence and avoid its negative impacts on people. A few existing studies concentrate in the field of cognitive psychology, conducting experimental control studies on how to reduce cognitive dissonance, alleviate information threat perception, and enhance personal internal coping resource perception and self-efficacy.

Self-affirmation theory is an important theoretical foundation for current information avoidance coping research. This theory points out that self-affirmation can counteract the negative effects of cognitive dissonance. When individual self-worth and self-image are threatened, recalling other selves unrelated to the threat and strengthening self-worth can improve stress coping ability, reduce threat perception, and promote acceptance of threatening information [69]. Therefore, self-affirmation interventions can reduce individuals' defensive reactions. For example, "recalling positive experiences" can regulate the defensive psychology of daily coffee drinkers toward health risk information that "heavy caffeine intake can cause fibrocystic breast disease" [70]; strengthening self-worth can weaken healthy college students' perceptions of disease curability and thus promote disease risk screening [71].

Based on the assumption that "information avoidance is largely emotionally driven" and human heuristic information processing and decision-making mechanisms, J.L. Howell and J.A. Shepperd [72] introduced the contemplation stage concept from the Transtheoretical Model of behavior change [73], believing that contemplating avoidance motivations (i.e., thinking about the reasons for not wanting) and shifting attention from the immediate threat of understanding information to its long-term significance or outcomes may reduce individual health information threat perception and decrease health information avoidance drive, which was verified in three experiments. The experiments also found that only under conditions where diseases are curable can contemplating avoidance reasons weaken individual health information avoidance motivations, indicating that the effect of contemplation on avoidance motivations and behaviors is influenced by perceived threat control.

Additionally, some scholars have briefly discussed information avoidance coping strategies in health information avoidance motivation and influencing factor studies. For example, A. Persoskie et al. [40] pointed out in a study on the relationship between cancer worry, cancer risk perception, and doctor avoidance behavior among the U.S. public that improving doctor-patient communication strategies and patient appointment methods can reduce doctor avoidance behavior among cancer patients; D. Melnyk and J.A. Shepperd [58] found in a study on influencing factors of breast cancer risk information avoidance among women that having subjects read controllable breast cancer risk information can

help reduce breast cancer health information avoidance behavior.

5 Research Methods

Among the 66 documents, 61 are original empirical studies that collect and analyze data to study specific problems: 54 use quantitative research methods, and 7 use qualitative research methods.

5.1 Quantitative Research Methods

Quantitative research methods are the main research methods for current health information avoidance behavior, applied to all four main topics of reasons, strategies, outcomes, and coping, basically following the “propose research hypotheses - collect quantitative data - statistical testing” process.

Quantitative research mainly collects research data through questionnaire surveys and experiments, with coping research mainly collecting data through experiments. Questionnaire surveys are most widely used due to their ability to obtain relatively large-scale sample data, with survey subjects ranging from hundreds to thousands. Survey object selection and scales used are related to health information themes under avoidance contexts: avoidance research under generalized health themes often uses scales that do not involve specific themes, highlighting people’s survey intentions, tendencies, methods, motivations, and influencing factors, with college students as the main survey objects; avoidance research under specific themes designs scales that reflect the themes, selecting survey objects based on theme relevance. In addition to designing scales to collect data according to research needs, some scholars directly use survey data released by authoritative institutions (such as the U.S. National Cancer Institute [65, 75]). Experimental methods in health information avoidance quantitative research mainly guide subjects to fill out scales (mainly stable individual difference factors) and participate in specific experimental tasks (such as understanding caffeine intake risks [70], viewing photos of their own skin damage under ultraviolet light [43], virtual disease risk assessment [52]) to obtain objective factual data. During experiments, researchers systematically control and vary conditions (such as coffee consumption and enhanced self-affirmation [70], informing whether diseases are curable [71]), observing cognitive and emotional states and information behavior or intention choices of subjects with different attributes under different conditions, or differences of subjects with the same attributes under different conditions. The number of subjects included in existing health information avoidance experimental research ranges from a few to several hundred.

Quantitative data analysis mainly uses traditional statistical analysis methods. In addition to descriptive statistics, scholars commonly use Pearson correlation analysis [58] to test whether variables are associated with health information avoidance intentions and choices, and use F-tests [47] and ANOVA [12] to test the significance of differences in avoidance intentions among subjects with differ-

ent attributes. Regression analyses such as hierarchical regression [5], multiple logistic regression [76], and ordinal regression [77] are often used to determine correlations between single or multiple independent variables and health information avoidance intentions, measuring the predictive power of related motivations and influencing factors on health information avoidance behavior. Only individual studies have used structural equation modeling [66].

5.2 Qualitative Research Methods

Qualitative research is mainly concentrated in avoidance reasons and avoidance strategy studies, with research content focusing on disease information avoidance, including specific themes such as cancer, diabetes, and genetics, as well as generalized themes. Interview, observation, and diary methods are the main data collection methods for current health information avoidance qualitative research. Among them, semi-structured interviews are most widely used, with sample sizes ranging from fewer than 10 [42] to dozens. Respondents in qualitative studies on specific disease information avoidance are mainly patients, while respondents in generalized theme information avoidance studies are mainly college students. Interview methods are mainly face-to-face, generally using individual interviews, sometimes mixed with individual and group interviews [63]. Interview questions mainly consist of respondents' basic information, avoidance motivations, influencing factors, and behavioral strategies, encouraging research subjects to recall or record important avoidance experiences and report their thoughts, feelings, and behaviors. To obtain explanatory mechanisms and behavioral strategies that would only appear in large samples through small samples, some researchers combine observation methods [78], diary methods [42], and critical incident methods [79] with interview methods.

Content analysis, thematic analysis, and grounded theory are the main qualitative data analysis methods used in current health information avoidance research. Content analysis often sets the analysis scope within existing theoretical frameworks (such as uncertainty management theory) or classification systems proposed by researchers through sampling data, codes empirical data according to established frameworks or classification systems, then conducts descriptive statistical analysis and reports and explains health information avoidance motivations, influencing factors, and avoidance strategies [80]. Thematic analysis follows a “whole-part-whole-part-whole” spiral analysis process, seeking, reflecting on, and defining common themes from empirical data, and using extracted common themes to explain the causes of health information avoidance [81]. Grounded theory is a bottom-up inductive analysis method aimed at theory discovery, extracting, testing, and developing health information avoidance-related concepts, categories, and inter-category relationships from raw data through continuous comparative analysis and programmed coding, ultimately forming a health information avoidance influencing factor theory [63].

6 Discussion and Outlook

This paper 梳理 es the progress of health information avoidance behavior research topics and their methods, specifically covering theoretical foundations, research objects, information types, data collection and analysis methods involved in each study.

6.1 Theoretical Foundations

Health information avoidance behavior is a very complex social phenomenon involving multiple disciplines such as psychology, behavioral science, communication, library and information science, sociology, management, economics, medicine, and public health. Applying a single theory is often difficult to explain [10]. Current health information avoidance research mainly revolves around psychological theories such as cognitive dissonance, emotion theory, stress coping, uncertainty management, self-efficacy, self-affirmation, and perception, with a few studies also involving economic risk management theory and sociological impression management theory. However, these studies are often based on single theories, focusing on repeated testing of relationships between factors such as cognitive consistency, emotion regulation, behavioral invariance or limited change, self-efficacy, perceived threat, coping resources, threat control perception, and disease nature and avoidance intentions/tendencies and coping effects.

Future research should, in addition to strengthening the application of existing disciplinary theories such as verifying more psychological defense strategies like self-handicapping in health information avoidance behavior [64]: Expand the disciplinary scope of health information avoidance behavior research theories, such as introducing relevant theories from information science, neurocognitive science, education, and public health management to develop new research variables and help people understand and construct meaning for specific health information avoidance phenomena. Strengthen integrated utilization of related theories, especially theoretical connections and integration of similar concepts across different disciplines, which not only helps improve the theoretical explanatory power of research findings but also helps broaden existing theoretical frameworks and discover new theories.

6.2 Research Topics

Looking at existing research, compared with health information seeking and adoption behaviors, health information avoidance research, although attracting scholars' attention, is still in its infancy, with significantly fewer research findings, mainly concentrated on avoidance motivations and influencing factors, 致力于 explaining the reasons and formation mechanisms of health information avoidance behavior. Research on behavioral strategies, avoidance outcomes, and coping is seriously lacking. Avoidance reasons research generally focuses on acquisition avoidance relative to information seeking, mainly revolving around whether to initiate information seeking, rarely involving the information seek-

ing process and cognitive and utilization stages after information acquisition, while the latter ultimately determines whether information value can be realized. There is a lack of connection between behavioral strategies, avoidance outcomes, and coping; research focuses on verification of single influencing factors, which is not conducive to the development of health information behavior theory.

In addition, general information behavior models have long revealed that information behavior has stage and process characteristics [82-83], but current health information avoidance behavior reasons and coping research does not distinguish the stages of avoidance behavior occurrence, making it difficult to accurately provide reference for health information avoidance behavior intervention.

In this regard, future in-depth research can be conducted around the following aspects: Deepen avoidance reasons research. Study the relationships and mechanisms among different motivations and influencing factors; extend avoidance reasons exploration from focusing on acquisition avoidance to other stages of the full lifecycle of health information behavior, such as health information need avoidance, health information absorption avoidance, and health information utilization avoidance. Strengthen research on behavioral strategies, avoidance outcomes, and behavioral coping. At the behavioral strategy level, break the current sporadic enumeration characteristics and systematically expand from psychological, linguistic, and behavioral aspects to assist in identifying avoidance behavior in health information service practice; avoidance outcome research, in addition to focusing on the impact on the avoidance subject's own health problem solving and health behavior decision-making, can also focus on the impact on others (such as close others) during the avoidance process; behavioral coping research should distinguish implementation subjects, coping strategies, and coping effects; focus on the connections among behavioral strategies, avoidance outcomes, behavioral coping, and avoidance reasons.

Construct health information avoidance behavior theoretical models. Based on the definition and characteristics of health information avoidance, drawing on existing information behavior theories and using interdisciplinary theories from information science, psychology, education, communication, and other related fields, reasonably describe universal or specific user objects and usage environment avoidance types, avoidance processes, influencing factors, avoidance outcomes, and coping strategies from a unified abstract perspective, revealing users' avoidance behavior patterns, essential characteristics, and relationships among various elements in different health information environments. Focus on avoidance behavior processes. Conduct avoidance research oriented toward the entire health information behavior process, summarize and abstract the dynamics of health information avoidance, explore the stage sequences and all process links of avoidance behavior occurrence, distinguish the degree of behavioral agency (conscious vs. unconscious behavior, active vs. passive behavior, and occasional behavior, etc.), classify avoidance behavior types at different information behavior stages, and summarize large-scale behavioral characteristics and patterns of different contexts and behavior subjects.

6.3 Avoidance Contexts

Information behavior theory has long pointed out and proven that people's information behavior is influenced by the context they are in, and different contexts may trigger different information behaviors and lead to different information behavior outcomes [84]. Compared with domestic health information avoidance research that mainly revolves around contextual persons, foreign health information avoidance behavior research considers relatively diverse contexts, but mainly focuses on information and contextual person elements in research design, with the former mainly concentrated on major diseases and genetic diseases, and the latter mainly concentrated on basic demographic attributes such as age and gender, lacking consideration of time and antecedent states, which may be the reason for inconsistent conclusions in some influencing factor studies.

As a type of health information behavior, health information avoidance objectively exists in people's daily healthy lives, having rationality while often bringing adverse effects. Sufficient research on its behavioral characteristics and patterns not only helps expand and enrich information behavior and health information behavior research frameworks but also helps guide people to rationally treat and intervene in health information avoidance, preventing adverse effects caused by avoidance behavior. Looking at foreign related research, health information avoidance is increasingly attracting scholars' attention and has achieved certain results, with relevant research conclusions and designs providing important reference for domestic scholars to conduct health information avoidance behavior research. However, overall, health information avoidance research is still in its infancy, with health information avoidance behavior theoretical models, interaction mechanisms among different avoidance motivations and influencing factors, avoidance strategies, avoidance outcomes, and avoidance coping constituting key future research topics.

Future research should: Consider different contextual elements comprehensively, which can not only improve the consistency and practicality of research conclusions but also help directly apply conclusions to guide health information avoidance behavior intervention in specific contexts. Expand the scope of information themes, focusing on health information themes closely related to people's daily health maintenance and promotion, such as chronic diseases, common diseases, medication, diet, and exercise. Broaden health information avoidance research contexts with other component elements as the main line, such as physical environment elements guiding medical places, daily living environments, learning places, and workplaces; task elements guiding curiosity satisfaction, knowledge growth, disease prevention, and disease treatment; contextual person elements guiding closely related persons of health information beneficiaries or related persons, such as surrogate seekers, family members, friends, and medical service providers.

6.4 Research Methods

Overall, current health information avoidance behavior research is dominated by empirical research. Questionnaire surveys are widely used due to advantages such as not being limited by number, uniform format facilitating computer processing and analysis, avoiding surveyors' unwillingness to express true intentions due to privacy protection, and operational convenience. However, existing questionnaire surveys have the following shortcomings: lack of reliability and validity analysis, reducing research credibility; single sample type, with college student groups constituting the main survey objects for generalized health theme avoidance research, affecting conclusion generalizability; some studies use secondary survey data, and due to different original data collection goals, insufficient data support leads to relatively simple analysis and lack of sufficient explanatory power. In addition, questionnaire design lacks longitudinal consideration, making it difficult to collect longitudinal data, while rational methods to explore the essential laws of people's health information avoidance phenomena require long-term longitudinal tracking and observation.

Future research suggestions: Diversify data acquisition, combining questionnaire surveys with interviews, diary methods, observation methods, and other data collection methods; experimental methods can introduce emerging paradigms such as eye-tracking, EEG, and emotion experiments to collect real data; use information technology means to break time and space limitations and achieve non-intrusive longitudinal data collection. In terms of data analysis model construction, in addition to regression analysis, introduce analysis models such as structural equation modeling and neural networks to deeply reveal complex associations and action paths among behavioral elements. Given the complexity of health information avoidance phenomena and the fact that related research is in its infancy, the theoretical exploratory advantages of qualitative research methods need to continue to be leveraged, but the scientificity and standardization of the research process need to be controlled, such as using theoretical sampling rather than convenience sampling to select research subjects, conducting data analysis and analysis concurrently, and avoiding researchers' own views from affecting research subjects or data interpretation, to improve research reliability and validity.

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A Review of Foreign Studies on Health Information Avoidance Behavior

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Abstract: [Purpose/Significance] This paper reviews the current status and trends of foreign research on health information avoidance behavior to provide reference for related research in China. [Method/Process] The boundaries and characteristics of health information avoidance behavior are first defined. Relevant literature is then retrieved, traced, and screened as research data, followed by detailed analysis of research topics, conclusions, and methods. Finally, limitations and future directions are discussed. [Result/Conclusion] Avoidance motivation and influencing factors are current research hotspots, though an authoritative theoretical model has yet to be established. The mechanisms of influencing factors, avoidance processes, strategies, outcomes, and coping responses represent future topics with practical application value. Expanding research contexts and incorporating modern data collection and analysis methods may become innovation breakthroughs.

Keywords: health information behavior; health information avoidance; influencing factors; avoidance strategy; avoidance consequence; avoidance response

Note: Figure translations are in progress. See original paper for figures.

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