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Exploring the impact of power on information consumption decisions

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EXPLORING THE IMPACT OF POWER ON INFORMATION CONSUMPTION DECISIONS

by

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CERTIFICATE OF APPROVAL

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PH.D. THESIS

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ABSTRACT

In general, people prefer information that makes them look and feel good. This is information that is consistent with, or supportive of, their desires, beliefs, and behaviors. Much research has been devoted to examining biases in how we selectively seek some information and avoid other information as well as different factors that can mitigate or intensify these tendencies. The present project explored the impact of feeling powerful—a psychological experience shown to influence cognitions and behavior—on decisions about what information people choose to consume in a health context. Specifically, this was investigated in two different domains of health information consumption—selective exposure (Studies 1 & 2) and information avoidance (Studies 3 & 4). The first two studies investigated if feeling powerful affects selection of, or interest in, information known to be consistent or inconsistent with beliefs and behaviors. It was predicted that power would increase interest in belief-consistent (i.e., non-threatening) information. The final two studies examined how power impacts decisions about whether to receive or avoid an uncertain piece of health information that is potentially threatening. Contrary to selective exposure hypotheses, it was predicted that power would increase interest in this uncertain (i.e., threatening) information.

All four studies revealed null largely effects of power, suggesting that feeling powerful may not influence how people chose to consume potentially threatening health information. A discussion of the potential limitations of these studies and the scope of this conclusion are included.

PUBLIC ABSTRACT

In this day and age, people have virtually unlimited access to information about any topic imaginable, including their health. How do they choose what information to read? Previous research has shown that in general, people prefer to consume information that makes them look and feel good and avoid information that does the opposite. In a health context, they might seek out information that tells them they lead a healthy lifestyle, or that they have low risk for developing cardiovascular disease while avoiding information that suggests otherwise. The current research investigated whether feeling powerful—a psychological experience shown to influence thoughts and behavior—might change this tendency to seek reassuring information and avoid threatening information. This research question was examined in two possible situations. Two studies examined whether people voluntarily chose to read articles they knew to contain threatening information or whether they opted more for the articles containing reassuring information. Two additional studies examined whether people chose to receive personalized information about their risk for a specific disease or opted to remain ignorant of their risk.

Across all four studies, feeling powerful did not influence how participants made their information selections. In other words, participants' decisions about what health information to read—reassuring or threatening—were not impacted by whether they had been put in a high or low power position. A discussion of the potential limitations of these studies and the scope of this conclusion are included.

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CHAPTER 1

EXPLORING THE IMPACT OF POWER ON INFORMATION CONSUMPTION DECISIONS

Every day, people make decisions about what information to consume regarding their health. For example, the home page of an internet news source typically presents dozens of links about a variety of topics including the newest health research or virus outbreak. Which stories are people more likely to click on and read more about? Similarly, searching for specific health threats frequently brings up online risk calculators or information about risk factors. What determines whether a person decides to complete that risk calculator or not? Broadly, I am interested in understanding what information people want to know about their health and what they would prefer to avoid. Although these decisions are surely influenced by a variety of factors, the present project investigates how feeling powerful or powerless might affect decisions about information consumption.

Decades of psychological research have shown that people typically prefer to consume information that confirms their pre-existing views, makes them look and feel good, validates their behavior, and generally, does not threaten the self (for a review, see Smith et al., 2008; see also, Kunda, 1990; Nickerson, 1998). This means that, when feasible, people prefer to avoid information that is potentially threatening or inconsistent with their decisions, beliefs, and behaviors. Unfortunately, information about one's health frequently falls into this latter category. For example, someone who drinks alcohol might avoid information that suggests their behavior is unhealthy or a sunbather might skip over an article about skin cancer. In both of these cases, the information being

avoided might be considered threatening to their lifestyle and inconsistent with their beliefs and behavior. Avoiding this information can lead to biased or incomplete knowledge which can have a myriad of negative effects, from poor financial decisions to delayed health treatment (e.g., Cameron & Trope, 2004; Colvin & Block, 1994; Greitemeyer & Schulz-Hardt, 2003; Kray & Galinsky, 2003). Particularly troubling is the fact that the people who are most motivated to avoid certain health messages are the ones who would benefit from them most (e.g., sunbathers and a message about skin cancer) (Croyle, Sun, & Hart, 1997; Liberman & Chaiken, 1992; Reed & Aspinwall, 1998).

Understanding what factors exacerbate or mitigate this avoidant behavior is important for learning how we can make people more evenhanded consumers of information or more willing to consume threatening information (Kray & Galinsky, 2003). One technique aimed at doing just this is self-affirmation. This intervention involves reflecting on values that are important to the self as a way of reinforcing one's self-integrity. Doing this allows people to face threats to the self in a non-defensive manner because their overall self-integrity has been bolstered by the affirmation (Steele, 1988). Research has shown that engaging in self-affirmation prior to receiving threatening information generally makes people more open to that information (Sherman & Cohen, 2002, Sherman, Nelson, & Steele, 2000). However, another logical candidate that has not yet been explored is power. Feeling powerful has a variety of effects on cognition with theoretical relevance to this topic from increasing approach orientation (Keltner, Gruenfeld, & Anderson, 2003) to decreasing risk perceptions (Anderson & Galinksy, 2006). The current project investigates if, and in what direction, feeling

powerful influences the consumption of potentially threatening health information. In other words, does feeling powerful encourage consumption of information that is threatening or otherwise inconsistent with desires and behavior? Or, does feeling powerful make people even more prone to biased information consumption and/or the avoidance of threatening information? As I outline below, the answer to this question may depend on whether the information being consumed is known to challenge existing beliefs or has unknown valence.

I examine this research question from two different perspectives that both fall under the umbrella term of *information consumption*. For the purposes of this project, information consumption refers to any decision about whether to learn or expose oneself to a piece of information rather than to remain ignorant or avoid the information. This definition is agnostic to whether that information is subsequently used or processed in a biased or unbiased way.

The first perspective examines the impact of power on what is known in the literature as *selective exposure*. This encompasses decisions about seeking information where the content, position, or valence of the information is known to be consistent or inconsistent with decisions, attitudes, or behavior (Hart et al., 2009). When given an opportunity to choose between reading threatening or non-threatening pieces of information, which do people select? Which do they avoid? To a staunch vegan, an article describing problems associated with a vegan diet might threaten their beliefs and lifestyle, while an article describing the benefits of veganism supports and bolsters their pre-existing view. Previous research would suggest a vegan would typically prefer to read the second article, in support of veganism, and avoid the first, more threatening

article (e.g., Smith, Fabrigar, & Norris 2008). I explore whether feeling powerful or powerless alters this preference and how.

The second perspective examines the impact of power on what is known in the literature as *information avoidance*. This encompasses decisions about information whose valence is uncertain (Sweeny, Melnyk, Miller, & Shepperd, 2010). In these situations, it is unclear whether the information will be consistent or inconsistent with desires, attitudes, or behaviors. This could be a decision about learning the results of a genetic test for vulnerability to Alzheimer's disease or getting that oddly shaped mole biopsied. When given an opportunity to learn a new piece of information that has unknown valence, what determines whether a person takes the risk and learns it, or chooses to remain ignorant? Does feeling powerful or powerless alter people's decisions in these situations?

Comparison

Both of these perspectives on information consumption are fundamentally about decisions to be exposed to health information that is potentially threatening (either by virtue of being inconsistent with beliefs or by having uncertain hedonic consequences). Both phenomenon can also serve self-protective functions since both perspectives depict reactions to a threat to beliefs or decisions (Sweeny et al., 2010). However, the two perspectives are distinct from each other in their content, explanations, and typical paradigms. Selective exposure describes decisions about information whose content is *known* to be consistent or inconsistent with attitudes or decisions while information avoidance describes decisions about information whose content is *uncertain* or *unknown*. Selective exposure describes situations where multiple pieces of information are

displayed and chosen between while information avoidance describes situations where a decision is made about revealing a single, uncertain piece of information. These differences in context may ultimately be important in shaping how people react to potentially threatening health information. Finally, the explanations or motivations for these behaviors, described in each respective section in greater detail below, also differ.

Despite these differences, there is value in examining these topics together. While some researchers have acknowledged the existence of the other literature in passing (e.g., Sweeny et al., 2010), none thus far have embraced and fully developed the two side by side as is done here. This integrated perspective allows each literature to inform the other and perhaps prompt new insights about each under the umbrella of information consumption. This project uses power as a lens through which to examine these literatures together with the goal of learning more about how the two can be integrated. If power has a similar impact on both selective exposure and information avoidance, and does so via the same mechanism, that highlights an important commonality between the two phenomenon. Alternatively, if different mechanisms are operating, as I hypothesize here, that also reveals something important about how these two phenomenon are influenced and potentially uncovers boundaries to these effects. I have chosen to examine the impact of power on selective exposure and information avoidance, but power is just one of many different variables that could be used in this capacity. For example, self-affirmation could also be used to provide theoretical insights into how these two are related and I hope that other researchers embrace these other possibilities. Taking a bird's eye view of these phenomenon allows for a larger discussion of the patterns and biases surrounding information consumption more

generally. Below, I address each literature separately before integrating the two and outlining my hypotheses about the impact of power on each. First, however, I outline the relevant research on power below.

Power

This project focuses on social power, defined as "the ability to influence other people's behavior, based on asymmetric control over valued resources" (p. 59, Inesi, 2010). However, the effects of social power go beyond control in relationships to influence a multitude of judgment and decision making processes in both positive and negative ways (e.g., Galinsky, Magee, Gruenfeld, Whitson, & Liljenquist, 2008; Lammers, Dubois, Rucker, & Galinsky, 2013; See, Morrison, Rothman, & Soll, 2011).

One relevant finding for the current project is that power increases feelings of certainty or confidence in one's thoughts or knowledge. In other words, powerful people are more certain of themselves. People in positions of power tend to be overconfident decision makers, even to the point of hurting accuracy (Fast, Sivanathan, Mayer, & Galinsky, 2012). They are also less likely to take advice from others, an effect which is mediated by feelings of confidence and competition (See, et al., 2011; Tost, Gino, & Larrick, 2012). Similarly, power can protect people from the influence of others (e.g., by conforming less to the stated attitudes of others) and increase reliance on one's own values (Galinsky, et al., 2008) or accessible constructs, whether those are chronically or temporarily accessible (Guinote, Weick, & Cai, 2012; Weick & Guinote, 2008). Research from the attitudes literature suggests that feeling powerful increases reliance on one's thoughts, making those thoughts more influential in subsequent decisions and behaviors (Briñol, Petty, Valle, Rucker, Becerra, 2007; DeMarree, Briñol, & Petty,

2014). Increased certainty also acts as a cue that deeper processing about the topic is not needed (Tiedens & Linton, 2001; Weary & Jacobson, 1997). Relatedly, power has been found to increase heuristic processing. For example, powerful people are more likely to use stereotypes or other simple cues in their environment rather than engaging in more effortful processing (Fiske 1993; Goodwin, Gubin, Fiske Yzerbyt, 2000; Keltner & Robinson, 1996).

Power has also been linked to decreased risk perceptions and increased optimism and risk-taking behavior (Anderson & Galinksy, 2006; Carney, Cuddy, & Yap, 2010; Weick & Guinote, 2010). In a series of studies conducted by Anderson and Galinsky (2006), powerful participants were more optimistic about events in their future, even ones over which they would have relatively little control (e.g., experiencing turbulence on a plane), as well as events in the world in general, providing lower estimates of the number of fatalities across a variety of different causes of death. This increased optimism led to increased risk-taking in negotiations as well as greater willingness to engage in the risky behavior of unprotected sex.

The propensity to engage in risky behavior is related to the finding that power increases a general tendency to approach (Anderson & Berdahl, 2002; Galinsky, Gruenfeld, & Magee, 2003; Keltner et al., 2003), meaning that people who feel powerful are more likely to take action, risky or otherwise. High power participants are more likely to hit in blackjack on an ambiguous round (risky action) as well as remove an annoying stimulus in their environment (non-risky action, Galinsky et al., 2003). Additionally, participants primed to feel powerful were more likely to take action in the context of a social dilemma regardless of whether that action had prosocial or antisocial

consequences (Galinsky et al., 2003). This risk-taking behavior may be partly driven by reduced attention to constraints (Whitson et al., 2013) and increased focus on the potential rewards of a situation rather than the potential losses or threats (Anderson & Berdahl, 2002; Keltner et al., 2003). For example, a person primed to feel powerful may be more willing to engage in a risky behavior like gambling because they are more focused on the money they could win rather than the losses they might suffer.

Even when high power holders do recognize potential losses they exhibit decreased loss aversion, meaning that they minimize the negative anticipated value associated with a loss (Inesi, 2010). Inesi speculated that this may be because power holders generally have greater access to resources that would help them mitigate a loss. This tendency toward action and risk taking may therefore be driven by the belief that action will bring positive, rather than negative outcomes and that even if negative, the outcome might not be so bad.

The idea that power holders have greater access to resources that would help them mitigate a loss is not a new one. Social power by definition involves being in control of valued resources (e.g., Emerson, 1962, Keltner et al., 2003, Magee & Galinsky, 2008). This includes material resources like financial or physical comforts as well as social resources such as friends, esteem, praise, and positive attention from others (Chance, 1967; Ellis, 1993; Keltner, Young, Heerey, & Oemig, 1998; Savin-Williams, 1979). Power has also been shown to increase other, more psychological resources including self-regulation, self-esteem, and executive functions (DeWall, Baumeister, Mead, & Vohs, 2011; Guinote, 2007; Smith, Jostmann, Galinsky, & van Dijk, 2008; Wojciszke & Struzynska-Kujalowicz, 2007).

Beyond control over resources, power is also associated with greater feelings of control more generally, even extending to situations where a person cannot realistically have control (i.e., illusory control; Fast, Gruenfeld, Sivanathan, & Galinsky, 2009; Hsu, Huang, Nordgren, Rucker, & Galinsky, 2015). For example, in a classic demonstration of illusory control belief, high power participants were more likely than low power participants to choose to roll a die themselves whose outcome could earn them money rather than have the experimenter do it (Fast et al., 2009). Subsequent studies demonstrated that feelings of control mediated the effect of power on increased optimism, self-esteem, and action orientation (Fast et al., 2009), all of which are increased under high power as outlined above. In a different study, high power participants perceived their risk of skin cancer as lower when the description of the disease had been anthropomorphized because they had a greater sense of control over the disease when it was humanized than when it was described without human-like characteristics (Kim & McGill, 2011).

Thus far, I have focused on the effects of a high power mindset, partially because much of the research on power uses this focus and also because many of these effects are driven by feeling powerful rather than lacking power (e.g., illusory control; Fast et al., 2009). However, one impact of a low power mindset that may be especially relevant to my research question is how low power alters motivations in interactions. Research has shown that low power participants in an interaction are more motivated to develop accurate impressions of the people who control their outcomes and thus engage in stereotyping less (Fiske, 1993). Additionally, in negotiations with others, low power negotiators have a stronger accuracy motivation than high power negotiators and

therefore engage in more even-handed information gathering (i.e., ask more belief incongruent questions, De Dreu & Van Kleef, 2004).

Finally, it is worth noting that there are various ways in which power can be manipulated and measured (see Galinsky, Rucker, & Magee, 2015 and Smith & Galinsky, 2010 for reviews). Galinsky et al. (2015) provide a useful breakdown of the various types of manipulations into four main categories. The first are structural manipulations which involve placing participants into real situations where one person has actual power over another in some way (e.g., control over resources, Galinksy et al., 2003; Galinsky, Magee, Inesi, Gruenfeld, 2006). Second, are experimental manipulations that involve mentally activating the experience of power without actually changing the person's current power status. This encompasses one of the most commonly used power manipulations, having participants recall a time when they were in a position of high or low power (Galinsky et al., 2003). Third, are conceptual manipulations which involve semantically or visually priming the concept of power. This includes word completion tasks, scrambled sentences, word searches, or photos where the key words or images are related to either high or low power (e.g., Smith & Trope, 2006). Finally, there are physical manipulations of power which involve manipulating participants' posture, hand gestures, or seating positions to be consistent with high or low power postures (e.g., expansive versus constricted poses, Carney et al., 2010). Despite the variety among these manipulations, all of them seem to have similar effects on cognitions and behavior (Smith & Galinsky, 2010), and researchers often use varied manipulations across studies to demonstrate the same effect (e.g., Galinsky et al, 2003). I do the same with the current studies.

There are also several different ways to measure power, rather than manipulate it, which can often lend more external validity to an effect. This includes measures which assess people's personal sense of power (e.g., Anderson, John, & Keltner, 2012), trait dominance (e.g., Anderson & Kilduff, 2009), or changes in hormones such as testosterone and cortisol (e.g., Carney et al., 2010). Another way to assess power is to measure the amount of power participants have at work (e.g., Fast & Chen, 2009). Importantly, studies measuring power typically find similar results as those that manipulate it (e.g., Anderson & Galinsky, 2006). Study 4 measures participants generalized sense of power to determine if chronic levels of power have the same impact on information consumption as manipulated power.

Selective Exposure

Selective exposure to information is a fairly robust phenomenon whereby people tend to be biased toward selecting information that is consistent with their decisions, beliefs, and world-views rather than information that contradicts these constructs (Hart et al., 2009; Smith et al., 2008). The basic assumption of this research is that people are motivated to defend their attitudes from challenges (Festinger, 1957; Olson & Stone, 2005) and selectively viewing supportive information (as opposed to information that challenges their attitudes) allows them to do so (Hart et al., 2009). This behavior occurs every day when people choose to watch news networks whose political leanings are consistent with their own or read articles that describe their favorite sports team as most likely to win an upcoming game.

Most selective exposure paradigms examine *post-decisional* selective exposure, meaning they investigate information search strategies after an initial decision has been

made. Participants are typically presented with a decision case—common examples include decisions about extending hypothetical job contracts or political issues—and are asked to make a preliminary decision about the case (Fischer, Jonas, Frey, & Schulz-Hardt, 2005; Fischer, Jonas, Frey, & Kastenmüller, 2008; Frey, 1986). Afterward, participants have an opportunity to read additional information regarding the case. A number of different titles are shown which clearly display the thesis statement of each of the full articles so the participant can tell what the position of the article is. Half of these items are decision-consistent (congenial) and half are decision-inconsistent (uncongenial). Participants are instructed to select as many as they would like to read and their selections are recorded. A measure of selective exposure is calculated by comparing the number of decision-consistent selections to decision-inconsistent selections. A person engaging in selective exposure would choose a greater number of decision–consistent articles to read than decision-inconsistent articles.

Much of the research on biased information search has been carried out within the framework of Cognitive Dissonance Theory (Festinger, 1957, 1964; Frey, 1986; Hart et al., 2009). Since participants make an initial decision followed by information search, some of which supports their decision and some of which challenges it, the opportunity for feeling dissonance about making the wrong choice arises. According to this perspective, in order to reduce this feeling of dissonance, people often select information that supports and bolsters their choice, belief, or viewpoint rather than information that might make them question their decision. In other words, people prefer to read decision-consistent information over decision-inconsistent information because they are motivated

to defend their decision or belief from challenges and reduce aversive feelings of dissonance about the alternative (Jonas, Schulz-Hardt, Frey, & Thelen, 2001).

Cognitive explanations for this phenomenon suggest a much less defensively motivated explanation for the effects. These explanations suggest that information search is driven by perceived information quality, with participants seeking higher quality messages in general (Fischer et al., 2005). However, even with a rational goal of seeking information of the highest quality, judgments of quality are inherently biased by existing beliefs (e.g., Ditto & Lopez, 1992; Ditto, Scepansky, Munro, Apanovitch, & Lockhart, 1998), with congruent pieces of information judged as higher quality than incongruent pieces of information (Fischer et al., 2005; Fischer, Schulz-Hardt, & Frey, 2008). This phenomenon is known as biased assimilation (Lord, Ross, & Lepper, 1979) and it is frequently associated with biased selective exposure. Whether this pathway is causal versus artifactual is not clear. It could be that preference for one position drives both information selection as well as evaluations of title quality independently so that there is no causal chain, or that preference for one position creates biased assimilation which then causes biased selection (Scherer, Windschitl, & Smith, 2012).

It is hard to disentangle defensive motivations from more cognitive motivations and it is likely that some combination of these effects drives most selective exposure behavior (Fischer, Aydin, Fischer, Frey, & Lea, 2012). However, testing between these explanations is not a goal of this project.

Relevant Moderators of Selective Exposure

Several situational factors have been identified that increase the likelihood that a person will engage in confirmatory information search including information scarcity,

(Fischer et al., 2005), negative affect (Jonas, Graupmann, & Frey, 2006), need for cognitive closure, (Hart, Adams, Burton, Shreves, & Hamilton, 2012), and depleted self-regulatory resources (Fischer, Greitemeyer, & Frey, 2008) to name a few.

Consistent with a cognitive dissonance explanation and defense motivation, the presence of a related threat (meaning, related to the decision and information search task) increases people's tendency to engage in confirmatory information search (e.g., Fischer et al., 2011; Frey, 1981). For example, one study introduced a threat to the self by telling participants that they had scored poorly on a reliably-scored intelligence test (high self-threat condition) or an unreliably-scored test (low self-threat condition; Frey & Stahlberg, 1986). Subsequently, they were given an opportunity to choose from several articles which indicated a favorable or unfavorable evaluation of the intelligence test they had taken. Participants in the high self-threat condition were more likely to select the articles that questioned the validity of the intelligence test (a view that supported their belief or desire to derogate the source of the threat) as well as rate being intelligent as less important compared to participants in the low self-threat condition. In a related vein, reminders of mortality salience have been shown to increase participants' preference for decision consistent information when the threat is related to the decision topic (Jonas, Greenberg, & Frey, 2003).

Findings from the health literature are consistent with the idea that a person must feel some sort of personal threat to engage in selective exposure. Unfortunately, few selective exposure studies have examined health topics. Those that do examine these topics find that participants who are at greater risk for the health threat in question tend to exhibit greater selective exposure-type effects (e.g., frequent caffeine drinkers in a study

linking caffeine consumption to fibrocystic breast disease; Reed & Aspinwall, 1998). This suggests that feeling some level of personal threat from the message increases the tendency to engage in a confirmatory information search.

Decision certainty also increases selective exposure and is responsible for the effects of several variables on selective exposure (Fischer, Jonas, et al., 2008; Fischer, Fischer, Englich, Aydin, & Frey, 2011; Fischer, Kastenmüller, et al., 2011; Hart et al., 2009; Jonas et al., 2001). For example, greater decision certainty accounts for the finding that gain framed decisions lead to greater selective exposure. Gain framed decisions are less effortful to make, creating increased perceptions of decision certainty and thus, greater selective exposure to decision-consistent information (Fischer, Jonas, et al., 2008). The influence of approach orientation on selective exposure is also explained by increases in decision certainty. Participants primed with action words before engaging in a selective exposure task were more certain of their decisions, leading to increased selective exposure (Hart and Albarracin, 2012). Finally, increased levels of commitment to an initial decision mediated the effect of depleted self-regulatory resources on increased selective exposure (Fischer, Greitemeyer, et al., 2008).

In addition to certainty about an explicit decision, certainty in one's attitude towards a topic can also lead to increased selective exposure (Brannon, Tagler, & Eagly, 2007; Knobloch-Westerwick & Meng, 2009), although this effect appears to be moderated by information familiarity (see Sawicki, Wegner, Clark, Fabrigar, Smith, & Bengal, 2011). In these studies, participants simply report their certainty in a pre-existing attitude before engaging in information search rather than making an explicit decision first.

Increased certainty could lead to greater selective exposure through a few different pathways, including by increasing heuristic processing (Fischer, Jonas, et al., 2008). As noted above, increased decision certainty is generally associated with heuristic processing (Briñol et al., 2007; Tiedens & Linton, 2001). As humans tend to be cognitive misers, feeling certain about a decision or confident about an attitude can act as a cue that no further processing is needed which in this case can increase the tendency to engage in selective exposure (Fischer et al., 2012).

Increased certainty could also exacerbate the effect of biased assimilation given that stronger attitudes tend to have greater impact on information processing (Brannon et al., 2007; Briñol & Petty, 2009; Krosnick & Petty, 1995). Therefore, a person who is very certain in their decision or attitude may be more likely to view the decision-inconsistent information as being of poor quality while the decision-consistent information appears to be of higher quality (Fischer, Fischer, et al., 2011). Studies 1 and 2 will examine the influence of power on selective exposure in a health domain and test of the potential mediators outlined here.

Information Avoidance

Information avoidance is defined as "any behavior intended to prevent or delay the acquisition of available but potentially unwanted information" (p. 341, Sweeny et al., 2010). This literature focuses on situations where a decision must be made about learning a single, uncertain piece of information that could contain positive or negative news such as the results of a genetic test or diagnosis. Despite the adage that "knowledge is power", information avoidance is a fairly common phenomenon (Barbour, Rintamaki, Ramsey, & Brashers, 2012). For example, many people chose not to learn their genetic

risk for colon or breast cancer when given the opportunity (Keogh et al., 2004; Ropka, Wenzel, Philips, Siadaty, & Philbrick, 2006). Additionally, among people who get tested for HIV, some studies have shown that only 45% actually return to the test site to receive their results (Hightow et al., 2003; Molitor, Bell, & Truax, 1999)!

Why might people chose to avoid this information? In a 2010 review of this topic, Sweeny and colleagues summarized three main motivations that may lead to information avoidance behavior. First, the information may threaten a currently held belief about the self, others, or the world. As discussed earlier, people are motivated to maintain positive and consistent self-views (e.g., Hart et al., 2009, Kunda, 1990). In a health domain, the unknown information could suggest that their behavior has been less than ideal (e.g., a smoker learning their risk status for lung cancer), or that they could be sick (e.g., a cancer diagnosis). Second, learning the information may require subsequent undesired action. Indeed, one important moderator of information avoidance is behavioral obligation (Howell & Shepperd, 2013a). The more inconvenient, difficult, or complex a required follow up will be, the less likely people are to learn the information. Finally, learning this uncertain piece of information may create unpleasant emotions or negative affect. This is an often cited reason for avoidance of knowledge about medical conditions such as breast cancer (Thompson et al., 2002) and Huntington's disease (van der Steenstraten, Tibben, Roos, van de Kamp, & Niermeijer, 1994).

These motivations are not mutually exclusive, nor are they exhaustive; however, a common theme is that they all encompass some sort of threat to one's beliefs, desires, or emotional state. Indeed, information avoidance is considered a form of defensive responding (Ferrer, et al.,2015; Howell & Shepperd, 2012, 2013b; Witte, 1994).

Relevant Moderators of Information Avoidance

Given the defensive motivations behind information avoidance, anything that reduces the sense of threat from uncertain information could potentially reduce information avoidance. Multiple studies have demonstrated that engaging in self-affirmation decreases information avoidance in the context of learning the results of a risk calculator or genetic test (Ferrer et al., 2015; Howell & Shepperd, 2012; van Koninsbruggen & Das, 2009). Additionally, an intervention that prompted participants to contemplate their reasons for why they would or would not like to learn the information made individuals more likely to opt to learn their risk status, presumably because they were able to focus more deliberatively on the benefits of learning the information rather than the automatic defensive reaction of threat or fear (Howell & Shepperd, 2013b).

One variable that unsurprisingly decreases information avoidance is the controllability of the outcome in question (Sweeny et al., 2010; Taber et al., 2015b). For example, when a hypothetical genetic disorder was described as untreatable, only 42% of participants indicated that they would like to receive the results of a genetic test for this disorder (Yaniv, Benador, & Sagi, 2004). That number rose to 87% when participants were told that there was a treatment that could effectively prevent and cure the disease. Another study that simply emphasized the controllable versus uncontrollable aspects of breast cancer showed similar shifts in participants' preference for information about their risk for breast cancer (Melnyk & Shepperd, 2012).

Characteristics of the person receiving the information are also important moderators of information avoidance. One such variable is whether a person has sufficient threat management resources to cope with learning a potentially negative

outcome (Howell et al., 2014; Sweeny et al., 2010). Threat management resources are "any source from which people can draw to manage the severity of the threat posed by receiving unwanted news" (p. 103, Howell Crosier, & Shepperd, 2014, also see Sweeny, 2008). Literature on coping suggests that those with more resources are better able to handle setbacks than those with fewer resources (Manne & Zatura, 1989; Sarason, Sarason, & Shearin, 1986). Therefore, the more resources a person feels that they have access to, the more willing they might be to face a potential threat rather than avoid it.

Threat management resources can be broken down into two categories. Personal threat management resources, also known as coping resources, represent a person's ability to deal with a threat internally (Carroll & Shepperd, 2009; Howell et al., 2014). This ability varies at a dispositional level between people (Ptacek, Pierce, & Thompson, 2006). On the other hand, interpersonal threat management resources, also known as social support resources, represent the strength of a person's social support network and social connections more generally (Brewin, MacCarthy, & Furnham, 1989; Howell et al., 2014). Most of the work on threat management resources in the information avoidance literature has been done on personal threat management resources (although there is certainly a plethora of research on social support in other contexts; e.g., Cohen & McKay, 1984; Thoits, 1986).

In a series of studies, Howell and colleagues (2014) measured participants' personal and interpersonal threat management resources and examined how they related to information avoidance behaviors. They consistently found that the more threat management resources a person had (both personal and interpersonal), the less likely they were to avoid information about their health. However, in the context of information

avoidance studies, threat management resources have always been measured and never directly manipulated making it difficult to draw causal conclusions (e.g., Dwyer, Shepperd, & Stock, 2015; Melnyk & Shepperd, 2012).

Another personal characteristic that may decrease information avoidance is dispositional optimism. In fact, Taber et al. (2015a) classify optimism as a type of threat management resource that may help buffer threat. Specifically, they found that dispositional optimism mitigated information avoidance tendencies regarding receipt of genome sequencing results even though risk perceptions were unrelated to intentions to receive the results (Taber et al., 2015a, 2015b). This may be because optimism is associated with more active coping strategies (Nes, Segerstrom, 2006). Studies 3 and 4 will explore the impact of power on information avoidance and test some of the potential mediators outlined here.

Conceptual Overview

My main research question is whether feeling powerful will make people more or less willing to consume information known to be threatening or that has the potential to be threatening to their existing beliefs or behaviors. I hypothesized that feeling powerful would increase the tendency to engage in selective exposure (select information known to be consistent with beliefs, desires, and behavior), but decrease information avoidance (express interest in learning information with uncertain valence). I conducted four studies to test these hypotheses, two examining each of these different aspects of information consumption.

For all of the following hypotheses, I made the basic assumption that the majority of my participants will have a strong tendency or desire to feel that they are relatively

healthy and will be motivated to maintain this perception. This assumption is important because it means that information that suggests otherwise is potentially threatening because it violates their expectations or opposes a motivation they have to maintain their view of themselves as healthy. In general, people prefer to avoid this type of information and here I examined whether power moderates this tendency.

Selective Exposure

Primary hypothesis. As stated above, I predicted that feeling powerful would increase people's tendency to engage in selective exposure in a health context. The research on increased decision certainty led me to this hypothesis. Several studies described above have shown that power increases certainty in, and reliance on, one's existing thoughts or knowledge (e.g., Briñol et al., 2007; DeMarree et al., 2014, Fast et al., 2012). In the case of health information, these thoughts should generally indicate that the person is healthy and not at risk for a particular health threat.

Research on selective exposure has repeatedly shown that increased decision certainty or attitude confidence results in greater selective exposure (Fischer et al., 2008; Fischer, Fischer, et al., 2011; Fischer, Kastenmüller, 2011; Hart et al., 2009; Jonas et al., 2001). Given this, participants made to feel powerful might select more information that is consistent with their beliefs, desires, and behaviors than information that is inconsistent because of increased certainty in their pre-existing, desired belief that they are not at risk. Increased certainty in this belief could lead to perceptions of reduced quality for the uncongenial pieces of information and increased quality for congenial information, creating increased selective exposure. Additionally, increased feelings of certainty may lead participants to assume that information which supports their belief is more relevant

to them while information that challenges their belief does not apply to them, rendering the former more worth reading than the latter. These differences in perceived relevance of information would result in the same pattern of biased information selection.

Additionally, since power activates an approach orientation (Anderson & Berdahl, 2002; Galinsky et al., 2003; Keltner et al., 2003), and approach has been shown to increase selective exposure (also through decision certainty, Hart & Albarracin, 2012), power could also increase selective exposure by activating an approach orientation.

The strongest piece of evidence for this hypothesis comes from work that directly examined the effect of power on post-decision selective exposure in a non-threatening domain (Fischer, Fischer, et al., 2011). Specifically, participants in these studies were placed in a high power or neutral embodiment position (e.g., clenched or relaxed fist) and asked to make an initial decision about a contract renewal for an employee (Study 1). They were then given the opportunity to read more information about the case, some of which supported their decision and some of which challenged their decision. Across several studies, participants in the high power condition engaged in more selective exposure than those in the neutral condition, meaning that they selected more pieces of information that supported their decision rather than refuted it. This effect was mediated by certainty in the initial decision such that high power participants were more certain that they made the right decision.

Clearly, this research lends support to the idea that power may increase participants' selective exposure bias in the current proposal. However, this is not a forgone conclusion given the differences between these studies and the present studies. First, Fischer and colleagues (2011) exclusively used embodied manipulations of power

(e.g., fist clenching, sitting in an expansive position). Recently, the validity and replicability of these types of manipulations has been called into question (see Ranehill et al., 2015 for more details). These manipulations, coupled with extremely small sample sizes (as low as 11 participants per cell; Study 4), make it unclear if the same effects would replicate or be found in the present work. Second, these studies follow the traditional selective exposure paradigm described above where participants make an initial decision which is then used as a cut-point for determining which information is decision consistent or inconsistent. This paradigm is different from the type of study proposed here where there is no initial decision, but the information presented either threatens or does not threaten the participants' existing beliefs about their health (see Study 1 for more detail). Third, although information suggesting participants might have made the wrong decision may have been threatening (i.e., decision-inconsistent information), the topic of contract renewal is in itself not threatening. The larger issue of threat to a person's health may affect participants' responses to the task. Finally, there is an empirically-driven, alternative hypothesis for the effect of power on selective exposure described below which highlights the need for a definitive answer to this research question.

Alternative hypothesis. Although I anticipated that the pattern of results would conform to my primary hypothesis outlined above, it is also possible that feeling powerful could reduce selective exposure relative to feeling powerless. The logic for this hypothesis comes from the idea that biased information selection is a defensive reaction to a threat or challenge to one's beliefs, attitudes, or behaviors (Festinger, 1957, 1964; Frey, 1986). If people feel like they have the resources to deal with this potentially

threatening information, they may be more willing to read it. Since power is associated with increased resources (e.g., Magee & Galinsky, 2008), powerful participants may actually be more open to reading information that is inconsistent with their beliefs as compared to powerless participants.

Similarly, if the feeling of threat is removed or lessened, people should have no reason to engage in the defensive action of selective exposure. There is some evidence that power can buffer threat in a way similar to self-affirmation (Bobrowski, Statzer, & DeMarree, 2015; Van Loo & Rydell, 2013). For example, priming participants with high power eliminated the effects of stereotype threat among women taking a math test (Van Loo & Rydell, 2013). If similar processes are at work here, feeling powerful could encourage participants to select some of the threatening, inconsistent information because they have been otherwise bolstered.

How power will impact confirmatory information search in a threatening health context remains an empirical question. Based on the evidence outlined above, I hypothesized that feeling powerful should increase selective exposure because it will make participants more confident in their pre-existing, desired belief that they are healthy. Studies 1 and 2 test this hypothesis.

Information Avoidance

Hypothesis. When the content of the information is uncertain and participants have to decide whether to learn the information or avoid it, I predicted that power would actually encourage participants to seek out the information (i.e., decrease information avoidance). Unlike with selective exposure where there are two potential hypotheses or outcomes, all of the available evidence from the literature points in this one direction.

First, although power should still increase certainty and reliance on one's thoughts, this increased certainty may have vastly different consequences given the paradigm differences. In both instances, power would increase certainty in the pre-existing, desired belief that the person is healthy. When given the option of selecting between information known to support or contradict this attitude, people might look for the information that supports it for the reasons outlined above. However, when the choice is between learning an unknown piece of information or avoiding it, high power participants—given the certainty in their attitude that they are healthy—would expect the unknown piece of information to contain positive, attitude-confirming information and thus, would be more open to learning that information. The idea that the unknown information will be desirable is also bolstered by the fact that power has been shown to increase optimism (Anderson & Galinsky, 2006).

Second, research has shown that people who feel as if they have more threat management resources are more likely to choose to learn uncertain information (Howell et al., 2014; Sweeny et al., 2010). Since having power is associated with greater resources, more powerful people might feel like they are better able to cope with potentially negative news and therefore be more willing to learn that information. Relatedly, people are more willing to learn uncertain information if the associated disease is controllable—if there is something concrete they can do with this knowledge (Sweeny et al., 2010; Taber et al., 2015a). Power increases feelings of control—including illusory control (Fast et al., 2009)—so high power participants may feel like they will have more control over the disease, regardless of whether that is true or not, and therefore would be more willing to learn the uncertain information.

Third, feeling powerful increases action and approach behavior (Anderson & Berdahl, 2002; Galinsky et al., 2003; Keltner et al., 2003), which may make participants more inclined to approach the uncertain information rather than avoid it. High power should also focus participants on the rewards of learning the information, rather than the threats or potential losses associated with this knowledge (Anderson & Berdahl, 2002; Keltner et al., 2003). This reward focus may encourage greater interest in learning the information, analogous to the study that had participants engage in contemplation because it allowed participants to focus on the benefits associated with learning their risk status (Howell & Shepperd, 2013b). Similarly, the decreased loss aversion associated with high power (Insei, 2010) might push participants towards learning the uncertain information because, even if the news is negative, it might not be so bad after all.

Given this evidence, I hypothesized that power would decrease information avoidance. Studies 3 and 4 test this hypothesis. See Figure 1 for a visual representation of the possible mediators described here.

A Note about My Related Work on the Impact of Power

Although the current project focuses on what information people chose to consume—a decision made before the information itself is processed—it is logical to think about how power might affect the actual processing of threatening health information; another stage in health communication known to be fraught with biases (e.g., Ditto &Lopez, 1992; Kunda, 1990). Much of the research described above can also be applied to how people think about their risk and process threatening messages.

I conducted several studies on this topic. In these studies, participants were primed with high or low power using an episodic recall task (Galinsky et al., 2003).

Then, they read a potentially threatening health message about a specific threat (i.e., the dangers of eating too few fruits and vegetables; the risk of skin cancer from sun exposure). Afterwards, participants answered several questions about their perceptions of vulnerability to the health threat (e.g., *how likely are you to develop skin cancer?*), their behavioral intentions (e.g., *do you intend to increase your consumption of fruits and vegetables?*), and completed measures of defensive processing (e.g., *when I read the message about skin cancer my first reaction was that I did not want to think about skin cancer*). I found no evidence that power influenced these types of dependent measures (in a positive or negative way) even among those at higher risk for the health threat in question (assessed before the manipulation). Although these studies were well-designed and theoretically based, they failed to show an effect of power on how threatening health information is processed.

However, the focus of the present project is on an earlier stage in the process of health communication, specifically, whether people choose to even expose themselves to the threatening information in the first place. I have several reasons to believe that power could impact these dependent measures even though no effects were found in the studies examining message processing. First, in the present studies, the manipulation of power immediately precedes the dependent measures. It is unclear how long manipulations of power last, but because participants had to read the entirety of the health message before answering any of the dependent measures the effects of the manipulation may have worn off by the time they answered any questions. Second, power has already been shown to affect selective exposure to decision-consistent information in a non-health context described above (see Fischer, Fischer, et al., 2011). Since this effect has already been

established, it lends credence to the idea that a similar effect may emerge with a similar dependent measure. Third, I have altered my power manipulations to include more varied and, hopefully, potent manipulations of power in the present studies.

Overview of Proposed Studies

Across four studies, I investigated the relationship between power and information consumption in a health domain. Studies 1 and 2 examined information consumption in situations where the available information is known to be consistent or inconsistent with participants desired and expected beliefs about their health. Study 1 employed a more traditional selective exposure paradigm, while Study 2 explored a more real-world situation where threatening information was available alongside a multitude of other, non-threatening topics. Studies 3 and 4 examined information consumption in situations where the valence of the available information was unknown, with Study 4 exploring the impact of chronic levels of power rather than manipulated power.

CHAPTER 2

THE INFLUENCE OF POWER ON SELECTIVE EXPOSURE

Study 1 examined if power affects the tendency to engage in selective exposure when faced with information suggesting participants' health may be at risk. This study used a modified version of the traditional selective exposure paradigm where participants were asked to select information to read regarding a health threat, some of which confirms their risk and some of which suggests they are not at risk. This is different from the typical post-decisional selective exposure paradigm because participants are not asked to make an initial decision. Instead, their initial, desired belief that they are healthy individuals makes some of the information congenial (consistent with this belief, risk-disconfirming) and the other information uncongenial (inconsistent with this belief, risk-confirming). I opted to use this methodology because it is more similar to how people naturally encounter health information. Having participants make a decision first is somewhat artificial and is not very representative of situations people face in the real world. Therefore, this non-traditional paradigm is more ecologically valid than the more traditional post-decisional information search.

This is not the first study to use this type of methodology. Research on selective exposure in the attitudes literature often uses existing attitudes towards a topic as an indication of which information would subsequently be considered congenial or uncongenial rather than an explicit decision (e.g., Brannon et al., 2007; Sawicki et al., 2011). In the health domain, Reed & Aspinwall (1998) used a similar technique to investigate the impact of self-affirmation on biased processing of health-risk information. In this study, frequent and infrequent caffeine drinkers were exposed to a health message

about the link between caffeine consumption and fibrocystic breast disease. Then, half of the participants completed a self-affirmation manipulation before being presented with additional pieces of information about this health threat. Specifically, participants could select to read a neutral passage, a risk-confirming passage, or a risk-disconfirming passage. Rather than measuring which pieces of information participants chose to read (nearly all participants opened each of the articles), the researchers measured the time it took for each participant to open the risk-confirming information. They found that among frequent caffeine drinkers, non-affirmed participants took much longer to select the risk-confirming information than affirmed participants. Rather than having participants make some sort of initial decision about the validity of the link between caffeine consumption and fibrocystic breast disease, the authors made the assumption that information which confirmed their risk was undesirable or threatening (i.e., uncongenial) and that non-affirmed participants for whom this risk was relevant (i.e., caffeine drinkers) would be motivated to avoid it.

This study also raises the importance of using a health threat that is relevant to my sample since Reed & Aspinwall (1998) only found the effects among caffeine drinkers who would be threatened by a message about the dangers of caffeine consumption. Therefore, I purposefully selected a health threat and behavior that the vast majority of my sample would report engaging in, and thus would feel some level of risk or threat from the uncongenial information. However, I also measured how often participants engage in this behavior to use as a potential moderator of my effects. Power may only influence people for whom this health issue is highly relevant, and therefore highly

potentially threatening. Those who do not engage in the behavior have no reason to avoid uncongenial information since they should not be threatened by it.

Additionally, even among those who engage in this behavior, it may also be important to draw attention to that behavior to arouse feelings of dissonance and get participants to feel threatened by the uncongenial or risk-confirming information. In order to determine if this is an important factor, I manipulated when participants completed the baseline measure of their behavior. Half of the participants completed the measure at the very beginning of the study, before the health message was introduced or power was manipulated. Reminding participants that they engage in this behavior before presenting them with some information which suggests that behavior is undesirable should arouse feelings of dissonance (e.g., Stone, Aronson, Crain, Winslow, Fried, 1994) and might motivate them to engage in more selective exposure (i.e., select more congenial information). This order also creates an untainted baseline measure of behavior given that it comes before the power manipulation.

However, asking these questions before the main dependent measure could make the study purpose too obvious and could create reactance or demand characteristics. Additionally, it is possible that soliciting behavioral reports before the dependent variable could produce a null effect. Making people think critically about their behavior could solidify how they respond to the dependent measure or induce a critical mindset that makes them even-handed in their information search, thereby negating any effect of the power manipulation. Counterbalancing the presentation of these questions allows me to look for the effect in both situations, however, I anticipate that this counterbalancing will not affect the overall results.

The present study used a message about the threat of pesticide exposure to investigate the impact of power on information selection. I hypothesized that high power would increase participants' tendency to engage in selective exposure (i.e., select more congenial information) relative to low power. As outlined above, this hypothesis is based on research showing that power increases certainty and increased certainty leads to greater selective exposure. However, since participants in the present study do not make an initial decision, "certainty" is harder to conceptualize here than it is in the traditional post-decisional context. Therefore, rather than certainty in an explicit decision, I assumed that power would produce enhanced confidence in participants' pre-existing attitudes (e.g., Briñol et al., 2007; DeMarree et al., 2014) and I measured this more general sense of confidence in their health. I also assessed perceptions of the quality and relevance of the headlines to determine if power impacted these judgments. I hypothesized that high power participants would rate congenial headlines as of higher quality and more relevant than uncongenial headlines to a greater extent than low power participants. This is because high power participants would be more certain in their belief or desired attitude that they are healthy so they would engage in more heuristic processing, using article position as a stronger cue to quality or relevance than low power participants. Finally, I assessed participants' threat management resources, predicting that power would be associated with greater resources and, if my alternative hypothesis is true, less selection bias.

Method

Participants and design. One hundred eighty-five[1] students were recruited from the University of Iowa subject pool (62.2% female; M_{age} = 19.63, SD = 2.69). Sample sizes for all studies were chosen to provide at least 80% power to detect a medium size effect on the basis of power analyses using GPower3* (Faul, Erdfelder, Lang, & Buchner, 2007). Participants were randomly assigned to one condition in a 2 (power: high or low) X 2 (counterbalanced order: report behavior first or last) between subjects design. All studies were run using Qualtrics (www.qualtrics.com).

Procedure. Participants were told that they were participating in two unrelated studies, one about perceptions of a controversial health issue and one about vividness in recalling previous experiences. At the beginning, half of the sample read about what pesticides are, saw a list of foods that are commonly contaminated, and were asked to indicate how often they consume these foods. Next, all participants read about a fictitious recent health controversy, namely, the threat that exposure to a relatively new pesticide, RU-76, potentially poses and told that they would be asked some questions about it later in the study. Before engaging in the selective exposure task, participants were told that they would complete the second study regarding vividness in recalling past experiences (i.e., the power manipulation, see below for more information). After completing this manipulation, participants were told that they would have the opportunity to read more

[1] Three hundred nineteen total participants were actually collected, but due to computer error, 134 of these participants did not receive either the power manipulation or the message about pesticides. These participants were excluded from the data, making the final sample size 185 participants.

about the pesticide controversy. At this point, they engaged in the information search task which involved selecting headlines they were interested in reading more about. Next, they made quality and relevance judgments for each headline and completed measures of certainty, risk perception, and threat management resources. Finally, they completed a manipulation check, the second half of the sample completed the consumption measure, and all participants were debriefed.

Materials.

Baseline consumption. With a short explanation that certain foods are more likely than others to be contaminated with pesticides, accompanied by a list of those foods (see health controversy below), participants reported on average how often they eat these foods on a seven-point scale (1 = *never (0 times)*; 7 = *extremely often* (*4 or more times a day)*). The wording of the anchors was slightly skewed so that even a response of 3 on the scale was equivalent to "sometimes" and 4 was equivalent to "frequently" to make most participants feel at risk. Given this, and that very common foods were listed, most people reported eating these items frequently (90.7% reported a 4 or higher on the scale; $M = 5.44$, $SD = 1.28$). Only 1 participant reported never eating any of these foods.

Power manipulation. Participants completed the essay writing task from Galinsky et al. (2003). This manipulation has participants write about a time that they either had power over another person (high power) or that another person had power over them (low power). Smith & Trope (2006) added additional instructions to this task to bolster the cover story that I adopted here. In their version of the task, participants are told that they are participating in a study about vividness in recalling previous experiences. They are asked to complete two writing prompts about specific experiences. The first prompt asks

participants to write about "a recent time or incident when you spent a lot of time outdoors" and is included only for the sake of the cover story, to make it seem like the writing task is truly independent from the other study. The second prompt contains the power manipulation from Galinsky et al. (2003). For both of these prompts, participants are asked to describe the experience in detail (what happened, how you felt, where you were, who you were with, etc.).

Health controversy. For the purposes of this study, I took a health concern that people are generally aware has some controversy surrounding it—the effects of pesticides—and exaggerated a specific threat that pesticides do actually pose using a fabricated, specific pesticide. Using exposure to pesticides as the threat meant that the message could be believably controversial as well as relevant to an average college student's lifestyle (given that they likely eat foods that could be contaminated). Therefore, participants were told that there is some evidence that a relatively new pesticide (RU-76) is potentially linked to a variety of cancers, but specifically bone cancer. They were also told that this claim is controversial and some people maintain that the pesticide is safe for human consumption. Since participants needed to feel threatened by this information, the message explained that this pesticide RU-76 has been widely used in farming in the last few years and therefore is commonly consumed. It listed several foods college students typically consume that are likely contaminated by this specific pesticide such as apples, tomatoes, coffee, corn, potatoes (including potato based foods such as french fries and potato chips), as well as meat (including beef, poultry, pork) and animal products (milk, butter, cheese), and even fish (which are exposed to pesticides when contaminated run-off enters bodies of water). The pesticide

was described as gradually building up in the body from prolonged consumption of these pesticide-contaminated foods so that it is something that even young people should be concerned about. Additionally, the message contained some factual information about bone cancer, highlighting threatening aspects of the information such as the low survival rate.

Information selection task. Participants were presented with the headlines of eight different articles about this topic on one screen. The headlines were presented in a random order for each participant. Half of these headlines suggested that the related article refuted the threat (i.e., congenial information). The other half of the headlines suggested that the related article provided evidence for the existence of the threat (i.e., uncongenial information). See Table 1 for the complete list of headlines used. Participants were asked to select between three to seven articles to read later in the study. A measure of each participant's selection bias was calculated by dividing the number of congenial articles selected by the total number of articles selected. This metric reveals what proportion of selections were congenial ones. A 50% value would indicate unbiased selection, meaning both congenial and uncongenial information were selected equally. Values greater than 50% indicate that participants were biased toward selecting congenial information while values below 50% indicate that participants were biased toward selecting uncongenial information.

Quality and relevance judgments. Participants rated the perceived quality of each article in a random order by responding to two items (Fischer et al., 2005; Fischer, Greitemeyer, et al., 2008), one assessing credibility ("How credible do you expect the information in this article to be?"), and one assessing importance ("How important do

you expect this information to be for learning about this controversy?") on seven-point scales (1 = *not at all*, 7 = *extremely*). They also rated the perceived relevance of each article to them personally on the same scale ("How relevant do you expect the information presented in this article to be to you personally?").

Certainty and risk perceptions. To assess general certainty, participants responded to two questions about their health, "How certain are you that you are in good health?" and "How certain are you that you are in poor health?" on seven-point scales (1 = *not at all certain*, 7 = *very certain*). Next, participants' specific risk perceptions were assessed with both a verbal and a numeric likelihood judgment item (e.g., How likely do you think you are to develop bone cancer from eating foods contaminated with this pesticide?).

Threat management resources. Threat management resources were assessed with a four item measure modified from Dwyer et al. (2015) to be relevant to the health issue at hand. These items were: "I personally have what it takes to deal with the news should I learn I am at elevated risk for bone cancer"; "I have the emotional help and support I need to deal with the news should I learn I am at elevated risk for bone cancer"; "I can remain calm in the face of the news should I learn I am at elevated risk for bone cancer"; and "I would cope poorly if I learned that I was at elevated risk for bone cancer" (reverse coded). These ratings were made on seven-point scales (1 = *strongly disagree*, 7 = *strongly agree*).

Individual difference measures. Participants also completed individual difference measures that could potentially affect this phenomenon including dispositional optimism (LOT-R, Scheier, Carver, & Bridges, 1994), the threat orientation scale (TOM,

Thompson & Schlehofer, 2008), the Behavioral Inhibition and Activation Scale (BIS/BAS, Carver & White, 1994), and the Generalized Sense of Power Scale (Anderson, John, & Keltner, 2012, see Appendix). The measure of chronic power status was included for exploratory reasons to examine if chronic power status predicts information consumption differently than state-level, manipulated power. In Study 4 I examine the impact of chronic power status more directly.

Manipulation check and debriefing. Participants responded to a manipulation check assessing the extent to which they currently felt powerful on a seven-point scale (1 = *not at all*; 7 = *very much).* They were also asked how powerful they felt in the experience they described at the beginning of the study on the same scale. Last, participants were debriefed and told they would not read the full articles from the headlines that they had selected. Emphasis was placed on the fact that RU-76 is not a real pesticide and the health controversy they read about was only loosely based on real information about pesticides. They were also offered factual information about the link between pesticides and cancer including a link to the National Institute of Health's webpage about the hazards that pesticides may pose.

Results and Discussion

Manipulation check. Feelings of power were assessed in three different ways at the end of the study. First, participants completed the Generalized Sense of Power scale (α = .82), then an item assessing how powerful they currently felt, and finally, an item assessing how powerful they felt in the experience they described at the start of the study. Previous research has shown that the Generalized Sense of Power Scale is not affected by power manipulations since it measures a stable, enduring, individual difference

(Anderson & Galinsky, 2006). Accordingly, participants' Generalized Sense of Power did not differ between the high and low power conditions, $t(175) = 1.67$, $p = .10$. Although not significantly different, the pattern of means was in the opposite direction of what might be expected. Participants in the low power condition reported a greater generalized sense of power ($M = 4.82$, $SD = .91$) compared to those in the high power condition ($M = 4.60$, $SD = .87$). Unexpectedly, high and low power participants also did not differ in how powerful they reported currently feeling, $t(179) = 1.41$, $p = .16$, and also showed the same reverse-pattern of means, such that low power participants ($M = 4.48$, $SD = 1.25$) reported currently feeling slightly more powerful than high power participants ($M = 4.21$, $SD = 1.27$). Given that these differences were not statistically significant I hesitate to draw conclusions on the basis of these numbers alone, but, it is possible that participants were displaying some reactance or that the effects of the power manipulation had simply worn off by this point in the study. In support of this possibility, when asked specifically about how they felt during the experience they described at the start of the study, high power participants reported feeling more powerful ($M = 4.66$, $SD = 1.52$) than low power participants ($M = 2.94$, $SD = 1.56$), $t(178) = 7.35$, $p < .001$), indicating that the manipulation was successful. The inter-correlations between these measures as well as the power manipulation are presented in Table 2. Finally, none of these measures of power were correlated with the main dependent variable, the selection bias index, described in more detail below (all rs < .10, ps > .21).

Counterbalanced order condition. Recall that I counterbalanced whether participants completed the baseline consumption measure at the start or at the end of the study. As a preliminary step, I examined whether this counterbalanced factor had a main

effect on any of the dependent measures by conducting a series of t-tests on these measures. Only three significant effects emerged. The first was on the time participants spent reading the pesticide message $t(183) = 1.99$, $p = .05$, such that participants who answered the baseline consumption question at the start ($M = 40.16$ seconds, $SD = 21.32$) read the message more quickly than those who answered the baseline consumption question at the end ($M = 53.14$ seconds, $SD = 55.01$). However, this effect is likely due to the fact that the message was one sentence longer for those who answered the consumption question at the end of the study because a definition of pesticides had to be included whereas those who answered the baseline consumption question at the start had already had pesticides defined for them.

The second significant effect was on participants' ratings of the perceived quality of uncongenial articles (measure described in depth below), $t(176) = 2.07$, $p = .04$. Participants who answered the baseline consumption question at the start of the study ($M = 5.11$, $SD = .72$) rated the uncongenial articles as of higher quality than those who answered the baseline consumption question at the end of the study ($M = 4.89$, $SD = .71$). Finally, the manipulation check assessing how powerful participants felt in the situation they wrote about differed by baseline consumption condition $t(178) = 2.31$, $p = .02$, such that participants who answered the baseline consumption question first ($M = 4.00$, $SD = 1.83$) reported feeling more powerful in their experience than those who answered the baseline consumption question last ($M = 3.39$, $SD = 1.66$). Given the lack of theoretical basis for these latter two effects and the large number of comparisons made, they are likely spurious. Therefore, because of the relative lack of differences and the absence of

effects on key variables (e.g., baseline consumption, selection bias), I will collapse across this factor for the remaining analyses.

Selective exposure. Participants selected anywhere from zero to eight articles to read, selecting 3.31 (*SD* = 1.02) on average. Breaking this down by article type, participants selected 1.70 (*SD* = .93) congenial articles (i.e., articles that refuted the link between pesticides and cancer) on average and 1.62 (*SD* = .88) uncongenial articles (i.e., articles that confirmed the link between pesticides and cancer) on average. To examine whether participants engaged in selective exposure overall, I created the selection bias index as described above by dividing the number of congenial articles selected by the total number of articles selected, creating an index of what proportion of article selections were congenial articles. A one-sample t-test with a test value of .5 (which indicates unbiased selection) revealed that overall, participants were unbiased in their selections (*M* = .51, *SD* = .24), $t(181) = .49$, $p = .62$. However, the more relevant analysis to my research question is to examine whether high and low power participants engaged in different levels of selective exposure. A t-test revealed a marginally significant effect of power on selection bias, $t(180) = 1.81$, $p = .07$, $d = .29$, such that high power participants were slightly more biased toward selecting congenial information (*M* = .55, *SD* .24) than low power participants (*M* = .48, *SD* = .25), directionally consistent with previous work showing that high power increases selective exposure (Fischer et al., 2011).

It is also possible that power could influence selection bias only among participants who frequently consume many of the potentially pesticide contaminated foods because these are the people to whom the health threat was most relevant. To examine whether participants' baseline consumption of pesticide contaminated foods

moderated the relationship between power and selection bias, I conducted a centered regression analysis where all predictor variables were centered (Aiken & West, 1991; all subsequent regressions utilize mean-centered predictors). Here, I used baseline consumption, power, and their interaction to predict selection bias (see Figure 2). However, no significant predictors emerged (all *b*s < .07, *p*s > .08). The lack of influence of baseline consumption may be due to the fact that the baseline consumption question was worded in such a way as to make most participants feel at risk and feel like they eat a lot of these potentially contaminated foods. It appears that this attempt to make participants feel like they eat a lot of these foods was successful as the mean response on the seven-point scale was 5.44, with a median and mode of 6. This may have created a ceiling effect with baseline consumption, preventing detection of moderation. Additional analyses exploring other potential moderators (e.g., chronic power, relevance) revealed no effects of note.

Perceived quality ratings. Since perceived quality was not assessed directly, but rather by combining perceived importance and credibility as in previous literature (Fischer, Greitemeyer, et al., 2008), I first created composite measures of perceived importance for the four congenial articles and then the four uncongenial articles. Then, I did the same for perceived credibility, creating an index for congenial and uncongenial articles separately. With these composite measures created, I averaged the measures of importance and credibility for congenial articles to form the index of perceived quality of the congenial articles and then similarly averaged the measures of importance and credibility for uncongenial articles to form the index of perceived quality for the uncongenial articles. Before examining whether power impacted the perceived quality

ratings, I explored whether these were associated with participants' selection bias. Perceived quality of the congenial articles was positively associated with selection bias (r = .21, p < .01) suggesting that, for the articles that confirmed the more desirable conclusion that pesticides are not related to cancer, there was a positive association between perceiving these articles as higher quality and being biased toward selecting them. However, given that this evidence is correlational, it is impossible to state directionality of this effect. Perceived quality of the uncongenial articles was not associated with selection bias (r = -.02, p = .81). For a complete description of how each of the dependent variables discussed here correlated with selection bias as well as the inter-correlations among these variables, see Table 3.

To determine whether the power manipulation and article type affected perceived quality ratings I conducted a 2 (power: high, low) X 2 (article type: congenial or uncongenial) mixed ANOVA with repeated measures on article type. There was no main effect of power condition F < 1, but there was a significant main effect of article type, $F(1, 175) = 102.98$, p < .001, η_p^2 = .37, such that participants rated uncongenial articles (M = 4.98, SD = .72) as of higher quality than congenial articles (M = 4.21, SD = .85). Although I had thought that the threateningness of the uncongenial articles might detract from peoples' quality perceptions relative to the congenial articles, it appears that participants still viewed the uncongenial articles as of higher quality. Given the novel stimuli I used here, it is possible that this pattern is idiosyncratic to these articles titles or even that the threateningness did actually detract from quality perceptions, but that I am unable to detect it here. For example, the headlines may have been rated as of even higher quality if they had been less threatening. Without collecting further data, this is

impossible to know. Therefore, I hesitate to draw broader conclusions about the relationship between perceived quality and the stance of an article on the basis of this main effect.

This main effect of article type was qualified by a significant two-way interaction between power and article type, $F(1, 175) = 4.14$, $p = .04$, $\eta_p^2 = .02$ (see Figure 3). Among both high, $F(1,175) = 28.54$, $p < .001$, and low power participants, $F(1,175) = 87.48$, $p < .001$, uncongenial articles were rated as of higher quality than congenial articles, but this effect size is larger among low power participants, $\eta_p^2 = .33$, than high power participants, $\eta_p^2 = .14$. In other words, low power participants perceived a greater quality disparity between the two types of articles than high power participants. This finding contradicts my original hypothesis that high power participants would display a greater quality disparity between congenial and uncongenial articles than low power participants. However, these results are consistent with the finding that low power participants engaged in less selective exposure. To elaborate, low power participants perceived uncongenial articles as of higher quality than congenial articles, and did so to a greater extent than high power participants. Thus, if article selection was driven by perceived quality, they would have chosen more uncongenial articles because they perceived them as being of higher quality. This would result in less bias toward the congenial articles, or less selective exposure overall. However, this implies a different route to high power participants engaging in more selective exposure than what I had originally hypothesized and might suggest that this pattern is actually driven by low power participants using article type as a stronger cue than high power participants. If

these participants see the uncongenial articles as of higher quality than the congenial articles, they will use that information to select which articles they would like to read.

Just like with selective exposure, it is possible that only participants who feel particularly threatened or at risk would show motivated reactions to the articles. Therefore, I also investigated whether baseline consumption moderated the relationship between power and perceived quality judgments. To do this, I created a perceived quality difference score by subtracting the perceived quality of the congenial articles from the perceived quality of the uncongenial articles. Positive numbers indicate that participants viewed the uncongenial articles as of relatively higher quality than the congenial articles while negative numbers mean that participants viewed the congenial articles as of relatively higher quality that uncongenial articles. This measure ranged from -1.88 to 4.63 with a mean score of .77 (*SD* = .98). The positive mean reflects the general finding that participants viewed the uncongenial articles more positively than the congenial articles. To determine if baseline consumption moderated the effect of power on this measure I conducted a centered regression using baseline consumption, power, and their interaction to predict the perceived quality difference score. Power emerged as a marginally significant predictor, $b = -.29$, $t(171) = -1.91$, $p = .06$, $r^2 = .02$, reflecting the significant interaction reported above. Since low power participants showed a greater perceived quality difference between the two types of articles, their difference scores were greater overall than high power participants. To answer the question of whether baseline consumption moderated this effect, I examined the main effect and interaction terms for baseline consumption. Baseline consumption did not exert a main effect or interact with power (all *b*s < .09, *p*s > .15).

I also thought it would be informative to examine the data broken down by which articles participants selected versus did not select, rather than on the basis of what is considered congenial versus uncongenial. This allows me to explore whether participants did select articles they perceived as being of higher quality and whether power moderated this effect. To do this, I calculated perceived credibility and importance ratings for the articles that each individual participant selected and did not select regardless of valence (i.e., congenial or uncongenial). In the same fashion as described above, I created the perceived quality ratings for these two groups of articles (selected and unselected) and conducted a similar 2 (power: high, low) X 2 (article choice: selected, unselected) mixed ANOVA with repeated measures on article choice and perceived quality ratings as the dependent measure. There was only a main effect of article choice $F(1, 179) = 12.75$, $p < .001$, $\eta_p^2 = .07$, such that the articles participants selected ($M = 4.72$, $SD = .87$) were rated as higher quality than the articles that participants did not select ($M = 4.45$, $SD = .79$). Neither the main effect of power nor the interaction were significant (Fs < 1), suggesting that power did not alter the quality perceptions of selected or unselected articles.

Perceived relevance ratings. Perceived relevance ratings were analyzed in the same way as perceived quality ratings. Composite measures of perceived relevance were created for the four congenial articles and the four uncongenial articles by averaging each participant's responses to these items. To determine whether the power manipulation and article type affected these ratings I conducted a 2 (power: high, low) X 2 (article type: congenial or uncongenial) mixed ANOVA with repeated measures on article type. There was only a significant main effect of article type on relevance ratings $F(1, 179) = 33.23$, $p < .001$, $\eta_p^2 = .16$, such that participants rated uncongenial articles ($M = 4.72$, $SD = 1.24$)

as more relevant to them than congenial articles (M = 4.26, SD = 1.18). This is consistent with the finding that participants also perceived these articles as being of higher quality, and indeed, perceived quality of congenial and uncongenial articles was positively correlated with relevance of these articles, (r = .46, p < .001; r = .41, p < .001, respectively, see Table 3). Neither the main effect of power nor the interaction between power and article type were significant (Fs < 1). Additionally, using the same method of analysis as described above, this effect was not moderated by baseline consumption (i.e., no significant predictors emerged; all bs < .20, ps > .11).

The same pattern of effects emerged when comparing the relevance ratings of the selected versus unselected articles. There was a main effect of article choice $F(1, 179)$ = 13.45, p < .001, η_p^2 = .07, such that participants rated the articles they selected (M = 4.59, SD = 1.28) as more relevant to them than the articles they did not select (M = 4.32, SD = 1.23) and no other effects emerged (Fs < 1).

Certainty. Recall that participants responded to two general certainty questions about their health: one about how certain they were that they are in good health, and one about how certain they were that they were in poor health. These items were significantly negatively correlated (r = -.50, p < .001), so I reverse scored the certainty that participants were in poor health and combined it with the good health item to create an overall measure of certainty that participants are in good health. Based on previous literature that found certainty in an initial decision mediated the effect of power on selective exposure (Fischer et al., 2011), I predicted that high power would make participants more certain in their existing belief that they are healthy as compared to low power participants. This certainty would then lead to greater selective exposure among

high power participants. Contrary to these predictions, certainty in good health did not differ by power condition, $t(181) = .89$, $p = .37$. Certainty was also not correlated with the tendency to engage in selective exposure (see Table 3 for more detail on how certainty correlated with the other dependent measures).

Again, it is possible that this effect may only emerge among those who are vulnerable to the health threat (i.e., those who report frequently eating many of the potentially pesticide contaminated foods). To examine whether baseline consumption moderated the relationship between power and certainty, I conducted a centered regression analysis using baseline consumption, power, and their interaction to predict certainty. Baseline consumption was a significant predictor $b = .15$, $t(177) = 2.64$, $p = .01$, $r^2 = .04$, indicating that those who reported eating more of the potentially contaminated foods felt more certain about their good health. While this may seem odd at first glance, many of the products that are typically thought of as being contaminated with pesticides are fruits and vegetables. Although the question listed a myriad of different foods, participants may have been primarily thinking about fruits and vegetables when responding. Therefore, those who eat lots of fruits and vegetables are also more likely to be certain that they are in good health. No other significant predictors emerged (all bs $< .20$, ps $> .19$). Both of these analyses illustrate that, contrary to predictions, power had no effect on certainty. Although this appears to contradict Fisher et al.'s (2011) findings, the differences in how certainty was assessed (i.e., certainty in the initial decision about the case versus general certainty about one's good health) likely account for the disparate findings.

An important caveat about how certainty was assessed is necessary to disclose. The items "How certain are you that you are in good (poor) health?" were answered on seven-point scales from "not at all certain" to "very certain." In retrospect, I realized that the wording of these items was somewhat ambiguous and entangles a belief about health status with confidence in that belief. For example, it is unclear whether a response of 1 or 2 on the question asking about certainty in good health reflects either the belief that the person is in poor health or the belief that they are in good health, but just are not very certain about that belief. Therefore, the results pertaining to the certainty items in this study should be interpreted cautiously. This applies to how certainty was assessed in subsequent studies as well given that the same response scale was used in each study.

Risk perceptions. Although I did not find an effect of power on certainty about participants' general good health, it is possible that power impacted participants' assessments of how vulnerable they are to this particular health threat, assessed with both a verbal and numeric likelihood judgment. First, examining verbal likelihood judgments, high and low power participants did not differ in how likely they thought they were to develop bone cancer, $t(182) = .32$, $p = .75$, (high power $M = 3.26$, $SD = 1.34$; low power $M = 3.20$, $SD = 1.35$). The same pattern emerged when examining participants' numeric likelihood judgments made on a 0 to 100 scale, $t(143.94) = .1.17$, $p = .24$, (high power $M = 24.82$, $SD = 21.64$; low power $M = 21.24$, $SD = 18.06$). To examine whether these effects were moderated by baseline consumption (i.e., to determine whether power only impacted risk perceptions among those who frequently eat the potentially contaminated foods), I conducted a centered regression using power, baseline consumption, and their interaction to predict verbal likelihood judgments and then a second regression with the

same predictor variables to predict numeric likelihood judgments. Baseline consumption was a significant predictor of verbal likelihood judgments b = -.18, $t(178)$ = -2.38, p = .02, r^2 = .03, indicating that those who reported eating more of the potentially pesticide contaminated foods thought they were less likely to develop bone cancer. Similar to the findings with certainty, this is likely due to greater fruit and vegetable consumption being associated with better health. No other significant predictors of verbal likelihood judgments emerged (all bs <.21, ps > .20). Additionally, no significant predictors of numeric likelihood judgments were found (all bs < 2.72, ps > .33). Therefore, in this study, power had no impact on participants' risk perceptions, assessed with either verbal or numeric likelihood judgments. To see how risk perceptions were related to the other dependent measures, see Table 3. A z-scored composite of the verbal and numeric likelihood judgments is reported in this table.

Threat management resources. Participants' ability to deal with the possibility of learning that they are at elevated risk for bone cancer was assessed with four items. These items were reverse coded where needed and averaged to create a composite measure of threat management resources (α = .74). Contrary to predictions, threat management resources also did not differ by power condition $t(181)$ = .66, p = .51, (high power M = 4.57, SD = 1.18; low power M = 4.69, SD = 1.14). I again examined whether baseline consumption moderated this relationship using mean-centered baseline consumption, power, and their interaction to predict threat management resources in a regression. None of the predictors were significant (all bs < .16, ps > .21), indicating that baseline consumption did not moderate the relationship between power and threat

management resources. Additionally, threat management resources were not associated with participants' selection bias (r = .02, p = .76, see Table 3).

Individual differences. The selection bias index was not correlated with any of the individual difference measures participants completed (i.e., the LOT-R, BIS-BAS, TOM, or the Generalized Sense of Power Scale; all ps > .35), nor were any noteworthy differences by power condition found. See Table 4 for a breakdown of how the TOM correlated with other main dependent measures of interest. The general pattern of these correlations will be discussed further in the general discussion section.

Summary of results. The primary purpose of Study 1 was to determine if power altered participants' tendency to engage in selective exposure when faced with potentially threatening health information. Unfortunately, the results revealed only a marginally significant, fairly weak effect (d = .29) for high power participants to engage in more congenial-biased article selection than low power participants. Although this result is in the predicted direction, the strength of the effect prevents me from drawing strong conclusions about the effect of power on selective exposure, particularly when paired with the evidence that power affected none of the predicted mediators. Indeed, certainty, risk perceptions, and threat management resources were not affected by power, nor were they correlated with selective exposure (ps >.35).

Given the lack of impact of the counterbalanced factor, it does not appear that making participants' own consumption behavior salient or not affected how participants responded to the selective exposure task. Additionally, baseline consumption did not moderate any of the tested relationships, revealing similar effects of power on the main dependent measures regardless of baseline consumption status. However, this lack of

moderation may have been due to a ceiling effect, given that I wanted most participants to report high consumption on this scale so that they might feel threatened by the uncongenial articles.

Participants viewed the uncongenial articles as of higher quality and more relevant to them than the congenial articles which probably contributed to the overall low level of selective exposure to congenial articles observed. Inconsistent with previous selective exposure research, which finds derogation of decision-inconsistent articles (Fischer et al., 2005), this effect is likely due to stimulus sampling issues and the particular article titles used. Overall, Study 1 does not provide strong evidence in support of my hypotheses regarding power and selective exposure.

CHAPTER 3

DOES THE INFLUENCE OF POWER ON SELECTIVE EXPOSURE GENERALIZE?

Study 1 addressed an important theoretical question (i.e., how does power impact information selection) in a way that allowed for a direct comparison of preferences for congenial versus uncongenial information. However, in the real world, people rarely encounter a neatly organized group of articles, half of which support one perspective and half of which support the opposing perspective. For example, when browsing through headlines at an online news outlet, there are many to choose from on a variety of topics, only some of which may deal with health related issues or be considered threatening. Similarly, other outlets such as the app "Flipboard" cull news articles from a range of topics and allow the user to flip through the headlines one at a time until they see something they are interested in and are willing to read more about. Therefore, Study 2 tested the same research question of whether people with varying levels of power differ in interest in reading potentially threatening health information in this slightly different context that has greater real world or applied relevance. Specifically, rather than choosing between articles that confirm or disconfirm a person's risk, participants were presented with an assortment of "news headlines" and asked to rate their interest in reading them to explore whether power affects a person's interest in reading potentially threatening health articles among many other articles.

Additionally, this study addressed a potential problem in Study 1. Previous research on selective exposure has shown that when the salient selection criteria is information direction (as opposed to information quality), it motivates participants to be

more even-handed in their search (Fischer, Schulz-Hardt, et al., 2008). Specifically, when there were only 2 pieces of information to choose from (one congenial and one uncongenial), or when the information was labeled with its direction without any content given, participants engaged in an unbiased search, selecting equal amounts of information on each side of the issue. Additionally, when instructed to explicitly consider whether the pieces of information support or contradict the initial decision, congenial information bias was completely eliminated, and in fact reversed in some conditions (people preferred more uncongenial information).

Therefore, although steps were taken to avoid an information direction focus (e.g., attention was not drawn to the fact that half of the headlines were risk-confirming and half were risk-disconfirming, the information was presented in random order), participants in Study 1 may have perceived the headlines in this dichotomous fashion and become motivated to engage in an unbiased search regardless of the threat posed by the uncongenial information or the power manipulation. Study 2 does not suffer from this problem as there are not two different sides to an issue being presented. Additionally, rather than using the episodic recall task again, I employed a different manipulation of power in this study.

Although this is a novel methodology, the possible outcomes are the same as Study 1, such that power may either decrease or increase rated interest in reading threatening health information. These competing predictions follow a similar logic as they did in Study 1. Feeling powerful may induce feelings of certainty, rendering these people less interested in threatening articles they believe are less personally relevant to them and biasing their perceptions of the information credibility. This would create a

pattern of results such high power participants would be more interested in reading the non-threatening articles as compared to the threatening articles to a greater degree than low power participants. However, if power acts as a buffer to threat or increases threat management resources, high power participants may be more interested in reading articles that are potentially threatening.

Method

Participants and design. One hundred forty-four participants were recruited from Amazon's Mechanical Turk and paid a small fee for their participation. The sample was 57.0% male and predominately White (80.3%) with a mean age of 32.98 (*SD* = 9.92). Participants were randomly assigned to either the high or low power condition.

Procedure. Participants were told that they were participating in a study about public perceptions of news articles and headlines. The study was described as having multiple parts. The power manipulation was introduced first and presented as part of the instructions for the second part of the study (described below). Next, all participants viewed 12 different health related headlines and rated their level of interest in reading each one. They also rated the perceived credibility and personal importance of each headline and completed measures of certainty and threat management resources. Finally, participants rated the perceived level of threat that each article posed, completed a manipulation check, and were debriefed.

Materials.

Power manipulation. At the start of the study, participants were assigned one of two tasks to ostensibly complete in the second half of the study. These assignments were said to be based on participants' responses to a bogus leadership questionnaire but were

actually randomly assigned. Participants were told that they would either *select* transcripts of radio news broadcasts for another participant to read (high power) or would *receive* assignments from another participant about which transcripts they would have to read (low power). Both of these possibilities were presented to participants, thereby highlighting their relatively powerful or powerless position. After receiving their assignments, participants reported which task they would be doing during the second half of the study.

Interest evaluations. Next, all participants were told that they would be looking through a variety of different health and lifestyle headlines and making some judgments about them. These headlines appeared one by one in a random order and participants rated their level of interest in reading each associated article on a seven-point scale (1 = *not at all interested*; 7 = *very interested)*. They were told that at the end of the study that the computer would randomly select two of the articles they rated as "high interest" for them to read. To control for some natural variation in interest in different news topics, all of the headlines covered health and lifestyle topics. Critically, six of the 12 headlines indicated that the article contained potentially threatening health information and six of the headlines described non-threatening health topics (see Table 5 for the full list of headlines). These headlines were informally piloted tested to ensure that they differed in perceived level of threat as well as rated by the participants on perceived threat (see "*threat assessment*" below).

Additional measures. After making the initial interest rankings for each headline, participants completed the same measure of perceived credibility from Study 1 about each headline. They also completed a measure of perceived personal importance

(How important do you expect the information presented in this article to be to you personally?) on a seven-point scale (1 = *not at all important*; 7 = *extremely important*). Given the nature of the study, certainty was assessed in a slightly different way than in Study 1. Certainty judgments targeted specific beliefs about the health threats presented in the six threatening articles. Assuming most participants would think they are not at risk for these health threats, the judgments asked about participants' certainty that they are not vulnerable. For example, "Please indicate how certain you are that you are NOT vulnerable to developing cancer from eating processed meats?" answered on a seven-point scale (1 = *completely uncertain*; 7 = *completely certain*). All headline judgments were presented in a random order. Participants also completed the same assessment of threat management resources from Study 1 which was modified to ask about general resources for coping with learning something negative about their health rather than learning they were at elevated risk for bone cancer.

Threat assessment. Participants rated the level of threat or dissonance that each headline posed by responding to the following two questions: "How uncomfortable might reading the information in this article make you feel?" and "How potentially concerning could the information you would read in this article be?" on a seven-point scales (1 = *not at all uncomfortable/concerning*; 7 = *extremely uncomfortable/concerning*). As this threat assessment variable was also used as a predictor when examining participants' interest ratings, it should ideally be unaffected by the power manipulation. Therefore, it was one of the last dependent measures participants completed.

Manipulation check. At the end of the study, participants indicated the extent to which they felt they had control over another person's fate after learning of their task

assignment on a seven-point scale (1 = *not at all in control*; 7 = *completely in control*). As in Study 1, they were also asked to indicate how powerful they currently felt and completed the Generalized Sense of Power scale for exploratory purposes. The other individual difference measures were not included given time constraints.

Results and Discussion

Manipulation check. Similar to Study 1, power was assessed in three ways at the end of the study, but in a slightly different order. First, participants reported how powerful they felt when they learned of their assignment, then how powerful they currently felt, followed by completing the Generalized Sense of Power Scale, $\alpha = .92$ (Anderson et al., 2012). For both the assignment specific question $t(139) = 12.24$, $p < .001$, and the current feeling question $t(140) = 6.32$, $p < .001$, high power participants ($M = 5.03$, $SD = 1.64$; $M = 4.47$, $SD = 1.39$ respectively) reported feeling more powerful than low power participants ($M = 1.88$, $SD = 1.41$; $M = 2.97$, $SD = 1.43$ respectively). However, as expected, the two groups did not differ when reporting their chronic power status, $t(139) = 1.69$, $p = .09$. Therefore, it appears that this novel power manipulation was successful. The inter-correlations between these measures as well as the power manipulation are presented in Table 6. Finally, none of these measures of power were correlated with the main dependent variable, the interest in reading difference score, described in more detail below (all rs < .11, ps > .21).

The influence of power on headline perceptions. Below I discuss how power influenced each of the different headline judgments. To see the inter-correlations between the different headline judgments as well as the other main dependent measures in this study, see Table 7.

Threat ratings. Recall that participants saw six headlines that were deemed to be threatening and six deemed to be non-threatening on the basis of informal pilot testing. To be sure that participants viewed the headlines in a similar manner, participants assessed the level of threat each headline posed by making two judgments about each headline: how uncomfortable reading the information in the article might make them feel and how concerning that information might be. To create an uncomfortable composite for threatening headlines I averaged together the uncomfortableness ratings for the six threatening headlines. I did the same for the six non-threatening headlines. I treated the concern questions the same, creating a composite measure of concern for the threatening headline and the non-threatening headlines separately. Then, to get a final index of how threatening each type of headline was perceived to be, I averaged the measures of uncomfortableness and concern for the threatening headlines and then for non-threatening headlines to create two different indices of perceived threat. To determine whether the two different types of headlines (threatening versus non-threatening) actually differed in the level of threat that they posed, I conducted a paired samples t-test. Consistent with informal pilot testing, participants perceived the threatening headlines (M = 3.63, SD = 1.19) as more threatening than the non-threatening headlines *(*M = 2.18, SD = 1.21), $t(134) = 14.94$, $p < .001$. Additionally, when examined on an item by item basis, the two distributions of means were entirely non-overlapping (see Table 5).

Participants completed these judgments at the end of the study, just before the manipulation checks and demographic questions, to minimize any potential impact of the power manipulation on participants' threat ratings. When examining perceived threat posed by the threatening headlines, there was no difference between the two power

conditions, $t(137) = .39$, $p = .70$ (high power $M = 3.71$, $SD = 1.15$; low power $M = 3.63$, $SD = 1.24$). However, power did impact participants' assessment of the non-threatening headlines $t(135) = 2.11$, $p = .04$, such that high power participants ($M = 2.41$, $SD = 1.27$) rated these headlines as more threatening than low power participants ($M = 1.98$, $SD = 1.12$). This main effect of power on threat ratings for non-threatening headlines, while unexpected, is not necessarily problematic. What is most important is the difference in threat perception between threatening and non-threatening articles. Although reported as a whole above, when broken down by power condition, both high $t(63) = 10.47$, $p < .001$, and low $t(70) = 11.02$, $p < .001$ power participants perceived the threatening articles (high power $M = 3.66$, $SD = 1.14$; low power $M = 3.61$, $SD = 1.24$) as more threatening than the non-threatening articles (high power $M = 2.39$, $SD = 1.28$; low power $M = 1.98$, $SD = 1.12$).

Interest in reading ratings. Splitting the headlines by type (threatening and non-threatening), I calculated the average interest for both types of headline. To answer the main research question of whether power alters interest in reading threating or non-threatening articles, I conducted a 2 (power: high or low) X 2 (headline type: threatening or non-threatening) mixed ANOVA with repeated measures on headline type. The main effect of power was significant $F(1, 137) = 5.24$, $p = .02$, $\eta_p^2 = .04$, such that regardless of headline type, high power participants ($M = 4.16$, $SD = 1.04$) were more interested in reading the articles than low power participants ($M = 3.75$, $SD = 1.07$). In other words, high power participants reported being more interested in reading these articles overall. This finding is not surprising given the general tendency for power to increase approach (Anderson & Berdahl, 2002). However, neither the main effect of headline type $F(1,$

137) = 1.87, p = .17, nor the interaction $F(1, 137)$ = .05, p = .82 were significant (see Figure 4). Therefore, power did not differentially affect interest in threatening versus non-threatening articles.

Another method of examining this research question is to compare the individual-level correlations between participants' interest in reading and their threat ratings for the 12 different headlines for high and low power participants. This method is more sensitive to individual level variation in the relationship between threat and interest than a mean-level ANOVA approach. To do this individual-level analysis, I calculated Fisher-transformed idiographic correlations for each participant across the 12 headlines between their interest and threat ratings. The average correlation, collapsing across power condition, was .20 (SD = .34). It is important to note that this correlation is positive. I would have predicted that greater perceived threat would have lessened interest in reading the article perhaps due to a motivation to avoid threatening information. However, it appears that the more threatening a headline was perceived to be, the more interested participants were in reading the associated article possibly because these issues seemed more important. Indeed, there was a strong positive relationship between overall perceived importance and overall perceived threat (r = .61, p < .001, see Table 7 for more on these inter-correlations). However, this relationship does not preclude finding a difference between how the high and low power participants reacted to the headlines. To test this hypothesis, I conducted an independent samples t-test on these idiographic correlations. Consistent with the null findings from the ANOVA, the magnitude of these correlations did not differ between high (M_{raw} = .18, SD = .34) and low (M_{raw} = .15, SD =

.34) power participants $t(134) = .55$, $p = .55$[2]. That is, the strength of the relationship between interest and threat did not differ between high and low power participants.

Finally, I also explored whether the group-level correlations between interest in reading and threat differed between power conditions. To do so, I calculated the correlation between interest and threat for each headline, among both high and low power participants, resulting in 24 different correlations. I submitted these correlations to a Fisher transformation and conducted an independent samples t-test on the correlations to determine if they were stronger in one power condition than the other. This test revealed no significant difference between the two power conditions $t(22) = .94$, $p = .36$, meaning that the correlations between interest and threat were roughly the same for high (M_{raw} = .32, SD = .18) and low power (M_{raw} = .25, SD = .17) participants. Additionally, the pairs of correlations (high and low for each headline) were coded to reflect whether the high (n = 9) or low (n = 3) power correlation was stronger in that pair. A binomial test on these data revealed that there was no systematic tendency for the correlations to be higher in one condition over the other, $p = .14$.

Reviewing the results from these three different methods of analysis it appears that contrary to my hypothesis, power did not differentially affect interest in threatening versus non-threatening articles.

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[2] Participants who gave the same response for each question (thus resulting in a 0 correlation) were removed before conducting the reported statistics (n = 8). Leaving these participants' correlations in as 0 does not change the results.

Perceived credibility ratings. Perceived credibility ratings were analyzed in the same manner as the interest ratings described above. To determine if power impacted how participants judged the credibility of threatening and non-threatening headlines, I conducted a 2 (power: high or low) X 2 (headline type: threatening or non-threatening) mixed ANOVA with repeated measures on headline type. The main effect of headline type was significant $F(1, 134) = 16.16$, $p < .001$, $\eta_p^2 = .11$, such that participants rated the threatening headlines ($M = 4.53$, $SD = .87$) as more credible than the non-threatening headlines ($M = 4.30$, $SD = .79$). Neither the main effect of power nor the interaction were significant (Fs < 1), suggesting that power did not impact participants' perceptions of headline credibility. Much like with interest and threat, I had expected the opposite relationship between credibility and threat, such that threatening articles would be perceived as less credible in an effort to discount them. However, this may be due to a stimulus sampling issue or methodology quirk. For example, it is possible that these particular headlines did not pose enough of an immediate threat to prompt greater disparagement among participants.

To examine the individual-level correlations between participants' credibility ratings and threat ratings I again calculated idiographic correlations across the 12 headlines. The magnitude of these correlations did not differ between high ($M_{raw} = .07$, $SD = .35$) and low ($M_{raw} = .13$, $SD = .27$) power participants $t(133) = -.98$, $p = .33$,

meaning that the strength of the relationship between credibility and threat did not differ between high and low power participants[3].

Finally, to explore whether the group-level correlations between credibility and threat differed between power conditions I used the same procedure described above with interest ratings. The t-test on these correlations revealed no significant difference between the two power conditions $t(22) = 1.22$, $p = .24$, meaning that the correlations between credibility and threat were roughly the same for high ($M_{raw} = .22$, $SD = .17$) and low power ($M_{raw} = .15$, $SD = .13$) participants. Additionally, a binomial test on the coded pairs of correlations revealed that there was no systematic tendency for the correlations to be higher in the high ($n = 7$) or low ($n = 5$) power condition, $p = .77$.

Again, the results from all three methods of analysis consistently show that power did not differentially impact participants' credibility ratings of threatening or non-threatening headlines.

Personal importance ratings. To explore the final judgment participants made about the headlines, personal importance, I submitted the data to the same analysis procedures described in the previous two sections. To determine if power impacted how participants judged the personal importance of threatening and non-threatening headlines, I conducted a 2 (power: high or low) X 2 (headline type: threatening or non-threatening) mixed ANOVA with repeated measures on headline type. Echoing the results with

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[3] Participants who gave the same response for each question (thus resulting in a 0 correlation) were removed before conducting the reported statistics ($n = 9$). Leaving these participants' correlations in as 0 does not change the results.

credibility ratings, the main effect of headline type was significant $F(1, 138) = 25.33$, $p < .001$, $\eta_p^2 = .16$, such that threatening headlines ($M = 3.75$, $SD = 1.14$) were perceived as more personally important than non-threatening headlines ($M = 3.39$, $SD = 1.16$). Here, the main effect of power was marginally significant $F(1, 138) = 3.47$, $p = .07$, $\eta_p^2 = .03$, such that high power participants ($M = 3.75$, $SD = 1.09$) rated the headlines (regardless of type) as more personally important than low power participants ($M = 3.41$, $SD = 1.03$). This effect is consistent with the finding that high power participants also indicated greater interest in the articles overall, perhaps because they saw them as more personally relevant overall. However, the interaction between power and headline type was not significant ($F < 1$). Therefore, my hypothesis that power would differentially affect how personally important participants judged the threatening versus non-threatening headlines was not supported.

Examining the individual level correlations between personal importance and threat, I found that the Fisher-transformed idiographic correlations did not differ in magnitude between the high ($M_{raw} = .23$, $SD = .37$) and low ($M_{raw} = .28$, $SD = .31$) power participants $t(133) = -.55$, $p = .58$[4].

Last, I submitted the group-level correlations between threat and personal importance to an independent samples t-test. This revealed no significant difference between the two power conditions $t(22) = -.22$, $p = .83$, meaning that the correlations

[4] Participants who gave the same response for each question (thus resulting in a 0 correlation) were removed before conducting the reported statistics ($n = 9$). Leaving these participants' correlations in as 0 does not change the results.

between personal importance and threat were roughly the same for high (M_{raw} = .45, *SD* = .20) and low power (M_{raw} = .48, *SD* = .30) participants. It is worth noting that these correlations are fairly strong. These strong correlations indicate that participants thought threatening articles were particularly relevant to them regardless of power status. Finally, a binomial test on the coded pairs of correlations revealed that there was no systematic tendency for the correlations to be higher in the high (n = 4) or low (n = 8) power condition, p = .39.

Overall, the results of all three methods of analysis converge to conclude that the power manipulation did not affect participants' ratings of personal importance for threatening or non-threatening headlines.

The influence of power on certainty and threat management resources. Moving away from judgments strictly about the headlines, I also explored if power impacted participants' feelings of certainty and their general threat management resources. Recall that certainty was assessed by measuring participants' certainty about their vulnerability to the six health threats mentioned in the threatening articles. To examine whether power impacted participants' general certainty about their vulnerability to the various threats presented in the six threatening articles, I created a composite measure of certainty by averaging the six certainty threat-specific items together. Certainty that participants were not vulnerable to these collective health threats did not differ by power condition $t(141) = .77$, p = .44, so it does not appear that power instilled a greater sense of certainty overall, at least as measured in this manner (high power *M* = 4.36, *SD* = 1.23; low power *M* = 4.21, *SD* = 1.19). I also explored whether power impacted the six certainty items separately. Only one significant effect emerged (all

other *p*s > .14). For the item assessing vulnerability to developing cancer from eating processed meats high power participants (M = 4.46, SD = 1.85) indicated that they were more certain they were not vulnerable to this threat than low power participants (M = 3.72, SD = 1.73), $t(141) = 2.46$, $p = .02$. However, this finding is likely spurious given the high number of comparisons made.

Similarly, I can explore whether power influenced participants' general threat management resources. To do so, I computed a threat management resources index by averaging the four items assessing the construct, reverse scoring where necessary (α = .74). Contrary to my prediction, but mirroring the results with overall certainty, threat management resources did not differ by power condition $t(139) = -.47$, $p = .64$. To see how certainty and threat management resources were related to the other dependent measures, see Table 7.

Other influences on interest. Given that power does not seem to have affected participants' perceptions of the headlines, it is useful to explore whether other variables (i.e., certainty and threat management resources) impacted headline perceptions. I will focus on interest in reading the different headlines as this was my main dependent measure. See Table 7 for more on the other headline judgments. Rather than analyzing two separate dependent measures, interest in threatening headlines and interest in non-threatening headlines, I wanted just one measure of interest that would capture participants' interest in threatening headlines relative to non-threatening headlines. Therefore, I created a difference score by subtracting the interest in non-threatening headlines from the interest in threatening headlines. This measure, which I will call the *interest bias index,* reflects how much more participants indicated interest in threatening

articles over non-threatening articles. Positive values indicate that they were more interested in threatening articles and negative values indicate that they were more interested in non-threatening articles. Values ranged from -2.5 to 2.67, with a mean of .10 (*SD* = .89).

To explore whether certainty was associated with this interest bias index, I correlated participants' overall certainty with the interest bias index. A significant negative correlation emerged (r = -.19, p = .03, see Table 7), meaning that greater certainty that participants were not vulnerable to these health threats was associated with lower scores on the interest bias index. In other words, there was greater interest in non-threatening articles among those who were certain they were not vulnerable to the threats described in the threatening articles. This relationship is logical since these participants likely thought the threatening articles were not relevant to them

The correlation between threat management resources and the interest bias index was not significant (r = -.02, p = .80, see Table 7) indicating that threat management resources were not associated with greater interest in one type of headline (i.e., threatening or non-threatening) in particular.

Summary of results. Study 2 extended the scope of the exploration into the effect of power on selective exposure by bringing it into a more real-world context, allowing participants to indicate interest in a variety of different health topics, some threatening, some not. Power increased participants' interest in reading articles, regardless of their valence, but did not differentially affect interest in threatening or non-threatening articles. This finding is consistent with the weak results of Study 1 which suggest that power may not influence information consumption when the valence of that information is known.

Also consistent with Study 1, power did not affect certainty judgments or threat management resources.

Participants were more interested in reading threatening articles and thought they were more credible and personally important than the non-threatening articles. Again, based on previous literature showing that congenial information is rated as of higher quality than uncongenial information (Fischer et al., 2005; Fischer, Schulz-Hardt, & Frey, 2008), I would have predicted that threat would have detracted from these attributes, but that does not appear to be the case. However, I am not claiming that threat will always increase these attributes. Given the novel stimuli I used, this effect may be limited to these particular headlines. Perhaps headlines containing more immediate threats would have elicited reactions consistent with prior research. This idea will be explored in further depth in the general discussion.

CHAPTER 4

THE INFLUENCE OF POWER ON INFORMATION AVOIDANCE

The previous two studies examined people's willingness to expose themselves to information they know to be congenial or uncongenial as a function of power status. In these situations, the headline informs the viewer whether reading it will make them feel good (risk-disconfirming or irrelevant) or bad (risk-confirming) about themselves. However, as outlined above, I am also interested in the role that power plays in decisions about whether to expose oneself to information or to avoid it when the valence of that information is unknown.

I hypothesized that feeling powerful will decrease information avoidance, or—put another way—increase willingness to learn information about the self with unknown hedonic consequences. There are several theoretically driven reasons for this hypothesis. The increased certainty and optimism that power instills could result in confidence that the information will be positive (or good news) which should make people more open to receiving it. Similarly, increases in threat management resources and perceived control could also encourage interest in learning the unknown information because people might feel more able to cope with it should it be negative. Finally, the increased approach orientation and focus on rewards that characterizes powerful people could also increase willingness to learn this uncertain information. Any one (or some combination) of these reasons could result in increased interest in information with uncertain valence among powerful individuals.

As is outlined in more detail below, information avoidance was operationalized in this study by measuring how interested participants were in receiving information that

may indicate they have sun damage on their skin and may be vulnerable to skin cancer. This is potentially threatening information that is relevant to a college sample.

Method

Participants and design. One hundred twenty-nine students were recruited from the University of Iowa subject pool. The sample was 54.3% male with a mean age of 19.28 (*SD* = 1.10). Participants were randomly assigned to either the high or low power condition.

Procedure and measures. Upon arrival, participants were told that they would be participating in two different studies. The first "study" contained the power manipulation, while the second "study" contained the measures of interest. Specifically, participants answered some questions about their previous level of ultraviolet (UV) exposure and were confronted with an opportunity to learn some information about their level of sun damage. After this, participants completed measures of threat management resources, perceived risk, certainty, and perceived control, as well as individual difference measures.

Materials.

Power manipulation. This study employed a role based manipulation of power in which participants believe they are participating in an experiment about creativity in the workplace that involves working with another person (cover story adapted from Guinote, 2007). Participants were run in sessions of two and if only one participant signed up or showed up the experimenter pretended there was another person in the next room who they would be working with. Participants completed the same bogus leadership questionnaire from Study 2. The computer "automatically scored" their responses and

informed them that they have more of the style of a manager (these people are good at telling others what to do) or of a subordinate (these people can easily work on tasks and follow instructions). In reality, these roles were randomly assigned. Participants were told that they would be working in pairs of one manager and one subordinate. The job of the subordinate would be to find solutions for problems and the job of the manager would be to judge how good the subordinate's solutions are. Once the participant was told whether they would be a manager or subordinate, they filled out a short questionnaire regarding the upcoming task with several items meant to bolster the cover story. Critically, they indicated whether they were assigned the manager or subordinate role, as well as the extent to which they believed they would be in charge of the situation compared to the other person on a seven-point scale. This served as the manipulation check for power.

Information avoidance. Upon completion of this questionnaire, the experimenter informed them that they would be completing the partner task at the end of the session and that they would finish up on the computer first with the second experiment. This "second experiment" contained the actual measures of interest and was based on a modified procedure from Dwyer et al. (2015). First, participants read a short description of what a UV camera is and saw a UV photo of a person with a moderate amount of damage to their face. Then, they answered some questions about their own level of sun exposure. This served as a cover for calculating their supposed level of skin damage as well as a measure of how threatened participants might be by the idea of receiving information that exposes their risk. Those who have engaged in more dangerous sun exposure should have more reason to be threatened.

Rather than receiving personalized numeric risk results, participants were given the opportunity to see a UV photograph of a matched peer whose skin damage profile is similar to theirs. Participants were told:

> Based on your responses to these questions, we have identified the likely amount of damage you might have. Would you like to see a UV photograph of a matched peer who has a similar skin damage profile as you to get a visual representation of the damage that has already been done to your skin? If you select yes, you will see the photo at the end of the study.

Participants responded on a dichotomous yes/no scale. To avoid a ceiling effect (such that everyone might be interested in seeing the photo), this message also contained a "disclaimer" that indicated that seeing these photos makes people aware of underlying skin damage that they were likely unaware of beforehand and that this experience can be unpleasant. Participants who choose not to see the UV photograph would be said to be engaging in information avoidance.

Threat management resources, perceived risk, and certainty. Threat management resources were assessed in the same way as in the previous studies with the items modified to be about the UV photo revealing serious skin damage. Perceived risk was assessed with numeric (0-100 scale), verbal (1 = *very unlikely*; 7 = *very likely*), and comparative (1 = *much less likely*; 7 = *much more likely*) likelihood judgments. These items asked participants how likely they think they are to develop (1) serious skin damage and (2) skin cancer in their lifetime. Participants also reported how certain they were that the UV photograph would reveal a lot or only a little skin damage with two

separate items (i.e., "How certain are you that the UV photo of a matched peer would reveal *a lot of* (*only a little*) skin damage." (1 = *not at all certain*; 7 = *very certain*).

Perceived control. To assess how much control participants felt they had over whether they will develop skin cancer, participants responded to four items modified from Kim & McGill (2011). Specifically, these items asked participants to indicate their level of agreement or disagreement with the following statements on a seven-point scale: "I believe I can effectively resist skin cancer", "Skin cancer has little chance of taking hold of me", "If I get skin cancer, I believe I could fight it off quickly", and "If I get skin cancer, it will not get the better of me."

Individual difference measures. Finally, participants completed three individual difference measures (i.e., BIS/BAS, TOM, and the Generalized Sense of Power Scale). Upon completion, participants were told they were not going to engage in the partner task and were fully debriefed.

Results and Discussion

Manipulation check. Shortly after receiving their role assignment, participants reported to what extent they believed they would be in charge of the situation during the upcoming task. Participants assigned to the manager role (M = 4.77, SD = 1.37) believed they would be more in charge than participants assigned to the subordinate role (M = 3.48, SD = 1.48), $t(127) = 5.12$, $p < .001$. However, when asked at the end of the study how powerful they currently felt, there was no difference between the two groups $t(127) = .05$, $p = .96$, suggesting that the power manipulation may have worn off by this point. As expected, high (M = 5.04, SD = .82) and low (M = 4.93, SD = .82) power participants also did not differ in their Generalized Sense of Power $t(127) = .77$, $p = .44$. The inter-

correlations between these measures as well as the power manipulation are presented in Table 8. Finally, none of these measures of power were correlated with the main dependent variable, information avoidance, described in more detail below (all *r*s < .12, *p*s > .18).

Information avoidance. Overall, a very small minority of participants (11.6%, *n* = 15) engaged in information avoidance by indicating that they did not want to see a UV photo of a matched peer. My primary research question was whether power impacted participants' decision to view this photograph. A chi square test of independence indicated that the number of people engaging in information avoidance did not differ by power condition, $\chi^2(1) = .73$, $p = .39$ (see Table 9 for raw numbers)[5]. This result is unsurprising given the overall low rate of information avoidance. Given the unequal response rate, the current study only had 48.6% power to detect an effect. The previous sample size had been calculated under the assumption that about 50% of participants would say yes and 50% of participants would say no.

Despite low statistical power, it is still important to examine if this effect was moderated by participants' reported risky sun exposure. Recall that participants answered questions about their previous sun exposure that served both as hypothetical grounds for finding a peer matched on skin damage as well as a measure of risky sun exposure behavior. The UV photo may be particularly relevant or threatening to those

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[5] Participants also completed an item asking them to report which role they had been assigned (i.e., manager or subordinate) shortly after learning their assignment. Three participants indicated that they did not remember and three indicated the incorrect assignment. Excluding these six participants from the analyses does not change the outcome.

who have engaged in risky sun exposure in the past and thus might anticipate a more damaged-looking photo. To create an index of risky sun exposure behavior I summed participants' responses to the four sun exposure questions so that with higher numbers indicated greater risky sun exposure. To examine whether the effect of power was moderated by previous risky sun exposure I conducted a centered logistic regression analysis using risky sun exposure, power, and their interaction to predict information avoidance. No significant predictors emerged (all *Wald* values < 1, *p*s > .34), indicating that risky sun exposure did not moderate the relationship between power and information avoidance, nor did risky sun exposure predict information avoidance independent of power. Therefore, it appears that risky sun exposure, at least as it was assessed here, does not impact information avoidance decisions. However, the lack of effect here may also be partly attributable to the low number of participants engaging in information avoidance. Additional analyses exploring other potential moderators (e.g., chronic power, perceived control) revealed no effects of note.

Other possible effects of power. It is also useful to explore whether power impacted the other variables that were measured in the present study. Some of these represent novel tests of the effect of power (e.g., threat management resources) while others serve as conceptual replications of effects already demonstrated in the power literature (e.g., perceived risk).

Threat management resources. I calculated a composite measure of the four threat management resources items in the same fashion as in previous studies (α = .78). Contrary to the hypothesis that power would increase perceived threat management

resources, reported resources were not different for high power (M = 5.74, SD = .90) versus low power (M = 5.81, SD = .80) participants $t(126) = .42$, $p = .68$.

Perceived risk. Likelihood judgments about developing serious skin damage as well as skin cancer were assessed with verbal, numeric, and comparative items, resulting in six items assessing risk. As these items hung together fairly well ($\alpha = .63$), I standardized them and created a z-scored composite measure of perceived risk. See Table 10 for descriptive means for each measure broken down by power condition. Previous research suggests that power should decrease perceptions of risk (Anderson & Galinsky, 2006). However, composite risk perceptions did not differ by power condition $t(123) = .33$, $p = .74$. Examining each measure of risk separately also revealed null results (all ps > .28).

Certainty. Certainty that the UV photo would show a lot or a little sun damage was assessed with two items. Given that these items were negatively correlated ($r = -.46$, $p < .001$), I reverse scored one to create a composite measure of how certain participants were that the UV photo would show *little* sun damage. Previous research suggests that power should increase feelings of certainty (Fisher, Fischer et al., 2011), however, the power manipulation did not impact participants' certainty that the UV photo would show little sun damage, $t(127) = .64$, $p = .52$. In other words, high (M = 3.84, SD = 1.22) and low (M = 3.70, SD = 1.31) power participants reported similar levels of certainty.

Perceived control. The four perceived control items were averaged to create a composite perceived control measure ($\alpha = .64$). Similar to the items described above, perceived control did not differ by power condition $t(126) = 1.73$, $p = .09$. Although not significantly different, the means were in the opposite direction of what would be

expected from previous research on power and control (Fast et al., 2009; Hsu et al., 2015). Low power participants (M = 4.74, SD = .98) reported slightly greater feelings of control than high power participants (M = 4.44, SD = .99). However, research on power and anthropomorphism may shed some light on this relationship. Kim and McGill (2010) found that when skin cancer was described with no anthropomorphic traits (as it was in this study), low power participants actually reported feeling more control over the disease than high power participants. These results are consistent with Kim & McGill's (2010) research and may lend more support to their findings.

Finally, I examined whether power impacted any of the individual difference measures that participants completed (i.e., Generalized Sense of Power, BIS/BAS, or TOM). High and low power participants did not differ in their responses to any of these measures (ps > .13).

Influences on information avoidance. Although power did not impact information avoidance in the present study it is useful to examine if any of the other measured variables were associated with information avoidance to replicate previous findings and potentially uncover new relationships. These relationships may be hard to detect given that only 11.6% of the sample engaged in information avoidance, but not impossible. See Table 11 for a complete list of the correlations between information avoidance and the main dependent measures as well as their inter-correlations. Examining these correlations in addition to the correlations with the individual difference measures (i.e., the BIS/BAS and TOM, see Table 12), only two significant relationships emerged, one which confirms previous research and one which is new. Threat management resources were significantly negatively correlated with information

avoidance (r = -.26, p < .01), such that greater threat management resources were related to less information avoidance (or, more information seeking). This replicates research by Howell and colleagues (2014) showing that greater threat management resources were associated with decreased avoidance of information about their health.

The novel relationship that emerged was a significant negative correlation between the reward responsiveness subscale of the BAS and information avoidance (r = -.23, p = .01). This means that people who are more activated by reward were less likely to avoid the information (i.e., more likely to indicate that they wanted to see the photo). This relationship makes sense if these participants viewed seeing the UV photo as potentially rewarding, but the pattern awaits replication.

Finally, I examined the inter-correlations between the TOM and the other measured variables to further explore any relationships that might exist there (see Table 12). As stated above, the TOM was not correlated with the main dependent measure, information avoidance, but did show other relationships worth noting. See the general discussion for further discussion of these relationships.

Summary of results. Study 3 transitioned to examining whether power impacts the second facet of information consumption, information avoidance. Overall, participants engaged in very little information avoidance, with only 11.6% of the sample declining to see a UV photo of a matched peer. Contrary to my hypothesis, but consistent with the lack of effect found on selective exposure, power did not affect participants' likelihood of engaging in information avoidance. Power also did not impact threat management resources, perceived risk, certainty, or perceived control. The only

variables found to be associated with information avoidance were threat management resources and the reward responsiveness scale of the BAS.

CHAPTER 5

DOES CHRONIC POWER STATUS INFLUENCE INFORMATION AVOIDANCE?

The final study in this series continued to examine the effect of power on information avoidance with some changes to maximize the external validity of this research and to give power the best shot at having an effect, namely, by examining chronic power status. By chronic power status, I mean a person's general sense of power that is relatively stable in contrast to the state-level, manipulated power that was explored in the previous three studies (Anderson et al., 2012). Understanding how chronic power status affects willingness to receive uncertain information is equally as important as understanding how temporary experiences of feeling powerful alter this behavior. Some people have occupations where they generally have higher positions of power, such as doctors or managers, while others occupy relatively less powerful positions. What impact does just going to work every morning have on how these people consume threatening health information, if any? If chronic power differences affect information consumption behavior even just in small ways, these differences could add up over a lifetime and could ultimately play a role in the health disparity between people of higher and lower socioeconomic status (and by proxy, high and low power). If higher power individuals are more willing to learn potentially negative information about their health such as diagnoses, they are more likely to receive the proper treatment. Therefore, in Study 4, I measured pre-existing power status rather than manipulating it to determine if chronic power levels are associated with people's tendency to engage in information avoidance in a different context than Study 3.

Additionally, measuring power, rather than manipulating it in this final study explores the possibility that chronic power could impact information consumption in a way that manipulated power does not seem to have done up to this point. It is possible that a more stable sense of high or low power would have a larger impact on information consumption than a transient power manipulation would.

In this study, participants read about a hypothetical genetic disease and indicated their willingness to learn if they carry the gene for this disease. The salience of participants' chronic power status was manipulated by having participants fill out a questionnaire about their power status either before or after responding to the scenario (i.e., the order manipulation). It is possible that this effect is stronger or only detectable when a person's chronic power status is activated (e.g., Fast et al., 2012). However, it would also be intriguing and relevant for external validity to discover that chronic power predicts information avoidance even when not explicitly activated. Regardless, I expected that participants with high chronic levels of power who are also reminded of that power before reading the scenario would be the most interested in learning the results of the genetic test.

Method

Participants and design. Given that a range of pre-existing power levels was needed, this study was conducted using MTurk rather than a college sample which tends to be more homogenous. Two hundred eighty-two workers were recruited and paid a small fee for their participation. The sample was 52.4% male and predominately White (75.3%) with a mean age of 36.61 (*SD* = 12.64). Upon consenting, participants were

randomly assigned to one of two order conditions (i.e., the power measure was completed before or after the main dependent measures).

Procedure and materials. All participants read a hypothetical scenario adapted from Yaniv et al. (2004) that described a fictitious genetic disease modeled on Huntington's disease. The instructions explained that although the presented disease is hypothetical, it is based on a real disease and that participants should respond to all questions as if it were real. It was described as follows:

> The terminal illness, Payne's disease, typically appears between the ages of 35 and 50. The disease causes brain degeneration, and hence progressive deterioration of physical and mental abilities over a period of 10-20 years, until death. The frequency of Payne's disease in the population is 1 in 10,000. The disease is caused by a genetic defect and can be detected before the onset of symptoms by taking a saliva sample. Individuals found to be carriers of the gene have a 100% chance of developing the disease. Those found not to be carriers of the defective gene will not develop the disease. There is no known treatment that can effectively prevent or cure the disease.

The main dependent variable was how interested participants were in learning if they are a carrier of the genetic marker for this disease. Specifically, participants read:

> The carriers of this gene can be easily identified with a simple salvia test. Assume that at your next doctor's visit, you had the option of taking or not taking the test. If you take the test, you'd learn whether you are a carrier. The doctor is leaving the decision to you. What would you do?

Participants responded on a four-point scale (1 = *would definitely not have the test done*; 4 = *would definitely have the test done*).

Half of the participants completed the Generalized Sense of Power Scale (Anderson et al., 2012, see Appendix) before reading the scenario while the other half completed it at the end of the study. This is an eight item scale meant to measure participants' beliefs about the power they have in relationships with others. Participants rate their level of agreement or disagreement to statements on a seven-point scale (e.g., "I can get people to listen to what I say"). Those who completed the power measure beforehand had their power status made salient before completing the measure of information avoidance while those who completed it afterwards did not have their power status made salient.

In addition to the single question assessing interest in having the genetic test done, participants responded to four items assessing information avoidance modified from Howell et al. (2014) on seven-point scales (1 = *strongly disagree*; 7 = *strongly agree*). For example, "When it comes to whether I am a carrier of this gene, ignorance is bliss."

Participants also completed measures of threat management resources, perceived control, and certainty about the possible outcome of the genetic test from the previous studies (modified to fit this decision scenario) as well as the TOM. Finally, participants also indicated the extent to which their work positions afforded formal authority and power on seven point scales (1= *not at all*, 7 = *a great deal;* Fast & Chen, 2009) as an exploratory measure to see if this variable impacts information avoidance better than the Generalized Sense of Power Scale.

Results and Discussion

Descriptive statistics and preliminary analyses. First, participants' chronic power levels were calculated by scoring their responses to the Generalized Sense of Power scale. These scores ranged from 1 to 7 (M = 4.83, SD = 1.17), were normally distributed, and did not differ by order condition, $t(275) = .42$, $p = .67$. Additionally, there was no main effect of order on any of the variables described below (ps > .18). Table 13 displays the correlations between each of the measures described in this section.

On the main dependent measure, *interest in testing*, 30.9% of participants reported that they would definitely or probably not have the test done (a 1 or 2 on the response scale), indicating that a minority of participants engaged in some extent of information avoidance.

Composite measures of threat management resources, perceived control, and information avoidance were created by averaging the four items assessing each of these constructs, reverse scoring items when necessary (α = .89, α = .81, and α = .89, respectively). The information avoidance scale was highly correlated with responses on the single item assessing interest in testing (r = -.84, p < .001; see Table 13) and yields the same pattern of results throughout unless otherwise noted.

Recall that certainty was assessed with two items, one asking how certain participants were that they do NOT carry the genetic marker, and one asking how certain participants were that they DO carry the genetic marker (1 = *not at all certain*; 7 = *completely certain*). These items were positively correlated (r = .15, p = .01), perhaps reflecting a general sense of confidence. I created a difference score by subtracting the

certainty that they do carry the genetic marker from the certainty that they do not to form a measure of how certain participants are that they do not carry the gene.

Finally, the two items assessing participants' power at work were highly correlated ($r = .91$, $p < .001$) and thus combined to form a composite score of power at work. This was significantly positively correlated with chronic power ($r = .30$, $p < .001$), but did not predict interest in testing better than chronic power and thus will not be discussed further (see Table 13).

The impact of power on interest in testing. My primary research question is how power might affect information avoidance or information seeking. In the present study, there are a few different ways this effect could manifest. First, it is possible that simply activating the concept of power (regardless of a person's own power status) could affect interest in testing. Therefore, participants for who completed the power measure before reading the scenario might react differently than those who completed the power measure after completing the other dependent measures. It is also possible that a person's chronic power status could predict their interest in testing such that higher power participants are more interested in testing. Finally, consistent with my hypothesis, it is possible that chronic power and order interact, such that a tendency for people with higher chronic power status, relative to those with low status, to show more interest in getting the genetic test is only or more apparent when power is made salient beforehand. To test these possibilities, I conducted a centered regression analysis using chronic power status, order, and their interaction to predict interest in testing. Neither chronic power status $b = .08$, $t(273) = 1.52$, $p = .13$, order $b = 0.03$, $t(273) = .23$, $p = .82$, nor their interaction $b < 0.01$, $t(273) = .01$, $p = .99$ were significant predictors of interest in testing

(see Figure 5). In other words, none of these power-relevant variables predicted participant's interest in testing. The lack of a relationship between chronic power status and interest in testing is consistent with the correlational evidence displayed in Table 13, which shows no relationship between these two variables.

Additionally, a centered regression analysis using chronic power status, order, and their interaction to predict responses on the four item information avoidance scale revealed no significant predictors (all *b*s < 0.10, *p*s > .33), consistent with these results for interest in testing.

In an effort to explore important moderators that might be relevant to or even obscure the above results, I conducted a series of centered regression analyses similar to the analysis described above but adding threat management resources, perceived control, and certainty that they do not have the gene as predictors in three separate regressions. These regressions revealed mostly null effects, with a few exceptions. I will briefly summarize these results here. Certainty that they do not have the gene neither independently predicted nor interacted with any other variables to predict interest in testing (all *b*s < .10, *p*s > .09). The regression with threat management resources revealed a significant main effect of threat management resources on interest in testing, $b = .37$, $t(262) = 9.32$, $p < .001$, $r^2 = .25$, but no other significant main effects or interactions (all *b*s < .09, *p*s > .29). Examining perceived control as a predictor resulted in a significant three-way interaction between perceived control, chronic power status, and order as a predictor of interest in testing $b = -.15$, $t(260) = -1.97$, $p = .049$, $r^2 = .01$. No other predictors were significant (all *b*s < .10, *p*s > .08). As can be seen in Figure 6, the relationship between chronic power status and perceived control appears to be different

based on the order of the dependent measures. Specifically, when power status was not made salient, there was no interaction between chronic power status and control b = .02, $t(260)$ = .42, p = .68 (top panel of Figure 6; Cohen, Cohen, Aiken, & West, 2003). When power had been made salient, there was a significant interaction between chronic power status and control b = -.13, $t(260)$ = -2.22, p = .03, r^2 = .02 (bottom panel of Figure 6), such that among participants high in control (+1 SD), chronic power status did not affect interest in testing b = -.07, $t(260)$ = -.64, p = .52, but among participants low in control (-1 SD), chronic power status did alter interest in testing b = .27, $t(260)$ = 2.43, p = .02, r^2 = .02. High power participants were more interested in testing than low power participants. This suggests that when people lack control, reminding them of their power status, assuming it is high, will help them seek out potentially threatening health information rather than avoid it. However, these findings should be viewed tentatively given the small effects and the myriad of tests that were conducted.

Despite the lack of a relationship between chronic power status and interest in testing it is worthwhile to test, in an exploratory fashion, for indirect effects of chronic power status. Of the potential mediators, examining threat management resources made the most sense given the correlational patterns (see Table 13). I predicted that greater power would be associated with increased threat management resources which would subsequently increase interest in testing. To explore this proposed mechanism, I conducted a mediation analysis using the PROCESS macro in SPSS with 10,000 bootstrap samples using Model 4 (Hayes, 2013, 2014). Chronic power level was the predictor, the composite threat management resources measure was the potential mediator, and interest in testing was the outcome variable. Although there was no direct

effect of power on interest in testing, (the 95% confidence interval did include zero, *B*(*SE*) = 0.003 (0.05) [-0.09, 0.10], the indirect effect was significant (the 95% confidence interval did not include zero, *B*(*SE*) = 0.10 (0.03) [0.03, 0.17]). However, given the high degree of overlap between the mediator (threat management resources) and the outcome variable (interest in testing; $r = .50$, $p < .001$), it is possible that the extent of the indirect effect is overinflated. Given this issue as well as the lack of a direct effect, these results should be viewed as preliminary and await replication.

Other possible effects of power. Although there was not a significant effect of power on interest in testing, there are theoretically supported reasons to assume that power may be linked to some of the other variables that are interesting to explore. Some of these relationships have not been empirically tested previously, and thus represent a novel contribution to the literature. Specifically, prior research theoretically supports the idea that chronic power status should be related to increased threat management resources, perceived control, and certainty that you do not carry the gene. The correlational evidence displayed in Table 13 supports these hypotheses. However, although these positive correlations are statistically significant, the relationships are weaker than predicted. To examine whether these relationships were different based on the order manipulation, I conducted three separate centered regression analyses on each of these dependent measures using chronic power status, order, and their interaction to predict each outcome variable.

Examining perceived control as the outcome variable, chronic power status was a significant predictor $b = .15$, $t(264) = 2.24$, $p = .03$, $r^2 = .02$, but order was not $b = .21$, $t(264) = 1.31$, $p = .19$. This significant main effect indicates that chronically higher

power participants reported greater control. However, this was qualified by a significant interaction between chronic power status and order $b = .43$, $t(264) = 3.13$, $p < .01$, $r^2 = .04$ (see Figure 7). For chronically low power participants (-1 SD), order of the dependent measures did not alter their perceived control, $b = -.29$, $t(264) = -1.29$, $p = .20$. However, among chronically high power participants (+1 SD), order did alter perceived control, $b = .93$, $t(264) = 3.30$, $p = .001$, $r^2 = .04$, with those who were not reminded of their power reporting greater control than those who were reminded. Contrary to what might be expected, these results suggest that chronic power levels might be more impactful when not explicitly referenced, at least among high power participants. However, since both chronic power and perceived control were measured it is impossible to state the directionality of this effect and this result must be interpreted with caution. For example, it could also be that answering the perceived control questions subsequently impacted how participants responded to the chronic power measure.

Examining threat management resources as the outcome variable, only chronic power status was a significant predictor, $b = .27$, $t(266) = 3.59$, $p < .001$, $r^2 = .05$, mimicking the correlational relationship between chronic power status and threat management resources. No other significant predictors emerged (all bs < .11, ps > .48). Finally, when predicting certainty that they do not have the gene, the same pattern emerged, with chronic power status as the only significant predictor of certainty, $b = .28$, $t(270) = 2.23$, $p = .03$, $r^2 = .02$. No other significant predictors emerged (all bs < .27, ps >.27).

Exploratory analyses.

Influences on interest in testing. Again, despite the fact that chronic power status was not associated with interest in testing, it is still an important outcome variable to examine. Information avoidance is still a pernicious problem in health settings, so future research can benefit from exploring the relationships between information avoidance and the other variables measured in this study. Examining Table 13 reveals a strong positive relationship between threat management resources and interest in testing, suggesting, consistent with previous work, that greater threat management resources are associated with decreased information avoidance, or increased interest in learning potentially threatening health information (Howell et al., 2014; Sweeny et al., 2010). However, perceived control was not associated with interest in testing, nor was certainty that participants do not carry the gene. Particularly for perceived control, a variable that has been tested previously (Melnyk & Shepperd, 2012; Yaniv et al., 2004), this lack of relationship was surprising. However, this may have been because the disease was described as completely uncontrollable both in terms of contracting it as well as curing it so questions assessing control may have been interpreted peculiarly. Finally, I conducted a centered regression analysis using threat management resources, perceived control, and certainty to predict interest in testing. Threat management resources $b = .37$, $t(261) = 9.75$, $p < .001$, $r^2 = .27$, and perceived control $b = -.08$, $t(261) = -2.00$, $p = .05$, $r^2 = .02$, were both significant predictors, although the effect of threat management resources was clearly stronger than the effect of perceived control. Certainty was not a significant predictor, $b < -.01$, $t(261) = -.08$, $p = .94$.

Threat Orientation Measure (TOM). I included the TOM on an exploratory basis to examine if how people respond to threats was related to the other measured variables, interest in testing in particular. As displayed in Table 14, interest in testing is significantly positively correlated with a control orientation and significantly negatively correlated with an avoidance denial orientation. That is, participants who are more control oriented and less likely to engage in avoidance are more likely to seek information rather than avoid it, consistent with theory (e.g., Sweeny et al., 2010). Although similar patterns were not observed in Study 3 with the measure of information avoidance (see Table 12) these results highlight the usefulness of exploring the TOM in relation to information avoidance in the future. Equally intriguing is the lack of relationship between interest in testing and the other two subscales, heightened sensitivity and optimistic denial. Are these facets simply not as important when it comes to making decisions about whether to seek or avoid potentially threatening information? Why would this be the case? Future research should try to replicate these results and explore why this particular correlational pattern appears. Correlations between the TOM subscales and other dependent measures are included in Table 14 for interested readers. The relationships between the TOM subscales and the other dependent measures are explored further in the general discussion. Although there are significant main effect relationships with chronic power, none of these orientations interact with power to predict interest in testing when entered into regressions (*p*s > .30).

Summary of results. Study 4 explored whether chronic power status, rather than manipulated power, was associated with information avoidance. Similar to Study 3, although not as extreme, a minority of participants engaged in information avoidance

(30.9%). I found no strong evidence that chronic power status predicts information avoidance. There was one significant interaction which suggested that high power might be linked to increased interest in testing among people low in perceived control when they have been reminded of their power status. However, this effect is small, $r^2 = .01$, and I hesitate to put too much emphasis on this finding.

Exploring whether power influenced other variables revealed that chronic power status was associated with increased threat management resources, but not certainty. Additionally, chronic power status was related to perceived control, but counterintuitively, only when it had not been made salient. In all likelihood, this effect was caused by answers to the perceived control questions impacting answers on the Generalized Sense of Power measure, given that it was completed last for these participants rather than an actual effect of chronic power status.

Threat management resources did predict information avoidance, consistent with previous work and the correlational evidence from Study 3, however, perceived control and certainty did not. Finally, the TOM revealed some interesting correlational patterns with interest in testing and further research should follow up on these promising relationships.

CHAPTER 6

DISCUSSION

With this project, I united two seemingly disparate literatures, selective exposure and information avoidance, under the umbrella of information consumption. My goal was to explore the role that feeling powerful might play in altering decisions about what health information to pursue. I hypothesized that feeling powerful would increase people's tendency to engage in selective exposure; that these participants would choose to read non-threatening health information over threatening health information. On the other hand, I predicted that feeling powerful would decrease people's tendency to engage in information avoidance; that these participants would choose to learn potentially threatening information about their health when confronted with the opportunity. Four studies produced mostly null effects of power on both selective exposure and information avoidance measures. These studies are summarized below.

Summary of Results

Studies 1 and 2 examined the effect of power on selective exposure. Neither of these studies provided robust evidence that power increased or decreased participants' tendency to engage in biased information seeking. In Study 1, high power participants were marginally more likely to engage in selective exposure to articles that touted a more desirable conclusion, namely that people should not be concerned about a potential link between pesticides and bone cancer. However, this effect was weak (d = .29) and power did not impact any of the measured potential mediators (i.e., certainty, risk perceptions, or threat management resources). Study 2 extended this investigation to a more real-world scenario where people perused multiple, unrelated health headlines. When rating

interest in headlines that differed in how much threat they posed, high power participants were more interested in reading articles regardless of their threat level, suggesting an overall approach orientation for high power participants. However, central to my research question, power did not differentially affect interest in threatening versus non-threatening articles. In other words, participant power level did not increase or decrease interest in articles based on the level of threat they posed. Replicating Study 1, power did not impact the potential mediators assessed in this study, certainty judgments or threat management resources.

Transitioning to the second facet of information consumption, information avoidance, I found similar null effects. Neither of the two studies examining information avoidance (Studies 3 & 4) provided robust evidence that power altered information avoidance behavior. In Study 3 the overall rates of information avoidance were very low (11.6%), making it hard to find statistically significant results. Regardless of power, participants engaged in similar (low) levels of avoidance when faced with information about their potential level of skin damage. There was also no evidence that power affected the measured potential mediators (i.e., threat management resources, risk perceptions, certainty, or control).

In Study 4, where power was measured rather than manipulated, I found no relationship between chronic power status and information avoidance in a hypothetical genetic testing scenario. There was some evidence that when chronic power status had been made salient, it impacted people who were low in perceived control. However, due to the high number of analyses performed this finding is tentative and needs to be replicated. Interestingly, despite the lack of relationship between manipulated power and

threat management resources in the previous three studies, chronic power status was positively associated with greater threat management resources. Additionally, in both Studies 3 and 4, greater threat management resources were associated with less avoidance, replicating previous research showing that threat management resources seem to buffer information avoidance (Dwyer et al., 2015; Howell et al., 2014).

Given the resounding null effects found in each of these studies, it appears that, with these power manipulations and these information consumption measures, the prognosis for the impact of power on information consumption is pessimistic. Below, I outline my rationale for this conclusion followed by a consideration of the potential limitations of these particular studies and potential issues with the scope of this conclusion. Finally, I discuss the evidence for what I did find and the value of uniting these two areas of research.

Perhaps Power Does Not Influence Information Consumption

Given the evidence presented, it is quite possible that social power does not influence information consumption in health contexts. The studies described here were well-designed, theoretically-grounded investigations of the influence of power on information consumption that failed to find any consistent effect. With the exception of Study 3, which was underpowered given the imbalance in responses, these studies were appropriately powered to find effects of power if any existed. I utilized previously validated, and commonly used, power manipulations (e.g., the Galinsky et al., 2003, essay writing task) and still failed to find an effect on previously employed dependent variables. Therefore, the most sensible conclusion is that social power does not substantially influence health information consumption.

It is not just the four studies presented here that lead me to this conclusion. As is described briefly in the introduction, I had previously conducted some research examining whether power influenced the processing of threatening health information, assessing dependent measures like risk perceptions, behavioral intentions, and defensive processing. While these dependent measures are slightly different from the ones examined in this project, both sets of studies describe how people react when confronted with threatening health information (i.e., are they persuaded by it, do they avoid it altogether?), and are conceivably affected by similar variables.

To provide a little more background on this previous project, I will describe one of the studies in more depth here. In this study, participants (N = 204) completed baseline measures of their current sunscreen use followed by the same power manipulation from Study 1 (i.e., the Galinsky et al., 2003, essay writing task). Then, they read a message describing skin cancer and the hazards that can come with too much sun exposure. Finally, they answered several dependent measures assessing their perceived risk for skin cancer, their behavioral intentions to increase their use of sunscreen, how severe they perceived skin cancer to be, how much control they thought they had to protect themselves, and how much defensive processing they engaged in. The data revealed almost entirely null effects of power with no clear, identifiable patterns. Just as with the studies described in the current project, this study employed what could be considered the standard power manipulation in the field along with previously used dependent measures and ultimately suggests that, despite theoretical reasons to believe that social power would impact these variables, in reality, this may not occur. Below, I

discuss some potential caveats to this broad conclusion in the form of specific study limitations and scope considerations.

Consideration of Limitations

There are of course limitations to how these studies were conducted that could have prevented me from finding effects. These include potential problems with how the power manipulations were executed, how the materials were designed, or how the dependent measures were assessed. There were a few small glimpses of a possible effect of power such as the marginally significant effect in Study 1 that could have potentially been stifled by certain aspects of these studies. I discuss these possibilities below and explain why I do not think these were fatal flaws.

One potential concern is that power was not appropriately manipulated despite "successful" manipulation checks. Recall that each study contained multiple ways of assessing participants' power: asking how powerful they currently felt, asking about their felt power in relation to the manipulation task, and measuring chronic power status. Someone could argue that the manipulation check used in Study 1 is not a true manipulation check. This item asks participants to think about the situation they wrote about for the prompt and indicate to what extent they felt powerful in the situation they described. This manipulation check, which is used frequently in the literature, (e.g., Guinote, 2007; Lammers et al., 2013; Scheepers, de Wit, Ellemers, & Sassenberg, 2012; Weick & Guinote, 2010), does not really assess whether power was activated by the prompt throughout the length of the experiment, but rather just asks, did you follow the instructions? This idea is supported by the fact that I found no influence of the power manipulation on the question "how powerful do you currently feel?" in Study 1.

Therefore, it is possible that power was not appropriately activated in Study 1. However, Studies 2 and 3 which employed role based manipulations, used better manipulation checks that assessed how much power or control participants felt they had during the upcoming task and were both successful. Additionally, this limitation cannot explain the results of Study 4 where power was measured rather than manipulated. These null results cannot be explained by a failure to properly manipulate power.

Aside from not influencing the explicit information consumption variables, power also had very little impact on the other variables that were assessed, even ones shown to be affected by power in previous research. This is most glaring for control and certainty, both of which have been previously shown to be increased by power (e.g., Fast et al., 2009; Fast et al., 2012; Fischer, Fischer et al., 2011). Is this evidence that the power manipulations were not successful? Not necessarily. First, these variables were assessed very differently from the way they were originally tested which could have altered the results. Second, the field of psychology, and science more generally, suffers from the file drawer problem, whereby failed studies are not reported or published. It is possible that there are many studies that have failed to find an effect of power on control and certainty that were never published and therefore, the null effects found here might actually fit with the broader set of studies on this topic. Therefore, it is hard to use the lack of an effect on these variables as evidence that the power manipulations failed.

A second concern addresses the novel materials that were used in Studies 1 and 2 to assess the impact of power on selective exposure. Since this research question had not yet been examined, a pre-existing set of headlines that would have suited my needs was not available. Therefore, I had to create my own materials and define what I thought

participants would consider threatening or not threatening. Although participants did not rate the headlines used in Study 1 on threat, participants' threat ratings from Study 2 indicated that they agreed with my pre-determined classification of which headlines would be considered threatening and non-threatening. I was also able to examine the data from Study 2 using the participants' self-rated threat values and still found no effect of power. However, even though participants agreed that the "threatening" headlines were more threatening than the "non-threatening" headlines, this may not have been enough. The information I confronted participants with in the lab, or online, may not have been relevant or urgent enough for them to be actually motivated to avoid it, making it impossible to detect an effect of power. Perhaps power only influences information consumption when participants are truly threatened by the material. Tentative support for this hypothesis comes from the significant three-way interaction in Study 4. Chronic power status only affected participants for whom their power status had been made salient and who felt relatively low control over the disease. Among these participants, people with higher chronic power were more willing to get the genetic test done and learn if they were at risk for this disease compared to those with lower chronic power status. This suggests that chronic power status may only impact information consumption when other resources are lacking (in other words, when they feel threatened).

Another quirk of these particular headlines was that in both Studies 1 and 2 the threatening headlines were perceived as of higher quality, more credible, and more relevant than non-threatening headlines. I hesitate to draw conclusions on the basis of these findings given the clear issues with stimulus sampling, but ideally, these headlines would have been equated on all characteristics except for threat. That way, any

differences in selection between high and low power participants could be isolated as caused by the different threat levels. However, these differences do not preclude detecting an effect of power, they just add noise to the data. This is part of the reason that I selected all health and lifestyle articles, to try to control for some of this inevitable noise. In reality, it would be hard to find headlines that were equated on everything but threat simply because motivated reasoning can alter the perceptions of these other characteristics (e.g., Ditto & Lopez, 1992, Ditto et al., 1998). However, using headlines that have been extensively pre-tested might be able to eliminate some of the noise and give power a stronger chance to have an effect on information consumption.

A question could be raised regarding the actual design of the selective exposure studies, since they did deviate from what is considered the "traditional" selective exposure paradigm where an initial decision is made and then information supporting or undermining that decision is selected. However, this paradigm is not a prerequisite for demonstrating selective exposure effects as there are some selective exposure studies that do not have participants make an explicit initial decision yet still show these effects (e.g., Reed & Aspinwall, 1998; Sawicki et al., 2013). I will also argue that the design of Studies 1 and 2 are more ecologically valid assessments of the effect than a more traditional selective exposure paradigm would have been and therefore a more valuable test of the current research question. Inserting a pre-information-search decision would have made the phenomenon under examination somewhat artificial and would not resemble anything that happens in the real world when people are browsing through health information. Even if I had done this and found significant results, this information

would be relatively useless for helping health communicators encourage people to expose themselves to threatening health information given the artificial context.

A final issue with the materials concerns the tests of information avoidance in Studies 3 and 4. Although I modified previously established paradigms to suit my purposes (Dwyer et al., 2015 and Yaniv et al., 2004, respectively), the participants in my samples engaged in fairly low levels of information avoidance regardless of power. While this result does not preclude finding an effect of power, this relatively low desire to avoid the information indicates that participants may not have seen the information as threatening enough to be motivated to avoid it. Particularly in Study 3, with the UV photograph of a matched peer, participants may have been more curious than anything and could have felt that even though the peer was supposedly matched, that the photograph would not reflect their true level of skin damage, thereby releasing themselves from personal threat. Of course, it would have been ideal to offer to take the participants' own photos like they did in the original study (Dwyer et al., 2015), but, because I did not have access to a UV camera, this was not an option.

Even in Study 4, where there was slightly greater information avoidance, this paradigm was a hypothetical scenario and thus did not pose a real threat. Had the information that was to be revealed been more potentially threatening, I likely would have observed more information avoidance overall, and perhaps would have found an effect of power. As I speculated above with selective exposure, it is possible that power only has an effect in truly threatening situations. This makes sense if the benefits of feeling powerful are only applicable when a person lacks resources to cope with the

information or control over the situation, both of which are more likely when the information is more threatening.

Some might question the use of a hypothetical disease which, if found to be a carrier of, the person has a 100% chance of contracting the disease which has no treatment or cure. This might seem to be an odd choice given that one hypothesis was that power would provide a sense of control over the situation, when this disease clearly allows for no control. The reasons for selecting this scenario, modified from Yaniv et al. (2004), were twofold. First, I was concerned that had the disease been treatable, I would have seen almost no information avoidance. As outlined in the introduction, the more controllable the outcome, the less likely people are to avoid the information because they know they can do something about it. Second, it is precisely these cases, where people do not have control, that power might be the most helpful at reducing information avoidance, as tentative evidence revealed in Study 4, especially when power can increase illusory control. Choosing to learn about your vulnerability to something that is easily treated should not be a hard decision for most people regardless of their power, as there is a clear and sensible path of action. However, when faced with learning about your vulnerability to something that does not have a clear and sensible path of action, people may need that extra support or sense of control that power can provide to face that information. Therefore, I felt that this scenario, which had been used previously to detect information avoidance, would provide a good chance for power to influence information avoidance.

Although there are certainly things that could have been done differently, as there are with any study, none of these limitations invalidate any of the current studies or undermine my overall conclusion.

Questions of Scope

Given the lack of influence that power had on information consumption in these studies, they raise the question: does power not influence information consumption at all, or did it just not influence information consumption in these specific studies? In other words, despite utilizing commonly-used manipulations and dependent measures, have I cast a rather narrow flashlight on the question of interest? I would argue that this investigation was far broader that the typical set of studies which generally focus on one small facet of a phenomenon since I have covered both selective exposure as well as information avoidance using four different ways to manipulate or measure power. However, there are of course questions that were not tested in the present project that could reveal an effect of power that limit the conclusions I am able to draw. Below I will address two main issues of scope: one concerning the independent variable, social power, and one concerning the dependent variable, health decision-making.

The first scope issue to consider is the role of social power as compared to personal power (see Lammers et al., 2009, for a review). As described previously, social power is primarily defined by the idea of influencing or controlling others and was the focus on the present project. Personal power is more about autonomy and independence from others – the ability to do what you want, when you want. It is possible that personal power might impact information consumption of threatening health messages, whereas social power might not. Lammers and colleagues (2009) posit that social power

highlights interdependence and responsibility to others while personal power highlights independence and freedom, so in situations where this distinction is relevant, the two can have different effects on outcomes. Perhaps social power would only impact information consumption in the way I have defined it here when responsibility to stay healthy for family is made salient.

Some evidence for the idea that personal power might influence information consumption comes from the autonomy and self-efficacy literatures. Self-efficacy is about the perception of one's *ability* to engage in certain behavior (Bandura, 1977), and has been linked to change or initiation of health behaviors in a myriad of research (Bandura, 2004; O'Leary, 1985; Rosenstock, Strecher, & Becker, 1988; Witte, 1992). Autonomy, part of self-determination theory, is seen as a basic psychological need to freely engage in behavior that is in line with internal values rather than acting due to pressure from others or a sense of obligation (Ryan & Deci, 2000). Clearly, this definition has some overlap with Lammers and colleague's (2009) definition of personal power, both highlighting the importance of independent action. Although research explicitly exploring autonomy in relation to selective exposure or information avoidance has not been conducted to my knowledge, there is evidence to suggest that autonomy may influence how people respond to threatening health messages (Churchill & Pavey, 2013; Pavey & Sparks, 2008; Williams et al., 2006). For example, in one study, priming autonomy and reading about the risks of alcohol consumption led to less subsequent alcohol consumption among those who were considered high-risk (Pavey & Sparks, 2012). Similarly, a different investigation found that greater measured autonomy was associated with greater motivation to reduce risky health behaviors because these

participants perceived the information as less freedom-threatening (Pavey & Sparks, 2010). It is possible that personal power would have similar effects on the information consumption variables tested here, encouraging people to seek potentially threatening information about their health rather than avoid it because they perceive their freedom as less threatened by it.

Further evidence that *personal* power may impact information consumption comes from the Fischer et al. (2011) paper that linked greater power to increased selective exposure. In these studies, the experimenters employed embodied manipulations of power—actions like making a fist or sitting in an open, expansive position, which they state was a manipulation of personal power rather than social power. This distinction makes sense since none of the manipulations in their studies involved another person, a key component of social power which is all about relational differences. This finding lends credence to the idea that personal power may influence information consumption variables even though social power did not. However, the autonomy literature and this set of studies by Fischer et al. (2011) lead to opposite predictions about the effects of personal power on information consumption. Although their dependent measures are different, if framed as willingness to consider threatening information and internalize that information, the autonomy literature would predict personal power would increase this, while the selective exposure and power studies would predict greater bias against threatening information. Perhaps autonomy and personal power are more different than their definitions let on or there is some moderator that can explain these seemingly disparate findings.

Regardless of how this would play out, it is important to highlight that the goal of this project was to test the effects of *social* power, not personal power, on information consumption. Given the wealth of literature on autonomy and self-efficacy, I felt that exploring the role of social power would be a more substantial contribution to the literature. Therefore, even if great evidence of personal power impacting information consumption were to emerge, the take home message of this particular project would remain unchanged—social power appears to have no effect on these variables of interest.

The second major issue of scope concerns the dependent measure I have explored here, decisions in a health context. It could be the content of these messages that precludes finding an effect of power. One thing that both the current studies and my prior studies have in common is that, due to the very nature of my research question, the information under consideration is personally-relevant threatening health information. It is possible that the personal relevance of these health messages makes participants immune to the influence of power. Classic attitudes research suggests that when an issue is highly personally relevant, participants are more likely to engage in systematic processing of a message (e.g., Petty, Cacioppo, & Goldman, 1981). Perhaps the personal relevance of health messages increases systematic processing so that decisions are not as easily influenced by irrelevant cues like power. However, systematic processing does not necessarily equal unbiased processing (e.g., Chaiken, Liberman, & Eagly, 1989, Fischer et al., 2005). Therefore, this hypothesis would require further testing, particularly since greater threat has been linked with greater selective exposure (Frey & Stahlberg, 1986), suggesting personal relevance might not always lead to unbiased information selection.

Relatedly, the theoretical reasons to expect power to affect information consumption may hold in other contexts, but it could be something specific to the personal-health context that creates these null effects. In other words, perhaps the effects of power do not translate in to a health context. Other research has been successful at showing that power can influence selective exposure in different domains (Fischer, Fischer, et al., 2011). Recall that these authors found evidence of increased selective exposure to information that supported participants' initial decision among high power participants compared to low power participants. However, in each decision case that they used, the content was hypothetical, impersonal, and business-oriented. These included decisions about extending an employee's contract, investing in one type of business over another, and voting for different political candidates. With the exception of the hypothetical scenario in Study 4, each of the studies presented here were real, personal, and health oriented. These differences could contribute to the disparate findings between the current project and Fischer and colleague's (2011) work.

These two main scope considerations do not invalidate the findings from the present studies, but serve as a reminder of the limits to the breadth of my main conclusion from this project. That is, it does not appear that *social* power alters how participants chose to consume *potentially threatening health* information. It is possible that refocusing the attempt to examine personal power or non-threatening health domains would change the outcome, but these represent different research questions entirely.

The Impact of Chronic Power on Threat Management Resources

Although I may have found overwhelmingly null effects of power on information consumption variables, one effect of chronic power stood out. In every single study

reported here, participants' chronic power status was significantly positively correlated with threat management resources (all *r*s > .22, see Tables 3, 7, 11, 13). At first glance, this relationship may not seem all that surprising or important given the general association between power and resources (e.g., Chance, 1967; Ellis, 1993; Keltner et al., 1998), however, upon further scrutiny, it becomes clear why this finding is noteworthy. First, although other resources have been studied (e.g., financial, physical, social), to my knowledge, this is the only investigation to assess the relationship between chronic power status and threat management resources in a health context. Second, even though the items used to assess threat management resources were similar across studies (all items adapted from Dwyer et al., 2015), they each asked about participants' ability to deal with a different health threat, one that was pertinent to the content of that particular study. Additionally, since Study 2 was not about a single health threat, it assessed participants' ability to deal with learning something negative about their health in general, demonstrating that this relationship exists both for different specific health threats as well as health threats more generally.

Last, this relationship consistently emerged despite no relationship between manipulated power and threat management resources. This finding was unexpected and perhaps says something important about the nature of threat management resources, or the impact of chronic power over situationally induced power. Although not related to every information consumption variable measured in the current set of studies, having greater threat management resources is generally seen as a good thing and associated with positive outcomes (Carroll & Shepperd, 2009). If people who are chronically in high power positions have more of this resource, this could contribute to the health

disparity between people of higher and lower socioeconomic status (as a proxy for high and low power). Additionally, the results of these studies indicate that manipulating power may not be enough to increase someone's threat management resources. Attempts to manipulate threat management resources directly may be more successful at increasing interest in threatening health information. Simply reminding participants of their chronic power status, assuming that status is relatively high, may also work to remind participants of their ability to deal with threats. Finally, it is important to remember that I did not assess interpersonal threat management resources, also known as social support, so these findings may not generalize to all types of threat management resources.

Recurring Relationships with the Threat Orientation Measure

The TOM was developed to assess the different ways in which a person might respond to a threat in their environment (Thompson, Schlehofer, & Bovin, 2006). Four main dispositional responses emerged from that research: control-based, heightened sensitivity-based, and denial-based, consisting of both optimistic denial and avoidance denial (Thompson & Schlehofer, 2008). People who display a control-based orientation tend to take preventative action to reduce their risk and have a strong sense of efficacy. Those who display a heightened sensitivity orientation typically experience a lot of anxiety, even when they have taken preventative action and tend to overestimate their risk for negative events. Denial oriented individuals tend to either be overly optimistic about their risk (optimistic denial) or tend to minimize or ignore their risk (avoidance denial). Given that these orientations seemed highly relevant to my research question, participants in each study, with the exception of Study 2, completed the TOM. Unfortunately, these different orientations were not correlated with the main dependent

variables, with the exception of Study 4 (see Study 4 results section for more detail), but they did display consistent correlations with some of the other dependent measures. Specific correlations for each study are presented in Tables 4, 12, & 14, but I will discuss the general patterns that emerged across studies here.

The most consistent pattern was the TOM's relationship to the measure of chronic power. Across all three studies chronic power status was significantly positively correlated with both the control and optimistic denial orientations and significantly negatively correlated with the heightened sensitivity and avoidance denial orientations. Although the relationship between power and the TOM has not been explored previously, these patterns are consistent with previously established effects of power. Specifically, power has been tied to increased feelings of control (e.g., Fast et al., 2009) and optimism (Anderson & Galinsky, 2006), which match the positive relationship with both the control and the optimistic denial subscale of the TOM. The finding that power is associated with decreased loss aversion and focus on rewards (Inesi, 2010) is consistent with the negative relationship between chronic power and heightened sensitivity, since these participants are actually displaying reduced sensitivity. Last, the positive association between power and approach (e.g., Anderson & Berdahl, 2002) is consistent with the observed negative relationship between chronic power and the avoidance denial subscale. Higher power participants are less likely to engage in avoidant denial of potential threats. The finding that chronic power status is associated with these different dispositional responses to threat is a novel contribution to this literature and suggests that despite the null findings from this project, that there may be value in pursuing how chronic power alters how people respond to threat.

The TOM also displayed a stable pattern of association with threat management resources across the three studies, mimicking the pattern of positive and negative relationships between the TOM and chronic power. This is perhaps not surprising given the strong relationship between threat management resources and chronic power outlined above. The strongest relationships were negative associations with heightened sensitivity and avoidance denial. That is, participants who reported greater threat management resources were less likely to report engaging in heightened sensitivity or avoidance denial responses to threat. On the other hand, greater threat management resources were associated with more reported use of control and optimistic denial strategies in Studies 1 and 4, but not 3. Again, these relationships are sensible and consistent with research on both concepts.

Finally, there was some consistency between the TOM and the different assessments of certainty. Across all three studies, the control subscale was positively associated with certainty, whether that be certainty in good health, certainty that their skin would show little damage, or certainty that they would not be a carrier of the genetic disease. This association makes sense given that these control-oriented participants would likely take steps to minimize their risk and therefore feel more certain they were not at risk. The other two relationships that only emerged in two of the studies were a positive association with optimistic denial and a negative association with heightened sensitivity. Those who are generally optimistic would feel certain they are not at risk while those who experience a lot of anxiety would be less certain.

Given the consistency of these patterns, it appears that there is value in including the TOM in research exploring power, threat management resources, and certainty.

Future research should perhaps explore the predictive value of these orientations for how people respond to threatening health messages.

The Value of Information Consumption as a Broader Category

Despite the pessimistic conclusions from this project about the influence of social power on information consumption, it still has a valuable contribution to offer: providing the novel lens of information consumption. This broader category highlights the need to compare and contrast these two literatures. Examined almost entirely in isolation up to this point, selective exposure and information avoidance can each provide a fresh perspective on the other, opening up further avenues for exploration. For example, new mediators can be tested that may not have been thought of otherwise. In the current project, the selective exposure literature gave me the idea to test certainty as a mediator of the effect of power on information avoidance and the information avoidance literature gave me the idea to test threat management resources as a mediator of the effect of power on selective exposure. Although neither of these effects worked out, thinking outside the box like this can be helpful when generating new ideas.

A similar logic can be applied to mechanism. As noted in the introduction, selective exposure has thus far been primarily explained by cognitive dissonance (Festinger, 1957; Jonas et al., 2001) or biased assimilation (e.g., Lord et al., 1979) while information avoidance is primarily explained by motivated avoidance of information that might threaten an existing belief, obligate action, or create unpleasant emotions (Sweeny et al., 2010). There is clearly some overlap between these explanations, but perhaps taking a cognitive dissonance lens to information avoidance would reveal some new

insights about this behavior. Or thinking about avoiding uncongenial information because of the action it might obligate as a reason for engaging in selective exposure.

The typical paradigms used to examine these two phenomenon are also quite distinct. Is there anything to be gleaned from one methodology that would be useful for the other? Or are their differences irreconcilable given the differences in the underlying phenomenon? Considering these similarities and differences in this manner can help further the understanding of both of these phenomenon.

Another way to approach studying these two phenomenon in tandem is to understand that they both fundamentally represent decisions about exposing oneself to threatening health information and therefore should be influenced by similar variables. In this case, I discovered that both seem to be similarly unaffected by social power. However, identifying variables that affect them differently is equally valuable. Uncovering these differences can help reveal boundary conditions and underlying mechanisms. I hope that pairing these two phenomenon under information consumption will prompt other researchers to explore them together in relation to other variables aside from power. Perhaps some other intervention has disparate effects on selective exposure and information avoidance which could reveal an important characteristic of both.

Conclusions

The wealth of research on the effects that social power has on our cognitions, decisions, and behaviors might leave a casual reader with the impression that there is nothing power does not influence (see Galinsky et al., 2015; Smith & Galinsky, 2010 for reviews). However, it is equally important to identify boundaries conditions of the influence of power, which I have done here. Although there are some limitations to these

studies and their scope, based on this project as well as my previous research on power and information processing, it appears that social power does not influence health information consumption in the way I have measured it here. This of course does not mean that the door is, or should be, shut on research exploring how social power relates to selective exposure or information avoidance, but that this research should be approached cautiously, perhaps with a theoretically important moderator in mind that was not discussed here. For example, a focus on personal power, rather than social power, might reveal more effects on information consumption than this research has. Indeed, the field could benefit from more research directly comparing personal and social power, as this area has been relatively understudied (see Lammers et al., 2009 for an exception). Additionally, given the findings with chronic power and its relationships with the TOM and threat management resources, following up these studies with chronic measures of power may also be a more fruitful pursuit. Finally, exploring information consumption in other domains aside from health could shed light on the broader effects of power on information consumption.

Regardless, given the publication bias that exists in the field, bringing attention to null effects like these is important in this academic climate and still represents a meaningful contribution to the literature. I employed power manipulations that had been used many times over to situations where I had theoretically-driven reasons to believe power would affect the outcomes and still found no effect. Perhaps I am missing some key moderating factor that would de-mystify these null results, but after so many studies consistently showing no effect, the logical conclusion is to admit that power may not be so all-powerful after all.

This null conclusion also has implications for some of the more applied avenues for this work. People are regularly faced with decisions about what health information to consume. Ideally, people everywhere would be interested in reading threatening information about their health and learning uncertain information such as their risk status for a disease or whether a mole is cancerous. Armed with this knowledge, people would be able to take the appropriate steps to improve or maintain their health. Unfortunately, this is not the way the world works as decisions and behavior are frequently fraught with biases and imperfections (e.g., Kunda, 1990). Therefore, understanding the impact of different variables on these decisions and searching for ways to improve them is an important task. The research presented here suggests that altering feelings of power may not be a great avenue to pursue when attempting to change how people respond to these situations.

Although it would have certainly been useful to discover that power is a potential intervention for increasing threatening information consumption, the conclusions of this project are not entirely pessimistic. Participants in these studies did not let an extraneous variable influence their information consumption decisions. Perhaps health communicators do not need to be concerned about the power status of their target audience or making them feel more powerful, but rather should be focusing their energy elsewhere. For example, in the last half decade, considerable media attention has been placed on a phenomenon known as *power posing* (Carney et al., 2010). Power posing proponents claim that simply standing in an open, expansive posture makes people embody power and all of the characteristics that go along with it to "significantly change the outcomes of their life" (Cuddy, 2012). However, this phenomenon has recently come

under fire for failure to replicate (Ranehill et al., 2015), and may in fact, not actually create the changes that have been touted. I bring this up as an example of the recent focus on the effects of power and the stock that the public has put into this phenomenon. Although the current research is clearly different from Carney and colleagues work in both manipulations and dependent measures, this project may provide additional evidence that the health community should not be focusing exclusively on power as an intervention method.

So, perhaps it does not matter whether the person browsing an internet news outlet for health information is the CEO of a Fortune 500 company or an entry-level employee in the same company. Or whether a person considering getting a mole screened for cancerous cells just finished disciplining their children or being disciplined at work. This research would suggest that their decisions about which articles to read or whether to get tested would not be affected by their different power statuses. Future research should continue to explore other factors that do influence these decisions to encourage people to consume potentially threatening information about their health.

APPENDIX

Generalized sense of power scale items from Anderson et al., 2011

Please rate your level of agreement with each of the statements below. (1 = *disagree strongly*; 7 = *agree strongly*)

In my relationships with others…

1. I can get people to listen to what I say.
2. My wishes do not carry much weight.
3. I can get others to do what I want.
4. Even if I voice them, my views have little sway.
5. I think I have a great deal of power.
6. My ideas and opinions are often ignored.
7. Even when I try, I am not able to get my way.
8. If I want to, I get to make the decisions.

TABLES

Table 1

Complete List of Headlines Used in Study 1

Congenial	Uncongenial
Evidence Linking Pesticides to Cancer Weak at Best	Research Suggests RU-76 is a Probable Carcinogen
Pesticide Contamination Not as Pervasive as First Believed	Proportion of Produce with Pesticide Residue Doubles in a Decade
RU-76 Verified (Again) as Safe For Human Consumption	Exposure to New Pesticide Increases the Risk of Bone Tumors
Exposure to Pesticides in Low Doses Not a Concern	New Study Reveals Mice Exposed to Pesticides 3X more Likely to Develop Cancer

Table 2

Inter-correlations between Power Measures in Study 1

Variables	1	2	3	4
1. Generalized sense of power	-	.38***	.05	-.13
2. Current power		-	.12	-.11
3. Power in experience			-	.48***
4. Power manipulation				-

*p < .05, **p < .01, ***p < .001

Table 3

Correlations between Main Dependent Measures in Study 1

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Perceived quality: congenial	-	.23**	.46***	-.70***	.46***	-.40***	.13	.00	.17*	.05	.21**
2. Perceived quality: uncongenial		-	.54***	.19**	.41***	.28***	.09	.18*	.04	.18*	-.02
3. Perceived quality: difference			-	-.27***	.22**	.55***	-.05	.13	-.11	.09	-.20**
4. Relevance: congenial				-	.64***	-.38***	.08	.10	.10	.05	.12
5. Relevance: uncongenial					-	.47***	-.06	.18*	.06	-.01	.05
6. Relevance: difference						-	-.16*	.10	-.05	-.07	-.08
7. Certain in good health							-	-.08	.18*	.26***	.05
8. Risk perceptions (composite)								-	-.22**	-.15	-.02

9. Threat management resources	-	.22**	.02
10. Chronic power		-	-.02
11. Selection bias index			-

Note. The difference scores for perceived quality and relevance were calculated by subtracting the scores for the congenial headlines from the uncongenial headlines. Positive values on these scales mean that participants thought the uncongenial headlines were of greater quality or more relevant than congenial headlines. Negative values on these scales mean that participants thought the congenial headlines were of greater quality or more relevant than uncongenial headlines.

*$p < .05$, **$p < .01$, ***$p < .001$

Table 4

Correlations between Threat Orientation Measure (TOM) and Main Dependent Measures in Study 1

	Threat Orientation Subscales			
Variables	Control	Heightened Sensitivity	Optimistic Denial	Avoidance Denial
Chronic power status	.30***	-.22**	.23**	-.20**
Selection bias index	-.05	-.02	.02	.07
Threat management resources	.22**	-.37***	.31***	-.29***
Certain in good health	.21**	-.23**	.19*	-.02
Risk perceptions (composite)	-.01	.03	-.22**	.01
Perceived quality: difference	.20*	-.02	-.17*	-.15
Relevance: difference	.16*	.02	-.14	-.08

Note. The difference scores for perceived quality and relevance were calculated by subtracting the scores for the congenial headlines from the uncongenial headlines. Positive values on these scales mean that participants thought the uncongenial headlines were of greater quality or more relevant than congenial headlines. Negative values on these scales mean that participants thought the congenial headlines were of greater quality or more relevant than uncongenial headlines.

*$p < .05$, **$p < .01$, ***p < .001

Table 5

Complete List of Headlines Used in Study 2

Non-Threatening	Threatening
Ten products to get you moving at work **1.97 (1.37)**	New research says processed meats cause cancer 4.36 **(1.51)**
Presidents and elected leaders have shorter lifespan than runners-up, study says 2.22 **(1.41)**	Sleeping late has a surprisingly negative impact on your life **3.65 (1.75)**
This illegal drug could provide relief for migraine sufferers **2.38 (1.44)**	Sierra Leona has 2nd Ebola case after epidemic believed to be over 3.33 **(1.44)**
Study finds more evidence that coffee can be a life-saver 2.08 **(1.39)**	10 Deadly diseases you thought were gone **3.67 (1.53)**
This year's flu vaccine is most effective in recent years **2.29 (1.51)**	How fermentation gives up beer, wine, cheese—and cancer? **3.77 (1.48)**
Ithaca unveils radical new strategy to combat intravenous drug use **2.33 (1.39)**	New bird flu virus kills woman in China **3.27 (1.45)**

Note. Mean (*SD*) threat level rated on seven-point scale indicated in bold after each headline. Bottom row indicates average threat level for each group.

Table 6

Inter-correlations between Power Measures in Study 2

Variables	1	2	3	4
1. Power in role assignment	-	.56***	.13	.72***
2. Current power		-	.33***	.47***
3. Generalized sense of power			-	.14
4. Power manipulation				-

*$p < .05$, **$p < .01$, ***$p < .001$

Table 7

Inter-correlations between Main Dependent Measures in Study 2

Variables	1	2	3	4	5	6	7
1. Perceived threat: difference score	-	.17	.28**	.29**	-.25**	-.05	.04
2. Interest in reading: difference score		-	.29**	.52***	-.19*	-.02	-.05
3. Perceived credibility: difference score			-	.34***	-.22*	.05	-.06
4. Personal importance: difference score				-	-.16	.00	.05
5. Certain NOT vulnerable					-	.35***	.32**
6. Threat management resources						-	.28**
7. Chronic power status							-

Note. The difference scores for perceived threat, interest, credibility, and importance were calculated by subtracting the scores for the non-threatening headlines from the threatening headlines. Positive values on these scales mean that participants thought the threatening headlines were higher on that dimension than non-threatening headlines. Negative values on these scales mean that participants thought the non-threatening headlines were higher on that dimension than threatening headlines.

*$p < .05$, **$p < .01$, ***$p < .001$

Table 8

Inter-correlations between Power Measures in Study 3

Variables	1	2	3	4
1. Power in role assignment	-	.06	.06	.41***
2. Current power		-	.54***	.01
3. Generalized sense of power			-	.07
4. Power manipulation				-

*$p < .05$, **$p < .01$, ***$p < .001$

Table 9

Number of Participants Indicating Whether They Would Like to See the UV Photo of a Matched Peer in Study 3

Power Condition	Response	
	Yes	No
Low	55	9
High	59	6
Total	114	15

Table 10

Means and Standard Deviations for Perceived Risk Measures for Study 3

	Power Condition			
	Low		High	
Likelihood judgment	Skin Damage	Skin Cancer	Skin Damage	Skin Cancer
Verbal (1-7 scale)	4.03 (1.59)	3.31 (1.55)	3.89 (1.48)	3.37 (1.52)
Numeric (0-100 scale)	38.63 (22.24)	28.30 (20.21)	37.31 (21.32)	30.89 (20.54)
Comparative (1-7 scale)	3.70 (1.49)	3.44 (1.48)	3.43 (1.33)	3.32 (1.35)

Table 11

Inter-correlations between Main Dependent Measures in Study 3

Variables	1	2	3	4	5	6
1. Chronic power status	-	-.12	.34***	.03	-.09	.11
2. Information avoidance		-	-.26**	-.14	-.07	.05
3. Threat management resources			-	.22*	.02	-.01
4. Perceived control				-	-.35***	.09
5. Perceived risk (composite)					-	-.50***
6. Certain have little damage						-

*$p < .05$, **$p < .01$, ***$p < .001$

Table 12

Correlations between Threat Orientation Measure (TOM) and Main Dependent Measures in Study 3

	Threat Orientation Subscales			
Variables	Control	Heightened Sensitivity	Optimistic Denial	Avoidance Denial
Chronic power status	.05	-.38***	.21*	-.25**
Information avoidance	-.09	.13	.02	.12
Threat management resources	.16	-.38***	.14	-.41***
Perceived control	.21*	-.15	.21*	-.10
Perceived risk (composite)	-.23*	-.14	.04	-.02
Certain have little damage	.21*	.03	.06	-.06

*$p < .05$, **$p < .01$, ***p < .001

Table 13

Correlations between Main Dependent Measures in Study 4

Variables	1	2	3	4	5	6	7
1. Chronic power status	-	.30***	.09	-.06	.22***	.14*	.14*
2. Power at work (composite)		-	-.10	.14*	.01	.15*	.03
3. Interest in testing			-	-.84***	.50***	-.03	.03
4. Information avoidance scale				-	-.58***	.05	-.09
5. Threat management resources					-	.17**	.09
6. Perceived control						-	-.04
7. Certainty do not have gene							-

*$p < .05$, **$p < .01$, ***$p < .001$

Table 14

Correlations between Threat Orientation Measure (TOM) and Main Dependent Measures in Study 4

	Threat Orientation Subscales			
Variable	Control	Heightened Sensitivity	Optimistic Denial	Avoidance Denial
Chronic power status	.30**	-.25**	.18**	-.18**
Interest in testing	.16**	-.11	-.05	-.53**
Information avoidance scale	-.17**	.20**	.04	.61**
Threat management resources	.13*	-.41**	.24**	-.53**
Perceived control	-.05	-.04	.25**	.22**
Certainty do not have gene	.18**	-.31**	.22**	-.13*

*$p < .05$, **$p < .01$

FIGURES

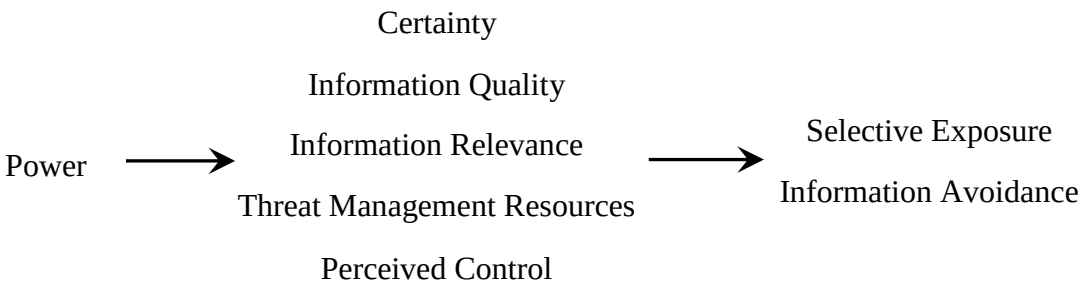


Figure 1. Conceptual model of all potential mediators measured in the current studies.

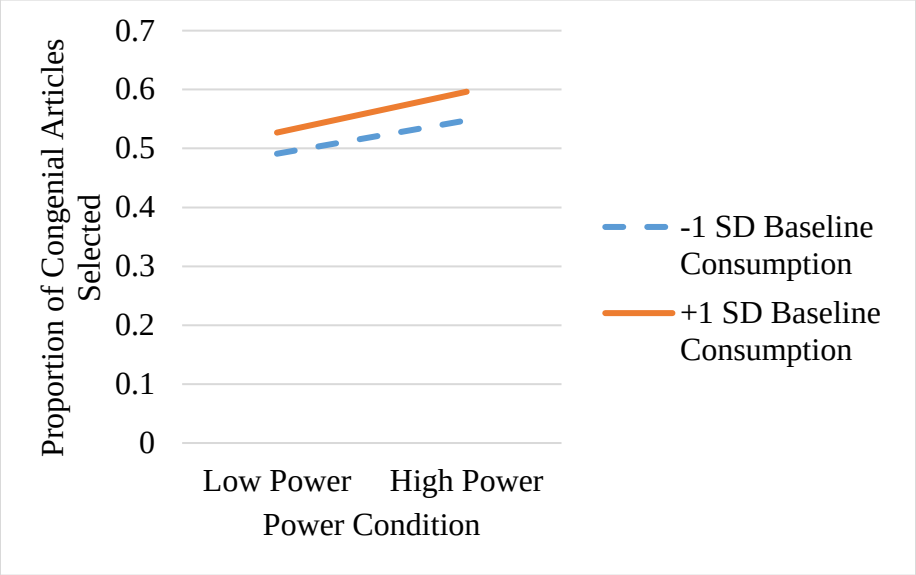


Figure 2. Effect of power and baseline consumption on selective exposure bias in Study 1. No significant effects found. Unbiased selection is indicated by the .5 mark.

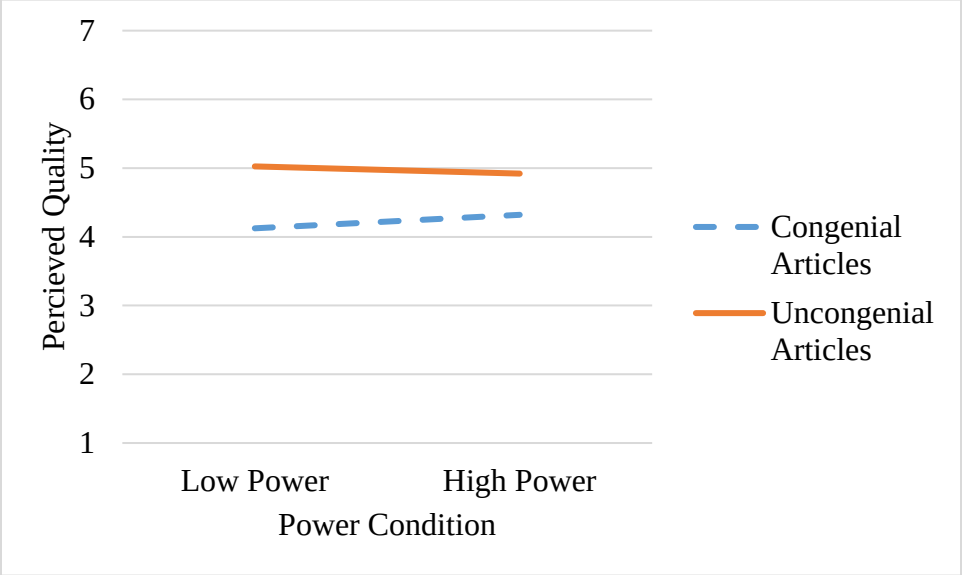


Figure 3. Interaction between power and article type on perceived quality in Study 1. Low power participants display a greater difference between their quality judgments of congenial and uncongenial articles than high power participants.

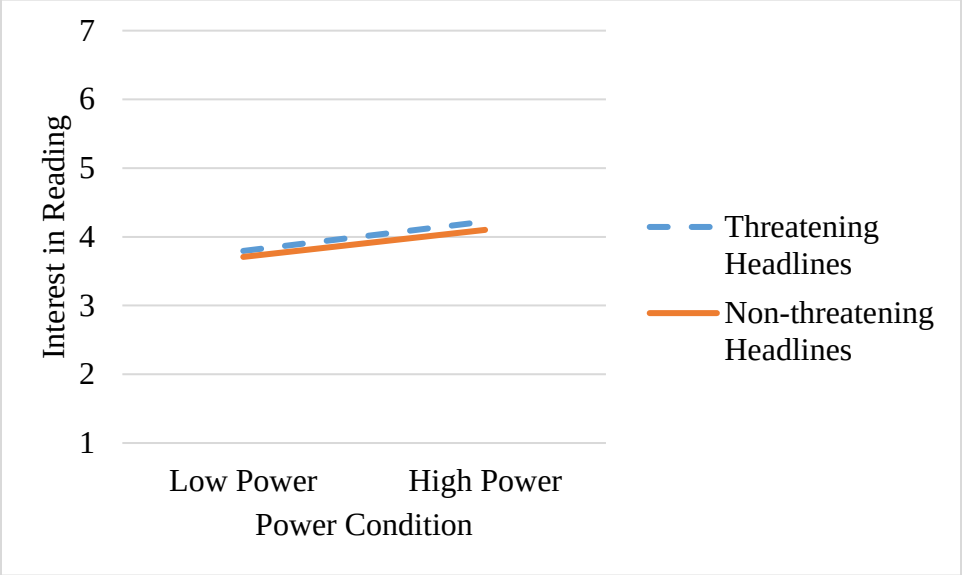


Figure 4. Interest in reading each type of headline broken down by power condition in Study 2. High power participants were more interested in reading articles regardless of whether they were threatening or not.

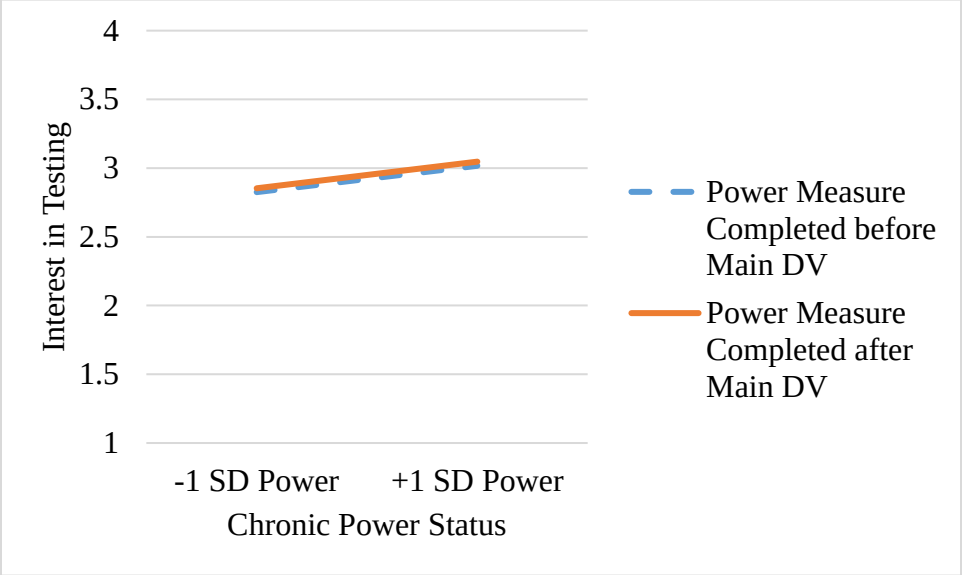
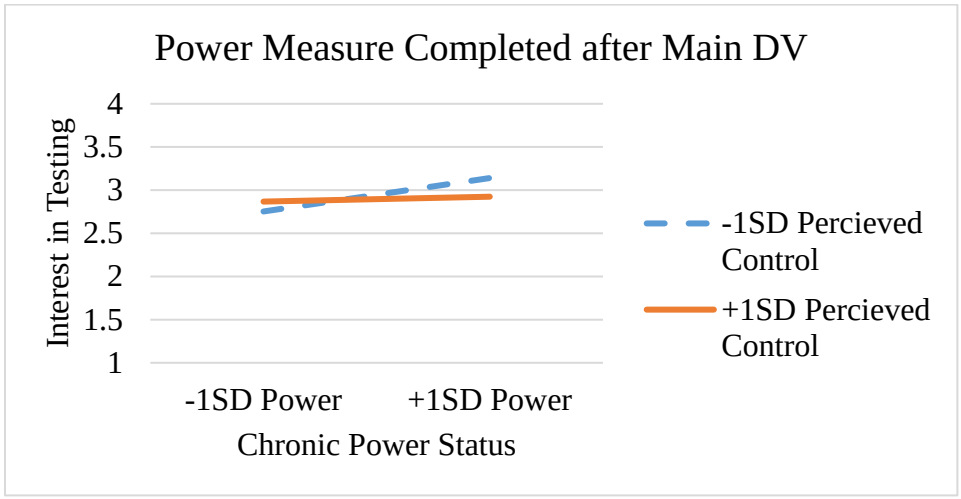


Figure 5. Effect of chronic power status and order condition on interest in testing in Study 4. No significant effects found.



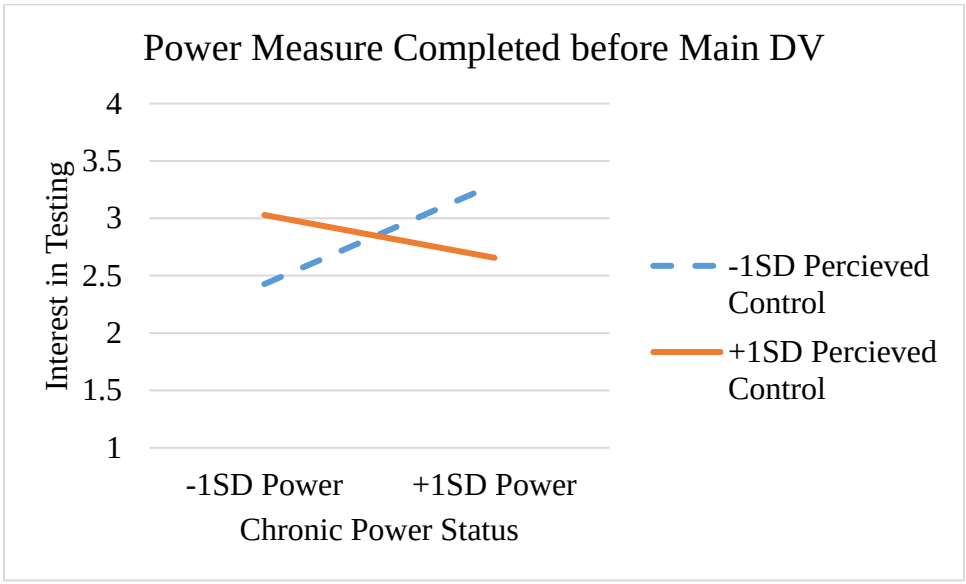


Figure 6. Three-way interaction between chronic power status, perceived control and order condition in Study 4. When the power measure was completed before the main dependent measure (i.e., chronic power status was salient), interest in testing among participants who were low in perceived control was impacted by their chronic power status. Participants high in chronic power were more interested in testing than those low in chronic power.

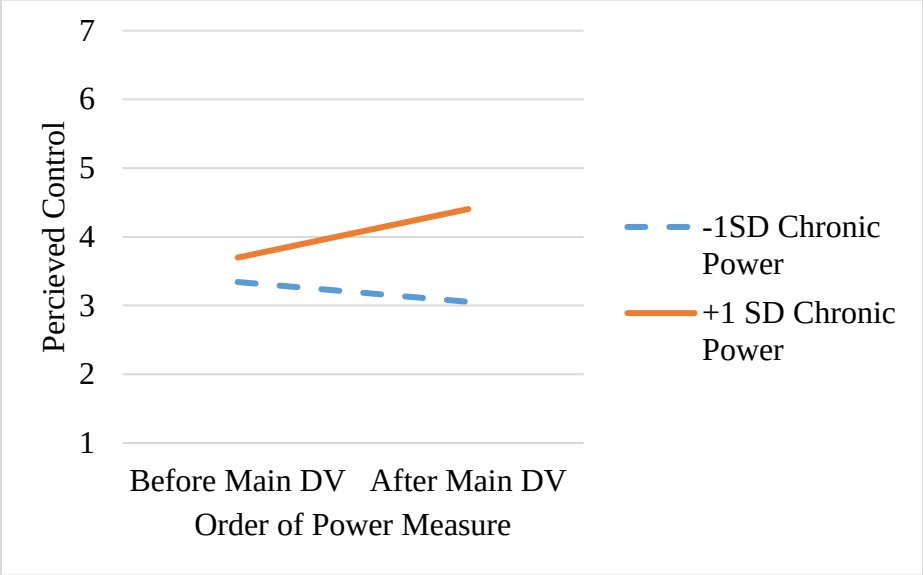


Figure 7. Interaction between chronic power status and order condition to predict perceived control in Study 4. Chronic power status was positively associated with perceived control only when participants had not been first reminded of their power.

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