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Joshua B. Barbour, Lance S. Rintamaki, Jason A. Ramsey, and Dale E. Brashers

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Author Note

Joshua B. Barbour, Department of Communication, Texas A&M University; Lance S. Rintamaki, Departments of Communication and Health Behavior, the State University of New York, University at Buffalo; Jason A. Ramsey, Department of Communication Studies, Indiana University Southeast; Dale E. Brashers, Department of Communication, University of Illinois at Urbana-Champaign.

The authors dedicate this manuscript to Dale E. Brashers who passed away in July 2010. We owe him a debt we cannot express or repay. He was our teacher, our colleague, and our friend. This article, like most of our scholarly pursuits, would not have been possible without him, and he still inspires us in ways that transcend academic life. Thank you Dale.

Address correspondence to Joshua B. Barbour, Department of Communication, Texas A&M University, 4234 TAMU, College Station, TX 77843-4234, USA. E-mail: barbour@tamu.edu

Abstract

This study investigates why and how individuals avoid health information to support the development of models of uncertainty and information management and offer insights for those dealing with the information and uncertainty inherent to health and illness. Participants from student ($N = 507$) and community ($N = 418$) samples reported that they avoided health information to (a) maintain hope or deniability, (b) resist overexposure, (c) accept limits of action, (d) manage flawed information, (e) maintain boundaries, and (f) continue with life/activities. They also reported strategies for avoiding information, including removing or ignoring stimuli (e.g., avoiding people who might provide health advice) and controlling conversations (e.g., withholding information, changing the subject). Results suggest a link between previous experience with serious illness and health information avoidance. Building on uncertainty management theory, this study demonstrated that health information avoidance is situational, relatively common, not necessarily unhealthy, and may be used to accomplish multiple communication goals.

Key words: health information avoidance, uncertainty management theory, information behavior

Avoiding Health Information

Health information management is a core concept in a growing body of communication research (e.g., Brashers, Goldsmith, & Hsieh, 2002; Hogan & Brashers, 2009; Nelson et al., 2004). Uncertainty—a concept related to how we manage information—has also long been of interest to communication researchers. (Berger, 2005; Bradac, 2001; Case, Andrews, Johnson, & Allard, 2005; Kramer, 2004). The combined study of these phenomena is rich with possibilities for understanding how people communicate when facing questions about health and illness. Understanding health information avoidance as part of health information management is particularly important because it can affect many areas of health communication (e.g., health campaigns, provider-patient communication, social support), and has potential ramifications for well-being (e.g., avoiding information in the presence of symptoms).

This paper contributes to the study of information and uncertainty in health contexts by exploring *information avoidance* as a communicative response to uncertainty. We first examine current research on information and uncertainty, and explicate how information avoidance and uncertainty management may be related. We report two studies of health information avoidance, exploring reasons and methods for health information avoidance. We conclude with implications for theorists and practitioners, building on uncertainty management theory (UMT, Brashers, 2001, 2007; Hogan & Brashers, 2009). We argue that information avoidance is a communicative response to uncertainty that can serve as a means to increase, decrease, or maintain uncertainty; that it is influenced by situational factors and individual characteristics; that it allows for the management of multiple goals in communication; that it is not necessarily unhealthy; and that it should be accounted for in models of information behavior.

Information and Uncertainty Management

A central principle of UMT is that the "relationship between information and uncertainty is not straightforward" (Hogan & Brashers, 2009, p. 48). Following Brashers et al. (2002), we defined *health information* as stimuli from a person's environment that contribute to his or her knowledge or beliefs related in particular to their health or the health of others (cf., p. 259), and although our focus is health information avoidance, we see it as part of an array of information behaviors related to uncertainty management. Hogan and Brashers (2009) argued that a broader conception of health information behavior is needed because according to UMT, "interacting with information can reduce, maintain, or increase uncertainty" (p. 48), and, they argued, information behavior is complex and varied. For example, people can seek information about their health by communicating with friends, family, and professionals in face-to-face or mediated contexts. Information may reduce uncertainty through specifying a diagnosis, allowing for the development of a treatment plan, or providing clarity about prognosis. Information may also increase or transform uncertainty by raising new concerns or complicating a person's understanding of the illness experience. Individuals may want to maintain or increase their uncertainty, and may do so by avoiding information or seeking incongruent information.

UMT guided our analysis of health information avoidance. Studying information avoidance is difficult according to Case et al. (2005) in part because the desire to know is an assumption deeply embedded in Western culture. As a preliminary step, we checked our basic assumption per UMT that people would report health information avoidance.

Existing research sometimes oversimplifies information avoidance. Case et al. (2005) also found that most models of information management limit avoidance to situations where information may be unpleasant, causing "mental discomfort or dissonance" (p. 354, also see Bawden & Robinson, 2009). Brashers et al. (2000) argued that individuals may avoid

information when appraising uncertainty as an opportunity that evokes a sense of hope or when feeling overwhelmed. In the case of chronic uncertainty, they may go through cycles of research and rest. UMT suggests that individuals may avoid information not just out of dissonance and discomfort, but also when they want or need to maintain or increase uncertainty. To motivate additional research and theory in this area, to elaborate UMT, and to identify additional reasons people avoid health information (including reasons that may not be an obvious result of uncertainty management), we investigated why and how people avoid health information guided by these research questions:

RQ1: What reasons do individuals give for avoiding information about a health issue or concern?

RQ2: What are the relative frequencies of reasons for avoiding health information?

RQ3: How do individuals avoid health information about a health issue or concern?

RQ4: What are the relative frequencies of methods for avoiding health information?

According to UMT, individual factors like past experience with illness may also influence uncertainty and information management. Although experience with a previous illness may increase the desire for information, research suggests that people who have had a serious illness may be more likely to avoid health information (e.g., people who have a second heart attack tend to delay seeking care longer than people who have a first heart attack, Alonzo & Reynolds, 1998). UMT suggests that experience with serious illness may encourage individuals to appraise uncertainty as an opportunity to maintain hope (Brashers et al., 1999). We hypothesized that:

H1: Individuals with previous experience with serious illness will be more likely to report avoiding health information.

The following sections describe a pair of studies designed to check the assumption that people do

purposely avoid information and to investigate these research questions and hypothesis.

Method

Participants

As part of a larger study, 507 undergraduate students were recruited from communication courses at a large Midwestern university. Over half of this sample was female ($n = 320$, 63.6%), with participants self-identifying as White/European ($n = 350$, 69.7%), Black/African American ($n = 55$, 11%), Latino/Latina ($n = 26$, 5.2%), Asian American ($n = 44$, 8.8%), or other ($n = 27$, 5.4%). The mean age of participants was 19.92 years ($SD = 1.5$ years, range 18 to 29 years).

A second sample (sample 2) was recruited through Craigslist.com in multiple cities (e.g., Atlanta, GA; Chicago, IL; Columbus, OH; Gulfport, MS; Los Angeles, CA; Miami, FL; New Orleans, LA; New York, NY; Phoenix, AZ; Seattle, WA) and the faculty and staff listserv at the same university. The majority of sample 2 was female ($n = 335$, 80.1%). The sample included responses from 28 states, and participants self-identified as White/European ($n = 333$, 79.7%), Black/African American ($n = 21$, 5%), Latino/Latina ($n = 21$, 5%), Asian American ($n = 25$, 6.0%), or other ($n = 18$, 4.2%). Most worked fulltime ($n = 258$, 61.7%), and 46 (11%) were students. Most had a college degree (bachelor's, $n = 131$, 31.3%; master's, $n = 90$, 21.5%; and doctorate, $n = 41$, 9.8%). The mean age was 39.14 years ($SD = 12.61$, range 19 to 79).

Questionnaire

The questionnaire for samples 1 (student sample) and 2 (community sample) elicited a history of the participants' experience with illness, perceptions of health issues, and demographics. The questionnaire posed two scenarios: "Sometimes people would rather not hear about a health issue or concern (for example, they would rather not hear people talk about it).

Have you ever wanted to not hear about a health issue or concern? Please explain" and "Have you ever done anything to try to avoid getting information about a health topic or can you imagine a time when you would want to avoid getting information about a health issue? Please explain." Based on our analysis of the data in the first sample, we modified this questionnaire slightly (e.g., we left out the “*or can you imagine*” prompt) in the second sample.¹

Data Analysis

The data generated in sample 1 were analyzed using latent content analysis and constant comparative techniques (Strauss & Corbin, 1990). We built, reviewed, and revised analytical categories through consensus for why and how people avoid health information. Next, we used the categories created in this iterative process to produce a coding scheme representing the broad categories of reasons and methods for avoiding (see the appendix).

To verify the robustness of the categories, two coders applied the scheme to a random sample 30% the first data set, resolving disagreements through consensus. The entire response was the unit of analysis. For responses containing multiple reasons, coders were instructed not attribute a single statement to multiple categories. We selected percent agreement and Cohen's κ as indicators of reliability (Lombard, Snyder-Duch, & Bracken, 2002; Lombard, Snyder-Duch, & Bracken, 2004).² Landis and Koch (1977) argued that Cohen's κ between 0.40 and 0.59 indicates moderate inter-rater reliability, 0.60 to 0.79 substantial, and 0.80 or greater indicates outstanding inter-rater reliability. Once the coders achieved satisfactory reliability, they coded the remaining data. A different pair of coders used the scheme (revised with feedback generated during coding sample 1) to categorize the sample 2 data. Independent coding of two samples allowed for the development of the categories in the student-based sample and verification of the applicability and robustness of the categories in a second, community-based sample. Our coders achieved

substantial to outstanding reliability (see Table 1).

Results

Avoiding Health Information

Individuals did report avoiding information. In sample 1 ($N = 507$), 289 (57.0%) responded yes to question 1 that they had not wanted to hear about a health issue and 189 (37.2%) responded yes to question 2 that they had tried to avoid or could imagine wanting to avoid health information. In sample 2 ($N = 418$), 198 (47.4%) responded yes, that they had not wanted to hear about a health issue and 130 (31.1%) responded yes, they had tried to avoid health information.

Reasons to Avoid Health Information – Research Questions 1 and 2

Reasons reported for avoiding health information included to (a) maintain hope or deniability, (b) resist overexposure, (c) accept limits of action, (d) manage flawed information, (e) maintain boundaries, and (f) continue with life/activities. Each category is described below, followed by quantitative assessment of the prevalence of these motivations among participants.

Maintain hope or deniability. Participants described a desire to forestall closure about health issues. For instance, after first describing a desire not to hear about sexually transmitted infections, 42-year-old Roseanne³ explained, “I prefer to pretend they don't exist.” Denying a potential health problem helped some maintain hope that undesirable outcomes would not come to pass. Joanna, a 43-year-old, explained, “like many people, I have a tendency to avoid information about my potential health problems in the mistaken belief that if I ignore it, it'll go away.” In the absence of knowledge, people could ignore or deny threatening information. Information avoidance followed medical tests. Jason, a 20-year-old, illustrated this:

Once I was afraid that I might have gotten an STD...so when I went to [the campus

health center], I asked to get tested. They asked if I wanted information and I said no. I didn't want to know anything until after I found out if I had it. I didn't want the information because I did not want to know what the worst possible scenarios were.

Jason chose to limit the information he received, avoiding potentially distressing news. Although he understood that he could have a potentially threatening condition, he did not want information about the consequences until he was certain he needed to address the problem.

Uncertainty also can arise in dealing with the illness of others. Participants described serious illnesses of family that motivated avoiding information (e.g., a husband with pancreatic cancer, a close friend with multiple sclerosis, a roommate with severe depression). Charles, a 26-year-old, explained his reasoning behind avoidance, stating, "I don't like to hear about their problems as it makes me think about their mortality." Individuals may avoid information when their own health or the health of others is in question, but they want to maintain hope.

Resist overexposure. Participants also avoided information when they felt tired or bored of a particular health issue. For example, participants described weariness of information in health campaigns and advertising including topics like obesity, pregnancy, smoking, illegal drugs, diabetes, sexually-transmitted infections, and impotence. Participants noted that previous experience with an illness might encourage them to avoid more information on the topic. Kate, 21, explained, "I had mono my freshman year. My mom drove me crazy trying to give me info about it every time I talked to her. I got to the point where I never wanted to hear about it again." In addition to personal experiences with illness, participants described feeling overexposed to health topics as a result of coping with another's illness. Ramona, 46, recounted, "I know this person has health issues as well as their family members, but don't need to be constantly reminded of it." Overexposure may encourage information avoidance and can come from direct

or vicarious experiences, news stories, and health campaigns.

Accept limits of action. Participants mentioned avoiding when there was no action they could or should take. In particular, participants avoided health information if they believed it was not applicable (i.e., would not allow them to take action) or if they could not prevent the illness. They also sought to avoid information if time constraints limited or prevented their ability to respond, if they felt they had responded sufficiently already, or if there was no action for them to take. For example, Clair, 21, argued that certain information may not always be relevant:

As a young woman, I don't like to think/talk about menopause when people (like my Mom) are discussing it. I don't want to talk about it because I feel like it doesn't affect me right now. I know I will eventually deal with it, but choose to ignore it now.

Seeing an issue as unpreventable may also motivate people to avoid information. Sean, 33-years-old, recounted, "When I was very overweight I did not want to hear others talking about how bad being fat was for your health...I felt helpless to lose the weight, so I just did not want to think about it." Max, 19, noted, "I didn't want to hear about random issues that you have no control over. I'd rather not know about them so I don't have to unnecessarily worry about them."

Manage flawed information. Participants discussed features of messages and sources as reasons for avoidance. Participants explained avoiding information from sources of questionable expertise or trustworthiness and from sources that provided imprecise, unclear, or contradictory health information. For instance, 57-year Rosita explained avoiding health information from sources lacking credibility, stating, "I think a lot of misinformation circulates due to misunderstandings [and] personal bias." Renee, 20, shared a similar sentiment:

I don't like hearing people talk about health concerns when they have had no experience dealing with it. For example, I don't like it when people talk about bulimia as if they

know so much about it, because my sister has been bulimic for 8 years.

Participants mentioned avoiding ostensibly credible information from sources perceived to have an agenda. Dolores, 31, was mistrustful of, and so avoided information from the pharmaceutical industry: “I feel I cannot be certain of the objectivity of the information they present or where their interest truly lies,” and Mary Anne, 47, wrote, “I think that commercials and advertisements for medications make people think they have illnesses they don't have...”

Difficulty differentiating credible and noncredible information may also encourage avoidance. Jeff, 20, recalled, “I had a severe headache and people all gave me different explanations for why and how to treat it. It confused me even more.” The format of information was also an issue. Participants reported avoiding information that was inconvenient, too technical, or required too much effort. Veronica, 34, explained, “I tend to disregard medical advertising...usually too much small print, often too heavy with medical and test jargon.”

Maintain boundaries. Participants noted that information may be more or less appropriate for certain situations and identified contexts where information might be taboo. Georgina, a 43-year-old, wrote, “I believe that I'm open to talking and hearing about someone else's health problems; however, I'd rather not hear the intimate details about a relative stranger's latest OB/GYN visit.” Such information violated their sense privacy or the privacy of others. For instance, 55-year-old Samantha recounted, “I had a cousin who was having gynecological problems because her mother took DES during pregnancy. My grandmother was talking to [her] mother ... in front of us teenage girls. It was more information than I needed.” For some, an occupation or relationship meant unwelcome contact with such information on a regular basis. Meg, a pharmacy technician, bemoaned, “People are always telling me gross things!” Boundary management was also salient for participants with stigmatized health concerns who reported

avoiding health information about such issues, even from care providers, over concern for how others might view them. Rex, 23, avoided “counseling [for] depression because of the stigma associated with it – that people who are depressed cannot take control of their lives.”

Continue with life/activities. Participants also mentioned avoiding information that might interfere with habitual or enjoyable activities. Information avoidance helped maintain habits participants knew to be unhealthy. Adrianna, a 26-year-old, illustrated this: “I don't like to hear about skin cancer, because I like to be tan in the summer – even though I know it's bad for me.” Adrianna's response reflects her own dissonance about avoiding this information even though she knew that tanning may not be healthy. Yukiko, a 20-year-old, reported:

There was one time that I avoided seeking a professional opinion concerning health.

While in gymnastics I suffered a lot of pain in my left knee, but I didn't tell anybody about it and I didn't see a doctor for a while because I didn't want to lose any time during the competition season and I was afraid the doctor would tell me to take a leave ...

Participants described wanting to avoid information about healthy behavior. Barbara, a 59-year-old, explained, “[I] have chosen not to follow good advice, such as hearing about how we should exercise more. I already know this and feel guilty about it.” Juan, a 19-year-old wrote “I broke my sternum and didn't get checked out for a while because I didn't want to not run track.”

Research question 3 asked about the relative frequency of these reasons in these data. Table 1 summarizes the frequency with which each reason appeared. Across samples, maintaining deniability was the most frequently identified reason, followed by managing flawed information and accepting limits of action. Participants also frequently reported multiple reasons.

How People Avoid Health Information – Research Questions 3 and 4

Participants described specific methods they used to avoid information. Examples in this

section highlight these means of avoidance. Each category is explicated below, followed by quantitative assessment of the methods that participants described.

Removing or ignoring stimuli. Participants in the study revealed that they would avoid stimuli that might reveal distressing information. *Avoiding or selectively attending to media* coverage of health and illness (e.g., television, magazines) was one goal. For example, 20-year-old Ryan discussed multiple sources and strategies: “If it is on T.V., I simply switch the channel. If the info is anything I could read, I simply do not read it.” Dorothy, a 19-year-old, wrote, “I wouldn’t listen to the T.V., because my aunt had cancer and she was dying. It made me emotional.” Claire, a 55-year-old woman, noted, “When I feel that medical information is being presented to sell a procedure or product, I tune out or off.”

Another method for regulating information flow was *avoiding people who might provide health advice*. David, a 32-year-old who reported struggling with weight, noted that he avoided people who give him recommendations about weight control. *Avoiding medical and health care interactions* helped participants avoid information. Martha, a 21-year-old, did not engage medical visits in which testing was likely:

I am hypoglycemic and I have been since I was 4. I don’t consider this an illness...I was supposed to be tested for diabetes when I was 19 because my blood sugar does not stay normal. I don’t want to and don’t plan to until I am forced to do so.

Participants noted that they avoided testing even when they had a family history of disease (e.g., high cholesterol); therefore, *avoiding medical procedures* allowed them to evade getting medical information. Gladys, a 52-year old, noted that, “I sometimes avoid getting a regular physical or going to the doctor when I have a medical issue because I am afraid of what I might learn about my medical condition.” Some described long delays in seeking care, even with conditions that

might be life-threatening. Jillian, a 26-year-old, noted that

[I] refused to get screened for HIV (even though I had an extremely low chance of having it and it was the responsible thing to do) because I was afraid of what the results would say. Finally got blood tested for insurance purposes and HIV screen was a standard part of that ... so two years after I knew I should get it done I finally had it done, and I was fine, but still hadn't wanted to go through the process.

Even in the presence of symptoms, participants reported avoiding health care. Julio, a 30-year-old who had experienced serious illness said, “Yes, I have stalled on seeking medical advice in hopes that issues might resolve themselves. I waited several days before acknowledging a problem that was causing me some concern.” Even in cases that might be considered life-threatening participants preferred uncertainty to a diagnosis. Constance, a 43-year-old, said, “[I] delayed making an appointment regarding a spot on my abdomen for fear it would be 'something bad' like skin cancer . . . turns out it was eczema.”

Controlling the conversation. A second category of information-avoiding behavior included strategic maneuvering in conversations. These behaviors included *controlling the flow of the conversation*, such as when Ruby, 21, would “change the subject or make a joke.” Others noted *interrupting unsolicited and unwanted advice* with indirect strategies. Beth, 25, noted:

[When I smoked], I'd just interrupt people from offering advice by finishing their sentences for them thus showing that I was educated about my habit. It annoyed most people but then I told them that's how I feel when they continue to approach me with advice that I've already given my opinion to them on.

Participants also reported direct methods of *regulating the conversation*. Muriel, a 33-year-old woman whose sister had cancer, wrote, “I did not want to get any more information on carrying

the cancer gene. I told my doctor to stop talking about it to me.” Kimberly, a 30-year-old, wrote of her father (a physician) who gave her advice about travel precautions (e.g., prophylaxis for possible illnesses) before she visited another country. She wrote that his advice created anxiety, and added, “I interrupted my dad on the phone and told him I would look up the information myself and would be fine. I did look up some information, but then I did not go much further.”

Participants also mentioned *withholding information* from health care providers and others to keep them from providing information or exploring possible illness. Cara, 36, wrote that she tried to hide the fact that she smoked from friends and family and 34-year-old Delta noted, “[I] avoid getting information about certain health topics by lying about certain pains that I have. Or sometime I try to bypass it by not bringing up certain issues that the doctor could try to slide in information.” Regulating information flow was also accomplished by *refusing results of tests or procedures*. Sue, 36, wrote, “I avoid talking about my weight, even to the point that when I go to the doctor and they weigh me, I stand on the scale backwards so that I can't see it.”

Building on insights from the first sample, we asked specifically for methods of avoiding from sample 2. Approximately a third of participants in the community sample (32%) responded to this question. Most participants (74%) who addressed this issue mentioned removing stimuli and mentioned controlling conversations less frequently (19%).

Avoiding Health Information and Illness Experience—Hypothesis 1

Hypothesis 1, that individuals with previous experience with serious illness will be more likely to report avoiding health information, received partial support. We compared whether or not individuals reported that they had avoided health information at all and whether or not they reported previous experience with serious illness. Sample 1 data produced no association between having had a serious illness and not wanting to hear about a health issue or concern

(Q1), $\chi^2(1) = 0.21$, $p > .05$ or wanting to avoid health information (Q2), $\chi^2(1) = 0.84$, $p > .05$. In sample 2, experience with serious illness was associated with not wanting to hear about a health issue or concern (Q1), $\chi^2(1) = 14.21$, $p < .01$. Having tried to avoid health information also was associated with having had a serious illness (Q2), $\chi^2(1) = 9.52$, $p < .01$.

Discussion

The results of our study reinforce that people do avoid health information. Although this point may seem minor, the bias toward information seeking in studies of information and uncertainty behavior suggests the need to confirm that information avoidance can and does occur. Consistent with UMT, factors that included increasing, maintaining, and reducing uncertainty motivated health information avoidance.

Information Avoidance as Situational

The results highlight the situational character of uncertainty and information management. Past research has suggested that predispositions toward information and uncertainty exist (e.g., monitoring and blunting, see Miller, Fang, Diefenbach, & Bales, 2001), but information needs can vary across situations. Lambert and colleagues (2009) noted that people living with cancer shifted preferences for information over time and, "Although traditionally these information behaviors [disinterest and avoiding] have been subsumed under the general label of 'blunting,' ... such a conceptualization might be inappropriate" (p. 34). The situational complexity of information management is apparent in our data. For example, individuals may have seen information as irrelevant because it was flawed in some way (a characteristic of the information) but also because it did not allow them to take any action (a characteristics of the information and the context). Along with characterizing individuals as seekers and avoiders, we should understand the situational and communicative factors that

encourage functional or dysfunctional information management behavior.

Health information avoiding was more common for those who had previously experienced an illness in the community sample. Those in sample 2 were older and reported more experience confronting serious illness. Our data underscore how previous experience with illness may shape and be shaped by uncertainty management processes. Future research should investigate how the nature of the illness (e.g., treatable versus intractable, chronic versus acute) and the illness experience (e.g., effective versus ineffective contact with health care professionals, quality of previous information behavior) influences uncertainty and information management.

The situational nature of information avoidance is related to the multiple goals that can be relevant to specific contexts or interactions (e.g., Caughlin et al., 2008; Clark & Delia, 1979; Goldsmith, 2004). For instance, people may want to maintain hope or avoid feeling overwhelmed by information while managing their health care (Lambert, et al., 2009). People also may want to maintain positive relationships with their health care providers, or present an image of a person coping well with the illness. They may have responsibilities that make addressing their information needs difficult (e.g., needing to care for a sick loved one while being bored or overwhelmed by health information, or having a job involving health information). Participants reported avoiding information because they already felt they had enough information. People may appraise a situation as certain and, as a result, require no more information. Of course, not all information avoidance documented here was motivated solely by uncertainty. Participants reported a desire to maintain boundaries suggesting the importance of the appropriate moment and place for information—especially regarding stigmatized illnesses.

Methods of Information Avoidance

UMT contends that many forms of uncertainty and information management are communicative. Participants mentioned avoiding test results and in general situations in which information might be presented and avoiding or selectively attending to channels or media likely to present health information. Others reported various means of avoiding people who might provide them information, including health care professionals, family members, and friends. Avoiding information involved manipulating conversational features (e.g., changing the subject, joking, refusing test results) and engaging in deception (e.g., several individuals told their doctor or friends that they did not smoke; one man told a nurse that he was a virgin). The results underscore the distinction between avoiding information and not seeking information. A person may actively avoid information, for example, by avoiding information sources or changing the flow of a conversation. Information avoidance is distinct from simply not making an effort to seek information.

Our study also reveals how information avoidance could be made more difficult by specific circumstances. Participants noted that they must sometimes deal with well-meaning individuals in their lives who wanted to provide health information. Their challenge then was how to respond to these unwanted pressures from family and friends who wanted them to seek information. Participants reported interrupting unsolicited advice (which may be the least appreciated form of advice, see Goldsmith, 2004) and not communicating with those who would insist on sharing information.

Health campaign designers in particular should find value in understanding why and how avoidance occurs. Rimal's (2001) analysis of longitudinal data about perceptions of risk and the use of health information suggested that avoidance can occur when people's sense of risk overwhelms their feelings of self-efficacy. Motivations for information avoidance not limited to

a lack of efficacy can include receiving too much information, wanting to maintain hope, and fending off unwanted behavior change.

Outcomes of Information Avoidance

The results also provided examples suggesting that avoiding health information might not always be unhealthy. Examples suggested a clear need for health care (e.g., a woman who had “weird vertigo things,” but did not want tests or medication; a man who broke his sternum, but wanted to continue track competition). However, participants also offered examples of information avoidance that might be healthy. Accepting the limits of action, for example, included situations in which health information avoidance might mitigate the stresses of illness because no recourse is available. People may avoid information to limit anxiety, make problems more manageable, or wait for the right moment to act. Participants mentioned avoiding flawed information and sources (see also research pointing to the relationship between trust in information sources and information seeking, Ramanadhan & Viswanath, 2006), a healthy choice when people can make sound judgments about information.

Social norms encourage information seeking not avoidance (Lapinski & Rimal, 2005), and our data suggest that people act on these norms. Although we did not specifically analyze them for this paper, many participants offered reasons they would not or never avoid information. Babrow and Kline's (2000) argued that a bias toward uncertainty reduction and information seeking in health promotion and mass media suggests that solving health problems requires provision of more or better information, but they posited that such an assumption is unrealistic and potentially counterproductive for research. For example, in the literature addressing risk and communication, researchers have articulated health information seeking as a positive, healthy outcome in and of itself (Kahlor, Dunwoody, Griffin, & Neuwirth, 2006). Such

an operationalization holds that information avoiding is inherently unhealthy, and conflates information avoidance and not seeking information. How individuals deal with health issues, however, is not so simple. Individuals may avoid information to keep their options open, to delay the discovery of negative information, and to maintain hope. They may seek health care, but not want elaborate details about procedures or even their prognosis (Brashers, et al., 2000).

The results are consistent with research on avoidance in other contexts too. For example, although some researchers on topic avoidance in relationships have argued that avoidance is detrimental, Caughlin and Afifi (2004) found that it was not necessarily damaging to relationships. They argued that “topic avoidance can be benign – and even helpful – in some relational circumstances” (p. 26). Afifi and Schrodt (2003) found that, in post-divorce or stepfamilies in which questions about child and parent roles are complex or ambiguous “children ... may simply cope with their uncertainty by avoiding discussions that pertain to changes in family relationships” (p. 528).

Increasing or maintaining uncertainty through avoiding information may be functional. Brashers, Goldsmith, and Hsieh (2002) reoriented Brashers’ (2000) model of uncertainty management developing a “rhetorical model” of uncertainty management (for a discussion of normative or rhetorical models see Goldsmith, 2004). Their reorientation argued that predicting the strategy used is not as important as discovering which information behaviors will be most effective and why, as well as the specific features of the health management process that influence their effectiveness. This study underscores the need for inquiry into why certain strategies for avoiding information are effective and adaptive and why they may not be.

Conclusion

Several issues should be considered when interpreting results from the studies reported

here. To begin, they make use of convenience samples and self reports about behavior. Due to the nature of avoidance, memories of health information avoidance may not always be intense enough to show up in self-report data. Individuals may not be aware of their avoidance behaviors. Recent memories and emotional episodes may be more likely to be reported. An alternative method (e.g., face-to-face interviews or focus groups) would also have allowed us to ask follow up questions. Future research should attempt to document the day-to-day information management behaviors that may be forgotten or overlooked. A by-product of our convenience sample, the second sample is overwhelmingly female suggesting caution in interpreting the results. Also, our coding scheme captures these data well, but because the data were generated through convenience sampling, the usefulness of the analysis is in offering examples of what can happen not in describing what happens in all cases (Jacobs, 1986). Our categories should not be taken as an exhaustive list of all possible motivations for health information avoidance, nor do the quantitative results distinguish the fine grained examples that cluster within our categories. However, the study does offer insights for the growing body of research exploring information avoidance as part of uncertainty and information behavior (Case, et al., 2005; Lambert, et al., 2009), and suggests that models of information behavior need include information avoidance.

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Footnotes

¹In sample 1, question 2, because we asked if participants had ever imagined "a time when you would want to avoid getting information about a health issue?" we had the independent raters code this subset of responses as real versus hypothetical or imagined. For sample 1, question 2, coders determined that 114 of 189 (60%) were real, not hypothetical or imagined examples ($PA = .95$; $\kappa = .89$). As a check of the other response subsets, the coders also coded the other data, but calculating reliability for this variable proved problematic, because the vast majority of responses were coded as real. The imagined and unclear categories were used infrequently if at all by the coders. This pattern is not surprising given that the prompts did not ask for imagined or hypothetical responses. In two subsets (S1, Q1 and S2, Q2), the categories were not used at all by one of the coders, making the calculation of Cohen's κ impossible, so in those cases we report only percent agreement ($PA_{S1Q1} = .88$, $PA_{S2Q2} = .93$). In such cases, Fleis, Levin, and Paik (2003) suggested that the proportion of specific agreement (p_s) may be used as an alternative when a category is likely to be rare thus inflating agreement (p. 600). For sample 1, question 1, the $p_s = 0.93$, and for sample 2, question 2, the $p_s = 0.97$. In summary, for sample 1, question 1 coders identified 263 of 289 (91%, $PA_{S1Q1} = .88$, $p_{sS1Q1} = 0.93$) as real, and for question 2, coders determined that 114 of 189 (60%, $PA_{S1Q2} = .95$; $\kappa_{S1Q2} = .89$) were real. For sample 2, question 1 coders determined that 191 of 198 (97%, $PA_{S2Q1} = .97$, $\kappa_{S2Q1} = .59$) were real, and for question 2, coders determined that 127 of 130 (98%, $PA_{S2Q2} = .93$, $p_{sS2Q2} = 0.97$) were real. We report the values for the reader's reference, and the only inference we draw from these results is that the experiences reported by participants were by and far drawn from their actual not imagined life experiences as is evident in the examples offered throughout the results section.

²Krippendorff (2004) raised doubts about the mathematical properties of Cohen's κ , so we also

calculated the indicators recommended by Krippendorff (i.e., Scott's π and Krippendorff's α). In all cases in these data, the differences between the indicators were negligible. Most were the same to the third decimal place, and no differences were greater than .01. Results for all reliability indicators are available from the first author.

³We used pseudonyms throughout to protect the privacy of our participants.

Table 1

Indicators of Inter-Coder Reliability

	<u>Sample 1</u>		<u>Sample 2</u>		<u>Sample 1</u>		<u>Sample 2</u>	
	<u>% Agreement</u>		<u>% Agreement</u>		<u>Cohen's κ</u>		<u>Cohen's κ</u>	
	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2
Avoiding Reported?	100	100	100	100	1.0	1.0	1.0	1.0
Reasons for Avoiding	93	95	92	96	.78	.79	.72	.79
Methods of Avoiding	98	85	93	86	.87	.69	.69	.72

Table 2

Reasons for Avoiding Information

	<u>Sample 1</u>		<u>Sample 2</u>	
	Q1	Q2	Q1	Q2
	(<i>n</i> = 289)	(<i>n</i> = 186)	(<i>n</i> = 198)	(<i>n</i> = 130)
Maintain Deniability	32% (92)	48% (90)	29% (57)	15% (20)
Resist Overexposure	19% (54)	6% (11)	19% (38)	8% (11)
Accept Limits of Action	20% (58)	17% (31)	19% (37)	8% (11)
Manage Flawed Information	23% (67)	7% (13)	29% (58)	18% (24)
Maintain Boundaries	9% (26)	11% (21)	9% (17)	4% (5)
Continue with Life Activities	7% (19)	6% (11)	7% (13)	2% (3)
Other	3% (10)	3% (6)	2% (3)	5% (6)

Note. Frequencies for each category are given in parenthesis.

Appendix

The full set of coding documents are available from the first author. Coders first determined whether participants said they could or could not remember a time when they did not want to hear about a health issue or concern, question 1, or if they could or could not remember a time when they wanted to avoid information, question 2, (*Avoiding Reported*). Coders then identified within each response all of the reasons for avoiding information with instructions that within each response they had to be able to identify each reason independently. In other words, the same element in a single response could not serve as evidence of more than one category. They then coded the methods for avoiding information mentioned if any (*Reasons and Methods*).

Coding Scheme—General Guidelines

Code the response as a whole. Any element within the response may be coded only once.

Avoiding Reported

Does the participant report that he or she has (or can imagine) not wanting to hear about or wanting to avoid health information? If there is a response in which they have felt like not hearing about or avoiding indicate yes (1) and continue coding. If the response indicates not, (e.g., reads something like, “no,” “never,” or, “avoiding is dangerous”) then indicate no (0).

Situation Real? (sample 1, question 2)

Is the situation mentioned real (i.e., the participant is reporting something that actually happened, 1), imagined (i.e., the participant is reporting something that they could imagine happening hypothetically, 2) or is it unclear whether they have imagined or reported a real experience (3)?

Reasons for Avoiding Health Information

What reasons do the participants provide for not wanting to hear about or avoid

information on a health topic? Indicate if a particular reason matches one and only one of the following categories or if no reason is given (NRG).

Maintain deniability (MD). Participants want to avoid closure, avoid making things real, deny information that would be scary or make them paranoid, avoid information that could affect them, avoid information that could lead to painful procedure, or help others avoid the same (e.g., not make my parents worry).

Resist overexposure (RO). Regarding the receipt of information, participants may report boredom (e.g., “Just being bored with a topic”), having learned enough (e.g., “Having learned enough about a topic to maintain good health”), or having previous experience that they are tired of hearing about (e.g., a family member had an experience with the illness).

Accept limits of action (ALA). Participants framed their desire to avoid information as the result of feeling there was no action they could or should take. Includes if (a) no action available or possible; (b) the illness seems to them unpreventable; (c) they are able to take action, but there is action available; (d) does not apply to them—no need to take action, (e.g., a man reporting not wanting to hear about women’s health issues); (e) time constraints make action impossible; (f) already taken sufficient action; and (g) not motivated or too tired to take action.

Manage flawed information (MFI). Features of messages and the source of the information as potential reasons for avoidance. These include (a) questions about the expertise or trustworthiness of source, (b) unclear information, (c) too much information at once (not concise), (d) it’s the other person’s fault, or (e) morbid information or gross information, unpleasant information, or discomforting information.

Maintain boundaries (MB). Boundaries for the appropriate or effective management of health information. This includes (a) privacy management (e.g., some issues just private,

embarrassing, not wanting others to know), (b) taboo locations (e.g., work, dinner table), (c) situations when it is inappropriate to get or give information.

Continue with life/activities (CLA). Avoiding information that might interfere with habitual or enjoyable activities. Includes (a) desire to maintain bad habits and (b) keep up other activities that might be interfered with (e.g., an injury might prevent them from playing sports).

Other. If other, please explain briefly on data sheet.

Methods of Avoiding

What means do participants mention for avoiding?

Removing or avoiding stimuli. For example, selective exposure (changing the channel, ignoring or walking away from someone), selective attention (only paying attention to selected information, avoiding health campaigns), avoiding situations (not going to the doctor), discounting, or ignoring information.

Controlling the conversation. For example, withholding information (not disclosing), changing the subject, telling a joke, changing information.

Other. If other, please explain briefly on data sheet.

No method mentioned.