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The demand for information and its usefulness is well documented and found to be driven by factors such as curiosity, the pursuit of knowledge, or increased economic utility. However, the usefulness of information can be offset by avoidance responses. This study investigated the relationship between the practice of information avoidance and retirement worry based on theoretical support from the transactional theory of stress and coping. Specifically, this study focused on avoiding information related to retirement savings needs. Results showed that as respondents increased avoidance behaviors, they were more likely to report no retirement worry relative to each of the higher reported levels of retirement worry. These findings support increased attention to avoidance behaviors by financial planners, therapists, and counselors as it can influence, or possibly mask, the emotional well-being of their clients. The study's insights can be used in various contexts, e.g., communicating financial information, making recommendations, or developing client coping strategies.

Keywords: information avoidance; retirement worry; transactional theory of stress and coping

INTRODUCTION

Former U.S. president Ronald Reagan has been quoted as saying, information is the "oxygen of the modern age" (Rule, 1989, para. 15). Yet, surprisingly, people sometimes avoid information even when it is free, relevant, and readily accessible. This behavior has been observed and studied extensively in the fields of psychology, public health, and medicine (Golman & Loewenstein, 2015) with the communication and information sciences domain showing interest as well (Sweeny et al., 2010). However, very little has been published

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regarding the impact that information has on financial decisions, behaviors, and outcomes despite their importance to overall well-being.

The demand for information and its usefulness is well documented. Curiosity, the pursuit of knowledge and insight, and increased economic utility have all been cited for their motivating effect on seeking information (Golman & Loewenstein, 2015). Nevertheless, the usefulness of information can be offset by reactions that trigger avoidance responses. Scholars have hypothesized several motivations for information avoidance, ranging from a resistance to changing beliefs or behaviors to dodging unpleasant emotions (Sweeny et al., 2010). Soroya and colleagues (2021) have also explained that information avoidance involves ignoring some information to prevent an overload that may reduce the likelihood of receiving relevant information. This can happen because information overload prevents the processing of new information and may trigger negative psychological responses such as stress, depressive symptoms, and information avoidance (Soroya et al., 2021). The authors explain that avoidance behaviors can take many forms, including inattention, physical avoidance, or biased interpretation. Some of these behaviors are easily recognizable, for example, a refusal to monitor weight to avoid admitting to a need for a change in diet, or not checking account balances to avoid adjusting spending habits. These response types have been colloquially referred to as the *ostrich effect* (Golman & Loewenstein, 2015; Sicherman et al., 2016). Despite the tale that it buries its head in the sand to avoid danger, an African proverb reminds us that "even the ostrich, with its long neck and sharp eyes, cannot see what will happen in the future" (All Things Kenyan, 2024, line 36). This adage lays the groundwork for considering the impact of avoidance behaviors in the personal finance domain. This study examines the relationship between avoidance behaviors and retirement worry, with a specific focus on avoiding information related to retirement savings needs. Retirement savings is a prominent topic for financial professionals and researchers given the public's concerns around the adequacy of Social Security benefits in retirement, the effect of inflation on investment assets, and more general concerns around outliving their savings (Heiser, 2023).

THEORETICAL FRAMEWORK

The transactional theory of stress and coping (TTSC) was used as the theoretical model for exploring the use of avoidance behaviors to cope with financial stressors and its relationship to the emotion of retirement worry. TTSC posits that we go through a two-stage appraisal process when determining a response to a stressor (Lazarus & Folkman, 1984). In the initial stage, primary appraisal, an individual assesses the stressor for its threat level. If determined to be a threat, the individual moves to the next stage. It is in the secondary appraisal stage that an individual determines if their resources are sufficient to deal with the threat.

TTSC explains that the cognitive appraisals described in the two-stage appraisal process influence an individual's response to the perceived threat and the individual's emotional state when dealing with the threat (Lazarus & Folkman, 1984). In this theoretical model, once an assessment of threat is made, an individual would select a coping strategy. *Coping* has been defined as thoughts and behaviors that people use to handle situations

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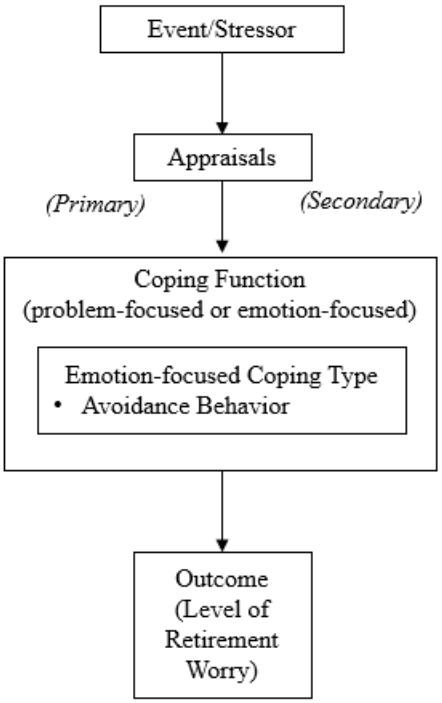
perceived as threats that exceed their resources or ability to handle (Folkman & Moskowitz, 2004; Lazarus & Folkman, 1984). Further, Folkman and Moskowitz (2004) underscored that coping does not happen in isolation, rather it is part of a dynamic process that involves the individual, their environment, and the relationship between the two.

Lazarus and Folkman (1984) have explained that coping strategies can be problem-focused or emotion-focused. According to the authors, *problem-focused coping* aims to manage or fix the problem or stressor whereas *emotion-focused coping* attempts to address the emotional response to the problem or stressor. Emotion-focused coping is most likely to be chosen when an individual determines that nothing can be done to change the threat they may face (Lazarus & Folkman, 1984). Emotion-focused strategies can take the form of avoidance or distracting behaviors, such as drugs or alcohol, and may help an individual circumvent the emotional repercussions of an event (Folkman & Moskowitz, 2004; Lazarus & Folkman, 1984). This study focused on the emotion-focused coping strategy of avoidance.

Resolving a threat can also create emotional responses, making emotions a vital part of the coping process. Folkman and Moskowitz (2004) explained that positive emotions tend to result from successful resolutions while uncertain or unfavorable resolutions tend to result in negative emotions. These relationships are represented in the conceptual model shown in Figure 1.

Figure 1.

Conceptual Model of Transactional Theory of Stress and Coping (Lazarus & Folkman, 1984).



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LITERATURE REVIEW

Personal financial decisions are complex and may be influenced by nonfinancial tendencies, for example avoidance behaviors like avoiding bad news or preserving an image (Exley & Kessler, 2021). Yet, empirical studies in the personal finance domain regarding financial information acquisition and avoidance behaviors in the U.S. are limited (Golman et al., 2017; Karlsson et al., 2009; Sicherman et al., 2016).

Avoidance Behavior

Active information avoidance has been described as ignoring relevant information and can take many forms, including inattention, biased interpretation of information, or physical avoidance (Golman et al., 2017; Soroya et al., 2021; Sweeny et al., 2010). This study focused on inattention as its form of information avoidance. Experimental studies have provided evidence of individuals adjusting their attention, or the information they collect, based on incentives found in their environment (Andries & Haddad, 2020; Caplin & Dean, 2015). Scholars have characterized information acquisition and avoidance as active or passive (Golman et al., 2017; Sharif et al., 2020; Sweeny et al., 2010). Specifically, active avoidance behaviors involve intentionally avoiding information that is free and relevant to the outcome (Golman et al., 2017). An example would include being inattentive to information such as a bank balance when it is expected to be negative.

Other scholars have also considered reasons why individuals might choose to avoid information. Economists, Exley and Kessler (2021), have found that individuals avoid information due to self-image concerns, specifically related to selfishness. They also identified several other drivers for avoiding information, including a desire to avoid bad news, laziness, inattention, and confusion.

While actively avoiding information can deprive people of information relevant to decisions they need to make (Golman et al., 2017; Soroya et al., 2021), avoiding information should not be assumed to be irrational in all cases. Information is a source of utility and there are circumstances where individuals could derive utility from avoiding information, e.g., avoiding genetic testing for a hereditary disease so one can enjoy life before symptoms or finding out the gender of a child (Golman et al., 2017). This study did not consider positive outcome conditions, rather it focused on avoidance behaviors that place individuals in a position to miss relevant financial information.

Avoidance Behavior in Personal Finance

The concept of attention, and the intentional lack thereof—in other words avoidance, has drawn interest from researchers looking to understand investor behavior. In an examination of investor attention to portfolio holdings, Sicherman et al. (2016) described attention as the demand for information. The authors noted that the benefit provided by information would need to overcome the costs associated with the attention needed to

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acquire it. This includes time, opportunity costs, and information-processing costs. For this study, attention was interpreted as actively considering information.

The literature on investor attention has generally shown that inattention was increased in volatile market conditions for loss averse investors (Andries & Haddad, 2020; Karlsson et al., 2009; Sicherman et al., 2016). Andries and Haddad (2020) argued that increased levels of risk make information costs feel higher, so investors do not seek information about their portfolios as often during periods of higher volatility. Similarly, Alvarez et al. (2012) examined the frequency of portfolio observations, trading behavior and risk preferences in Italian households and found that the presence of observation costs reduced the frequency of information gathering. News media coverage also influenced attention to investment portfolios while investors displaying ostrich behavior, or the tendency to avoid information, were inclined to trade less often after market downturns (Andries & Haddad, 2020; Sicherman et al., 2016). In summary, scholars have posited that down markets result in different information cost assessments by risk tolerant and loss averse investors. Risk tolerant investors tend to hold riskier assets, so more information is considered valuable in volatile markets. In contrast, loss averse investors' view information costs as higher in down markets, which explains the tendency toward ostrich behavior for these investors. (Alvarez et al., 2012; Sicherman et al., 2016).

Using panel data, Sicherman and colleagues (2016) found evidence of hedonic utility from attention to, or avoidance of, information about their investment portfolios. The researchers concluded that the attention response to volatility was a stable personality trait with males— and wealthy investors showing a greater ostrich effect to volatility. They also found a negative correlation between volatility and attention, which they labeled a *volatility ostrich effect.* It should be noted that this negative relationship between attention and volatility may offer benefits for risk averse individuals as it could minimize panic responses during periods of market volatility and reduce excessive trading. Research has historically shown that investors who trade frequently tend to underperform market benchmarks (Barber & Odean, 2000). Further, Barber et al. (2022) found that fintech technologies that attract the attention of new investors with their simplicity and game-like features can lead to more speculative trading. They argued that this behavior leads to herding, or trading based on attention measures such as—unusual volume, extreme returns, so a volatility ostrich effect may work to counterbalance this reaction.

Support for the ostrich effect was also found in studies of both U.S. and Scandinavian investors, as both groups of investors monitored their portfolios more often in rising markets (Karlsson et al., 2009). Karlsson and his fellow researchers (2009) offered a definition of the ostrich effect in a finance context and described it as, "avoiding exposing oneself to information that one fears will cause psychological discomfort" (p. 96). They argued that acquiring and focusing attention on information increases the psychological impact of the information. Further, scholars have reasoned that the abundance of information available digitally or through traditional media, also referred to as *information overload*, can create stress, anxiety, and tension, resulting in difficulties in memorizing and remembering, and even poor decisions by consumers (Lee & Cho, 2005).

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While these findings provided evidence for the construct of attention influencing trading and investment behaviors, the current study will add to the literature on the demand for financial information by exploring emotions that are impacted by a decrease in demand for information, in other words information avoidance. In the personal finance domain, information-seeking and information avoidance behaviors are observed in decision-making beyond trading and investing and the decision-making process includes emotions . For example, financial information is informative in the context of estate planning and wealth transfer decisions. Death can evoke emotions that could stymie conversations and preventive coping strategies on this topic. Avoidance behaviors in this context risks delaying decisions that may have a long-term impact on a family's future.

In summary, a review of the literature indicates a need for additional research to identify the relationship between avoidance of financial information and emotions . This study's focus on the influence of information avoidance on retirement worry, a potential source of anxiety and information overload for individuals not experienced or comfortable with financial decisions, aimed to fill that gap.

Avoidance Behavior and Retirement Worry

According to Gutierrez and Hershey (2013), individuals with high levels of worry about retirement planning face greater difficulties processing financial and retirement concepts than those without emotional barriers. The researchers explored how retirement-related fears and worries would affect the processing of retirement-related information in an experimental study involving working adults. They concluded that ongoing negative thoughts about one's finances, or financial worries, can disrupt how information is processed. In another study of U.S. adults that used data from the Survey of Consumer Finances and the Health and Retirement Study, Owen and Wu (2007) found that individuals worried more about the adequacy of their retirement income after an adverse financial shock. They attributed part of this response to general pessimism after experiencing unexpected financial shocks rather than changes in income or net worth.

Findings from these studies appear to be in line with research that considered behaviors that could be impacted by retirement worry, for example, retirement savings. Magwegwe and Lim (2021) assumed the opposite of avoidance behaviors in their study of retirement savings. Specifically, they considered directly addressing retirement savings needs by using a measure for calculating retirement savings needs as an intention for retirement savings. The researchers found that an individual's intention for retirement savings and the behavior of having a retirement account were significantly related. This suggests that even if avoidance is an effective coping strategy, it is not helpful. Individuals using avoidance strategies would not prepare themselves to address important financial needs. According to the 2024 Retirement Confidence Survey (EBRI, 2024), which measures worker and retiree confidence about retirement, 62% of workers report feeling stressed about preparing for retirement. Industry surveys like this one have been funded by financial services firms and may be influenced by product development goals. This study adds to the scholarship on retirement savings and potential barriers to sufficient savings by focusing on the retirement funding aspect of retirement worry.

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Inaction and procrastination, which can be interpreted as a form of avoidance, have also been found in studies examining retirement savings behaviors (Lusardi, 1999; Madrian & Shea, 2001; Owen & Wu, 2007). Madrian and Shea's (2001) study showed that 401(K) participants from a large Fortune 500 company were unlikely to change automatic contribution rates or default allocations set by their employer. In early research on retirement behaviors, Lusardi (1999) found evidence for procrastination around retirement savings, particularly among low wealth households. She reported that as much as one-third of older adults (age 51-61) sampled from the Health and Retirement Study were not thinking about retirement.

Based on prior literature, this study operationalized coping strategies as avoidance behavior, which reflects an emotion-focused coping strategy most fitting when faced with a threat that cannot be changed. Emotion-focused coping strategies have been described as helpful for navigating the emotional repercussions of a threat (Folkman & Moskowitz, 2004; Lazarus & Folkman, 1984). Retirement worry operationalized the outcome resulting from the coping strategy. This conceptual model, adapted from the Transactional Theory of Stress and Coping (Lazarus & Folkman, 1984), predicts that coping strategies would reduce the impact of the stressor on the outcome of interest and supported exploring the following hypothesis:

H_1: Levels of retirement worry are lower for those who avoid financial information.

METHODOLOGY

The 2021 National Financial Capability Study (NFCS) is a cross-sectional study commissioned by the FINRA Investor Education Foundation to benchmark key indicators of financial capability and was used to provide the data (FINRA Investor Education Foundation, 2022). The 2021 NFCS included two surveys, the State-by-State Survey (NFCS-SS) and the Investor Survey (NFCS-IS), however, only the 2021 NFCS-SS was used. While the 2021 NFCS-SS was administered to 27,118 U.S. adults, retired respondents were excluded from this study's sample. The focus on adults in the pre-retirement stage of the life cycle reflects the measure for the key variable in the study. Broadly, the construct of worry has been defined to reflect its focus on future threats and negative outcomes (Holaway et al., 2006; Matthews & Funke, 2006; Sibrava & Borkovec, 2006), so retirement worry is best captured in individuals before they have retired. The pre-retirement stage has been cited as the period when individuals worry about running out of money during retirement or having enough to retire (Heiser, 2023; Hill, 2016; Skarborn & Nicki, 2000). Also, the types of worry older adults report have been found to differ from younger adults, for example health and functional independence later in life are greater concerns for older adults (Sibrava & Borkovec, 2006). This previous research supported limiting the sample by excluding retired respondents.

The full sample included 27,118 U.S. adults aged 18 and older, however the analytic sample was reduced because retirees were excluded which resulted in a sample size of 21,263. Additionally, some variables had fewer responses due to the structure of the NFCS survey, e.g., routing respondents to applicable questions or respondent preferences. Respondents were also given the option to choose responses of *prefer not to say* or *don't*

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know to survey questions. For this study, those responses were treated as missing values given the challenge of inferring an accurate response. Missing values for the key variable of avoiding behavior was coded as *avoiding* and any remaining missing values were excluded from the final dataset. Absence of a response to the avoidance behavior question was interpreted as inaction on the part of the respondent, therefore indicative of avoidance behavior (Lusardi, 1999). The proportion of missing values were below 10% for key variables in the study, which does not exceed the threshold scholars have argued may create bias in the statistical analysis (Bennett, 2001; Dong & Peng, 2013). Demographic characteristics between the final sample and the sample with missing values were compared and no significant differences between the means were found (t = 1.3871, p = 0.1654). Further, researchers have argued that listwise deletion results in unbiased estimates across all missing data mechanisms provided that the missingness is unrelated to the dependent variable (Allison, 2009; Magwegwe, 2020). For this study, patterns in the missing data were analyzed and none were found, which provided support for using listwise deletion to address missing values (Schlomer et al., 2010). This approach was also consistent with the treatment of missing values in the NFCS dataset by other researchers (Allgood & Walstad, 2016; Magwegwe, 2020) and resulted in a final sample size of 20,689.

Dependent Variable

Retirement worry was the dependent variable in the empirical model of this study. It was operationalized with a single survey question asking respondents to score their response on a 5-point Likert-type scale to the following statement, "*I am concerned that the money I have or will save won't last.*" Responses were coded as an ordinal measure ranging from (1) *does not describe me at all* to (5) *describes me completely*. This measure specifically focuses on the retirement funding component of retirement worry.

Independent Variables

Avoidance Behavior

The key independent variable was avoidance behavior. Responses were coded as a binary (1) *yes* or (0) *no* in response to the question, "*have you ever tried to figure out how much you need to save for retirement*?" This question was only posed to respondents who had not yet retired. Prior research has identified inaction and procrastination as avoidance-type behaviors that can have a negative effect on retirement savings (Lusardi, 1999; Madrian & Shea, 2001) which provided support for the use of this question to measure avoidance behavior.

Demographic and Control Variables

The demographic variables of age, marital status, sex, race, education, and income have been previously established as explanatory variables associated with retirement worry and were included as control variables in this study. Age was grouped into six categories—*18 to 24*, *25 to 34*, *35 to 44*, *45 to 54*, *55 to 64*, and *65 and older*. The categories used for marital status included, *married*, *single*, *separated*/*divorced*, and *widowed*. Race and sex were

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categorized as *White* or *non-White* and *male or female*, respectively. Education categories included *less than high school*, *high school graduate*, *GED*, *some college*, *associates*, *bachelor's*, and *graduate*. Finally, income was categorized as *less than $25K*, *$25K to no more than $50K*, *$50K to no more than $100K*, *$100K to no more than $200K*, *$200K to no more than $300K*, and *$300K or more*.

Analysis

Retirement worry was assessed using both continuous and categorical measures. The continuous measure was used to analyze its linear relationship with avoidance behaviors. The categorical measure allowed for a robustness check to investigate the relationship between avoidance behaviors and different categories of retirement worry. Ordinary least squares (OLS) regression was used to explore the relationship between retirement worry and avoidance behavior, which is typically recommended when testing for relationships with continuous outcome variables (Allison, 2012). An important assumption of this statistical technique is that there is a linear relationship between the key independent and dependent variables. Although the dependent variable in this study, retirement worry, was not a truly continuous variable, a correlation analysis supported the expectation of a linear association between retirement worry and avoidance behavior.

A multinomial logistic regression model was also used to assess the relative risk of various categories of retirement worry compared to experiencing no retirement worry for those practicing avoidance behavior. Multinomial logistic regression was selected because of the five categories of retirement worry tested and its suitability for examining relationships with categorical outcome variables (Allison, 2012). Despite the initial appearance of an ordered nature to the categories considered for retirement worry, the data failed to meet the proportional odds assumption necessary for an ordered logistic regression model to be deemed appropriate. The proportional odds assumption states that the relationship between each pair of outcome categories is the same which allows for the ordered logistic model's predicted probabilities to be similar to the observed proportions (Cornell Statistical Consulting Unit, 2020; UCLA Statistical Methods and Data Analytics, n.d.b). This assumption was tested using the *Brant test* which dichotomizes the ordinal dependent variable in various ways before running a series of logistic regressions (Williams, 2012). Statisticians explain that a significant test statistic is evidence of a failure to meet the proportional odds assumption (UCLA Statistical Methods and Data Analytics, n.d.b). The test statistic for the dependent variable was significant at the $p < .01$ level.

RESULTS

Descriptive Results

A summary of both weighted and unweighted descriptive statistics for variables is provided in Table 1. The weighted analytic sample of 20,689 U.S. adults included slightly more female (50.31%) than male (49.69%) and most were unmarried (56.04%). A majority of the weighted sample had an education level below a bachelor's degree (68.38%). The average age of the sample was included in the *35 to 44* age category. Household income was

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categorized into six groups, with the average income in the $25,000 to $49,999 group. More than forty percent of the weighted sample reported high levels of retirement worry (47.57%), and approximately one-third practiced avoidance behaviors (38.83%).

Table 1.

Sample Characteristics of Variables (n = 20,689).

	n	% (unweighted)	% (weighted)
Practice Avoidance Behavior			
Yes	8,328	40.25	38.83
No	12,361	59.75	61.17
Retirement Worry			
Does not describe me at all	2,282	11.03	11.24
Describes me very little	3,104	15.00	14.98
Describes me somewhat	5,447	26.33	26.21
Describes me very well	4,371	21.13	21.16
Describes me completely	5,485	26.51	26.41
Control Variables			
Age			
18 to 24	2,910	14.07	15.85
25 to 34	4,559	22.04	21.96
35 to 44	4,399	21.26	20.12
45 to 54	4,316	20.86	20.01
55 to 64	3,393	16.40	16.70
65 and older	1,112	5.37	5.37
Gender			
Male	9,584	46.32	49.69
Female	11,105	53.68	50.31
Race			
White	14,776	71.42	59.46
Non-white	5,913	28.58	40.54
Education			
Less than HS	1,240	5.99	6.82
HS graduate/GED	6,141	29.68	31.82
Some college/Associates	5,890	28.47	29.74
Bachelor's	4,768	23.05	21.26
Graduate	2,319	11.21	10.36
Marital status			
Married	9,591	46.36	43.96
Single	8,188	39.58	42.40
Separated/divorced	2,466	11.92	11.57
Widowed/widower	444	2.15	2.07
Income			

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Less than $25K	5,000	24.17	25.78
$25K to $49,999	4,970	24.02	24.37
$50K to $99,999	6,341	30.65	30.02
$100K plus	4,378	21.16	19.83

OLS Regression Results

Results of the OLS regression analysis can be found in Table 2. In this model, avoidance behaviors were inversely related to retirement worry (b = -0.14, β = -0.05, p < 0.001). In addition, several demographic covariates were positively related to retirement worry, including each of the age and income categories when compared to their base categories. Interestingly, non-White (b = -0.15, β = -0.05, p < 0.001) and male (b = -0.18, β = -0.07, p < 0.001) respondents were inversely related to retirement worry when compared to White and female respondents, respectively, suggesting a difference in how racial groups and genders experience retirement worry. Respondents who were separated or divorced (b = 0.25, β = 0.06, p < 0.001) were the only non-married category with a significant and positive relationship to retirement worry when compared to those who were married. Of the education categories, only those with a bachelor's degree (b = -0.09, β = -0.03, p < 0.05) showed a significant negative relationship with retirement worry when compared to those with less than a high school diploma, suggesting education may have a positive relationship with retirement worry.

Table 2.

OLS Regression Model of Predictors of Retirement Worry--weighted (n = 20,358).

	Coefficient	SE	β	p-value
Avoidance behavior	-0.14	0.02	-0.05	0.00
Age (*ref 65 and older*)				
18 – 24	0.32	0.05	0.09	0.00
25 – 34	0.54	0.04	0.17	0.00
35 – 44	0.60	0.04	0.18	0.00
45 – 54	0.58	0.04	0.18	0.00
55 – 64	0.32	0.04	0.09	0.00
Gender (*ref Female*)				
Male	-0.18	0.02	-0.07	0.00
Race (*ref White*)				
Non-White	-0.15	0.02	-0.05	0.00
Education (*ref less than HS*)				
HS grad/GED	-0.04	0.04	-0.01	0.26
Some college/Associates	0.01	0.04	0.00	0.73
Bachelor's	-0.09	0.04	-0.03	0.03
Graduate	-0.02	0.04	-0.00	0.68
Marital status (*ref Married*)				
Single	0.03	0.02	0.01	0.13
Separated/Divorced	0.25	0.03	0.06	0.00
Widowed	0.09	0.06	0.01	0.16
Income (*ref $100K or more*)				
Less than $25K	0.88	0.03	0.29	0.00

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$25K - $49,999K	0.71	0.03	0.23	0.00
$50K - $99,999K	0.38	0.03	0.13	0.00

Note. $X^2(18, 20339) = 133.37$, $p < .001$; adjusted r-squared = 0.10.

Multinomial Regression Results

As a robustness check, a multinomial regression model was also tested with the dependent variable—retirement worry, as a categorical variable. This was done to investigate the relationship between avoidance behavior and different categories of retirement worry. Table 3 displays relative risk ratios for the key variables estimated by the model. *Relative risk ratios* (RRR) describe the exponentiated coefficients derived from a multinomial logistic model. Despite their similarity to odds ratios, statisticians have explained that relative risk ratios are more appropriate when model results are stated relative to a base category (Gutierrez, 2005; UCLA Institute for Digital Research and Education, n.d.a). In this model, RRR were appropriate because the model results were stated relative to a base category of retirement worry. The results represent a respondent's RRR of experiencing retirement worry at *very little*, *somewhat*, *very well*, and *completely* levels, relative to the neutral *not at all* level.

Results from the full model are illustrated in Table 3. Higher levels of retirement worry were significantly related to avoidance behavior. If a respondent increased their avoidance behavior, they were more likely to report no retirement worry relative to the *somewhat* (RRR = 0.84, 95% CI = 0.76, 0.94, $p < 0.001$), *very well* (RRR = 0.78, 95% CI = 0.69, 0.87, $p < 0.001$), and *completely* (RRR = 0.77 95% CI = 0.69, 0.85, $p < 0.001$) levels of retirement worry. Our regression analyses found that not focusing on how much is needed for retirement savings was associated with lower levels of retirement worry. These findings support the study's hypothesis that individuals who practice avoidance behaviors experience lower levels of retirement worry.

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Table 3.

Multinomial Regression Model of Predictors of Retirement Worry.

	Describes me… Very Little		Somewhat		Very Well		Completely	
	RRR (95% CI)	*p*-value	RRR (95%CI)	*p*-value	RRR (95% CI)	*p*-value	RRR (95% CI)	*p*-value
Avoidance behavior	1.07(0.95, 1.20)	0.26	0.84(0.76, 0.94)	0.00	0.78(0.69, 0.87)	0.00	0.77(0.69, 0.85)	0.00
Age (*ref 65 or older*)								
18 to 24	1.51(1.17, 1.94)	0.00	2.05(1.62, 2.61)	0.00	2.88(2.22, 3.75)	0.00	2.03(1.56, 2.62)	0. 00
25 to 34	1.42(1.13, 1.79)	0.00	2.43(1.95, 3.03)	0.00	3.48(2.72, 4.44)	0. 00	3.48(2.74, 4.42)	0. 00
35 to 44	1.36(1.08, 1.70)	0.01	2.14(1.72, 2.65)	0.00	3.30(2.59, 4.20)	0. 00	3.87(3.07, 4.90)	0. 00
45 to 54	1.51(1.21, 1.90)	0.00	2.44(1.96, 3.02)	0.00	3.31(2.60, 4.22)	0. 00	3.97(3.15, 5.02)	0. 00
55 to 64	1.36(1.09, 1.70)	0.01	1.92(1.55, 2.37)	0.00	1.93(1.51, 2.46)	0. 00	2.20(1.74, 2.77)	0. 00
Gender (*ref Female*)								
Male	0.92(0.83, 1.03)	0.16	0.82(0.74, 0.91)	0.00	0.76(0.68, 0.85)	0. 00	0.63(0.57, 0.70)	0. 00
Race (*ref White*)								
non-White	0.91(0.82, 1.02)	0.13	0.83(0.75, 0.92)	0.00	0.77(0.69, 0.86)	0. 00	0.68(0.61, 0.76)	0. 00
Education (*ref Less than HS*)								
HS grad/GED	0.93(0.72, 1.19)	0.55	0.94(0.75, 1.18)	0.60	0.83(0.66, 1.05)	0.12	0.90(0.72, 1.13)	0.36
Some college/ Associates	1.04(0.80, 1.33)	0.79	1.08(0.86, 1.35)	0.51	1.04(0.82, 1.31)	0.76	1.06(0.85, 1.33)	0.62
BS	1.12(0.87, 1.46)	0.37	0.96(0.76, 1.21)	0.72	0.93(0.73, 1.19)	0.58	0.85(0.67, 1.07)	0.16
Graduate	0.93(0.71, 1.24)	0.63	0.91(0.71, 1.18)	0.48	0.88(0.68, 1.15)	0.34	0.96(0.74, 1. 24)	0.75
Marital status (*ref Married*)								
Single	1.02(0.89, 1.18)	0.74	1.04(0.91, 1.18)	0.58	1.09(0.96, 1.25)	0.19	1.07(0.94, 1.23)	0.30
Separated/ Divorced	1.08(0.87, 1.35)	0.48	1.29(1.06, 1.57)	0.01	1.49(1.22, 1.81)	0. 00	1.84(1.52, 2.23)	0. 00
Widowed	0.92(0.63, 1.35)	0.67	0.70(0.49, 1.00)	0.05	0.98(0.68, 1.42)	0.93	1.09(0.77, 1.54)	0.61
Income (*ref $100K or more*)								
< $25K	1.02(0.84, 1.24)	0.84	1.97(1.65, 2.35)	0.00	3.53(2.93, 4.25)	0. 00	6.77(5.63, 8.15)	0. 00
$25K - $49,999K	1.29(1.08, 1.54)	0.01	2.06(1.75, 2.42)	0.00	3.28(2.75, 3.89)	0. 00	5.08(4.28, 6.04)	0. 00
$50K - $99,999K	1.42(1.23, 1.63)	0.00	1.82(1.59, 2.08)	0.00	2.44(2.11, 2.83)	0. 00	2.50(2.15, 2.90)	0. 00
-2 LL	-30549.27							
X^2	2425.80							
Nagelkerke R^2		0.04						

Note. n = 20,358; RRR-relative risk ratio; reference group for DV = *describes me not at all*; $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$.

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DISCUSSION

The purpose of this study was to investigate the relationship between avoidance behaviors and retirement worry, specifically related to retirement savings adequacy. The transactional theory of stress and coping (Lazarus & Folkman, 1984) provided the theoretical framework for predicting that avoidance coping strategies will result in lower levels of retirement worry. Using data from the 2021 NFCS-SS, two models were specified. The first model tested the linear relationship between retirement worry and avoidance behaviors using OLS regression. Results showed an inverse linear relationship between avoidance behaviors and retirement worry. In other words, when an individual avoids their retirement savings needs and does not consider how much may need when they retire, they tend to experience lower levels of retirement worry. This finding supports the study's hypothesis and is in line with findings from prior studies showing that attention to information increases the psychological impact of the information (Karlsson et al., 2009). These findings should serve as a red flag to practitioners and planners. Observations of clients, and potential clients, who demonstrate tendencies toward disregarding their retirement savings preparation could be explained as a rational response to protecting themselves from emotional discomfort.

The study's second model considered the probability of avoidance behaviors relative to various levels of retirement worry. Findings from the multinomial regression model mirrored the linear relationship found in the OLS model. As avoidance behaviors increased, respondents were less likely to report three of the four higher levels of retirement worry, *very little*, *somewhat*, and *completely*, than reporting *no* retirement worry when demographic controls were added. This would support the potential effectiveness of avoidance behaviors as a coping strategy. Financial professionals should be alert for signs of this strategy at play in the clients they work with.

Limitations

This study has several limitations. First, cross-sectional data was used which does not allow for an assessment of changes in retirement worry or avoidance behaviors over time, the key outcome and predictor variables in the model. Next, this study did not consider participants' level of knowledge about retirement planning. We view financial knowledge as a result of information acquisition. This would make it difficult to examine the relationship between avoiding retirement information when faced with a stressor and the emotion of retirement worry if we also included the acquisition of related information in the model. While we would have controlled for the participants' level of financial knowledge, the dataset used did not include knowledge questions specifically related to retirement planning.

While this study focused on the relationship between avoidance behavior and retirement worry from the theoretical perspective that avoidance behavior impacts retirement worry levels, it is possible that retirement worry could trigger avoidance practices. In a recent study investigating preparation for the Covid-19 pandemic, Soroya and her fellow researchers (2021) found that Finnish adults who experienced information

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anxiety, or felt there was an overwhelming amount of information, tended to avoid information about the pandemic. Their findings showed that avoidance behaviors can stem from information anxiety and information overload. In other words, this negative affect was a predictor of avoiding information. The current study did not evaluate potential triggers of avoidance behaviors, of which retirement worry may be one, representing a limitation of the study in terms of identifying causality amongst the variables. The multivariate analysis used in this study can only establish relationships between the variables included in the model, it does not establish causation.

Further, missing data that was removed using listwise deletion could also bias the sample. While it is not uncommon for survey data to have missing values that are not MCAR, missing values that are not MCAR risks providing sample data that is affected by some form of bias. Lastly, despite the significant relationships found between the key variables, the multinomial model showed low explanatory power for variance in the dependent variable. The Nagelkerke r-squared value was 0.04, indicating the model only explained 4% of the variance in retirement worry.

Implications

This study provides important implications for financial professionals working to help clients manage behavioral biases. The results have identified an empirically significant link between avoidance behaviors, e.g., not calculating the amount of savings needed, and retirement worry. These findings could help financial professionals identify potential triggers of retirement worry as clients tend to turn to professionals for help with managing these types of emotions. The results, combined with prior studies that support the importance of active planning and attention to financial needs (Magwegwe & Lim, 2021), also provide support for financial professionals to prompt their clients to pay attention to financial information when it is helpful for the decision-making process. Ultimately, while findings show that avoidance behaviors may be successful at reducing worry to levels perceived as tolerable, although not sufficient to completely eliminate it, it does not mean that avoidance behaviors are helpful in the context of personal finance. The risk to using this strategy is that individuals would not position themselves to address important financial needs.

Results were consistent with prior research indicating a negative correlation between attention and investment volatility (Sicherman et al., 2016), which suggested that attention declines with negative outcomes. Similarly, research examining attention and trading and investment behaviors found an inverse relationship between avoidance behaviors and trading frequency during market downturns (Andries & Haddad, 2020). This study adds to the literature on avoidance behaviors and broadens it into the personal finance domain, expanding our understanding of its role on emotions related to financial outcomes. Exploring emotions that are impacted by a decrease in the demand for information extends the literature related to information search as well.

CONCLUSION

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In summary, this study provides the first examination of the relationship between avoidance behaviors and retirement worry. Results from the multinomial regression model supported expectations for a negative association between the two key variables at high levels of retirement worry. The findings also provide a rationale for increased attention to avoidance behaviors by financial planners, therapists, and counselors that can be used when preparing financial information for clients, when helping clients manage their coping strategies, or when making financial recommendations. This research contributes to the growing literature that explores the impact avoidance behaviors have on emotions, behaviors, and outcomes while also extending the study of its influence into the personal finance domain.

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