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Information Avoidance in Risky Financial Behavior

Shannon Foglia

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Bryant University
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INFORMATION AVOIDANCE IN RISKY FINANCIAL BEHAVIOR

A Thesis in Communication
by
Shannon Foglia

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Master's Committee Page

The thesis of Shannon Foglia was reviewed and approved by the following:

Chris R. Morse

Thesis Adviser

Associate Professor of Communication

Wendy Samter

Associate Dean, College of Arts and Sciences

Professor of Communication

Julie E. Volkman

Assistant Professor of Communication

Abstract

Maxing out credit cards, spending savings accounts, and only paying off the credit card minimum each month are all examples of risky financial behaviors that tend to get college students into debt. These risky choices can stay with a student long after college, making them unable to buy a home or achieve financial independence. As one of the last taboos, personal finances are rarely a topic of conversation among students and their social networks. This investigation uses the Theory of Motivated Information Management to understand what makes college students avoid information and communication regarding personal financial behaviors. Results showed that the TMIM model with the addition of guilt is useful in understanding information avoidance on personal financial behaviors and provides direction for how to induce communication among college students and their social networks on personal financial decisions.

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Literature Review

Many Americans of every age, race, and sex struggle with personal finances. Specifically, they struggle with paying off debt, planning for the long term, saving, investing, and living within their means. A study published in September 2017 by the United States Federal Reserve shows that over 77% of Americans hold some kind of debt, with one of the most common categories being credit card debt (Bricker, Dettling, & Henriques, 2017). Often, these risky financial behaviors land people in situations where they need to deal with foreclosure, bankruptcy, high interest rates, and ultimately being rejected for further credit. To prevent these consequences, some look to increasing financial literacy.

Defined by Gale and Levine (2010), financial literacy is “the ability to make informed judgments and effective decisions regarding the use and management of money and wealth.” Unfortunately, despite its importance, few Americans possess financial literacy, though many perceive themselves as having it (Tang & Baker, 2016). Unfortunately, researchers believe that education aimed to promote financial literacy is ineffective in preventing the major consequences of risky financial behavior (Smith, Richards, Shelton, & Malespin, 2015). These consequences can include low spending capacity, fewer resources available during financial crisis, less unspent income available, and less money in savings accounts if they exist at all (Klapper et al., 2012). Furthermore, they are more likely to take out loans, rack up credit card debt and interest, negotiate poor mortgages, avoid financial markets, maintain uniform portfolios, and have no long-term wealth plans (Bucks & Pence, 2006; Campbell, 2006).

Evidence from a 2017 study by the United States Consumer Financial Protection Bureau supports the idea that positive financial decision making can lead to financial well-being. The study measured American financial well-being, defined as being able to meet financial

obligations, feel secure in the future, and make choices that enable individuals to enjoy their lifestyle (Consumer Financial Protection Bureau, 2017). Those that reported higher financial well-being tend to engage in behaviors and make decisions that those with lower reported levels of financial well-being were less likely to participate in (Consumer Financial Protection Bureau, 2017). These behaviors include saving and daily money management practices such as paying off credit card balances in full every month, being aware of and remaining within a budget, and being vigilant about checking statements for errors (Consumer Financial Protection Bureau, 2017). Furthermore, individuals who scored high on the financial well-being scale also reported engaging in long-term financial planning, having high financial self-efficacy, and having high levels of financial skill *and* financial knowledge (Consumer Financial Protection Bureau, 2017). Unfortunately, as the mean score of 54 out of 100 suggests, not all people possess these positive financial skills and behaviors.

Those that report lower levels of financial well-being deal with much more than just financial uncertainty. On the individual level, poor financial well-being can cause stress and damage mental as well as physical health (Smith et al., 2015). Consequences are emotional and can come with additional stressors like social isolation, frustration, immobility, shame, and stigma (Smith et al., 2015). Even health issues such as sleep disorders and depression may come along with the stress caused by risky financial behaviors. Relationally, it has been found that couples frequently enter marital therapy because their financial distress spills over into other aspects of their life including parenting, lack of communication, and their sexual and nonsexual relationships (Aniol & Snyder, 1997). The ability of couples to work effectively to address their financial concerns and the quality of their marriage can be compromised and deteriorate due to the stress of personal finances. Due to the severe consequences associated with it, risky financial

behavior is a topic worthy of research that might determine why some people engage in these behaviors and how to communicate with them in a way that will change those behaviors.

Risky Financial Behavior in Research

While the issue of risky financial behavior has been studied previously, research to date seems to lack any discernable pattern or consistency. No theory or model has yet been consistently used in research to describe the phenomenon of risky financial behavior. In fact, risky financial behavior and decision making have been studied in a variety of ways across multiple disciplines including communication, sociology, psychology and biology (He, Inman & Mittal, 2008; Wang, Zhou, & Hu, 2016; Zhu, Dholakia, Chen, & Algesheimer, 2012). Often, risky financial behavior will be studied similar to or in tandem with other types of risky behaviors including drinking, driving, health, and sexual behaviors (Palan et al., 2011; Sadeh & Baskin-Sommers, 2017). Scholars have tested hypotheses about risky financial behavior based on different theories, contexts, and variables thought to influence why people make the decisions they do (Wang et al., 2016; Xiao et al., 2011; Zhu et al., 2012). Only one pattern emerges in the research on risky financial behavior. While research suggests that the population at risk for these behaviors and consequences is diverse, it also shows young people and college students may have a particularly high risk for engaging in these unhealthy financial behaviors and are thus the focus of this study.

Risky Financial Behavior among College Students

College students represent a high risk group for engaging in risky behavior and making risky financial decisions. According to a study by the National Bureau of Economic Research, less than a third of young adults were found to have basic financial knowledge about topics like

interest rates, inflation, and risk diversification (Lusardi, Mitchell, & Curto, 2009). In addition, young adults also tend to engage in behaviors and hold attitudes that promote poor decision making when it comes to personal finances (Lusardi, Mitchell, & Curto, 2009).

During early adulthood and during college, students generate attitudes and beliefs towards debt and using credit (Compton & Pfau, 2004). The attitudes they develop can be healthy or unhealthy, and they influence a person's future financial well-being (Compton & Pfau, 2004). Many students also tend to behave in risky ways that put them in dangerous financial positions for the future (Palan, Morrow, Trapp, & Blackburn, 2011). This risky behavior stems from a sense of invulnerability among younger age groups, a sense that has been linked to other dangerous behaviors such as binge drinking, drug use, and driving too fast (Palan et al., 2011). One behavior of particular interest to this research is compulsive buying, when people spend more than they can or should (Palan et al., 2011). This occurs frequently with college students who use credit cards which has become a major contributor to the issue of college students making risky financial decisions.

Over eighty-four percent of college students have one credit card, of this group, at least half have four or more (Xiao, Tang, Serido, & Shim, 2011). Of these students, 82% carried an average balance of over \$3,000 (Xiao et al., 2011). While some students may use credit cards for necessities, research suggests that the majority of usage is on "preventable spending" such as extra food, entertainment, alcohol, and tobacco products (Joo, Grable, & Bagwell, 2003). This preventable spending is risky in that students are spending money that in most cases they know they cannot easily pay back in full.

The direct consequences of risky financial behavior range from a poor credit score to an inability to achieve economic independence during adulthood (Palan et al., 2011). This could

also include filing bankruptcy, an action that follows a person for at least eight years, and negatively impacts the purchase of a home or vehicle (Palmer, Pinto, & Parente, 2001). These negative consequences, similar to those of financial stress and anxiety, have been linked to the younger demographics' impatience and tendency to discount the future when it comes to making financial decisions (Lusardi et al., 2009). Unfortunately, these are not the only negative consequences that have been discovered. Other debilitating effects of poor financial behavior include depression, broken relationships, poor academic achievement, and even suicide (Palan et al., 2011; Xiao et al., 2011).

Despite the lack of patterned research on risky financial behavior, there is one consistency – a mention of personal finances as a topic of taboo in the United States. Family members, friends, and even spouses can be hesitant to talk about personal financial matters. Young adults practically inherit a sense of secrecy when it comes to personal finances because they rarely learn about them in school and parents tend to avoid disclosing their own financial situations to their children (Romo, 2015). Not only does this lead to a lack of understanding and guidance about how to manage one's own personal finances, but it also leads to a looming sense of uncertainty in individuals who may have learned not to seek out information from others on this specific topic (Romo, 2015).

Benefits of Open Communication

This is problematic because having open communication about tough topics has been shown to lead to positive outcomes including better decision-making, increased trust, higher relational satisfaction and a diminished feeling of unease among many others (Anderson, Kunkel & Dennis, 2011; Fowler, Gasiorok & Afifi, 2018; Keating, Russell, Cornacchione & Smith, 2013). The benefits of open communication about topics that may be difficult to bring up or

even considered “taboo” tend to far outweigh the costs. For example, Keating et al. (2013) found that after having difficult conversations with family members about a child’s sexual orientation, over 75% of participants reported having positive outcomes. These included increased trust, understanding, happiness, satisfaction, and an overall strengthening of the family bond (Keating et al., 2013). The same was found of couples who disclosed their sexual histories to each other. Despite having high levels of uncertainty about what they would find and how the conversation would go, couples reported that disclosing their sexual histories increased their relational satisfaction, diminished unease about what they didn’t know about their partner, and even fostered better physical health due to the acquisition of information about STDs (Anderson et al., 2011).

Research suggests this is true of conversations regarding personal finances (Fowler et al., 2018). A study by Romo (2014) found that because of the stress of finances to a relationship, many couples actually chose to avoid conversations about personal finances with their partners in order to maintain uncertainty. Fortunately, more people reported *wanting* to reduce their uncertainty by speaking with their partners about finances, but found it challenging to do so (Romo, 2014). They fear that their partners will view them as nagging, be paralyzed with emotion, or that their efforts will simply go ignored (Fowler et al., 2018). Due to these struggles, it could be argued that people who lack communication about financial behaviors are more likely to make poorer decisions about how to save for retirement, how to structure a mortgage, and how to maintain good credit. The current research believes that studying risky financial behavior from the context of uncertainty and information avoidance could be a promising approach to understanding why college students choose to engage or not engage in risky financial behaviors

and potentially shed light on how messages can be created to promote open communication about financial behavior and prevent poor financial decisions.

Uncertainty

People experience uncertainty when making decisions and interacting with other people (Brashers, 2001). It occurs when the details of a situation or interaction are ambiguous, but it is not inherently good or bad. Brashers (2001) argued that the “fundamental challenge for refining theories of communication and uncertainty is to abandon the assumption that uncertainty will produce anxiety,” (p. 477). This means that in some situations, some people prefer higher levels of uncertainty, while others prefer lower levels. For example, when it comes to personal finances, one student may be uncomfortable with uncertainty and aim to reduce it by seeking information about the consequences of debt. Another student may feel more comfortable having a high level of uncertainty when it comes to personal finances, avoiding new information on the consequences associated with having a lot of debt. The realization that uncertainty does not always need to be reduced has changed the uncertainty reduction model to an uncertainty management model (Brashers, 2001). Despite the advances that have come with uncertainty management theory, there are still elements of uncertainty and the processes that follow that need to be explained. These include how individuals seek and/or avoid information to aid in managing their uncertainty (Brashers, 2001).

Afifi and Weiner (2004) aimed to adapt uncertainty management theory by making it a better predictor of the actions people dealing with uncertainty will take related to information management (Afifi, Morgan, Stephenson, Morse, Harrison, Reichert & Long, 2006). They developed the theory of motivated information management (TMIM) to understand information seeking and avoidance. The current research believes that this development in uncertainty is

important and applicable to college students and risky financial behavior. The model includes many of the variables that inhibit communication about personal finances such as being viewed as nagging and becoming too emotional. TMIM has the potential to predict whether students will seek or avoid financial information from their peers and explain why they make these decisions.

Theory of Motivated Information Management (TMIM)

The Theory of Motivated Information Management (TMIM) can be used to explain the relationships between risky financial behaviors/attitudes and information seeking decisions (Hovick, 2014). TMIM, a three-phase theory, aims to describe the process people go through in choosing a course of action to obtain or not obtain information following uncertainty and its accompanying negative emotions (Tian, Schrodt & Carr, 2016). Specifically, it focuses on active information management efforts through interpersonal channels (Afifi & Weiner, 2006). The current research will study risky financial behavior based on this model, as shown in Figure 1.

Interpretation phase.

The first phase of the theory, interpretation, begins with uncertainty discrepancy. Unlike other uncertainty models, TMIM focuses not on the amount of uncertainty, but on the element of uncertainty discrepancy (Tian, Schrodt & Carr, 2016). Uncertainty discrepancy is when individuals become aware of the difference between the amount of uncertainty they desire about an issue/situation and the amount of uncertainty they are experiencing about that issue or situation (Afifi & Weiner, 2006). TMIM posits that when individuals recognize their uncertainty discrepancy, anxiety ensues (Afifi & Weiner, 2006). Unlike other models of uncertainty, TMIM

suggests that the anxiety experienced as a result of uncertainty is not only a motivator, but also a mediator of the effects on information seeking or avoiding (Afifi, Dillow & Morse, 2004).

Evaluation phase.

The anxiety experienced in the interpretation phase drives the judgments made in the evaluation phase (Lancaster, Dillow, Ball et al., 2016). In this phase, individuals consider both outcome expectancy and efficacy to determine whether they will be successful if they choose to seek information (Hovick, 2014). Individuals' responses to the anxiety experienced in the interpretation phase is derived from their perceptions of the potential outcomes of a search for information and their perceptions of their ability to get the necessary information (Afifi, Dillow & Morse, 2004). In this phase, individuals assess outcome expectancy, or the costs and benefits of the information search (Afifi & Morse, 2009). Their expectations play a critical role in determining whether they will move forward with their information search (Afifi & Weiner, 2006). For example, if a student believes that seeking information from a roommate about personal finances would result in the roommate becoming offended, the student would likely choose to avoid seeking information. If the student believed that seeking information from a roommate would result in a productive conversation, that student would be more likely to seek information.

Those in the evaluation phase also assess three types of efficacy: communication, target, and coping. Communication efficacy is the belief about an individual's capability of getting information based on one's own communicative skills (Afifi & Morse, 2009). Those who feel more confident in their ability to ask others about financial behavior will be more likely to bring up the topic. Target efficacy refers to the individual's belief about whether the target of their

information search has the information they are seeking and will be able to completely and accurately give them the information that they are seeking (Lancaster, Dillow et al., 2016). If the information seeker does not believe that one has honesty or the ability to share information, they are less likely to seek information. Finally, people assess their coping efficacy, or ability to handle the information that might result from the search (Afifi & Morse, 2009). This type of efficacy is a reflection of whether the individual believes he or she has the emotional and instrumental resources to cope with the information (Tian, Schrodt & Carr, 2016). A college student may believe that the information they might get from seeking information about financial behavior would be beyond their ability to cope with. They may feel that they do not have the resources necessary to handle what they find out. In these situations, people experience fear which leads them to engage in information avoidance (Afifi, Dillow & Morse, 2004). As a whole, the evaluation phase of the theory predicts that higher outcome expectancies higher and levels of efficacies will influence individuals to seek information (Rafferty, Cramer, Priddis & Allen, 2015).

Decision phase.

The final phase of TMIM is the decision phase. The decision phase is when individuals select a method of managing information based on their assessments of the elements in the interpretation and evaluation phases. The selected information management strategy can be anywhere from beginning a direct or indirect information search to actively avoiding information (Lancaster, Dillow et al., 2016). The path individuals choose in the decision phase of TMIM has implications for their uncertainty and future decisions regarding the topic.

In a study done by Afifi & Afifi (2009), information avoidance is the strategy that adolescents with divorced parents often chose when deciding whether to speak with their parents about their relationship. Specifically, they were shown to avoid talking to their parents about their relationships because of the negative consequences they fear “for themselves, their other family members (e.g., the parent), and their relationship with the parent,” (Afifi & Afifi, 2009, p.494). These fears are negative outcome expectancies that encourage avoiding information. The same was found to be true of efficacy in this case. Those who felt unable to communicatively discuss parental relationship issues with their parents or who felt that their parents would not provide them with honest information would choose avoidance (Afifi & Afifi, 2009). Essentially, adolescents were avoiding conversations with their parents about their relationships because of their negative outcome expectancies and low levels of efficacy. Based on this information, it is possible that the same is true of college students – they are avoiding seeking information about personal finances because they have negative outcome expectancies and low levels of efficacy. For example, a student might have the outcome expectancy that his/her friend would be offended at the idea of talking about personal finances. An individual may also believe that he/she wouldn’t be able to handle the information from the interaction (coping efficacy).

Within the context of this study, TMIM may prove useful in understanding why college students avoid speaking to those in their social networks about financial decisions. Given the trends argued in this study, individuals not talking to others about financial decisions, the work on avoidance seems to be most applicable. However, the current research parts from the traditional TMIM model when it comes to anxiety. Anxiety isn’t the only emotion that may ensue after uncertainty discrepancy. Afifi & Morse (2009) suggested that TMIM was incomplete

in its coverage of emotion. By assuming that uncertainty discrepancy results in some amount of anxiety, other emotions that could contribute to the theory are being ignored. Other emotions such as guilt, fear, and surprise may all be experienced as a response to uncertainty discrepancy. More importantly, they could change the way people move through the TMIM model. For example, uncertainty discrepancy could result in fear of the unknown which can lead people to want to engage in denial and avoid information (Lazarus, 1991).

Guilt.

In the context of risky financial behavior, the current research suggests that guilt could be more significant than anxiety as the emotion that moves college students through TMIM. Anxiety occurs when people experience the danger of being overwhelmed, but guilt occurs when people believe they have behaved in a way that opposes their morals or their perceptions of what they *should* do (Lazarus, 1991). This is relevant for college students who are spending money that they *know* they don't have or ignoring credit card bills that they know they should pay off. Lazarus (1991) describes anxiety as an "ache" while he describes guilt as more of an "acute pain," meaning anxiety is more easily ignored than guilt (p. 243).

Focusing on guilt as the emotion propelling students through the information avoidance or seeking process may change the traditional relationships of the TMIM model. Specifically, the relationships between emotion and the variables in the evaluation stage could change due to the different action tendencies associated with guilt. While anxiety causes people to avoid and deny, guilt causes people to want to atone or seek punishment for what they've done wrong (Lazarus, 1991). Guilt, which is caused by doing or wanting to do something considered immoral, is considered prosocial because it motivates those experiencing it to want to do well by

others (Lazarus, 1991). As opposed to anxiety, guilt leads individuals to want to face a situation instead of avoiding it.

When individuals violate the moral or ethical standards they set for themselves, they experience guilt, a distressing emotion (Newman & Trump, 2017). Guilt is often induced when people experience a lack of self-control (Saintives & Lunardo, 2016). This can be anything from impulsive or compulsive behavior to making choices that pay off in the short term instead of the long term (Saintives & Lunardo, 2016). Guilt also arises when people aim to alleviate other negative feelings (Newman & Trump, 2017). For example, some students may compulsively spend to repair a negative emotion, but end up with guilt from their unnecessary and risky behaviors (Newman & Trump, 2017). Fortunately, guilt is distinctly associated with approach motivations (Baek & Yoon, 2017). Said differently, those who feel guilt are motivated to approach what it is that induced their guilt. While other emotions like shame and anxiety predict avoidance motivation, guilt uniquely predicts approach motivation (Baek & Yoon, 2017).

For these reasons, we expect that guilt may have positive relationships with communication, target, and coping efficacies and outcome expectancies. Motivated by the desire to reduce guilt, college students should want to engage in conversation about risky financial behavior. Therefore, knowing they will feel better after communicating and atoning for their guilt, they should have higher outcome expectancies and efficacies about the conversations.

In the context of this study, uncertainty discrepancy would be experienced when college students realize their desired uncertainty is higher or lower than their actual uncertainty about personal financial behavior and risks. To reach their desired uncertainty levels, individuals engage in information seeking (talking with others about financial habits and behaviors) or

information avoidance (avoiding discussing personal finances with others). This decision is affected by the guilt felt by the student and its relationship with other variables that appear in the evaluation phase. The current research will study risky financial behaviors among college students using the TMIM model, replacing anxiety with guilt, as shown in Figure 2.

The current research believes that if college students sought information from their social networks, their uncertainty levels would change, and they could improve their own financial behaviors by learning from their information search. However, the decision to seek out information about financial behaviors is not one that college students seem to be making. Instead, they are actively avoiding it due to their outcome expectancies and low levels of communication, target, and coping efficacies. If they perceive themselves as having low levels of efficacies and negative outcome expectancies, they will avoid information on the topic of personal finances or financial behavior and thus maintain their poor habits. If this is true, the outcome expectancies and three types of efficacy need to be high in order to push college students to seek information about financial behaviors that could increase their understanding of personal finances and lead them to make better personal financial decisions. Based on the TMIM and the literature reviewed here, the following hypotheses and research questions are proposed:

H₁: Uncertainty discrepancy will predict guilt, such that high levels of uncertainty discrepancy regarding one's personal financial behavior decisions will predict high levels of guilt about one's financial knowledge.

H₂: Increases in guilt regarding financial knowledge will result in increased levels of (a) communication, (b) target, and (c) coping efficacies.

H3: Increases in guilt regarding financial knowledge will result in higher levels of outcome expectancies.

H4: Higher levels of outcome expectancies will result in increased levels of (a) communication, (b) target, and (c) coping efficacies.

H5: Higher levels of outcome expectancies will result in decreased levels of information avoidance about personal financial behaviors and beliefs.

H6: Increases in (a) communication, (b) target, and (c) coping efficacies will result in decreased levels of information avoidance about personal financial behaviors and beliefs.

While this study argues that uncertainty discrepancy plays a large role in individuals' level of guilt, which in turn impacts information avoidance, it is of course not the only potential explanation. A review of the literature suggests that another concept which may also have predictive value is dissonance. Dissonance results in psychological discomfort and a motivation to eliminate it. If used in the context of risky financial behaviors among college students, dissonance could offer a competing explanation concerning levels of guilt when it comes to finances.

Uncertainty discrepancy vs. dissonance

While research indicates uncertainty discrepancy should have a large impact on guilt in this context, other research suggests cognitive dissonance may have a similar impact (Yousaf & Gobet, 2013). Cognitive dissonance is a motivational theory first advanced by Leon Festinger in 1957. The theory, which continues to be used in research 60 years since its founding, is applicable to a wide variety of situations (Dillard & Pfau, 2002). It is based on the idea that

human beings have cognitive elements. These elements include attitudes, beliefs, opinions, values, perceptions and behaviors (Festinger, 1957). All of these elements are capable of having relationships with one another.

When two elements are unrelated, they are considered irrelevant or null. If they are related, they are either consonant (consistent) or dissonant (inconsistent) with each other (Festinger, 1957). Having two elements in conflict with each other leads to dissonance, or psychological discomfort. Dissonance is a motivational state, meaning that those experiencing it are influenced to change an attitude, belief, or behavior in some way. The cognitive dissonance model assumes that inconsistency (dissonance) creates a pressure to change, and that when it is present; an individual will try to reduce it (Festinger, 1957). For example, individuals find hunger an unwanted state. Thus, when individuals experience hunger, they should be motivated to reduce it by eating something (Festinger, 1957).

Ultimately, the more dissonance one experiences, the more motivation one has to reduce it. To reduce dissonance, there are three reduction strategies individuals can take. These include changing a behavioral cognitive element, changing an environmental cognitive element, or adding a new cognitive element (Festinger, 1957). Reduction is essential to the persuasion process as it can have lasting changes on an individual's beliefs, attitudes, and/or behaviors (Harmon-Jones, 2002).

Dissonance often arises in situations where decision making, social support, and forced compliance play a role (Dillard & Pfau, 2002). The severity of dissonance experienced can differ too. Higher levels of these variables will result in higher levels of dissonance, and therefore more motivation to reduce it. These variables become important in the current research as college students may experience dissonance from irreversible credit card debt (commitment to

the decision), the fact that no one forces them to spend (volitional control), and their own self-perceptions. Emotional dissonance is of particular interest to this study as it concerns the emotional reactions to dissonant elements instead of the cognitive reactions (Sweeney, Hausknecht & Soutar, 2000). Instead of wondering if one did the right thing, emotional dissonance leads one to feel disappointment, despair, and anger with oneself (Sweeney, Hausknecht & Soutar, 2000). Like uncertainty discrepancy, emotional dissonance should lead individuals to feel a sense of guilt about their behaviors, promoting the same outcome of less information avoidance.

Previous research on dissonance does suggest that the state may be similar to and even influence guilt (Stice, 1992). As a state that motivates people to eliminate it through discomfort, dissonance often brings about personal and emotional reflections. These reflections happen when the subjects of the dissonance are personal or affect the ego of the individual. This is likely in the case of risky financial behavior as it deals with one's own personal attitudes, behaviors and perceptions of self. Stice (1992) researched dissonance and guilt together and what effect confession had on the two states. He found four main similarities between dissonance and guilt. These included that both are states of negative arousal, that both states are brought on by an individual feeling personally responsible, that the states may be relieved by remembering an event or behavior differently, and that both may be relieved by participating in a self-affirming act (Stice, 1992). Our focus on college students and risky financial behavior seems to match these conditions. Students don't want to feel torn over their financial behaviors and attitudes, they tend to know better, and we believe they avoid information on financial behaviors by trying to rationalize their decision. In Stice's (1992) study, he induced groups of

participants to feel dissonance and guilt and found that those who made confessions had reduced levels of both guilt and dissonance.

Although Stice (1992) attempted to argue that guilt and dissonance were the same, other researchers have argued that dissonance has a predictive relationship with guilt. Yousaf & Gobet (2013) tested how dissonance affects other emotions like guilt and shame. By inducing religious hypocrisy through dissonance in participants, they found that participants also had increased levels of guilt (Yousaf & Gobet, 2013). They also found that when participants engaged in a self-affirmation, their guilt was reduced and the attitude that they reinforced with their self-affirmation was stronger. Most importantly, Yousaf & Gobet (2013) found that dissonance can result in feelings of guilt which can help to bolster attitudes instead of reconciling them as the traditional dissonance reduction strategies predict. Unfortunately, this finding could mean that if a student who knew he/she overspent had a self-affirmation that reinforced that behavior, his/her guilt will be reduced but the negative attitudes will be maintained.

In the context of this study, we must also look at how dissonance would affect information avoidance through guilt. Though research is slim on dissonance regarding information seeking and avoidance, some research explores the variables in ways that can be applied here. Jonas, Schulz-Hardt, Frey & Thelen (2001) looked at dissonance as it relates to information exposure. They found that once an individual has made a decision, they choose to view information that supports their choice (Jonas et al., 2001). Of course, this is known as confirmation bias. The interesting difference in this study was that the researchers determined the confirmation bias became even stronger when pieces of information were presented sequentially instead of simultaneously. The stronger confirmation bias was caused by a perception of heightened commitment due to the focus on their original decision (Jonas et al.,

2001). In the context of risky financial behavior, this would imply that once students make a risky financial decision, they avoid information that contradicts their decision. Instead, they choose to interact with only information that supports their poor decision.

In a similar study, Frey (1982) bridged the gap between dissonance's relationship with avoidance and risks. He tested how much participants would avoid information that was consonant or dissonant with their choice in a card game with money as the prize. The results were interesting – showing that participants had the greatest desire for consonant information and the lowest desire for dissonant information when they hadn't won or lost a large amount of money (Frey, 1982). Those who won large amounts were essentially indifferent because they justified their winnings by chance, but those who lost large amounts were more likely to revise their original reason for making their decision so that future information would be consonant instead of dissonant (Frey, 1982). Therefore, we may need to consider that students who have negative outcomes from risky financial behavior will justify their behavior by convincing themselves they had no other choice but to spend their savings so that conflicting information doesn't produce the uncomfortable dissonance.

Regarding risky financial behavior specifically, research argues that most individuals understand that being in debt is negative (Smith et al., 2015). Furthermore, being in debt has been shown to threaten the positive image that most individuals like to maintain of themselves (Palmer et al., 2001). Given this, when people engage in behaviors that contradict their negative views of debt and positive views of self, they will experience dissonance (Bem, 1967). A college student who has engaged in an information search about financial behaviors and decision making may experience dissonance if he/she found information that contradicts current

behaviors or attitudes toward personal finances. Experiencing this dissonance would lead the student to become motivated to reduce it and achieve consonance (Festinger, 1957).

Dissonance may not be able to help prevent risky financial behavior in the first place, but understanding how people experience emotional dissonance in this context can help create messages that will result in long-term behavioral change and positive financial behaviors and well-being through dissonance reduction. Given this discussion, if emotional dissonance can impact not only guilt, but also information avoidance, it could provide a competing variable to the TMIM model, and give insight for how to encourage college students to seek information on personal finances. Based on the literature reviewed here, the following hypotheses are proposed:

RQ1: Does emotional dissonance account for more variance in guilt regarding personal financial behaviors and knowledge than uncertainty discrepancy?

RQ2: Does emotional dissonance account for more variance in information avoidance regarding personal financial behaviors and knowledge than uncertainty discrepancy?

Method

Participants

Two hundred eighty-eight undergraduate college students participated in the study. The sample averaged 20.7 years old ($SD = 1.46$). The sample was 39.2% male ($n = 113$) and 59.4% female ($n = 171$), with 1.4% choosing not to answer ($n = 4$). Additionally, participants were asked to estimate how much debt they have. The majority of the sample reported having \$0-500 in debt at 78.8% ($n = 227$), 6.6% reported having \$500-1,000 in debt ($n = 19$), 8% reporting

having \$1,000-3,000 in debt ($n = 23$), 1.4% reported having \$3,000-5,000 in debt ($n = 4$), and 5.2% reported having over \$5,000 in debt ($n = 15$).

Participants were required to be current undergraduate students. The sample was made up of 8% freshmen ($n = 23$), 22.6% sophomores ($n = 65$), 29.6% juniors ($n = 86$), and 39.6% seniors ($n = 114$). Both convenience and snowball samples were used to recruit participants who came from different universities. The researcher recruited these participants through social media platforms and email, and participants were also asked to forward the survey to their own networks of peers. Additionally, participants were recruited through email by university professors. Participants took the survey online and on their own time.

Procedure

To test the hypotheses, a survey was put together. Most participants took between eight and twelve minutes to complete the survey on the online survey research platform Qualtrics. Before participating, they were provided with a consent form that explained the purpose and scope of the study. Once participants agreed to study participation they were provided access to the survey. In total, the survey took participants about 8-12 minutes to complete. The following scales in the survey included measures of dissonance, outcome expectancies, communication efficacy, target efficacy, coping efficacy, avoidance, uncertainty discrepancy, emotion regarding uncertainty discrepancy, and demographics.

Measures

The first scale used in the survey was the Sweeney, Hausknecht & Soutar's (2000) cognitive dissonance scale. The measure, a 22-item scale to measure dissonance immediately after purchase, is broken into subscales that measure three different dissonance effects on emotions, wisdom of the purchase, and concern over the deal (Sweeney et al., 2000). Each item

was to be answered following the phrase “after I bought this product,” (Sweeney et al., 2000). Examples from each subscale included “I was in despair,” “I wonder if I really need this product,” and “I wondered if I’d been fooled,” (Sweeney, et al., 2000). Participants answered the items on a seven point Likert scale from strongly disagree to strongly agree. Due to the fact that this research is examining dissonance to personal financial behaviors in general as opposed to single purchases, some of the phrasing in the items had to be adjusted (see Appendix). For example, instead of reading “after I bought this product,” the items began with “after I engage in risky financial behaviors,” or “after I make risky financial decisions.” According to Sweeney et al. (2000), the scale has good internal consistency with Cronbach alpha coefficients ranging from .80 to .97. The current study found high reliabilities for the emotional dissonance subscale (Cronbach’s $\alpha = .95$, $M = 4.26$, $SD = 1.37$), the wisdom of dissonance subscale (Cronbach’s $\alpha = .93$, $M = 5.12$, $SD = 1.47$), and the concern over actions subscale (Cronbach’s $\alpha = .84$, $M = 4.12$, $SD = 1.49$).

The next section of the survey included several measures related to TMIM including outcome expectancies, communication efficacy, target efficacy, coping efficacy, and avoidance (see Appendix). Each of these measures was adapted from similar versions from Afifi & Afifi (2009). In Afifi & Afifi’s (2009) study, the measures were used to assess the outcome expectancies and efficacies of adolescents should they have a conversation with their parents about their relationship. The current research changed some of the wording in the items in order to assess college students’ outcome expectancies and efficacies of conversations with their social networks about their finances.

For example, in the outcome expectancies measure, an item was changed from “asking my parent what he/she thinks about this issue would produce...” to “asking my social networks

what they think about personal financial behaviors would produce...” (Afifi & Afifi, 2009). The outcome expectancy measure included four items on a seven-point Likert scale ranging from “a lot more negatives than positives” to “a lot more positives than negatives.” The outcome expectancy scale was highly reliable (Cronbach’s $\alpha = .84$, $M = 3.68$, $SD = 1.51$).

The next three scales measured the three types of efficacy mentioned in TMIM. All three were adaptations of Afifi & Afifi’s (2009) scales on communication with parents about their relationships. All scales were seven-point Likert scales from strongly disagree to strongly agree. The communication efficacy scale was made up of three items including “I could approach my social networks to ask about their beliefs about the issue.” The target efficacy scale, made up of four items, assessed how well participants believed a target in their social network would be able to answer their questions and do so honestly. One item on the scale was “my social networks would give me truthful information about the issue,” regarding financial behaviors. Finally, the coping efficacy scale was made up of four items that included “I can handle what I would find out about my social networks’ behaviors.” The communication and target efficacy scales had high reliabilities with Cronbach alpha coefficients of .93 ($M = 4.29$, $SD = 1.47$) and .92 ($M = 4.39$, $SD = 1.32$) respectively. The coping efficacy scale had moderate reliability (Cronbach’s $\alpha = .67$, $M = 4.66$, $SD = 1.04$).

The next TMIM measure, also adapted from Afifi & Afifi (2009), was the avoidance scale that measured how likely participants would be to avoid talking about personal finances and risky financial behaviors with their social networks. The scale was four items and included items like “I would avoid talking about my attitudes towards risky financial behaviors.” The avoidance measure had a high reliability (Cronbach’s $\alpha = .91$, $M = 4.2$, $SD = 1.39$).

The last two measures dealt with uncertainty discrepancy. The first was a scale measuring emotion by Dillard & Shen (2006). Participants responded to the scale based on how much of each of 23 emotions they felt when they think about how much or how little they know about their financial decisions (see Appendix). Examples were given to participants that included financial decision making, level of debt, and financial management abilities. The scale uses a five-point Likert scale from “none of this feeling” to “a great deal of this feeling.” The scale measures levels of several different emotions including anger, fear, happiness, guilt, and anxiety (Dillard & Shen, 2006). While this study asked participants for responses on all emotions, it only used the guilt measure as the current research is examining guilt’s place in the model. The guilt measure consisted of two items – guilt and ashamed. Its internal consistency was high (Cronbach’s $\alpha = .77$, $M = 3.61$, $SD = 1.08$).

The last scale included in this research is an uncertainty discrepancy measure designed to determine how much uncertainty discrepancy one feels about how confident they are in their personal financial behavior decisions and how confident one wishes they were in their personal financial behavior decisions (see Appendix). It is only a two-item seven-point Likert scale from “not at all” to “completely” confident. Unlike the other measures used in this study, this scale measures the concept of uncertainty discrepancy by subtracting the desired confidence/ (item 2) from the actual confidence (item 1). This allows results to range from -6 to +6, with higher absolute values indicating higher uncertainty discrepancies, and positive values indicating that individuals had more confidence than they needed while negative indicated they had less than they wanted. Due to the fact that this concept is not measured traditionally, the reliability cannot be statistically tested, but previous tests by Afifi & Weiner (2006) have ensured the scale’s validity by correlating it with other UCD measures. The mean UCD for this sample was -1.899

($SD = 1.79$), meaning overall, participants wanted more uncertainty with regard to their personal financial decisions.

Finally, the survey also included a demographics section (see Appendix) that included age, gender, class rank, a personal debt assessment, and a measure of how likely one is to engage in risky financial behavior. Demographic results are discussed above in the participants section.

Results

Since the hypotheses in this study were designed to test the TMIM model in relation to personal financial behaviors, standard linear regressions were used to test all of the relationships in the model. The results will indicate how well the independent variables will predict the following variables in the model. Hypothesis 1 tested how much variance in guilt was accounted for by uncertainty discrepancy. The total variance in guilt accounted for by uncertainty discrepancy was 5.3%, $F(1, 286) = 16.14, p < .05$. The relationship was positive.

Hypothesis 2 was also supported. Three linear regressions were calculated to see how much of communication, target, and coping efficacies could be predicted by guilt. For communication efficacy, a significant regression equation was found ($F(1, 286) = 8.249, p < .05$) with an R^2 of .028. Guilt accounted for 1.8% of the variance in target efficacy ($F(1, 286) = 5.26, p < .05$). Hypothesis 2C was also supported as guilt accounted for 11.2% of the variance in coping efficacy ($F(1, 286) = 36.12, p < .05$). All three relationships were significant and positive.

Hypothesis 3 was tested with another linear regression. The total variance in outcome expectancies explained by guilt was positive at 3.1%, $F(1, 286) = 9.01, p < .05$. The three parts of Hypothesis 4 were also supported with linear regressions. Outcome expectancies accounted

for 29.9% of the variance in communication efficacy ($F(1, 286) = 121.7, p < .05$). For target efficacy, outcome expectancies were responsible for 18% of the variance ($F(1, 286) = 62.6, p < .05$), and for coping efficacy, they were responsible for 4.7% of the variance ($F(1, 286) = 14.09, p < .05$). All of these relationships were positive.

Another linear regression was calculated to predict the variance in information avoidance based on outcome expectancies. A significant regression equation was found ($F(1, 286) = 26.07, p < .05$) with an R^2 of .08, meaning high outcome expectancies would lead to low information avoidance. The same was done for Hypothesis 6 which predicted the variance in information avoidance based on communication, target, and coping efficacies. Only communication efficacy had a significant relationship with avoidance. The variance was 5.1%, $F(1, 286) = 5.14, p < .05$, meaning low communication efficacy would lead to high avoidance.

Research questions 1 and 2 were tested with hierarchical regressions to determine whether emotional dissonance may account for more change in the model than uncertainty discrepancy. For research question 1, uncertainty discrepancy was entered into the model first, accounting for 5.3% of the total variance in guilt with high uncertainty discrepancy resulting in high guilt. Beyond uncertainty discrepancy, emotional dissonance accounted for an additional 4% of the variance, leaving 9.3% accounted for. Emotional dissonance had a negative relationship with guilt, meaning high emotional dissonance led to lower levels of guilt. The hierarchical regression equation was significant, $F(1, 286) = 12.44, p < .05$. Research question 2 determined that emotional dissonance did not account for any more of the variance in information avoidance than what uncertainty discrepancy already accounted for, with uncertainty discrepancy accountable for 2.3% of the variance, $F(1, 286) = 2.3, p < .05$.

Discussion

This study's purpose was to examine why college students approach or avoid conversations with their social networks on the state of their personal financial behaviors. With a theoretical basis in the Theory of Motivated Information Management (TMIM), the study's results show that the emotion of guilt significantly impacts variables in the model and could lead to less avoidance on the topic of risky financial behaviors and financial status among college students (see Figure 3).

The current research was inspired by the realization of a pattern among college students. Despite likely knowing the consequences of risky financial behavior, many still choose to unnecessarily overspend, max out credit cards, and deplete their savings if they have any. For many of these students, it is not a one-time splurge, but a behavioral pattern. Knowing the severe personal implications that poor financial behavior can have at a young age, we began to ask ourselves how we can communicate with this at-risk population in a way that will get them to change their attitudes and therefore their behaviors.

The problem, however, is that most of this populations isn't communicating about personal finances at all. Fowler, Gasiorek & Afifi (2018) bring attention to the fact that talking about money is the last taboo between couples. It is even a taboo topic for families which is why so few people have learned from a model for how to speak effectively about finances from their parents (Fowler, Gasiorek & Afifi, 2018). This lack of open communication led us to information avoidance as well as the theoretical basis of this study – the Theory of Motivated Information Management. What we found was both surprising and enlightening.

Broadly, one of the biggest takeaways from this research has been that using guilt as the emotion propelling the model forward works. As predicted, high levels of guilt lead individuals going through the model to lower levels of information avoidance; however, the pathway there was surprising. The most important finding in this study was that guilt creates relationships that are the opposite of what anxiety would create. For example, while anxiety predicts low outcome expectancies, replacing it with guilt results in high outcome expectancies. In the current research, this means that those with higher levels of guilt about their financial behaviors and personal financial knowledge have better expectations for what talking to their social networks about their personal financial behaviors and beliefs would result in. Although it seems contradictory that having guilt would predict high outcome expectancies, atoning for guilt makes people feel better through apologizing or even about talking about it (Lazarus, 1991). Those who have guilt about their financial behaviors want to eliminate it by expressing their guilt and apologizing for their behavior. Thus, the outcome expectancies are high because people expect that their guilt will be gone once they address it and atone for it through communication. This explains why people with guilt believe that approaching, asking, and talking to their social networks directly about personal financial behaviors and beliefs will result in a lot more positives than negatives.

The same was true of guilt and efficacy. Unlike anxiety, more guilt results in higher levels of efficacies. Upon first glance, this finding may be surprising because it opposes the similar relationship in the traditional TMIM model, but a deeper look into the implications of guilt explain the surprising relationships. As mentioned, guilt leads people to want to atone, to repair damage, or even to seek punishment (Lazarus, 1991). Interestingly, guilt makes people want to atone *publicly*. They want to make others aware of their actions and fix them. In this

case, people want to make their social networks aware of their personal financial decisions/behaviors and atone for the guilt they feel.

One interesting finding is that the more guilt someone feels, the more confidence the individual has that he/she can effectively seek information from the target person in his/her social network. This may be because they are so motivated to reduce their guilt by atoning for their risky financial behaviors or their lack of personal financial knowledge. Students feeling guilt about financial behaviors seem to want to approach these conversations and feel comfortable doing so. The target of their communication also matters.

Those with higher levels of guilt also had higher levels of target efficacy, meaning they believed the person they'd approach about their personal financial behaviors would be upfront, honest, truthful and forthcoming about the issue. One possible explanation for this is that target efficacy *must* be high to atone for guilt felt over personal financial behaviors since another party is necessary to issue an apology. The guilt would not be eliminated if the college student believed his/her target would react poorly to the conversation.

The same goes for coping efficacy which deals with how well an individual believes he/she can handle what information is found about a social network's finances and financial behaviors. This could be because people with guilt about their financial knowledge have a higher belief that once they atone for it by seeking information from and speaking with their social networks, they will be able to handle what they find out. College students anticipating these conversations likely expect to get more information, financial resources, or advice that may lead them to feel they have repented their guilt.

As the research on guilt points out, it is a distressing emotion that triggers apologies and repentance (Lazarus, 1991). Therefore, it makes sense that feeling guilt about one's personal financial behaviors would result in that person being motivated to effectively bring it up (communication efficacy) to a person in his/her social network who could speak honestly about the topic (target efficacy) in a way that would allow the individual to handle the information, perhaps through advice (coping efficacy).

Although all the three types of efficacy had significant relationships with guilt, the same was not true with all three types when it came to their relationships with avoidance. Even more interesting, however, were what implications we found based on the relationships between communication, coping and target efficacies and avoidance.

Communication efficacy was related to information avoidance. Those with low communication efficacies have high avoidance levels. However, communication efficacy was the only type of efficacy that significantly predicted avoidance. Target efficacy and coping efficacy were not significantly related to a higher or lower likelihood to avoid information about personal financial behaviors and beliefs. This suggests that those who believe they cannot effectively approach their social networks about their personal financial behaviors/beliefs will be more likely to avoid information about them. However, individuals' confidence in their social networks to give honest responses and in their ability to handle what they learn did not have relationships with information avoidance.

This is not a surprise as communication efficacy has consistently been the one form of efficacy that has had a significant relationship with information avoidance or seeking in the TMIM model (Afifi & Afifi, 2009). Perhaps this is because communication efficacy deals with the individual *approaching* someone for information while target and coping efficacy deals with

what happens *after* information seeking has begun, meaning the individual may feel more comfortable when they are in control. Communication efficacy has been central to people's information management decisions in contexts such as information seeking/avoidance about parents' relationships (Afifi & Afifi, 2009), about sexual health (Afifi & Weiner, 2006), about organ donation (Afifi et al., 2006), and from those they are in close relationships with (Afifi, Dillow & Morse, 2004).

In this study, communication efficacy was the only type that had a significant relationship with information avoidance. No relationship was found between target efficacy and information avoidance in the current research. Upon closer inspection, this could be due to the fact that the current study did not specify a target. This study asked participants to think of their social networks which could generate very different results if some participants thought of their parents while others thought of their roommates as targets. Other studies that have found a relationship may specify who the target is. For example, Afifi & Weiner (2006) specify that the target is a sexual partner in a study on information seeking about sexual behavior.

Coping efficacy is rarely found to be a predictor of information seeking or avoidance. One reason for this was pointed out by Afifi & Weiner (2006) as being methodological. Due to the fact that surveys do not specify whether participants are expecting positive or negative information, we cannot be sure how they are answering the coping efficacy items. The same reason was expected for the failure in coping efficacy's relationship with information seeking/avoidance in a study on information about parents' relationships (Afifi & Afifi, 2009). When anticipating positive information, individuals do not see a need for coping. However, a study on organ donation found that higher levels of coping efficacy were predictive of intentions to seek information despite the mostly positive information expectations (Afifi et al., 2006).

Afifi & Afifi (2009) unpacked this by suggesting that coping efficacy is more central to information avoidance when the topic has personal rather than relational implications. Since the coping efficacy items ask whether “you could handle” the information received, the coping is personal instead of relational. Information on something like organ donation leads to personal consequences, but information on financial behaviors – particularly risky ones – could have relational consequences that were not addressed due to the wording of the coping efficacy items. For example, would one’s mother be able to handle what she found out about her son/daughter’s financial behaviors? Would that information impact their relationship? These may be the more appropriate questions to ask regarding coping efficacy when it comes to topics that could impact relational coping like risky financial behaviors.

Along with efficacies, the findings on outcome expectancies helped pull the model together by incorporating information avoidance. The goal of the TMIM model is to explain why individuals choose to seek or avoid information based on uncertainty discrepancy, anxiety, or in this case guilt, efficacies, and outcome expectancies. Our research found that those with positive outcome expectancies for talking with their social networks about financial behaviors and beliefs were less likely to avoid talking with their social networks about the current state of their personal finances and their attitudes towards risky financial behaviors. Although this finding may seem obvious, it is significant because it supports the TMIM model. More importantly, it bridges the gap between discussing financial behaviors and beliefs in general and discussing personal risky attitudes and behaviors. Put simply, if a student believes conversation with social networks about financial behaviors will go well, he/she will likely not avoid information about risky decisions specific to themselves. The significance of this finding is that increased outcome expectancies open the door to conversations about risky financial behaviors.

As discussed in the literature review, avoiding information and communication about financial behavior and beliefs can be dangerous as it often results in uninformed decision making and therefore detrimental financial positions (Fowler, Gasiorek & Afifi, 2018). This is what makes the role of efficacies and outcome expectancies so central to studying the practical use of TMIM in terms of information seeking and avoidance in risky financial behaviors.

Another important takeaway from our findings was that uncertainty discrepancy is effective, more so than dissonance, in creating the proper amount of guilt that guides students through the TMIM model to information seeking instead of avoidance. This is the first relationship in the TMIM model. It examines uncertainty discrepancy as it predicts guilt, meaning those who have larger discrepancies between how confident they are and how confident they wish they were about their personal financial behavior decisions have more guilt about the financial decisions they make. While this finding supports the model, it interestingly finds that both those who feel less confident than they wish they were and those who feel more confident than they wish they were in their financial decisions feel guilt. This might sound contradictory but should not be surprising when looking at the implications.

Those who wish they were more confident in what they know about their personal financial decisions could experience guilt because they make risky financial decisions, aware that they should have more knowledge about what they are doing. For example, they might have done more research, asked a friend or parent, or even looked into their credit history prior to making a decision. On the other side of the spectrum, students who wish they were less confident in what they know about financial decisions are aware that they “know better.” These students may wish they knew less about their personal financial behavior decisions, helping them justify making a decision they know they shouldn’t have made. For example, if a student knows

he won't be able to pay back a credit card bill for a purchase but still engages in the behavior, he will wish he didn't know the consequences of his choice and therefore not feel guilty. A student with this perception would agree that "ignorance is bliss." Since the research on guilt shows that people are motivated to avoid guilt, it makes sense that they wish they knew less in order to avoid it when making an admittedly bad or risky financial decision. For example, people report experiencing guilt when using money they saved for a particular reason on something else, like an emergency or other debts (Sussman & O'Brien, 2016).

Based on the results and discussion above, it is clear that uncertainty discrepancy is effective in leading college students to guilt and therefore away from information avoidance on risky financial behavior. However, as discussed in the preceding literature review, dissonance was proposed as an alternative variable that could help to better explain the model and its relationships. Dissonance, like uncertainty discrepancy, results in psychological discomfort and a motivation to eliminate it. Based on this knowledge and dissonance's place in risky financial behaviors, it was worth testing to determine if inducing emotional dissonance instead of uncertainty discrepancy in college students would result in more conversations about personal financial behaviors. What we found was surprising, and not something we predicted.

The research questions tested here addressed these considerations by using emotional dissonance as a tool to understand college students' risky financial behaviors. They found that beyond uncertainty discrepancy about personal financial behaviors and decisions, emotional dissonance predicted even better how much guilt would exist. This is significant because it shows that emotional dissonance about risky financial behaviors like spending more than one can afford, maxing out credit cards, and not paying off bills in full better predicts levels of guilt than uncertainty discrepancy. For one, this is significant because uncertainty discrepancy is the first

variable in the TMIM model, used to better explain the information management process when uncertainty is experienced. However, the direction of the relationship that the results found was the opposite of what would be anticipated. High levels of emotional dissonance actually predicted lower levels of guilt. It seems conflicting that feeling emotional turbulence between the contradictions in one's attitudes and behaviors about risky financial behaviors would decrease guilt, but the explanation may lie in the way that emotional dissonance is defined and measured. Unlike cognitive dissonance, emotional dissonance deals with the emotional reactions to the two contradictory elements instead of the thoughts that follow it (Sweeney, Hausknecht & Soutar, 2000). The emotional elements of dissonance are much different from the cognitive ones. For example, the cognitive elements of dissonance deal with concerns over one's actions and the wisdom of one's actions. They wonder if a certain risky behavior was the right thing to do, if there was a better decision that could have been made, or if they were fooled into making a decision (Sweeney, Hausknecht & Soutar, 2000). On the other hand, emotional dissonance deals with a negative array of emotions including anger, frustration, depression, and more. It's tested with items that include words like "anger," "despair," "disappointed with myself," "let myself down," "in agony," and more (Sweeney, Hausknecht & Soutar, 2000, p. 381). These items, high in aggression, represent a lot of self-hatred. Conversely, guilt is not associated with self-hatred. It is felt primarily when an individual feels he or she has transgressed a moral imperative (Lazarus, 1991).

Secondly, this finding means that those who experience emotional dissonance about engaging in risky financial behaviors don't actually experience significant levels of guilt about it. A student who maxes out her credit card at the bar may feel angry that she let herself down, but may not experience guilt. Perhaps a student like this wouldn't engage in information seeking

because she is so disappointed in herself. Conversely, a student experiencing uncertainty discrepancy about their financial knowledge may feel guilty about maxing out his credit card and want to atone for it to return to his status as a person of sound morals, or in this case as a person of good financial wellbeing. Therefore, it makes sense that when an individual feels overwhelmed with emotional dissonance about risky financial behaviors, he/she would become so angry and frustrated with him/herself that instead of feeling guilt, the individual would feel self-disdain.

This relationship did not extend to information avoidance however. The current research also found that emotional dissonance did not account for any more of the variance in information avoidance than what uncertainty discrepancy already accounted for. This means that while emotional dissonance may better predict guilt, uncertainty discrepancy is what will ultimately and more directly lead to information avoidance or seeking when it comes to personal financial behaviors. This further supports the importance of the other variables in the model such as outcome expectancies, efficacies, and even guilt in pushing students to seek instead of avoid information from their social networks. So although the addition of emotional dissonance at the beginning of the model improves its prediction of guilt, replacing uncertainty discrepancy with it would ultimately change the overall model. More importantly, this means that inducing uncertainty discrepancy and guilt about personal financial knowledge is the better way to encourage conversations about financial behaviors and decisions.

Understanding information avoidance and how the TMIM model influences it is important because it can be detrimental not only to individuals' uncertainty levels, but also to their well-being, particularly their financial well-being in this study. Understanding how information avoidance works in terms of this TMIM model and personal financial behaviors

opens the door for encouraging new styles of information seeking behaviors that could result in increased financial literacy, better personal economic decisions, and improved financial well-being. It's also important to understand the variables that lead to an information management strategy, which we hope will be information seeking.

The results of this study show that the TMIM is an effective model to use to predict college students' avoidance of information about personal financial behaviors. The discrepancy between how much college students know about personal financial behaviors and how much they want to know leads to feelings of guilt that motivate them to atone. Uncertainty discrepancy, unlike emotional dissonance, produces guilt and encourages finding a solution. If students also believe the outcomes of conversations with their social networks about personal financial decisions will be positive and perceive that they have the ability to effectively bring it up, they are unlikely to avoid information that could help them make better financial decisions. Taken together, what we've found can help give guidance for how to induce conversation and communication about risky financial behavior among college students.

Limitations and future directions

This study tested the TMIM model by exchanging anxiety for guilt and found that although the valence of some of the relationships changed, guilt about financial behaviors and beliefs propels the TMIM model to the same information seeking or avoiding behaviors that anxiety does. That being said, there is still much that we do not understand about the relationships among the variables when it comes to risky financial behaviors among college students. Our limited knowledge about it could be expanded if this study had incorporated more measures.

For example, while we know that uncertainty discrepancy causes guilt, we don't know in which direction the uncertainty discrepancy will go. Do students who feel less confident in what they know about risky personal financial behavior than they would like to feel more guilt or vice versa? Additionally, this study tested target efficacy by asking participants how honestly and effectively their social networks would be able to give them information about personal financial behaviors and beliefs. However, our research should have asked participants which person in their social network they were thinking of or even specified one. It is possible that the target efficacy variable did not have a relationship with information avoidance because participants were thinking of very different people and relationships in their social networks. For example, students may have very different target efficacy perceptions about their parents, their professors, their peers, or siblings when it comes to talking about risky financial behaviors. All of this information would be helpful to know not only for advancing understanding of the theory, but also for designing campaigns to create the appropriate amount of guilt to get students to take action in talking about their personal financial behaviors and changing their spending/saving habits.

Additionally, the findings from this research could have been improved with more consistent wording in the measures. As described in the methods, multiple different scales were used in order to measure the six variables tested in the TMIM model. Each scale used slightly different wording to ask participants about their levels of each variable. For example, the emotional dissonance scale referred to "risky financial behaviors" and gave multiple examples of what those include, while the efficacy scales simply asked about "financial behaviors." Due to this oversight in wording, we could not draw more specific conclusions. For example, we had to conclude that students would be more likely to discuss risky financial behavior with their social

networks if they had high levels of communication efficacy regarding financial behavior, not *risky* financial behavior.

Despite these limitations, this research still provides us with theoretical considerations to continue studying as well as practical implications to implement in persuasive messages. First, it builds on Afifi & Morse's (2009) idea of studying the TMIM model with other emotions in the place of anxiety. Although the model had slightly different relationships with guilt, the model still worked to see individuals through uncertainty discrepancy all the way to an information management strategy. Guilt worked in the context of risky financial behaviors, but other emotions like fear or surprise may best fit the model in other contexts. In addition to switching out the emotion variable, this research added emotional dissonance and found it accounts for more self-destructive reactions than uncertainty discrepancy. Future research on this model may get more specific by examining what the appropriate amount of uncertainty discrepancy is in order to induce conversation through high efficacy levels, positive outcome expectancies and guilt instead of information avoidance. It may take the TMIM model and use these and other variables to uncover stronger, more predictive relationships that can be applied to information management strategies for a variety of contexts.

Persuaders and message creators may also take the results from this study and apply them to persuasive messages in PSAs, advertising, and entertainment education. By focusing on making viewers, students in particular, recognize their uncertainty discrepancy and feel slight guilt about their risky financial behavior in addition to giving them positive models for speaking with their social networks about it, their outcome expectancies and communication efficacies will increase and lead to information seeking. These interventions could potentially lead at-risk populations

like students to engage in important conversations about their financial situations and even result in better economic decisions.

Conclusion

The purposes of this study were to better understand how to get college students to communicate about risky financial behaviors and to determine if the TMIM is an effective model for predicting these information management decisions. The results support the use of TMIM in this context, particularly with the use of guilt as a result of uncertainty discrepancy. More importantly, the findings showed that the right amount of uncertainty discrepancy regarding personal financial behaviors will induce guilt. In turn, that guilt will lead to high levels of outcome expectancies and therefore communication efficacy which results in low levels of avoidance of information on risky financial behaviors. Future research may take this knowledge to determine the appropriate levels of uncertainty discrepancy and guilt to induce in college students to encourage them to communicate about financial behaviors in order to make more positive decisions.

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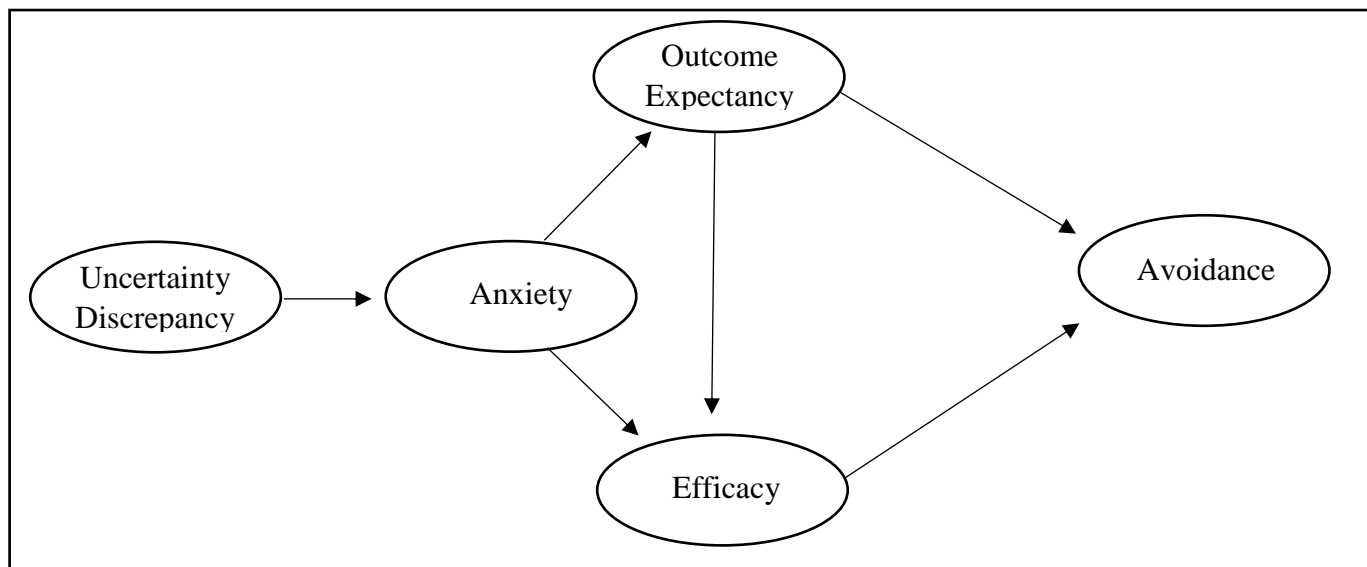


Figure 1 – Theory of Motivated Information Management Model

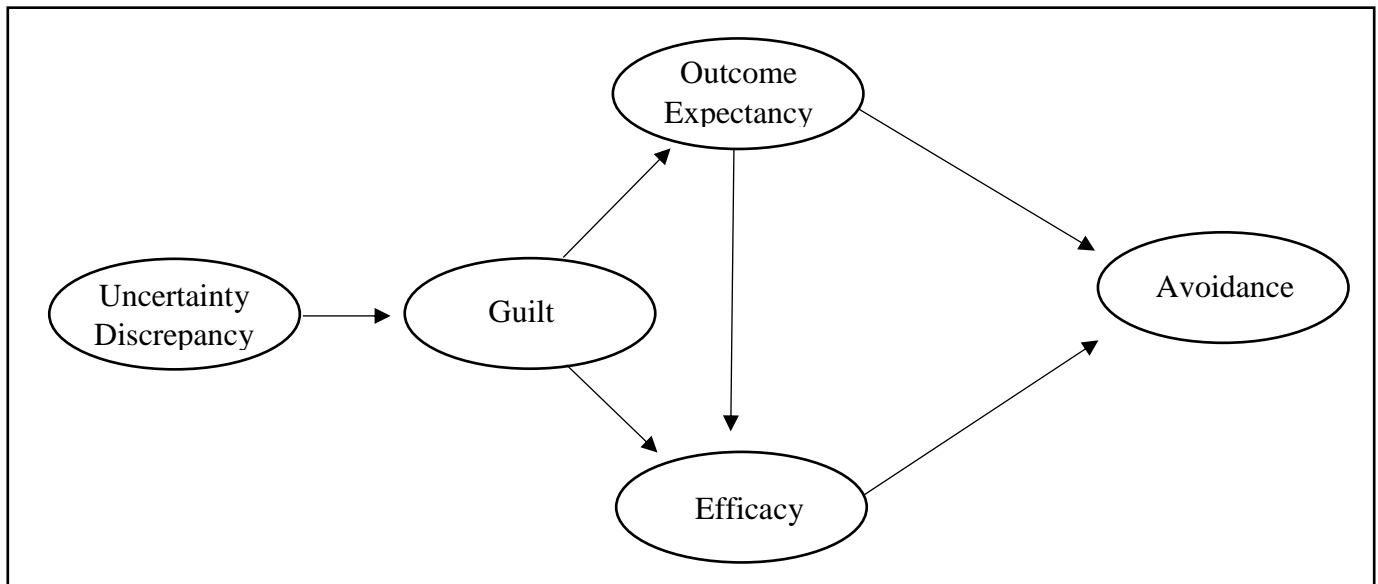


Figure 2 – Theory of Information Management Model with Guilt

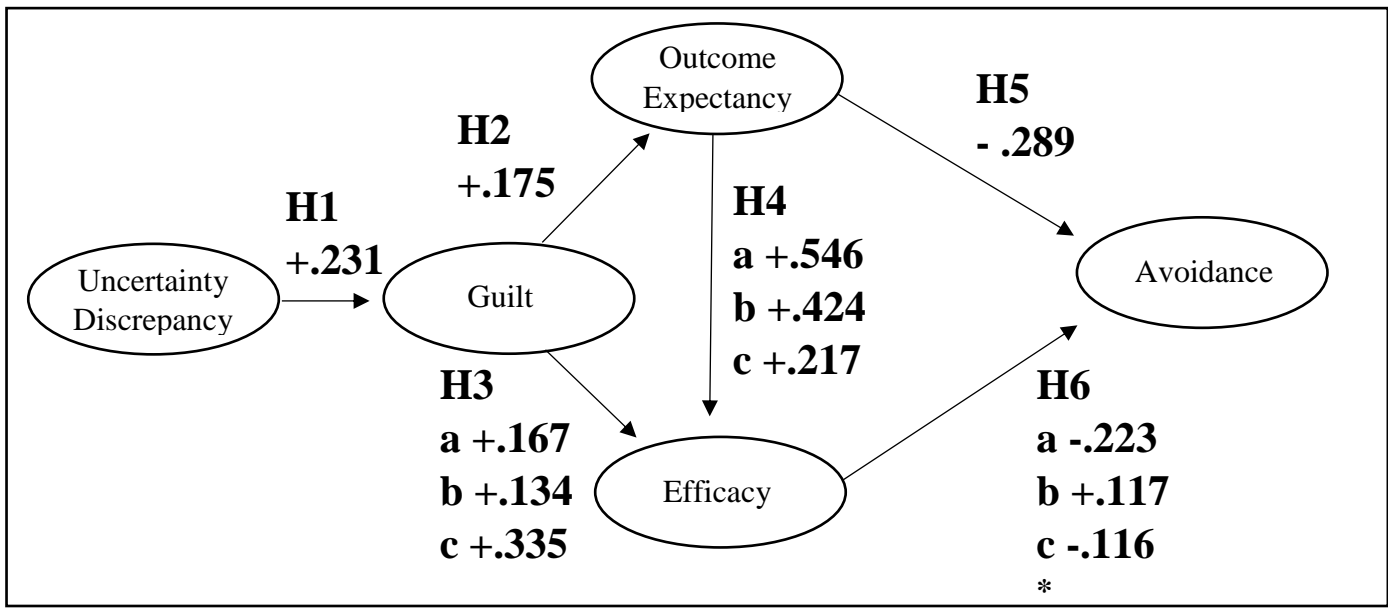


Figure 3 – Theory of Motivated Information Management Model Results

*Only communication efficacy had a negative relationship with information avoidance. The relationships between target and coping efficacies and information avoidance were insignificant.

Appendix

Measures

Dissonance Scale

Choose an answer from strongly disagree to strongly agree for the following items based on how you feel after engaging in risky financial behavior (spending more than you can afford, maxing out credit cards, not paying credit cards off in full each month, spending savings, not saving, etc.)

Emotional

After I engage in risky financial behaviors:

I feel despair.

I resent it.

I feel disappointed with myself.

I feel scared.

I feel hollow.

I feel angry.

I feel uneasy.

I feel I let myself down.

I feel annoyed.

I feel frustrated

I am in pain.

I feel depressed.

I feel furious with myself.

I feel sick.

I am in agony.

Wisdom of actions

I wonder if I really needed to do this.

I wonder whether I should have spent anything at all.

I wonder if I made the right choice.

I wonder if I have done the right thing in behaving this way.

Concern over actions

After I make risky financial decisions I wonder if I've been fooled.

After I make risky financial decisions I wonder if I'd been spun a line.

After I make risky financial decisions I wonder whether there was something wrong with my choice.

*TMIM Measures**Outcome Expectancies*

Answer the following items based on how you feel about your social networks (peers, roommates, teachers, family, etc.)

1. Talking to my social networks directly about financial behaviors would produce:

-3	-2	-1	0	1	2	3
A lot more negatives than positives	about as many negatives as positives			a lot more positives than negatives		

2. Asking my social networks what they think about personal financial behaviors would produce:

-3	-2	-1	0	1	2	3
A lot more negatives than positives	about as many negatives as positives			a lot more positives than negatives		

3. Approaching my social networks to ask about their financial beliefs would produce:

-3	-2	-1	0	1	2	3
A lot more negatives than positives	about as many negatives as positives			a lot more positives than negatives		

Communication Efficacy

Choose an answer for each of the following based on your beliefs about interactions with your social networks about financial behaviors.

1. I am able to ask my social networks what they think about personal financial behavior.
2. I could approach my social networks to ask about their beliefs about this issue.
3. I am able to approach my social networks to talk about this issue.

Target Efficacy

Choose an answer for each of the following based on your beliefs about interactions with your social networks about financial behaviors.

1. My social networks would be completely honest about the issue.
2. My social networks would give me truthful information about the issue.
3. My social networks would be completely forthcoming about the issue.
4. If approached, my social networks would be upfront about this issue.

Coping Efficacy

Choose an answer for each of the following based on your beliefs about interactions with your social networks about financial behaviors.

1. I feel confident that I could cope with whatever I discover about my social networks' personal financial behaviors.
2. I couldn't deal with what I might find out about my social networks' financial behaviors.
3. I can handle whatever I would find out about my social networks' behaviors.
4. I would not be able to deal with what I might find related to this issue.

Avoidance

Think about how much you would avoid each issue during an interaction with your social network.

1. I would avoid talking about the current state of my social networks' personal finances.
2. I would avoid talking about the current state of my personal finances.
3. I would avoid talking about my social networks' attitudes towards risky financial behaviors.
4. I would avoid talking about my attitudes towards risky financial behaviors.

Emotion regarding Uncertainty Discrepancy Measure

What do you feel when you think about how much/how little you know about your financial decisions (level of debt, financial management abilities, financial decision making, etc.)? For each of the words below, please choose the option that best represents how you feel.

	None of this Feeling			A great deal of this feeling	
	0	1	2	3	4
Surprised	0	1	2	3	4
Irritated	0	1	2	3	4
Fearful	0	1	2	3	4
Startled	0	1	2	3	4
Peaceful	0	1	2	3	4
Sad	0	1	2	3	4

Happy	0	1	2	3	4
Mellow	0	1	2	3	4
Angry	0	1	2	3	4
Astonished	0	1	2	3	4
Content	0	1	2	3	4
Annoyed	0	1	2	3	4
Tranquil	0	1	2	3	4
Afraid	0	1	2	3	4
Dreary	0	1	2	3	4
Guilty	0	1	2	3	4
Scared	0	1	2	3	4
Aggravated	0	1	2	3	4

	None of this Feeling			A great deal of this feeling	
Elated	0	1	2	3	4
Ashamed	0	1	2	3	4
Cheerful	0	1	2	3	4
Down	0	1	2	3	4
Joyful	0	1	2	3	4

Uncertainty Discrepancy Measure

1) How confident are you about your personal financial behavior decisions? (1 “not at all” to 7 “completely”)

2) How confident do you want to be about your personal financial behavior decisions? (1 “not at all” to 7 “completely”)

Personal Debt Assessment and Demographics

1. How much personal debt (i.e. credit card debt, personal loans) do you have? Do not include student loans.
 - a. \$0-500
 - b. \$500-1,000
 - c. \$1,000-3,000
 - d. \$3,000-5,000
 - e. \$5,000+
2. On a scale of 1 to 7, how likely are you to engage in risky financial behaviors (not paying off credit card balance in full each month, maxing out credit cards, overspending, not saving)? Answer with one as extremely likely and seven as extremely unlikely to engage in risky financial behaviors

1 2 3 4 5 6 7
3. What is your age?
4. What is your gender?
 - a. M
 - b. F
 - c. Prefer not to say
5. Which class are you in?
 - a. Freshmen
 - b. Sophomore
 - c. Junior
 - d. Senior