Determinants of financial worry of widows and widowers compared to married individuals

by

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B.A., Walsh College, 1990
M.S., Walsh College, 1996
M.S., Walsh College, 2014

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

Department of Personal Financial Planning
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Abstract

This study explores financial stress and how it can manifest into financial worry. Financial worry is defined as “repeated and negative thinking about the uncertainty of one’s (future) financial situation” (de Bruijn & Antonides, 2020, p. 1). Money issues and relationship hurdles can create financial stress, which can lead to uncertainty and financial worry (Magwegwe et al., 2020). So, too, can relationship status and gender (Hsu & Barrett, 2020). Financial stress, or the “level of stress and well-being emanating from one’s personal financial condition” (Prawitz et al., 2006, p. 36), can differ for married and widowed individuals. Widowed individuals may experience added personal grief along with increased financial pressures due to the loss of income, responsibility for overseeing all financial matters for the first time, or lack of an emergency fund.

This study seeks to identify differences in financial worry between heterosexual married individuals and widows/widowers. It utilizes the Stress Process model (Pearlin et al., 1981) to investigate stressful financial indicators, personal resources, and financial resources by comparing the financial statuses of married and widowed individuals (Pearlin et al., 1981). Data provided by the National Financial Capability Study (NFCS) in 2018 was used to measure financial stress for U.S. adults above the age of 45. The NFCS includes questions on objective and subjective financial stressors (e.g., paying bills on time, calls from collection companies, debt levels, etc.), the consequences of which were expected to result in financial worry measured with a six-component index.

This study also utilized structural equation modeling to identify differences in financial stress levels between married and widowed individuals. While the study found no significant difference between married and widowed individuals in fueling financial worry, it did discover

that subjective financial stressors (e.g., what married and widowed individuals thought about their present financial situation) were significantly different when compared to objective financial stressors (e.g., drop in income, debt levels, inability to pay bills). The study also found that objective financial stressors are significant for married individuals and that personal resources matter significantly. An understanding of the determinants of financial worry can help financial practitioners and financial educators create plans and strategies for clients coping with financially stressful situations. This study will be especially useful for financial planners, financial counselors, and financial therapists who work both with married and widowed individuals.

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Dedication

This dissertation is dedicated to my mom, Esther Edwards, otherwise known as Mamacita. She is a great cook and my favorite shopping buddy. Thank you for the unconditional love that you have given me, for your wisdom and strength, for always believing in me, and for making me feel like anything is possible.

Chapter 1 - Introduction

Stress is a normal part of life, but losing a spouse and the period of bereavement that follows may be one of the biggest stressors in life for a surviving spouse (Kaunonen et al., 1999). In addition to the mental and emotional anguish of losing a partner, it can be daunting for a surviving spouse to handle financial matters (Streeter, 2020). There are many short- and long-term plans that a surviving spouse needs to deal with after the loss of their spouse, including planning for a funeral, paying bills, comforting loved ones, and planning for the future. The purpose of this study is to examine the differential effect of financial stressors on financial worry for widows/widowers compared to married individuals. Married individuals and widowed individuals may experience financial stress due to the cost of their children's education, excessive credit card debt, or the inability to pay current obligations. In contrast, widowed individuals may also experience grief along with financial pressures due to the loss of income, responsibility for overseeing all financial matters for the first time, or lack of an emergency fund. Widows/widowers may be dealing with grief alongside financial stress and financial worry.

Financial worry has been defined as "repeated and negative thinking about the uncertainty of one's (future) financial situation" (de Bruijn & Antonides, 2020, p. 1). Financial worry is a subcomponent of the general worry domain. General worry has been defined as repeated negative thoughts about the uncertainty of one's future (de Bruijn & Antonides, 2020; Magwegwe et al., 2020). Individuals can have varying levels of worry, from low to extremely high. Research in financial worry has gained interest in recent years because of the detrimental effect it can have on mental health and financial well-being (Magwegwe et al., 2020; Ryu & Fan, 2023; Weissman et al., 2020). Financial well-being is "a state of being financially healthy, happy, and free from worry" based on a judgment of one's financial situation (Joo, 2008, p. 22).

Financial worry helps us understand the ways in which people experience and respond to uncertainty about their future. Prolonged financial stress and financial worry can result in negative psychological well-being (reduced mental health and/or emotional health) as well as serious financial situations (Litwin & Meir, 2013).

Worry is a normal part of life. People worry about actual situations (e.g., illness, employment, children) as well as things that may never materialize. Financial worry appears to be escalating in the United States. In a recent survey, 92% of recent respondents believed that their finances had a negative effect on their mental health (Salary Finance, 2022). The Salary Finance survey also found that 72% of respondents had less savings compared to a year ago. Additionally, 67% of respondents struggled more with their finances compared to the previous year (including half of those making more than $100k), and 57% of respondents reported running out of money between paychecks (Salary Finance, 2022). Prolonged worry about finances can negatively impact mental and emotional well-being (Salary Finance, 2022). Litwin and Meir (2013) found that financial worry was associated with negative outcomes among older people, including outcomes related to health, lifestyle, economic status, and social networks.

Financial stress is the "level of stress and well-being emanating from one's personal financial condition" (Prawitz et al., 2006, p. 36). This study investigates the influence of financial stress on financial worry and the differences between married and widowed individuals. The marital status of single, separated, and divorced individuals was not a focus because this study examined married individuals compared to widowed individuals. Being a widow/widower is different from being single, divorced, or separated. In this study, being widowed meant "a person whose husband or wife has died" (Cambridge Dictionary, 2024, p. 1), whereas married participants were defined as "a husband and wife enumerated as members of the same

household" (United States Census Bureau, 2023, p. 1). This research will also explore personal resources and financial resources to examine their impact on financial worry.

This topic may be considered taboo as there can be cultural stigmas associated with widowhood. Panchadhyayi (2021) researched widows in India and described them as coping with stigma and concerned about becoming irrelevant, helpless, and lonely. While cultures vary, Panchadhyayi's study discussed feelings of loss and grief after the loss of a spouse; yet it is equally important to study financial worry in widowed individuals because their numbers are significant. According to the United States Census Bureau (2022), 5.7% of the population (more than 15 years old) was widowed, compared to 47.6% who identified as married. COVID-19 increased mortality (Verdery et al., 2020), leaving even more individuals widowed. Understanding how widows/widowers experience financial stress and how it manifests into financial worry can help financial planners and financial educators.

The Stress Process model provides a framework for investigating stressful financial indicators, personal resources, and financial resources. It also allows for comparisons between the marital statuses of married individuals and widows/widowers. Pearlin et al. (1981) identified a stress process with three primary components: sources of stress, mediators/moderators of stress, and emotional and mental well-being. These components work together to form a process, and the specific mental health outcome of focus in this study was financial worry.

This study examines whether widows and widowers experience more financial stress than married individuals. In addition to differences in marital status, this research explored predictors of financial stress and whether or not personal and financial resources moderated those predictors (Aneshensel & Avison, 2015). The model suggests that these resources may assist with coping and thus moderate the effects of stress and health outcomes (Pearlin et al., 1981).

Pearlin et al.'s (1981) framework was operationalized with financial stressors to determine if personal or financial resources moderated financial stress (e.g., not paying bills on time, receiving calls from collection companies, increasing debt levels, etc.). Examples of personal resources include financial self-efficacy, objective/subjective financial knowledge, financial education, and perceived numeracy. Financial resources include household income, emergency funds, retirement accounts, investments, and homeownership.

Financial worry was measured with a six-component index. Three components are based on Magwegwe et al.'s (2020) and Gallardo's (2023) research on financial worry, including (a) worry about running out of money in retirement, (b) anxiety when thinking about finances, and (c) physical/emotional reaction to finances. The remaining three components, as used by Collins and Urban (2022) and Zhang and Chatterjee (2023), study financial well-being. Joo (2008) defines financial well-being as "a state of being financially healthy, happy, and free from worry" (p. 22). Zhang and Chatterjee (2023) used reverse coding to examine financial well-being related to (d) because of the money situation, I will never have the things I want in life; (e) just getting by financially; and (f) concerned that the money I have or will save will not last. This study focused on the outcome of financial worry; therefore, these three questions will not be reverse-coded. Instead, guided by the Stress Process model (Pearlin et al., 1981), the following research question was investigated: Is there a differential effect of financial stressors on financial worry for widows/widowers compared to married individuals? It was predicted that financial stressors are positively associated with financial worry, and personal resources and financial resources would moderate the relationship between financial stressors and financial worry.

This study differs from prior research because it focuses on the financial stress of widows and widowers compared to married individuals. Prior research largely focused on women

(widows) as opposed to men (widowers; Grable et al., 2017; Mattia et al., 2020; Rehl et al., 2016). Streeter (2020) found that both widows and widowers experience stress. The inclusion of widows and widowers in this study shows how stress can manifest into financial worry and may add to our understanding of gender similarities and differences. Additionally, this was the first study of widowhood to use the National Financial Capability Study (NFCS), which contains information about financial capability, behavior, attitudes, and financial literacy, as well as psychological and behavioral questions that are not available in other secondary data sets. Therefore, the NFCS allows for psychological examination, which is important in understanding financial worry and, ultimately, well-being.

The proposed study has important practical and research implications. It may provide empirical support for identifying the relationship between financial stress on financial worry and a better understanding of how married individuals compare to widowed individuals regarding financial concerns. Such results may be relevant to financial professionals, therapists, counselors, and educators who might use these findings to discuss and build financial plans and strategies for married and widowed individuals. An understanding of the similarities and differences between marital statuses could help financial practitioners build individualized support services and structures to aid married and widowed individuals. The results of this study can also help policymakers understand the implications of financial worry for different individuals, which can result in the creation of new rules and laws.

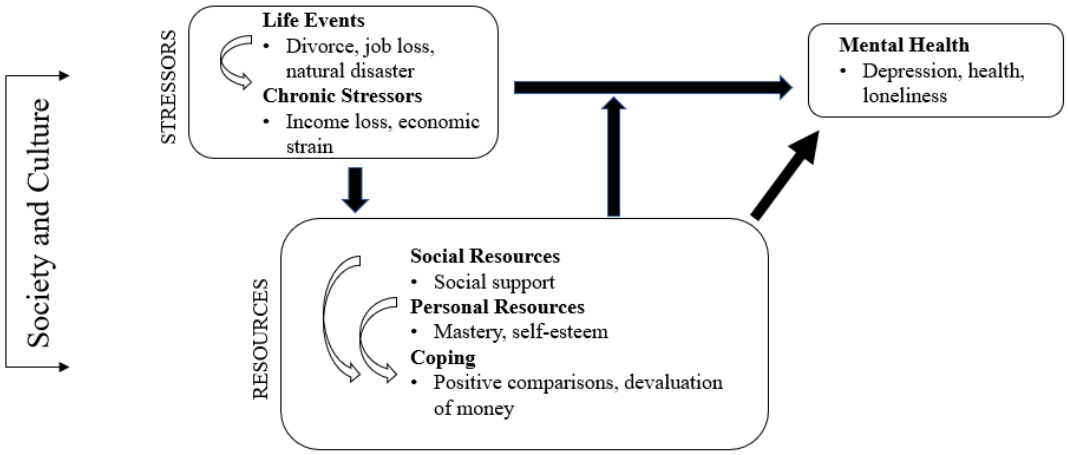
Theoretical Framework

The Stress Process model, the theoretical framework for this study, includes protective factors of personal resources, social resources, and coping as buffers against negative mental health outcomes caused by stressors. Pearlin et al.'s (1981) model identifies that society and

culture can impact stressors and resources, such as one's role in society (e.g., worker, parent, marital status), and can contribute to stressors that ultimately result in negative health consequences. Pearlin and colleagues (1981) identified a process of stress that included three primary components: sources of stress, mediators/moderators of stress, and mental health or psychological outcomes. The three components work together to form a process (see Figure 1.1).

Figure 1.1.

Theoretical Model



Stressors originate from two broad circumstances: life events and chronic stressors. Life events could include a significant one-time event (e.g., divorce, job loss, natural disaster) referred to as discrete events (Pearlin et al., 1981). Chronic stressors, such as economic hardship and strain or loss of income, can create ongoing stressors for individuals and families, resulting in the inability to pay bills in a timely manner or pay for household necessities such as housing, food, clothing, and transportation (Aneshensel & Avison, 2015; Pearlin et al., 1981).

Pearlin et al. (1981) identified resources as buffers between stressors and mental health outcomes. These buffers dampen the impact of stressors on the outcome through mediators and

moderators (Aneshensel & Avison, 2015). Pearlin et al. (1981) used mediation and moderation extensively in the model. Although Pearlin et al. (1981) coined mediation and moderation as buffers, others in the field continue to build upon their work. For example, Barron and Kenny (1986) defined mediation as an intervening variable that accounts for the relationship between the predictor variable and the outcome variable. Moderation has been defined as "a variable that affects the direction and/or strength of the relationship between an independent variable and a dependent variable" (Lim et al., 2014, p. 151). In Pearlin et al.'s (1981) model, resources include social resources, personal resources, and coping. The presence of social support includes a network of emotional support (e.g., family, friends, faith community); personal resources include self-efficacy, mastery, self-competence, and self-esteem, and coping includes positive comparisons (e.g., comparing to others in worse financial shape) and devaluation of money (e.g., demeaning the importance of money).

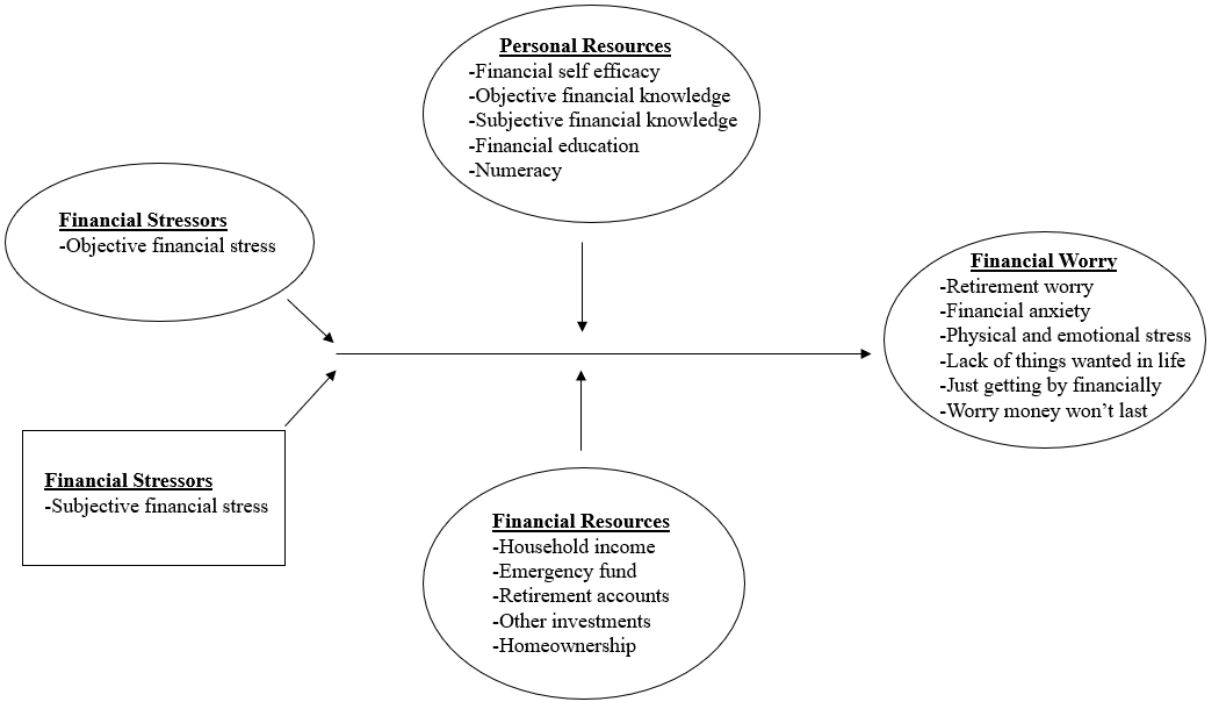
Researchers have used the model to great effect. When Pearlin et al. (1981) introduced the model, they used it to study the stress related to job loss and found that changes in income, economic strain, and impacts on self-esteem and mastery all increased depression (Pearlin et al., 1981). Later, Pearlin et al. (2005) used the model to study stress among the older population and the outcomes of health-related issues. Kahn and Pearlin (2006) used this model to study health outcomes due to financial strain for older adults and found that long-term financial strain and hardship correlated with a wide range of negative health outcomes later in life. Drost (2020) used the model to show how objective and subjective changes in household finances correlated with general loneliness. Although these studies each focused on different mental health outcomes (e.g., depression, health outcomes, loneliness), they still illustrate how the model is flexible and can be used to analyze different mental health and psychological outcomes.

Do widows and widowers experience financial stress differently than married individuals? Kaunonen et al. (1999) argued that "the death of a spouse is one of the most stressful events in a person's life" (p. 1304), yet married individuals also face financial stressors. This study examines the differential effect of financial stressors on financial worry for widows/widowers as compared to married individuals. If there are differences by marital status, then what are the predictors of financial stress, and are those financial stressors moderated or mediated by personal and financial resources to buffer financial stress? Pearlin et al.'s (1981) model suggests that these factors moderate the effect of financial stress and health outcomes. This model operationalized financial stressors (e.g., questions about paying bills on time, calls from collection companies, levels of debt, etc.) to assess its impact on financial worry. Further, the Pearlin et al. (1981) model determined if personal resources (i.e., financial self-efficacy, objective/subjective financial knowledge, financial education, perceived numeracy) or financial resources (i.e., household income, emergency fund, retirement accounts, other investments, homeownership) better moderated the relationship between financial stress and financial worry.

The conceptual model of widows/widowers and married individuals reflects the influence of objective and subjective financial stressors on financial worry (see Figure 1.2). Additionally, the model reflects the moderating effect of financial stressors on personal and financial resources in the outcome of financial worry. This study will not examine the effect of social support or coping because the data set does not contain information related to social support and coping for married or widowed individuals.

Figure 1.2.

Conceptual Model



The Stress Process model aims to identify various components of stress and the connection with life events, strains, beliefs, resources, and coping behaviors to impact a psychosocial outcome. The model posits that there are protective factors in personal resources and social supports that act as buffers against negative stress (Pearlin et al., 1981). This study uses the model's key constructs of stress, and the interaction with personal resources to shape psychosocial outcomes (i.e., financial worry). Numerous studies have examined financial stress (Fiksenbaum et al., 2017; Johnson & Lamdin, 2015; Streeter, 2020) but few studies touch on financial worry (Litwin & Meir, 2013; Magwegwe et al., 2020). Prawitz et al. (2006) defined financial stress as the level of stress one may experience because of difficulty meeting financial obligations. Conversely, de Bruijn and Antonides (2020) define financial worry as repetitive and negative thoughts about the uncertainty of one's future finances. This study positioned financial

threats and stressors, personal resources, and financial resources as key variables in understanding the psychological mechanisms of financial worry.

This dissertation is organized as follows. Chapter 2 contains a comprehensive literature review followed by hypotheses. Chapter 3 presents the methodology, the study's design, the operationalization of relevant variables, and the analytical approach. Chapter 4 outlines the study's results and findings using structural equation modeling to measure the outcome of financial worry. Chapter 5 concludes with a discussion of findings, implications for the financial industry, limitations of this study, and recommendations for future research.

Chapter 2 - Review of Literature

What follows is a pertinent literature review. Please note that the conceptual model presented in Figure 1.2 guides this review. The literature review begins with a discussion about the marital status of married and widows/widowers and then shifts to literature related to financial worry, financial stressors, financial resources, and personal resources. These key constructs align with the stress process model framework (Pearlin et al., 1981), focusing on married individuals and widows/widowers.

Marital Status

Married

The institution of marriage is generally understood to be a commitment (social and legal) made to the one person chosen as a life partner. The U.S. Census Bureau defines marriage as, "a husband and wife enumerated as members of the same household" (United States Census Bureau, 2022, p. 16). In recent years, civil rights laws have allowed same-sex married couples the same legal benefits and protection as heterosexual marriages (Carpenter et al., 2021). In the United States, "marriage typically provides important and substantial benefits" (Waite, 1995, p. 486). Perkin et al. (2016) noted that these benefits extend not only to married individuals but to society. Marriage is often associated with better health, longer life, a stable support network, higher earnings, more wealth, and better outcomes for children (Perkins et al., 2016; Waite, 1995; Waite & Gallagher, 2001).

Numerous reports suggest that married men earn more than single men, a phenomenon referred to as the "marriage premium" (McDonald, 2020, p. 1554). Men with higher incomes are more likely to marry and report a marriage premium of 6.4% after one year of marriage and 7.4% after two years (Indika, 2018). In short, McDonald's study found that married men are

more productive, controlling for education, nationality, and experience. This productivity increases married men's wages (McDonald, 2020).

Hsu & Barrett (2020) found a positive effect of marriage on overall well-being for both men and women, which may contribute to shared thoughts and dreams, short- and long-term plans for the future together, and a built-in support network. In another study, researchers found that "married adults are better off than non-married in terms of physical health and subjective quality of life" (Shapiro & Keyes, 2008, p. 330), and that marriage promotes a sense of belonging and purpose. While there are advantages to being married in terms of health, these advantages "are not as strong or as consistent when examining perceived social well-being" (Shapiro & Keyes, 2008, p. 341). In other words, married persons do not have an advantage over unmarried persons in terms of social well-being.

Over time, married couples may grow closer and tackle life stressors as a team, but such stressors can also erode a relationship. Some of those stressors can be related to children. Wei and Chen (2013) found that financial stress caused by having children leads to more mental health issues and, as a result, can negatively impact life satisfaction. Stressors can be internal (i.e., unfaithfulness, drinking too much, drug abuse, gambling, domestic violence), or external (i.e., one partner losing a job, medical conditions, overwhelming financial obligations; Pearlin et al., 1981). Stressors can range from mild to severe; for example, the stress of a child staying out too late is less extreme than domestic violence. Married individuals may use coping skills to deal with these stresses (Amirkhan, 1990), including seeking outside support, changing expectations, denial, and distractions such as workaholism.

Married individuals may perceive that their household has sufficient resources to handle stressors; however, changes in personal or financial resources can impact stress levels

(Magwegwe et al., 2020). Financial stress can lead to worries about one's ability to retire, health status, children's independence, job loss, or financial pressures.

Widow/Widower

Widows and widowers experience one of life's most difficult events (Kaunonen et al., 1999). Losing a spouse certainly disrupts any married couple's future plans and is typically followed by a period of mourning. (Dunn, 2015). Because all marriages are different, widows/widowers may have very different experiences. Some may feel varying levels of grief as compared to others, especially if they have difficulty recalling positive memories of their deceased spouse (Mancini et al., 2015). While all widows and widowers experience a loss event, outcomes often differ by gender. Streeter (2020) found that widowhood negatively impacts both men and women; however, widows suffer greater financial insecurity after the loss of their spouse, while widowers suffer more emotionally. Streeter (2020) also found that many widows' financial position decreases by both income (22% reduction) and net worth (10% reduction) in the short run (within 2 years of spousal loss), while widowers experience loneliness and depression, but their financial situation typically remains stable.

Women generally live longer than men. According to the United States Census Bureau (2020), in 2020, the life expectancy of women in the U.S. was 82, and for men in the U.S., it was 77 (U.S. Census, 2020); however, some husbands do outlive their wives. There are far fewer studies on men who experience widowhood than women who experience widowhood (Streeter, 2020) because in the U.S. there are more widows (8.67%) than widowers (2.7%; U.S. Census Bureau, 2019).

There are many financial challenges and decisions to be made independently after the death of a spouse, including funeral arrangements, locating important documents, keeping the

bills paid, and wealth management. Depending on the financial situation, the surviving spouse may have lost their family's financial manager (Biever et al., 2021). DiGiacomo et al. (2015) found that widows identified the assumption of household financial management as the most difficult aspect of coping with their husband's death, whereas Streeter (2020) found that men are less impacted financially upon the death of their wife.

In addition to mourning the loss of their spouse, widows and widowers may experience significant grief. Kaunonen et al. (1999) defined grief as "a normal, dynamic, unique, multidimensional process after the death of a spouse" (p. 1304). One coping strategy that widows use is seeking support from family, friends, and financial planners (Kaunonen et al., 1999). Widows report financial confidence when working with a skilled financial planner who shows empathy and good communication skills (Grable et al., 2017). Widows are more likely than widowers to seek social support by talking to their children, friends, family, therapists, or support groups (Streeter, 2020). Conversely, widowers may not be as social, which may contribute to their loneliness (Streeter, 2020).

Financial Worry

Financial worry consists of "repeated and negative thinking about the uncertainty of one's (future) financial situation" (de Bruijn & Antonides, 2020, p. 1), whereas worry is simply "a set of uncontrollable negative thoughts or images … associated with a variety of negative outcomes" (Litwin & Meir, 2013, p. 114). Worry implies a future-oriented concern, while stress indicates a here-and-now state of being (Magwegwe et al., 2020). Stress has been defined "as arising out of two broad circumstances: the occurrence of discrete events and the presence of relatively continuous problems" (Pearlin et al., 1981, p. 338). Married individuals may experience objective and subjective stress from jobs, relationship issues, health concerns, the

economy, a pandemic, and financial pressures. Married and widowed individuals may experience financially stressful events or ongoing financial pressures, which may lead to financial worry. Widowed individuals may also experience additional stress and concerns caused by losing a life partner. Overwhelming stress levels can lead to financial worry (Magwegwe et al., 2020) and ultimately negatively impact an individual's well-being.

Individuals may use coping strategies to reduce stress and worry. Amirkhan (1990) identified three types of coping strategies including problem-solving, seeking social support, and avoidance. Coping attempts to reduce negative emotions by putting conscious effort into solving problems (Amirkhan, 1990). Coping strategies include keeping busy, seeking outside support, relaxing/meditation, humor, denial, or changing expectations. One basic element of the Stress Process model was that stress and prolonged stress can have a negative outcome (Pearlin et al., 1981), in this case, financial worry.

Retirement Worry

Worrying about retirement can create an ongoing strain for both married and widowed individuals. Preparing for retirement can be challenging because of the numerous unknowns. Individuals need to save enough to get them through retirement but cannot know how long they will live. Will they need 24-hour, around-the-clock care in a nursing home? Will there be health issues? Inflation? Such questions take on new importance today as medical advancements have led to longer lives. Pensions historically provided a life-long income stream for the retiree; however, most companies have shifted to defined contribution plans (e.g., 401k, 403b, SIMPLE), placing the responsibility for retirement squarely on the worker (Lusardi, 2012; Palacios et al., 2020). These factors can all add to the complexity of retirement calculations, and therefore can increase the financial stress and financial worry of married individuals and widows/widowers.

Financial Anxiety

Financial anxiety can be prolonged for both married and widowed individuals. Financial anxiety is any unhealthy response to negative financial circumstances (Potter et al., 2020; Shapiro & Burchell, 2012) that differs from financial worry in that it is a component of financial worry. Anxiety has negative connotations. One might experience anxiety before a big test, a job interview, awaiting the birth of a first child, while flying, or about money matters. Financial anxiety results from concerns about money or debt.

Anxiety has two subcomponents: cognitive (mental) and somatic (physiological; Khan et al., 2017). Khan et al. (2017) identified the mental component of anxiety as experiencing negative expectations, an inability to concentrate, negative self-talk, a disparaging mental image, and a lack of attention. The physiological elements of anxiety included feelings of uneasiness, dread, or fear, so much so that one may begin to sweat, tense up, or experience an increased heart rate.

An estimated 30% of workers worry about their financial situation at work and, as a result, are less productive than they might otherwise be (Greenwald et al., 2017). There is, however, a moderating effect between financial anxiety and financial knowledge, suggesting that individuals may benefit from financial therapy (Grable et al., 2020), or "the integration of cognitive, emotional, behavioral, relational, and economic aspects of financial health" through a trained professional (Ford et al., 2011, p. 21). Archuleta et al. (2020) found that goal-setting reduced short-term anxiety within a solution-focused financial therapy program. Rafi et al. (2019) found that mental health problems in Bangladesh were, in part, due to increasing unemployment rates because unemployed graduates were depressed, anxious, and stressed. This study focused on U.S. residents; however, the Bangladesh study illustrates that personal anxiety can be caused by the stressful situation of unemployment.

Physical and Emotional Stress

Stress and worry are caused by an event or ongoing issues that have not been resolved and can lead to emotional and physical tension and health problems (Liu et al., 2020). Some stress is normal, but severe or prolonged stress can negatively impact mental and physical health. Greenwald et al. (2017) found that 30% of workers reported feeling emotionally and mentally stressed when thinking about retirement, were less confident about retirement savings, and felt less financially stable. A Canadian study of families with young children conducted during the COVID-19 pandemic reported moderately high stress among parents who had to balance work with childcare, homeschooling, and concerns about COVID-19 (Carroll et al., 2020). The same study reported increased unhealthy behaviors (e.g., screen time for all members of the family) and decreased physical activity along with better health behaviors (e.g., eating at more home-cooked meals). This Canadian study illustrates the negative outcomes associated with physical and emotional stress among parents for all marital statuses, which should hold true for Americans as well.

A study of medical students entering their residency found that students' physical, emotional, and overall health significantly decreased during their first year in the program (McKerrow et al., 2020). McKerrow et al.'s (2020) study further illustrates how stress has physical and emotional effects similar to what married and widowed individuals could experience.

Lack of Things Wanted in Life

The fourth construct of financial worry is a question related to not being able to get the things they want in life. Unfulfillment has been a central component of previous financial well-being studies (Zhang & Chatterjee, 2023; Collins & Urban, 2022). Financial well-being is the

opposite of financial worry (Joo, 2008). In these studies, the authors reverse-coded the survey question “Because of my money situation, I feel like I will never have the things I want in life” (Collins & Urban, 2022; FINRA, 2023a, p. 14; Zhang & Chatterjee, 2023). According to Weida et al. (2019), financial well-being and financial health are synonymous. Furthermore, Machiz (2023) studied financial health and identified the same survey question in an abbreviated version of the Consumer Financial Protection Bureau (CFPB) scale of financial well-being by reverse coding the variable. The feeling of lacking the things one wants in life is a contributing factor in the measurement of financial worry.

Just Getting by Financially

Financial worry is measured by a construct expressed as just getting by financially or living from paycheck to paycheck, which doesn’t allow individuals to save for emergencies, the future, or retirement. Prawitz and colleagues (2006) developed the InCharge Financial Distress/Financial Well-Being Scale, including an eight-item subjective self-reporting measure. One of their eight items was “How frequently do you find yourself just getting by financially and living paycheck to paycheck?” (Prawitz et al., 2006, p. 50). In another recent study, Machiz (2023) studied financial health and identified “I am just getting by financially” in an abbreviated version of the CFPB financial well-being scale by reverse coding the variable (p. 40). Individuals who are not able to save for emergencies and retirement may persistently worry that something could happen (e.g., car repair, appliance failure, medical issue), and they would not have the money to resolve the situation. The experience of just getting by financially is a contributing factor in the measurement of financial worry.

Worry Money Will Not Last

Concern that retirement savings will not last can add to financial worry. Preparing for retirement is challenging because most employers have moved from pension plans to defined contribution plans, which put the responsibility of saving for retirement on workers instead of a company-provided benefit plan (Lusardi, 2012; Palacios et al., 2020). Individuals need to balance having a nest egg large enough to get them through retirement without knowing how long they will live, if there will be health issues, the impact of inflation, and how the bond and stock market will perform. According to the U.S. Census Bureau (2022), individuals are living longer, partly because of medical advances, which adds to the complexity of planning the appropriate amount to save for retirement. Magwegwe et al. (2020) measured financial worry with two components: worry that money will not last, and worry about running out of money in retirement. This all can add to the complexity of knowing how much is needed to retire comfortably and may increase the financial stress and financial worry of married individuals and widows/widowers.

Financial Stressors

Anyone can experience financial threats or stressors. A financial threat was defined as "fearful-anxious uncertainty regarding one's current and future financial situation," which can ultimately lead to financial worry (Fiksenbaum et al., 2017, p. 128). Additionally, anxiety, economic hardship, and debt were positively associated with financial threats. Financial stressors, conversely, are predictors of financial worry. They include financial stressors that are either objective or subjective.

Objective versus Subjective Financial Stressors

The basis for the Stress Process model was recognizing that an external event can manifest into a stressful situation, causing negative outcomes (Pearlin et al., 1981). Financial stressors can be objective or subjective (Magwegwe et al., 2020). Objective financial stressors represent a concrete change in income or assets, whereas subjective financial stressors measure feelings about financial situations (Drost, 2020, p. 2). Examples of objective financial stressors include a drop in income, an untenable debt-to-asset ratio, overwhelming credit card debt, or insufficient retirement savings.

Subjective financial stressors are financial stresses that are internally felt (Magwegwe et al., 2020), such as feelings about being contacted by a collection agency, reminders of having too much debt, or overwhelming feelings about unpaid bills. Arber et al. (2014) found that among Britons, poor health during midlife was associated with low income and financial difficulties. A drop in income or consistently low income could be considered objective, whereas financial difficulties could be identified as objective and subjective.

Stress can lead to worry, and worry can lead to depression. Buck et al. (2008) found that stress and worry are positively associated with depression. Financial stress and stressors can be thought of as the difference between perceived financial demand and perceived financial resources (Magwegwe et al., 2020). Situations of high financial demand and perceived lack of financial resources can heighten financial stress and financial worry. Objective and subjective financial stressors can weigh heavily on individuals and can ultimately lead to financial worry.

Personal Resources

Personal resources are defined as “aspects of the self that are generally linked to resiliency and refer to individuals’ sense of their ability to control and impact upon their

environment successfully" (Xanthopoulou et al., 2007, p. 121). Personal resources help married individuals and widows/widowers face perceived threats from the environment. Magwegwe et al. (2020) identified financial self-efficacy, objective financial knowledge, and subjective financial knowledge as personal resources in their study of financial worry about retirement. Gallardo (2023) referred to these as coping resources and included financial education and perceived numeracy in his study of student loan debt on financial worry.

Married couples and widows/widowers use personal resources to tackle perceived threats. Personal resources can include generalized thoughts and beliefs, locus of control, self-efficacy, and self-esteem (Magwegwe et al., 2020). Thoughts and beliefs under the personal resource umbrella may influence perceived threats and, ultimately, financial worry.

Financial Self-Efficacy

Self-efficacy is the belief in oneself to deal with and manage a situation effectively (Bandura, 1978); therefore, financial self-efficacy is the belief and confidence in oneself to set a financial goal and achieve it. Nguyen's 2019 study found that women with high self-efficacy scores were more likely to feel confident about setting and achieving a financial goal; therefore, individuals with high financial self-efficacy are expected to set a financial goal (e.g., saving three months of expenses for an emergency fund) with confidence and achieve their goal. A recent study found that six out of 10 workers in the United States felt confident about having enough money to retire comfortably (Greenwald et al., 2017). Individuals with low financial self-efficacy, however, often lacked the confidence to achieve a financial goal (e.g., paying bills timely, saving for an emergency, saving for retirement; Nguyen, 2019). Financial self-efficacy can moderate an individual's relationship with financial worry.

Objective Financial Knowledge

Objective financial knowledge was measured by respondents' answers to financially related questions including compound interest, the impact of inflation, bond prices, interest on a loan, mortgage interest, and diversification (Johnson & Lamdin, 2015). The respondents answered the question correctly or incorrectly. Objective financial knowledge was positively associated with short- and long-term financial behaviors, one component of financial literacy, and subjective financial knowledge (Henager & Cude, 2016). It also improves with age (Henager & Cude, 2016) and can moderate the relationship with financial worry.

Subjective Financial Knowledge

Subjective financial knowledge was typically measured by respondents' feelings about their financial knowledge, including questions like "How would you assess your overall financial knowledge?" (Johnson & Lamdin, 2015, p. 138), "How confident are you that you could come up with $2,000 if an unexpected need arose within the next month?" (Johnson & Lamdin, 2015, p. 140), and "I am good at dealing with day-to-day financial matters?" (Johnson & Lamdin, 2015, p. 138). Subjective financial knowledge incorporates the ability to pay bills on time, manage cash flow, make ends meet, and handle everyday financial matters (Lin et al., 2019). Subjective financial knowledge was positively associated with short- and long-term financial behaviors, one component of financial literacy, and objective financial knowledge (Henager & Cude, 2016). Married and widowed individuals with a high level of subjective financial knowledge may experience less financial worry. Conversely, married and widowed individuals with low levels of subjective financial knowledge may tend to experience more financial worry.

Financial Education

Financial education, when offered in an academic setting, employment setting, or a community-sponsored program, can improve financial literacy and financial self-efficacy by encouraging the motivation to manage finances, use credit cards responsibly, control debt, and set and achieve financial goals (Muizzuddin et al., 2017). One key predictor of positive financial literacy on financial behavior is numeracy, including emotional attitudes toward numbers (Skagerlund et al., 2018). Individuals who experience math anxiety could have lower levels of financial behavior, while those with an aptitude and affinity for numbers may help improve financial literacy.

Perceived Numeracy

Numeracy is the "ability to understand and work with numbers" (Merriam-Webster, 2024, p. 1). Numeracy, or number skills, includes emotional attitudes toward numbers (Skagerlund et al., 2018) and has been linked to financial decisions (Lusardi, 2012). Making financial decisions about building assets and managing debt requires the ability to do mathematical calculations (Lusardi, 2012). Studies and surveys testing adults indicate very low levels of numeracy or math skills in adults and even lower for some demographics such as women, the elderly, and those with lower levels of education (Lusardi, 2012). Peach and Yuan (2017) found lower stress among those who believe they have strong mathematical skills. Numeracy or lack of math skills may influence financial worry for married and widowed individuals.

Financial Resources

Married couples and widows/widowers may feel they have sufficient financial resources and will use financial resources to overcome perceived financial threats and stressors. When

married couples and widows/widowers have insufficient financial resources, they may have a hard time overcoming perceived threats and "may need to stretch limited resources and economize to make ends meet" (Rea et al., 2020, p. 29). Financial resources that can act as a buffer against financial stress include household income, an emergency fund, a retirement account (Magwegwe et al., 2020), other investments, and homeownership. Financial resources can influence the relationship between financial stress and financial worry because individuals who feel they have significant financial resources may experience lower levels of financial worry compared to individuals who feel they do not have sufficient financial resources.

Household Income

One of the most important financial resources is household income (i.e., earned income, social support system income, investment income), which can act as a buffer for financial stress and strain in the face of financial worry (Magwegwe et al., 2020). Household income is a significant part of an individual's financial resources and can have a negative effect on older adults when household income declines (Drost, 2020).

The elderly, many of whom are on a fixed income (e.g., Social Security), can feel constrained by their limited funds, which can contribute to loneliness (Drost, 2020). Magwegwe (2020) found that respondents in working households in the United States with incomes below $50,000 experience more financial worry than respondents above $50,000. Household income can influence financial worry positively or negatively. Fan and Babiarz (2019) found that income positively correlated with self-reported financial satisfaction. Individuals with significant income may experience lower levels of financial worry compared to individuals with lower levels of income, which may lead to financial worry. Married individuals could have dual incomes if both

spouses work outside the home, whereas a widow/widower would be limited to one income or none if the spouse who passed away was the sole provider for the family.

Emergency Fund

Saving for the short-term, intermediate-term, and long-term is an important aspect of financial planning. Dalton and Forjan (2022) defined short-term saving as less than 3 years, intermediate-term as 3 to 7 years, and long-term as greater than 7 years. Short-term savings are typically liquid financial assets, or assets that can be converted into cash easily without compromising the principal amount (Dalton et al., 2021). Short-term assets are used to pay bills as they come due, set aside for goals (e.g., purchase a new car, down payment on a house, paying down student loans), or to pay for an emergency. Adiandari et al. (2021) stressed the importance of an emergency fund for unexpected financial issues that could arise as a key element to financial planning. These short-term funds help to buffer financial threats and stressors. Financial educators and advisors agree that an emergency fund is important for all households, even if their recommendations differ (e.g., $1,000 or 3 to 6 months of expenses; Russell et al., 2021).

Long-term savings are for long-term goals and objectives (e.g., retirement, children's education). Studies have found a negative relationship between short- and long-term savings and financial strain (Magwegwe et al., 2020). Short- and long-term savings can moderate the relationship between financial stress and financial worry because individuals with significant short-term savings may have reduced financial worry compared to individuals who do not have short-term savings.

Emergency funds and long-term savings are important elements of a solid financial plan, and research has shown a significant relationship between savings and financial health (Friedline & West, 2016). Asebedo and Seay (2018) found that financial self-efficacy was a key contributor

to savings behavior, which would influence married and widow/widowers to plan for an emergency (e.g., the car breaking down, toilet leaking, refrigerator quit working) and long-term savings (e.g., new car, replace the roof, replace furnace).

Retirement Accounts (Occupational and Nonoccupational)

An occupational retirement account is a retirement plan offered by employers. Common plans include 401(k), 403(b), SIMPLE, or SEP. These are employer-sponsored plans, meaning the employer will either wholly fund the retirement plan or will match a portion of the employee's contributions. Employees with a retirement plan are more likely to save, feel self-confident about having enough money to retire, and feel less stressed (Greenwald et al., 2017). Nonoccupational retirement plans include Individual Retirement Arrangements (IRAs), which are self-funded. Both types of retirement plans are long-term savings; therefore, if money is withdrawn early, taxes and potential penalties will be imposed.

The United States Census Bureau (2020) reported that in 2019, baby boomers (ages 56 to 64) were 58.1% more likely to own at least one retirement account, 56.1% of Generation X (age 40 to 55) were likely to own a retirement account, and 49.5% of millennials (age 24 to 39) owned at least one type of retirement plan. Individuals who own an occupational or nonoccupational retirement plan like an IRA may reduce financial worries, viewing those savings as a buffer against financial threats or stress.

The Certified Financial Planner Board of Standards, Inc. (CFP Board) has established that contributing to a retirement account is an important component of a financial plan. As a Certified Financial Planner (CFP), Harris (2017) encourages financial planners to challenge married clients to plan for different scenarios. For example, if one partner were to die, would the surviving spouse be able to locate documents, maintain their home, and live comparable lifestyle

to before the loss? Does the married client have appropriate life insurance and are their financial documents organized? This approach helps married individuals because typically, one person in a marriage takes the lead on financial matters (Harris, 2017).

Other Investments

Individuals may have other investment assets outside of retirement accounts. These investments could include individual or brokerage accounts that hold mutual funds, exchange-traded funds, or stocks. Liquid financial assets such as these can be used for consumption and to help buffer household finances from financial shocks (de Bruijn & Antonides, 2020). These liquid assets can help married and widowed individuals make ends meet—having enough resources to pay bills, meet day-to-day financial responsibilities, and weather a financial shock (de Bruijn & Antonides, 2020). Other investments may influence the level of financial worry for married and widowed individuals because these other investments can be converted to cash quickly, which may reduce financial worry.

Homeownership

Another financial asset that married and widowed people might own is a house. When purchasing a home, typically, purchasers get a mortgage and pay the home off in monthly installments. Owning a home has historically been associated with positive mental health benefits (Dwyer et al., 2016). A mortgage is considered “good debt” in the United States because it allows a greater percentage of the population to purchase a primary residence and build equity (Dwyer et al., 2016, p. 484). However, during the financial crisis of 2008, home values plummeted, and many adults found themselves underwater with their mortgages (Dwyer et al., 2016). Homeowners without a mortgage reported the lowest levels of financial insecurity (Herbert & Molinsky, 2020).

In a recent study, age seems to play an important role in identifying who owns a home: 26% of 18- to 29-year-olds, 58% of 30-to-44-year-olds, 75% of 45-to-59-year-old, and 85% of those 60+ years old own a home (Board of Governors of the Federal Reserve System, 2020). The same study identified that many rent instead of owning a home because they had difficulty getting a mortgage (41%), could not afford the down payment (62%), it was more affordable to rent (55%), or they liked the convenience (55%; Board of Governors of the Federal Reserve System, 2020). Fan and Babiarz (2019) found that homeownership for all marital statuses was positively correlated to self-reported financial satisfaction. In short, homeownership by married and widowed individuals may impact financial worry. Individuals with high mortgage payments relative to income may experience higher levels of financial worry compared to those with smaller or no mortgage payments.

Summary

The purpose of this study was to examine the different effects of financial stressors on financial worry for widows/widowers compared to married individuals. Past research supports the hypothesis that objective and subjective financial stress, financial resources, and personal resources are determinants of financial worry (Magwegwe et al., 2020). It remains empirically unclear whether financial stressors, financial resources, and personal resources are determinants of financial worry for married individuals compared to widows/widowers. As such, the following hypotheses are proposed for the research question: “Is there a differential effect of financial stressors on financial worry for widows/widowers compared to married individuals?”

Hypotheses

H_1 – Objective financial stressors are positively associated with financial worry.

H_2 – Subjective financial stressors are positively associated with financial worry.

H_{2A} – Perceptions of having too much debt are positively associated with financial worry.

H_{2B} – Perceptions of difficulty paying bills are positively associated with financial worry.

H_3 – Personal resources moderate the relationship between financial stressors and financial worry.

H_4 – Financial resources moderate the relationship between financial stressors and financial worry.

Chapter 3 - Methodology

The purpose of this study was to examine the financial stressors and financial worries of widows/widowers compared to married individuals. Predictors of financial stressors and worry are drawn from the Stress Process model framework (Pearlin et al., 1981). These predictors, along with demographic information and financial variables, are operationalized to compare financial stressors and worries for married individuals and widows/widowers.

Pearlin et al.'s (1981) model includes protective factors (i.e., personal resources, social resources, and coping) as buffers against negative mental health outcomes caused by stressors. Their study used an iterative approach by first studying a job loss event (external stressor) and depression (psychological outcome). The second iteration included the influence of the change in household income on the change in economic strain's influence on depression; the final model included a change in economic strain moderated by personal resources of change in mastery and changes in self-esteem (Pearlin et al., 1981). In alignment with Pearlin et al.'s (1981) model, the current study examined stress and the moderating effect of personal resources and financial resources on the outcome of financial worry (psychological outcome).

Data

This study used data from the 2018 National Financial Capability Study (NFCS), which was funded and commissioned by the FINRA Investor Education Foundation and conducted by Additional Regulatory Contact (ARC) Research (FINRA, 2023b). The survey began in 2009 as a baseline for understanding the financial capability of adults in the United States and has been repeated every 3 years since 2012. The survey data are cross-sectional, meaning respondents are not tracked over time, and different individuals are surveyed every 3 years. The NFCS survey focused on the financial capability of American adults, including demographic information,

attitudes, behaviors, and financial literacy (Robb et al., 2015; Robb et al., 2018; Xiao & Porto, 2017). Survey respondents completed a self-administered online survey between June 2018 and October 2018 (FINRA, 2023c). The NFCS 2018 data set included 27,091 adults above the age of 18, including approximately 500 respondents from each state and the District of Columbia (FINRA, 2023c). The survey results are weighted to the U.S. population based on age, gender, education, and ethnicity, and state data is also weighted by age, gender, education, and ethnicity.

Sample

The initial sample for this study of 27,091 U.S. adults above the age of 18 includes all marital statuses. Within the sample, 53.3% were married, 29.7% were single, 1.5% were separated, 11.1% were divorced, and 4.4% were widows/widowers. However, this study is limited to married individuals and widows/widowers. Individuals with a marital status of single, separated, or divorced were excluded from the analysis, leaving a sample of 14,457 married individuals and 1,191 widows/widowers, for a sample size of 15,648. After analyzing the remaining respondents, a further reduction was made because of the small number (64) of widows younger than 45, which could skew results given that there were 5,333 married individuals younger than age 45. The final sample size was 10,251.

Another reason to exclude those younger than 45 is that Henegar & Cude (2016) studied the relationship between financial literacy and short- and long-term financial behaviors and found that good long-term financial behaviors are more significant for the age group of 45 and above than for those younger than 45. Brown et al. (2014) found that financial satisfaction varies by life stages. For earlier life stages, income was an important determinant; for later life stages, the most important determinants were investment income and housing equity. Skarborn and Nicki's (2000) study of pre- and post-retired adults found a different level of worry. The pre-

retired cohort experienced significantly greater levels of worry. Age and experience can contribute to an individual's perspective (Henegar & Cude, 2016), which further justifies the reduction of the sample for those younger than 45 years of age. After removing respondents younger than 45-years-old, the final sample consisted of 9,124 married individuals and 1,127 widow/widower individuals, for a total sample size of 10,251.

The current study used data from the 2018 NFCS data set because the 2018 data set was the last round in which respondents were asked their feelings on two important statements used to create the latent variable of financial worry. The two statements were: "I worry about running out of money in retirement" (FINRA, 2023a, p. 16) and "Discussing my finances can make my heart race or make me feel stressed" (FINRA, 2023a, p. 17). These two statements were deemed important for the dependent variable of financial worry and have been used by previous researchers in the study of financial worry (Gallardo, 2023; Magwegwe et al., 2020).

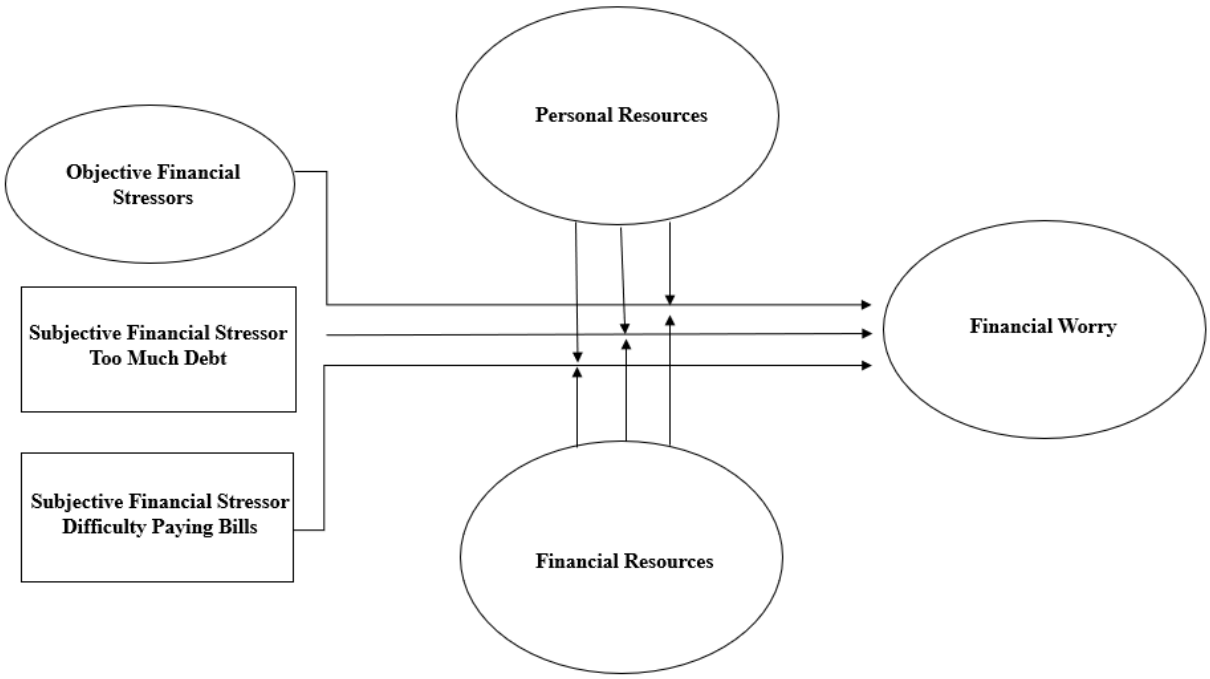
The NFCS provides respondents with "Don't know" or "Prefer not to say" options for some of the survey questions. These responses were treated as missing data except for six questions used to measure objective financial knowledge. For those questions, individuals select "Don't know" or "Prefer not to say," the response was considered an incorrect response. This approach to control this type of missing data was consistent with previous research using the NFCS data set (Kim et al., 2022; Lee & Hanna, 2020).

Empirical Model

An empirical model reflected in Figure 3.1 presents the Stress Process model of subjective and objective financial stress in determining the outcome of financial worry and the moderating effects of personal resources and financial resources on financial stress in the outcome of worry.

Figure 3.1.

Empirical Model



Variables of Interest

The variables of interest presented in Figure 3.1 include objective financial stressors, two subjective stressors, feelings about having too much debt, feelings about difficulty paying bills, as well as personal and financial resources that can act as moderating effects on the outcome of financial worry. Each variable is discussed below in more detail.

Financial Worry

Six questions were used to create a latent variable to measure the dependent variable of financial worry, as shown in Table 3.1. An index measured financial worry successfully in prior research (Gallardo, 2023; Magwegwe et al., 2020). Respondents were asked to gauge their response to these statements: "I worry about running out of money in retirement," "Thinking about my personal finances can make me feel anxious," and "Discussing my finances can make my heart race or make me feel stressed." The responses to these three statements were on a 10-

point Likert scale, where 1 = *strongly disagree* and 10 = *strongly agree*. Respondents were asked to gauge, “Because of my money situation, I feel like I will never have the things I want in life,” “I am just getting by financially,” and “I am concerned that the money I have or will save won’t last.” The responses to these statements were on a 5-point Likert scale, where 1 = *does not describe me at all* and 5 = *describes me completely*. Concerns about these responses contributed to financial worry and were added to the scale construct created by Magwegwe et al. (2020).

Table 3.1.

Index of Financial Worry

NFCS Questions	Measurement
I worry about running out of money in retirement	1 to 10
Thinking about my personal finances can make me feel anxious	1 to 10
Discussing my finances can make my heart race or make me feel stressed	1 to 10
Because of my money situation, I feel like I will never have the things I want in life	1 to 5
I am just getting by financially	1 to 5
I am concerned that the money I have or will save won’t last	1 to 5

Note. Variables and measurements came from the 2018 NFCS survey (FINRA Investor Education Foundation, 2023c, p. 14).

Objective Financial Stressors

Financial threats and stressors can stem from objective financial stressors, which represent a concrete change in income or assets. The latent construct of financial threats and stressors was represented by a latent variable that measures financial stress. There are 10 variables that represent perceived financial stressors.

Nine variables have a binary response, coded as 1 = *yes* and 0 = *no*. One question asks to respond with 1 for “Never,” 2 for “Once,” and 3 for “More than Once.” A binary dummy variable was coded such that responses of “Never” were coded as 0 and responses of “Once” or “More than Once” were coded as “Yes” to represent “late with mortgage payment.”

The 10 variables representing objective financial stressors are as follows:

- "Have you been contacted by a debt collection agency in the past 12 months?"
- "Do you currently have any unpaid bills from a health care or medical service provider (e.g., a hospital, a doctor's office, or a testing lab) that are past due?"
- "In the past 12 months, have you/your household experienced a large drop in income, which you did not expect?"
- "Do you overdraw your checking account occasionally?"
- "In the last 12 months, have you or your spouse/partner taken a loan from your retirement account(s)?"
- "In the last 12 months, have you or your spouse/partner taken a hardship withdrawal from your retirement account(s)?"
- If the respondent owns a home, "How many times have you been late with your mortgage payment in the past 12 months?" Respondents were asked to respond with 1 for "*Never,*" 2 for "*Once,*" and 3 for "*More than Once.*" A binary dummy variable was coded such that responses of "Never" were coded as 0 and responses of "Once" or "More than Once" were coded as "Yes" to represent those respondents that were "late with mortgage payment."
- "In the past 12 months, which of the following describes your experience with credit cards—In some months, I was charged a late fee for late payment." Respondents were asked to respond with 1 for "*yes"* and 2 for "*no."*
- "In the past 12 months, which of the following describes your experience with credit cards—In some months, I was charged an over-the-limit fee for exceeding my credit limit." Respondents were asked to respond with 1 for "*yes"* and 2 for "*no."*

- "In the past 12 months, which of the following describes your experience with credit cards—In some months, I used the cards for a cash advance." Respondents were asked to respond with 1 for "*yes*" and 2 for "*no.*"

The 10 survey questions represent perceived financial stressors that stem from objective financial stressors. These 10 questions were used to measure the latent variable for objective financial stressors.

Subjective Financial Stressors

Financial threats and stressors can stem from subjective financial stressors, which measure feelings about financial situations (Drost, 2020). Two observed variables are used to measure subjective financial stressors.

- "I have too much debt right now." Respondents rated their agreement with the statement by selecting from a 7-point Likert scale, where 1 = "*strongly disagree"* and 7 = "*strongly agree."* This item was coded on a scale from 1 to 7.
- "In a typical month, how difficult is it for you to cover your expenses and pay all your bills?" Respondents were asked to respond with 1 = "*Very difficult,"* 2 = "*Somewhat difficult,"* and 3 = "*Not at all difficult."* This item was reverse-coded so that the higher score reflected a higher level of difficulty.

The two survey questions represent perceived financial threats and stressors that stem from subjective financial stressors. These two questions measured subjective financial stress.

Personal Resources

Personal resources were created as a latent variable to measure personal resources that a respondent may have in terms of financial self-efficacy, subjective financial knowledge, objective financial knowledge, financial education, and perceived numeracy.

Financial Self-Efficacy. *Financial self-efficacy* was measured with one question, "If you were to set a financial goal for yourself today, how confident are you in your ability to achieve it?" Respondents rated their response with a 4-point Likert scale: 1 = "*Not at all confident,"* 2 = "*Not very confident,"* 3 = "*Somewhat confident,"* and 4 = "*Very confident."*

Subjective Financial Knowledge. *Subjective financial knowledge* was measured with a 7-point Likert scale based on the question: "On a scale from 1 to 7, where 1 means *"very low"* and 7 means *"very high,"* how would you assess your overall financial knowledge?"

Objective Financial Knowledge. *Objective financial knowledge* was measured with a six-item index based on questions about compound interest, inflation rate, bond prices, mortgage interest, and portfolio diversification. The following items were included in the index:

- "Suppose you had $100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?" Respondents were asked to select from five choices: (1) More than $102, (2) Exactly $102, (3) Less than $102, (98) Do not know, and (99) Prefer not to say. This item was coded 1 for the *correct* response of option 1, and all other responses including don't know and prefer not to say, were coded 0 as *incorrect*.
- "Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?" Respondents were asked to select from five choices, (1) More than today, (2) Exactly the same, (3) Less than today, (98) Do not know, and (99) Prefer not to say. This item was coded 1 for the *correct* response of option 3 and all other responses including don't know and prefer not to say was coded 0 as *incorrect*.

- "If interest rates rise, what will typically happen to bond prices?" Respondents were asked to select from six choices: (1) They will rise, (2) They will fall, (3) They will stay the same, (4) There is no relationship between bond prices and the interest rates, (98) Do not know, and (99) Prefer not to say. The *correct* response to option 2 was coded 1, and all other responses were coded 0 as *incorrect.*
- "Suppose you owe $1,000 on a loan and the interest rate you are charged is 20% per year compounded annually. If you didn't pay anything off, at this interest rate, how many years would it take for the amount you owe to double?" Respondents were asked to select from 1 = Less than 2 years, 2 = At least 2 years but less than 5 years, 3 = At least 5 years but less than 10 years, 4 = At least 10 years, 98 = Don't know, 99 = Prefer not to say. The *correct* response to option 2 was coded 1, and all other responses were coded 0 as *incorrect.*
- "A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage, but the total interest paid over the life of the loan will be less." Respondents were asked to select from four choices: (1) True, (2) False, (98) Do not know, and (99) Prefer not to say. The *correct* response of true was coded with 1, and all other responses were coded with 0 as *incorrect*.
- "Buying a single company's stock usually provides a safer return than a stock mutual fund." Respondents were asked to select from four choices, (1) True, (2) False, (98) Do not know, and (99) Prefer not to say. The *correct* response of false was coded with 1 and all other responses were coded 0 as *incorrect.*

Financial Education. *Financial education* was measured with the question, "Was financial education offered by a school or college you attended or a workplace where you were

employed?" Respondents were offered the choice of 1 = Yes, but I did not participate in the financial education offered; 2 = Yes, and I did participate in the financial education; and 3 = No. Respondents who were offered financial education but did not participate and those not offered financial education were coded 0 for *No* attendance in financial education. Those offered and participated in financial education were coded 1 for *Yes.*

Perceived Numeracy. The statement "*I am pretty good at math*" represented perceived numeracy. Respondents rated their agreement with the statement by selecting from a 7-point Likert scale where 1 = "*strongly disagree"* and 7 = "*strongly agree*." This item retained the scale from 1 to 7.

Financial Resources

Financial resources were created as a latent variable to measure the financial resources that married and widowed households may have in terms of household income, emergency funds, retirement accounts, other investments, and homeownership.

Household Income. *Household income* was reported using categories from "less than $15K" to $150K and more, but we reduced the number of categories to 1 = less than $25K, 2 = $25K to $50K, 3 = $50K to $100K, 4 = $100K to $150K, 5 = $150K or more. The income categories were reduced to create income ranges and reduce the number of categories to a manageable quantity.

Emergency Fund. The existence of an emergency fund was measured with one survey question, "Have you set aside emergency or rainy-day funds that would cover your expenses for 3 months in case of sickness, job loss, economic downturn, or other emergencies?" Respondents were asked to respond with 1 for yes and 2 for no. This item was coded 1 for *yes* and 0 for *no*.

Retirement Account. Participation in a retirement plan can include an occupational retirement plan or an independent retirement plan (nonoccupational) such as an IRA. Two survey questions were used for each:

- "Do you or your spouse have any retirement plans through a current or previous employer, like a pension plan, a Thrift Savings Plan (TSP), or a 401(k)?" Respondents were asked to respond with 1 for yes and 2 for no. This item was coded 1 for *yes* and 0 for *no*.
- "Do you or your spouse/partner have any other retirement accounts NOT through an employer, like an IRA, Keogh, SEP, or any other type of retirement account that you have set up yourself? Respondents were asked to respond with 1 for yes and 2 for no. This item was coded 1 for *yes* and 0 for *no*.

Other Investments. Other investments besides retirement accounts can include stocks, bonds, mutual funds, ETFs, and other securities in an individual or brokerage account. These additional assets were measured with one survey question, "Not including retirement accounts, does your household have any investments in stocks, bonds, mutual funds, or other securities? Respondents were asked to respond with 1 for yes and 2 for no. This item was coded 1 for *yes* and 0 for *no*.

Homeownership. *Homeownership* was the final item contributing to financial resources. Owning a home was measured by the survey question, "Do you or your spouse/partner currently own a home?" Respondents were asked to respond with 1 for yes and 2 for no. This item was re-coded so that 1 = *yes* and 0 = *no*.

Control Variables

Control variables included age, gender, race, employment or work status, education, dependent children, and health insurance (see Table 3.2.). These control variables are expected to influence financial worry but are not central to this study.

Table 3.2.

Control Variables

Control Variable	Categories
Age	45 to 54, 55 to 64, 65 and older
Gender	male, female
Race	white, all other races
Employment status	self-employed, full-time worker, part-time worker, homemaker, full-time student, disabled, unemployed, retired
Education	less than high school, high school, some college, college degree, postgraduate degree
Dependent children	Yes, No
Health insurance	Yes, No

Note: Control variables and categories came from the 2018 NFCS survey (FINRA Investor Education Foundation, 2023c, p. 2, 4, 5, 8, 29).

Analysis Methods

Data Analysis Procedure

Initial data coding was completed in Stata/SE 16.1. This study utilized a structural equation model (SEM) using MPlus 8.4 (Muthén & Muthén, 2019) to identify the differential effect of financial stressors on financial worry for widows/widowers compared to married individuals. This study also includes the moderating effect of personal resources and financial resources of stressors on the outcome of financial worry.

Rather than deleting cases with missing data, full information maximum likelihood (FIML) was used to estimate missing data. FIML is different from multiple imputation (MI)

because missing values are not imputed, but rather, FIML considers all available information (i.e., variance, mean, covariances) to provide maximum likelihood estimates of the parameters (Acock, 2005). Parameter estimates obtained from FIML provide more reliable and less biased information than listwise or pairwise deletion (Acock, 2005).

Several steps were performed starting with assessing normality for each variable using the Shapiro-Wilk W test (Shapiro & Wilk, 1965) for skewness and kurtosis, which is available in Stata version 16.1. All four variables were determined to be non-normal: stressor ($W = .850$, $p < .001$), personal resources ($W = .970$, $p < .001$), financial resources ($W = .975$, $p < .001$), and financial worry ($W = .986$, $p < .001$). Significant results indicate non-normality.

The next step was to perform a confirmatory factor analysis (CFA) model for each latent variable, including stressors, personal resources, and financial resources. Then, CFAs were performed for both groups (married and widowed) to determine an acceptable fit.

Model Testing

MPlus 8.4 (Muthén & Muthén, 2019) was used to test model fit statistics. This tool was used to analyze the unconstrained and constrained model chi-square test of model fit, standardized root mean square residual (SRMR), the root mean square error of approximation (RMSEA), Tucker Lewis index (TLI), and the comparative fit index (CFI). Values of less than .05 for SRMR and RMSEA indicate excellent model fit (Kenny, 2015; Kline, 2016), whereas values of .95 or greater for TLI and CFI are considered excellent for model fit (Kenny, 2015).

Chapter 4 - Findings and Results

This chapter presents the results of the statistical analysis, including descriptive statistics, Confirmatory Factor Analysis (CFA), measurement model, and the full structural model. The effects of financial worry through the constructs of the Stress Process model (Pearlin et al., 1981) were analyzed using Structural Equation Model (SEM).

Descriptive Statistics

Table 4.1. shows the categorical variable statistics for the sample. The sample was heavily skewed towards married (89%) compared to widowed (11%) individuals. The sample was skewed higher for females (50% married and 78% widowed) compared to males (50% married and 22% widowed). The sample was evenly distributed for the age category for married but heavily skewed to older ages for the widowed. The majority of respondents were White (86% married and 85% widowed) and held a college degree (33% married) compared to a high school diploma (34%) for widowed. In terms of employment or work status, the majority of married respondents worked full-time (32%), and the majority of widowed were retired (64%). Not having dependent children was skewed to the widows (88%) and married (73%). Finally, reporting of health insurance was similar for both married (96%) and widowed (95%). In this sample, married individuals were more likely to hold a college degree, work full-time, and have dependent children. In contrast, widowed individuals were more likely to be women, older, and retired.

Table 4.1.

Sample Descriptive Characteristics of Categorical Variables (N = 10,251)

	Married *n* = 9,124		Widowed *n* = 1,127	
	n	*%*	*n*	*%*
Number of Individuals	9,124	89.01%	1,127	10.99%
Gender				
Male	4,560	49.98%	245	21.74%
Female	4,564	50.02%	882	78.26%
Age				
45 to 55	2,653	29.08%	109	9.67%
55 to 65	3,032	33.23%	264	23.43%
65+	3,439	37.69%	754	66.90%
Race				
White	7,839	85.92%	960	85.18%
Non-White	1,285	14.08%	167	14.82%
Education				
Less than HS	108	1.18%	40	3.55%
High School	2,264	24.81%	385	34.16%
Some College	2,242	24.57%	295	26.18%
College Degree	3,041	33.33%	283	25.11%
Postgraduate Degree	1,469	16.10%	124	11.00%
Employment				
Work Full Time	2,929	32.10%	127	11.27%
Work Part Time	620	6.80%	82	7.28%
Self-employed	563	6.17%	44	3.90%
Homemaker	653	7.16%	34	3.02%
Student	12	0.13%	2	0.18%
Disabled	369	4.04%	93	8.25%
Unemployed	162	1.78%	24	2.13%
Retired	3,816	41.82%	721	63.98%
Dependent children (Y)				
Yes	2,437	26.71%	137	12.16%
No	6,687	73.29%	990	87.84%
Health insurance (Y)				
Yes	8,739	95.78%	1,073	95.21%
No	320	3.51%	47	4.17%

Note: For Health Insurance n= 10,179

Note. Variables and measurements came from the 2018 NFCS survey (FINRA Investor Education Foundation, 2023c).

Table 4.2. shows the continuous variable statistics for the sample. The sample reported financial worry skewed slightly higher for widowed (20.09) compared to married (18.71) on a scale from 6 to 36, indicating that both married and widowed individuals "Neither Agree or Disagree" that the survey questions related to financial worry describe them. The sample reported that objective financial stressors were skewed higher for married (.65) than widowed (.46) on a scale from 0 to 10. All 10 questions had yes or no responses, indicating that, in general, both groups had low objective financial stress. There were two subjective financial stressor questions; the first question asked respondents to agree or disagree with the statement "I have too much debt." Widows (3.09) report a slightly higher mean compared to married (3.01), indicating that married and widowed individuals "neither agree nor disagree" with the statement. For the subjective financial stressor question asking respondents about their "difficulty paying bills," the means were skewed higher for widowed respondents (.43) compared to married respondents (.30) for a binary question of yes or no. The sample reported that personal resources were skewed higher for married (16.84) than widowed (16.07) on a scale from 4 to 22, indicating that married individuals reported a slightly higher level of personal resources than widowed individuals. The sample reported financial resources were skewed higher for married (8.94) compared to widowed (5.95) on a scale from 1 to 13, indicating married individuals report higher levels of financial resources than widowed individuals.

Table 4.2.

Sample Descriptive Characteristics of Continuous Variables (N = 10,251)

Variables	Married n = 9,124			Widowed n = 1,127		
	n	%/M *(SD)*	Range	*n*	%/M *(SD)*	Range
Financial Worry	8,600	18.71 8.56	6-36	1,039	20.09 9.19	6-36
Retirement worry	8,968	4.06 2.05	1-7	1,107	4.16 2.13	1-7
Personal finance anxiety	9,032	3.89 2.01	1-7	1,112	4.05 2.08	1-7
Physical & emotional stress	9,013	3.49 2.01	1-7	1,116	3.68 2.08	1-7
Lack of things wanted in life	8,866	2.28 1.27	1-5	1,093	2.57 1.42	1-5
Just getting by financially	8,910	2.36 1.34	1-5	1,105	2.86 1.47	1-5
Worry money won't last	8,855	2.75 1.3	1-5	1,075	2.92 1.40	1-5
Objective Financial Stressors	2,652	0.65 1.28	0-10	107	0.46 0.92	0-10
Debt collection contact	8,987	0.09 0.29	0-1	1,100	0.12 0.33	0-1
Unpaid medical bills	8,985	0.14 0.35	0-1	1,104	0.18 0.38	0-1
Income drop unexpected	8,973	0.12 0.32	0-1	1,112	0.14 0.35	0-1
Overdraw checking account	8,727	0.10 0.30	0-1	1,037	0.12 0.32	0-1
Loan from retirement account	6,257	0.06 0.23	0-1	474	0.05 0.22	0-1
Hardship withdraw	6,254	0.03 0.17	0-1	474	0.04 0.20	0-1
Late with mortgage payment	3,914	0.07 0.26	0-1	266	0.12 0.33	0-1
Late charges on credit card	8,119	0.07 0.26	0-1	903	0.07 0.25	0-1
Overlimit fee on credit card	8,139	0.03 0.16	0-1	905	0.03 0.16	0-1

Cash advance on credit card	8,155	0.05 0.21	0-1	902	0.08 0.27	0-1
Subjective Financial Stressors						
I have too much debt	9,035	3.01 2.17	1-7	1,113	3.09 2.22	1-7
Difficulty paying bills	8,967	0.30 0.46	0-1	1,099	0.43 0.49	0-1
Personal Resources	7,205	16.84 2.65	4-22	740	16.07 2.87	6-22
Financial goal	8,754	0.83 0.38	0-1	1,045	0.71 0.45	0-1
Assess financial knowledge	8,924	5.47 1.13	1-7	1,092	5.29 1.32	1-7
Objective financial knowledge	7,557	4.19 1.23	0-6	796	3.72 1.26	0-6
Financial Education	8,913	0.11 0.31	0-1	1,100	0.07 0.26	0-1
Numeracy - good with math	9,081	5.9 1.43	1-7	1,121	5.65 1.63	1-7
Financial Resources	8,044	8.94 2.72	1-13	987	5.95 3.05	1-13
Household income	9,124	5.5 1.71	1-8	1,127	3.45 1.73	1-8
Emergency fund	8,774	0.67 0.47	0-1	1,088	0.53 0.50	0-1
Employer retirement plan	8,810	0.75 0.43	0-1	1,102	0.42 0.49	0-1
Non-employer retirement plan	8,639	0.55 0.50	0-1	1,087	0.36 0.48	0-1
Other Investments	8,547	0.48 0.50	0-1	1,039	0.35 0.48	0-1
Homeownership	9,045	0.87 0.34	0-1	1,119	0.69 0.46	0-1

Note. Variables and measurements came from the 2018 NFCS survey (FINRA Investor Education Foundation, 2023c*).*
M = Mean.

Bivariate Results

A Pearson correlation coefficient on all key variables of interest was run for married and widowed individuals. As shown in Table 4.3, perceived thoughts on too much debt were positively correlated with financial stressors for both groups (married: $r = .42$, $p < .001$; widowed: $r = .26$, $p < .01$), as were perceived thoughts on difficulty paying bills with financial stressors (married: $r = .41$, $p < .001$; widowed: $r = .28$, $p < .01$). For married individuals, personal resources were negatively correlated with financial stressors (married: $r = -.21$, $p < .001$) although this was not the case for widowed individuals, similarly with financial resources, which were negatively correlated with financial stressors for married individuals (married: $r = .-26$, $p < .001$) but not for widowed individuals. Financial worry was positively correlated with financial stressors for both groups (married: $r = .45$, $p < .001$; widowed: $r = .37$, $p < .001$).

Perceived thoughts on too much debt were positively correlated with difficulty paying bills for both groups (married: $r = .54$, $p < .001$; widowed: $r = .50$, $p < .001$), as were perceived thoughts on too much debt with financial worry (married: $r = .62$, $p < .001$; widowed: $r = .57$, $p < .001$). For both groups, perceived thoughts on too much debt and personal resources were negatively correlated (married: $r = -.30$, $p < .001$; widowed: $r = -.29$, $p < .001$), as were perceived thoughts on too much debt and financial resources (married: $r = -.38$, $p < .001$; widowed: $r = -.37$, $p < .001$). Perceived thoughts on difficulty paying bills were negatively correlated with personal resources for both married and widowed individuals (married: $r = -.31$,

$p < .001$; widowed: $r = -.36$, $p < .001$), as were perceived thoughts on difficulty paying bills and financial resources (married: $r = -.48$, $p < .001$; widowed: $r = -.49$, $p < .001$).

Personal resources were positively correlated with financial resources for both groups (married: $r = .37$, $p < .001$; widowed: $r = .40$, $p < .01$). Personal resources were negatively correlated with financial worry for married and widowed individuals (married: $r = -.41$, $p < .001$; widowed: $r = -.47$, $p < .001$). Financial resources were negatively correlated with financial worry for both married and widowed individuals (married: $r = -.47$, $p < .001$; widowed: $r = -.50$, $p < .001$). For a complete bivariate correlation table, see Table 4.3.

Table 4.3.

Preliminary Correlation among Variables of Interest *for Married (bolded, n = 2,170) and Widowed (non-bold, n = 87)*

	1	2	3	4	5	6
1. Objective Financial Stressor	-	0.26**	0.28**	-0.18	-0.03	0.37***
2. Too Much Debt	**0.42*** **	-	0.50***	-0.29***	-0.37***	0.57***
3. Difficulty Paying Bills	**0.41*** **	**0.54*** **	-	-0.36***	-0.49***	0.67***
4. Personal Resources	**-0.21*** **	**-0.30*** **	**-0.31*** **	-	0.40***	-0.47***
5. Financial Resources	**-0.26*** **	**-0.38*** **	**-0.48*** **	**0.37*** **	-	-0.50***
6. Financial Worry	**0.45*** **	**0.62*** **	**0.61*** **	**-0.41*** **	**-0.47*** **	-

* $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed)

Confirmatory Factor Analyses (CFA)

Creating the latent variables was the first step in developing a structural equation model. Latent variables were created for financial stressors, personal resources, financial resources, and financial worry. The key statistics include Chi-Square, Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Standardized Root Mean Square Residual (SRMR). Factor loadings above .40 are considered

acceptable model fit (Kenny, 2015; Kline, 2011; Little, 2013). RMSEA fit was considered excellent when less than .01, good fit less than .05, and acceptable fit less than .08 (Browne & Cudeck, 1993). Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) less than .90 was considered a poor fit, less than .95 was an acceptable fit, and greater than .90 was considered a great model fit (Kenny, 2015). Finally, SRMR was considered an acceptable fit less than or equal to 0.08 (Hu Bentler, 1999).

Financial Stressors CFA

The latent variable models for all constructs were within acceptable ranges for each latent variable (Kline, 2016). For the objective financial stressors CFA, the fit statistics were acceptable for the overall sample (χ^2[35] = 603.31, *p* = .000, *RMSEA* = .04, *CFI* = 0.97, *TLI* = 0.96, *SRMR* = 0.07), those that are married (χ^2[35] = 537.57, *p* = .000, *RMSEA* = .04, *CFI* = 0.96, *TLI* = 0.96, *SRMR* = .07), and for those who are widowed (χ^2[35] = 111.05, *p* = .000, *RMSEA* = .04, *CFI* = 0.940, *TLI* = 0.92, *SRMR* = .16). The SRMR for widowed was .16 which was greater than acceptable threshold of .08 (Hu Bentler, 1999), however, all other statistics were considered good. In each case, the χ^2 was significant and within acceptable fit ranges (Kline, 2016).

Personal Resources CFA

For the personal resources CFA, the fit statistics were acceptable for the overall sample (χ^2[5] = 106.696, *p* = .000, *RMSEA* = .05, *CFI* = 0.97, *TLI* = 0.95, *SRMR* = 0.03) except the financial education variable had a low standardized estimate (.09) and therefore was removed from the model. After this modification, objective financial knowledge reported a low standardized estimate of .30 and was also removed. After both modifications, the model was just-identified or a perfect fit to the data. The overall sample (χ^2[0] = 0, *p* = .000, *RMSEA* = .00, *CFI* = 1.000, *TLI* = 1.000, *SRMR* = .00), for those that are married (χ^2[0] = 0.00, *p* = .0.000,

RMSEA = .00, *CFI* = 1.00, *TLI* = 1.00, *SRMR* = .00), and for those who are widowed (χ^2[0] = 0, *p* = .000, *RMSEA* = .00, *CFI* = 1.000, *TLI* = 1.000, *SRMR* = .00). In each case the χ^2 was significant and within acceptable fit ranges (Kline, 2016).

Financial Resources CFA

For the financial resources CFA, the fit statistics were acceptable for the overall sample with the except of RMSEA, which reported a poor fit to the data (χ^2[9] = 1186.41, *p* = .000, *RMSEA* = .113, *CFI* = 0.94, *TLI* = 0.91, *SRMR* = 0.56). The model reported no modification indices; however, the occupational retirement plan variable had the lowest standardized estimate (.65) and was therefore removed from the financial resource CFA. The fit statistics were good after removing occupational retirement for the overall sample (χ^2[5] = 188.95, *p* = .000, *RMSEA* = .06, *CFI* = 0.99, *TLI* = 0.98, *SRMR* = .03) for those that are married (χ^2[5] = 134.58, *p* = .000, *RMSEA* = .53, *CFI* = 0.991, *TLI* = 0.982, *SRMR* = .026), and for those who are widowed (χ^2[5] = 15.523, *p* = .008, *RMSEA* = .043, *CFI* = 0.99, *TLI* = 0.99, *SRMR* = .02). In each case the χ^2 was significant and within acceptable fit ranges (Kline, 2016).

Financial Worry CFA

For the financial worry CFA, the fit statistics were acceptable for the overall sample (χ^2[9] = 6182.60, *p* = .000, *RMSEA* = .26, *CFI* = 0.97, *TLI* = 0.96, *SRMR* = 0.04) except for RMSEA which was greater than the acceptable threshold. No modification indices were noted however, correlating the variables improved the model. After correlating physical and emotional stress with financial anxiety, lack of things wanted in life with just getting by financially, lack of things wanted in life with worry that money won't last, financial anxiety with retirement worry, worried money won't last with just getting by financially, and worried money won't last with financial anxiety, RMSEA improved to .16. Still above the acceptable threshold but much

improved from the original statistics (χ^2[3] = 797.67, *p* = .000, *RMSEA* = .16, *CFI* = 0.993, *TLI* = 0.98, *SRMR* = .01) and all other fit statistics are considered excellent (Kenny, 2015). This same model was used for married (χ^2[3] = 721.83, *p* = .000, *RMSEA* = .16, *CFI* = 0.99, *TLI* = 0.98, *SRMR* = .01), and for those who are widowed (χ^2[3] = 64.11, *p* = .000, *RMSEA* = .14, *CFI* = 1.00, *TLI* = 0.99, *SRMR* = .01). In each case the χ^2 was significant and within acceptable fit ranges (Kline, 2016).

Measurement Model

MPlus 8.4 (Muthén & Muthén, 2019) was used to establish a measurement model to test factor loading and model fit of each latent variable before proceeding with the full structural model. All factor loadings were above .40 (Kenny, 2015; Kline, 2011; Little, 2013) with an RMSEA less than .08 and Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) greater than .90, which was considered an acceptable model fit. The model was a good fit to the data (χ^2[372] = 3393.452, *p* = .001, *RMSEA* = .04, *CFI* = 0.95, *TLI* = 0.94, *SRMR* = .05). An analysis between marital status (married and widowed individuals) was conducted to test the measurement invariance for each group on factor loadings. Constraining the factors to be equal improved the model fit (χ^{2diff}[8] = 35.266, *p* = .001); therefore, factor loadings were constrained to be equal among the marital statuses of married and widowed individuals. Table 4.4 reflects the standardized factor loading for each of the latent variables.

Table 4.4.

Standardized Factor Loading and Cronbach's Alpha for Latent Variable

Item	Married	Widowed
Objective Stressors		
Debt collection contact	0.90	0.85
Unpaid medical bills	0.87	0.81
Income drop unexpected	0.70	0.58

Overdraw checking account	0.71	0.68
Loan from retirement account	0.53	0.43
Late with mortgage payment	0.72	0.62
Late charges on credit card	0.69	0.65
Alpha = .72		
Personal Resources		
Financial goal	0.95	0.97
Assessed financial knowledge	0.53	0.62
Numeracy - good with math	0.32	0.40
Alpha = .48		
Financial Resources		
Household income	0.51	0.72
Emergency fund	0.95	0.96
Non-employer retirement plan	0.70	0.72
Other Investments	0.67	0.64
Homeownership	0.64	0.55
Alpha = .59		
Financial Worry		
Retirement worry	0.72	0.75
Personal finance anxiety	0.75	0.78
Physical & emotional stress	0.74	0.76
Lack of things wanted in life	0.83	0.85
Just getting by financially	0.87	0.89
Worry money won't last	0.83	0.85
Alpha = .91		

Note. Variables and measurements came from the 2018 NFCS survey (FINRA Investor Education Foundation, 2023c).

Structural Model

A full structural model utilizing group effects (married and widowed individuals) assessed the relationship between objective and subjective financial stressors in the outcome of financial worry. The model also evaluated the moderating effects of personal resources and financial resources on stress and financial worry. The model controlled for gender, age, race, education, employment or work status, having dependent children, and coverage by health insurance.

The model was first employed with all paths freely estimated across the two groups of married and widowed individuals. At this stage, two observed variables (perceived thoughts on too much debt and perceived thoughts on difficulty paying bills) were added to the model and the control variables. The unconstrained model did not have a good fit to the data (χ^2[736] = 17043.63, p = 0.000, *RMSEA* = 0.67, *CFI* = 0.67, *TLI* = 0.64, *SRMR* = 0.25) according to the work of Kenny (2011) and Kenny (2015). Constraining the model improved the model fit (χ^2[744] = 17009.08, p = 0.000, *RMSEA* = 0.66, *CFI* = 0.67, *TLI* = 0.65, *SRMR* = 0.25), but the overall fit was below the thresholds established by Kenny (2011, 2015). Because there was an improvement with the constrained model (χ^{2diff}[8] = 34.55, p = .001), factor loadings were constrained to be equal among the martial statuses of married and widowed individuals, revealing that there are no significant differences between the population of married and widowed individuals. Estimates of the direct effects of each path by subgroup appear in Table 4.5 and Figure 4.1 (coefficients for married are bolded and widowed are not bolded).

The results of the final model indicated no significant effect of objective financial stressors on financial worry for married and widowed individuals, indicating no support for Hypotheses 1. Hypothesis 2 included two observed variables for subjective financial stressors. Both perceived thoughts on having too much debt and perceived thoughts on difficulty paying bills were significant for married and widowed individuals—again, they revealed no significant differences between the population of married and widowed individuals. For perceived thoughts on having too much debt, the results for married (b = .43, p < .001, β = .46) and widowed (b = .36, p < .001, β = .38) individuals are significant and support Hypothesis 2A. For perceived thoughts on difficulty paying bills, the results for married (b = 2.12, p< .001, β = .62) and widowed (b = 2.30, p< .001, β = .67) individuals are significant and support Hypothesis 2B.

Moderating Effects of Marital Status.

The study was also interested in examining the extent to which personal resources and financial resources moderate the results of financial stressors in the outcome of financial worry. Adding latent variables as moderators significantly increased the complexity of the model and resulted in a model that would not converge. Marsh et al. (2004) recommended using an alternate estimate strategy for structural equation model latent interactions. The authors noted that reusing the same variable repeatedly in the same model results in poor model fit statistics with unexplained variances. Marsh et al. (2004) recommended using a matched pair method so that interaction terms are not repeatedly used. In recreating Marsh et al.'s (2004) approach, the author paired the most significant relationship between the independent variables, while moderating variables were paired and used only the most significant interaction relationship.

After analyzing the most significant relationship in the model for personal resources, the following financial stressors were retained: personal resources and calls from collection agencies, personal resources and unpaid medical bills, and personal resources and credit card late fees. After analyzing the most significant relationships in the model for financial resources, the following financial stressors were retained: financial resources and calls from collection agencies, financial resources and unpaid medical bills, financial resources and drop in income, financial resources and overdraw bank account, and financial resources and credit card late fees.

The most significant relationships as moderators of personal resources and financial resources were retained by modifying the constrained model utilizing Marsh and colleagues' (2004) recommended approach, but the data still did not converge, indicating that the model remained too complex. In an effort to reduce the complexity, the model focused on just one moderator at a time.

For personal resources, the model terminated normally; however, the fit statistics (χ^2[564] = 7458.534, p = 0.000, *RMSEA* = 0.49, *CFI* = 0.84, *TLI* = 0.83, *SRMR* = 0.24) did not meet thresholds established by Kenny (2011) and Kenny (2015). Modification indices recommended adding financial stressors with age categories and personal resources with education, which improved model fit (χ^2[560] = 6806.438, p = 0.000, *RMSEA* = 0.47, *CFI* = 0.86, *TLI* = 0.86, *SRMR* = 0.18), (χ^{2diff}[4] = 652.096, p = .001). The model results are below the threshold for CFI, TLI, and SRMR, which is a limitation of the study. However, the model converged.

The results indicate that personal resources moderate the relationship between objective financial stressors and financial worry for married individuals (b = 4.44, p < .001, β = .23) but not for widowed individuals. The results indicate that personal resources moderate the relationship between subjective financial stressors, perceived thoughts on too much debt, and financial worry for married individuals (b = -.29, p< .001, β = .22) and widowed individuals (b = -.20, p < .05, β =. -.14), partially supporting Hypotheses 3. Personal resources moderating subjective financial stressors for perceived thoughts on difficulty paying bills in the outcome of financial worry did not converge.

For the financial resource moderator, the model continued not to converge, indicating that the model was still too complex, which did not permit testing Hypotheses 4. This is a limitation of the current study.

Table 4.5.

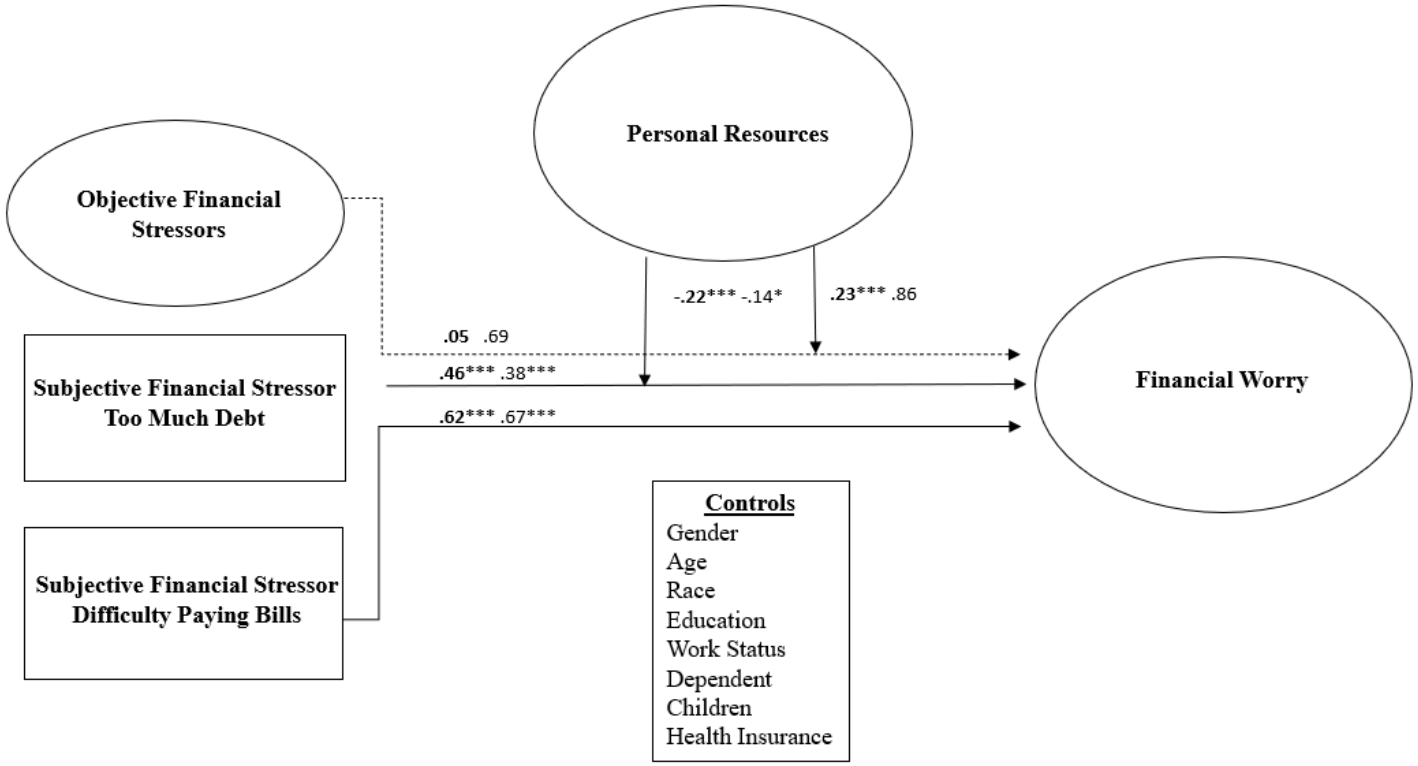
Unstandardized, Standardized, and Significance Levels for Model in Figure 4.3 for Married (n = 9,124) and Widowed (n = 1,127) Respondents (Standard Errors in Parentheses).

Parameter Estimate	Married n = 9,124			Widowed n = 1,127		
	B (SE B)	*β (SE β)*	*p*	*B (SE B)*	*β (SE β)*	*p*
Structural Model						
Objective Stressors → Financial Worry	.03(.04)	.05(.06)	0.397	-.51(.92)	.69(1.20)	0.565
Subjective Stressors						
Too much debt → Financial Worry	.43(.02)	.46(.02)***	0.000	.36(.06)	.38(.07)***	0.000
Difficulty paying bills → Financial Worry	2.12(.04)	.62(.01)***	0.000	2.30(.10)	.67(.02)***	0.000
Objective Stressors * Personal Resources → Financial Worry	4.44(.89)	.23(.04)***	0.000	19.90(23.53)	.86(.98)	0.380
Too Much Debt * Personal Resources → Financial Worry	-.29(.03)	-0.22(.02)***	0.000	-.20(.10)	-.14(.07)*	0.043
Significant Controls						
Gender → Financial Worry	-.31(.03)	-.10(.01)***	0.000	-.56(.13)	-.14(.03)***	0.000
Age → Financial Worry	-.32(.04)	-.17(.02)***	0.000	-1.09(.90)	-.44(.36)	0.227
Work Status → Financial Worry	-.04(.01)	-.07(.01)***	0.000	-.03(.02)	-.04(.04)	0.206
Dependent Children → Financial Worry	.40(.04)	.12(.01)***	0.000	.38(.15)	.08(.03)*	0.012
Health Insurance → Financial Worry	-.91(.08)	-.11(.01)***	0.000	-.25(.26)	-.03(.03)	0.331
Age → Objective Stressors	-.77(.08)	-.28(.02)***	0.000	-1.01(.45)	.30(.04)***	0.000
Education → Personal Resources	.84(.19)	.23(.02)***	0.000	1.17(.33)	.25(.04)***	0.000

Note. Variables and measurements came from the 2018 NFCS survey (FINRA Investor Education Foundation, 2023c).
Note: χ^2 [560] = 6806.438, $p < .001$; TLI = 0.847; CFI = 0.859; RMSEA = 0.047; SRMR = 0.180.
* $p < .05$; ** $p < .01$; *** $p < .001$

Figure 4.1.

Full Structural Model for the Effects of Financial Stress on Financial Worry for Married (bolded, n = 9,124) and Widowed (non-bold, n = 1,127) Respondents



Note: Standardized estimates. The paths from the control variables are not shown but were included in the analysis.
Note. Variables and measurements came from the 2018 NFCS survey (FINRA Investor Education Foundation, 2023b*).*
Note. Solid lines = significant paths; dashed lines = non-significant paths.
Note. Married individuals are in bold, and widowed individuals are not bolded (diagrams only).
Model fit indices: (χ^2[560] = 6806.438, p = 0.000, *RMSEA* = 0.47, *CFI* = 0.86, *TLI* = 0.86, *SRMR* = 0.18).
*p < .05. **p < .01. ***p < .001 (two-tailed).

Summary

This chapter presents statistical analysis results, including descriptive statistics, confirmatory factor analysis (CFA), measurement model, and the full structural model. The effects of financial worry through the constructs of the Stress Process Model (Pearlin et al., 1981) were analyzed using Structural Equation Model (SEM).

A full structural model utilizing group effects (married and widowed individuals) assessed the relationship between objective and subjective financial stressors in the outcome of financial worry. The model also evaluated the moderating effects of personal resources and could not evaluate the moderating effects of financial resources between stressors and financial worry. The model controlled for gender, age, race, education, employment or work status, having dependent children, and coverage by health insurance. The results of the hypotheses are summarized below:

H_1 – Objective financial stressors are positively associated with financial worry – Not Supported

H_2 – Subjective financial stressors are positively associated with financial worry.

H_{2A} – Perceptions of having too much debt are positively associated with financial worry - Supported

H_{2B} – Perceptions of difficulty paying bills are positively associated with financial worry – Supported

H_3 – Personal resources moderate the relationship between financial stressors and financial worry – Partially Supported

H_4 – Financial resources moderate the relationship between financial stressors and financial worry – Unable to Test

Chapter 5 - Discussion and Implications

This dissertation examined the group effect of married individuals compared to widows/widowers on the outcome of financial worry through the Stress Process model (Pearlin et al., 1981), specifically by utilizing financial stressors in the outcome of financial worry moderated by personal resources. This chapter will focus on the discussion of results, implications of the results, limitations of the study, suggestions for future research, and conclusions.

Discussion

The basis for the Stress Process model was that an external stressful event can manifest into a stressful situation, causing negative outcomes (Pearlin et al., 1981), such as financial worry. This study explored two types of stressors: objective financial stressors (concrete changes in income or assets) and subjective financial stressors (measures of feelings about financial situations; Drost, 2020). In this study, objective financial stressors included calls from collection agencies, unpaid medical bills, drops in income, overdrawn bank accounts, retirement loans, late mortgage payments, and credit card fees. The results indicate that these objective financial stressors do not significantly affect the outcome of financial worry for married or widowed individuals. This was a surprising outcome considering that the work of Magwegwe et al. (2020) found that financial stress and financial worry are correlated.

In terms of subjective financial stressors, the model included two observed variables for perceived thoughts on having too much debt and having difficulty paying bills. For the former, there was a strong and significant relationship with an increase in financial worry for both married (β = .46) and widowed (β =.38) individuals, but there were no statistical differences between the two groups. For perceived thoughts on having difficulty paying bills, there was a

strong and significant relationship with an increase in financial worry for both married (β =.62) and widowed (β =.67) individuals. Still, there were no statistical differences between the two groups.

The model included moderation of personal resources (Pearlin et al., 1981) on objective financial stressors and subjective financial stressors. Moderation affects the direction and/or strength of the relationship (Baron & Kenny, 1986; Lim et al., 2014) between financial stressors and financial worry. In this study, personal resources included self-efficacy, subjective financial knowledge, and numeracy.

The results indicate that personal resources moderate the relationship between objective financial stressors and financial worry for married individuals (β = .23) but not for widowed individuals (β = .86). Put simply, as personal resources increase for married individuals, the relationship between objective stressors and financial worry becomes stronger. As married individuals have increased levels of self-efficacy, subjective financial knowledge, and numeracy, they may feel that they should be stressed if they have objective financial stressors in their lives, and it may increase their level of worry. The underlying main effect between financial stressors and financial worry was not significant for married or widowed individuals, but when moderating the relationship with personal resources, the relationship was significant for married individuals. The findings underscore the importance of personal resources for married individuals when they have objective financial stressors in their lives.

Results also indicate that personal resources moderate the relationship between subjective financial stressors, perceived thoughts on too much debt, and financial worry for married individuals (β = -.22, p > .001) and widowed individuals (β = -.14, p > .05). So, as personal resources increase for both populations, the relationship between objective stressors and financial

worry weakens. The results suggest that individuals with greater personal resources are better equipped to cope with stressors and experience less financial worry. The findings highlight the protective role of personal resources in mitigating the negative impact of stressors on mental health and financial worry.

A handful of control variables proved significant. Prior research identified variables that matter but are not central to this study, including gender, age, race, education, employment or work status, having dependent children, and coverage by health insurance. In this study, gender is a significant control variable for both married and widowed individuals. After accounting for all other factors, the relationship between gender and financial worry was negative (β = -.31, p > .001), indicating that male individuals were associated with a lower level of financial worry. Similarly, for widowed individuals, the relationship between gender and financial worry was more pronounced (β = -.56, p > .001). These results suggest that being male was associated with even lower levels of financial worry compared to their female counterparts. The results for gender align with prior research focused on financial stress and worry for males and females (Streeter, 2020). This underscores the importance of considering gender as a relevant control variable when studying financial worry.

Age was another significant control variable for married individuals but less so for widowed individuals. The negative beta suggests that older individuals tend to have lower levels of financial worry. The results align with prior research, which found that objective financial knowledge improves with age (Henager & Cude, 2016) which may be related to individuals having more life experiences. The negative relationship between age and financial worry suggests that older individuals may be less susceptible to financial worry.

Employment or work status was another control variable that was significant for married individuals but not for widows/widowers. The negative beta suggests individuals who do not work full-time exhibit lower levels of financial worry. The results for employment or work status align with prior research between pre-retired and post-retired individuals, which found that pre-retired individuals experience significantly greater levels of worry than post-retired individuals (Skarborn & Nicki, 2000). This finding underscores the importance of considering work status as a relevant control variable when studying financial worry.

The control variable for age to objective stressors resulted in a negative significant beta for married individuals, suggesting that older age was associated with lower levels of financial stressors, whereas widowed individuals reported a positive significant beta, suggesting that older age was associated with higher levels of stressors. These findings indicate that age was a significant factor contributing to increased stress within the widowed population.

Finally, the control variable representing education in relation to personal resources showed significance among both married and widowed individuals, indicating that higher levels of education correlate with greater personal resources. This finding highlights the role of education in enhancing personal resources within the married and widowed populations.

The bottom line and most interesting part of the study indicates that what matters to both married and widowed individuals are subjective financial stressors or their perceived thoughts on having too much debt and difficulty paying bills. What seems to matter less are objective financial stressors, which are real changes in income or assets. The results of personal resources as a moderator between financial stressors and financial worry were strong and significant for married individuals. However, for widowed individuals, personal resources as a moderator between objective financial stress and financial worry were not significant. Additionally, for

widowed individuals, personal resources as a moderator between subjective financial stress, perceived thoughts on too much debt, and financial worry was significant at the 0.05 level, whereas for married, it was significant at the 0.001 level.

Implications

From a financial planning perspective, financial planners, advisors, and counselors need to understand the differences in financial worry between married individuals and widows/widowers. Such understanding will help guide them in creating plans, strategies, and interventions that can help reduce financial stress. Married individuals are typically familiar with making decisions together, so when a spouse passes away, the surviving spouse is left to make all decisions alone, which can add to an already stressful situation.

Understanding that widowhood is one of the most significant life events, planners and advisors should discuss this event with married couples and plan for either spouse's death. Having a plan can help reduce stress and anxiety in one area of their life (financial) so the surviving spouse can mourn. Additionally, employers are increasingly offering employee assistance consulting programs that provide professional and confidential consultation to employees dealing with financial stress and financial worry.

This study provides empirical support for the importance of the relationship between financial stress on financial worry and a better understanding of how married individuals compare to widowed individuals when it comes to financial worries. The study's implications and results are relevant to financial professionals who might differentiate their approaches to discussing and building financial plans for those who are married versus those who are widowed. Understanding the differences between marital statuses will be helpful for financial practitioners in building individualized support services and structures.

Financial planners and financial counselors could build questions similar to the subjective financial stressor questions from the NFCS survey questionnaire (FINRA, 2023a) into their discovery process. Adding such questions would help the practitioner better understand the prospect/client because these questions are more significant than the objective financial stressor questions. The survey statements included:

- "I have too much debt right now." Respondents rated their agreement with the statement on a 7-point Likert scale, where 1 = strongly disagree and 7 = strongly agree.
- "In a typical month, how difficult is it for you to cover your expenses and pay all your bills?" Respondents were asked to respond with 1 = Very difficult, 2 = Somewhat difficult, and 3 = Not at all difficult.

Asking these questions at a preliminary meeting will allow the practitioner to document baseline results. The following questions will also help to gauge the prospect/client's personal resources.

- "If you were to set a financial goal for yourself today, how confident are you in your ability to achieve it?"; 1 = Not at all confident, 2 = Not very confident, 3 = Somewhat confident, and 4 = Very confident.
- "On a scale from 1 to 7, where 1 means very low and 7 means very high, how would you assess your overall financial knowledge?"
- "I am pretty good at math." Respondents rated their agreement with the statement on a 7-point Likert scale, where 1 = strongly disagree and 7 = strongly agree.

The study highlighted that personal resources moderated the relationship between financial stressors and financial worry. Getting baseline results from the prospect/client so that the practitioner can work on improving personal resources in subsequent meetings can aid both parties in the process. The practitioner should also discuss goal setting and propose an action

plan to achieve the goal by the next meeting. The practitioner should encourage and inspire the client/prospect, even if their agreed-upon goal is relatively small. At subsequent meetings, the practitioner can ask about the status of the proposed goal. If the client is successful, the practitioner should continue to ask the same personal resource questions to see if achieving the goals begins to improve the client's self-efficacy, financial knowledge, and numeracy. Through continuous goal setting, guidance, and positive reinforcement, these personal resource attributes may grow over time.

One key difference between married and widowed individuals is that personal resources moderate the relationship between objective financial stressors and financial worry for married individuals but not for widowed individuals. As personal resources increased, the relationship between objective stressors and financial worry grew stronger for married individuals in this study. Financial practitioners should identify clients with high levels of personal resources and objective financial stress in their lives because this combination can lead to financial worry. Working with married individuals to analyze cash flow and create budgets to reduce objective financial stressors could help mitigate an individual's financial worry.

Another difference between married and widowed individuals was that personal resources acted as a moderator between perceived thoughts on having too much debt and financial worry. The difference was significant for married and widowed participants, but less for widowed individuals. For married and widowed clients, the focus should be on perceived thoughts about their financial situation. Financial practitioners should work with married and widowed clients to review cash flow and create budgets to minimize debt levels, which may give married and widowed clients a better understanding of their financial situation and perhaps lessen financial stress and, ultimately, financial worry.

Policymakers should also recognize the differences in financial worry between married individuals and widows/widowers and their mental health challenges. This study can help policymakers understand the implications of financial worry for individuals, which can result in the creation of ideas and plans to support them through new rules and laws. Policymakers can also make resources available to citizens by providing timely information on programs offered by the government or nonprofit organizations, which can help reduce financial stress and financial worry. The findings related to subjective financial stressors were key for both married and widowed individuals; however, the impact of personal resources was more pronounced for married individuals. Knowledge of these relationships can help policymakers reduce financial stress and increase self-efficacy, subjective financial knowledge, and numeracy.

Married individuals and widows/widowers would benefit from other investments outside retirement accounts because they allow all individuals additional financial resources to cushion the blow in the case of an emergency. Skogrand et al. (2011) studied financial management practices for happily married couples in the U.S. Common themes emerged in this study of "good" marriages, such as: usually only one of the partners handles day-to-day finances, which depends on good communication and trust between partners; couples having little to no debt or have a goal to payoff remaining debt; and couples living within their means or frugally which ultimately allows for a substantial investment portfolio (Skogrand et al., 2011).

Limitations

Along with the contributions of this study, several limitations could be addressed in future research. The NFCS data set does not have information on number of years married, number of years since becoming a widow/widower, number of marriages experienced, the quality of marriage, ages when married, and life insurance status. The data set also does not have

net worth, which would help explain the total resources available to married individuals and widows/widowers.

This study's data set was cross-sectional, which does not allow a view of causal relationships. A future study using longitudinal data could track the same individuals over time and provide insight into the causes of financial stress and financial worry. Future research could also include a qualitative study that would include specific questions about married individuals' and widows'/widowers' experience with financial stress and financial worry.

There were several limitations to using structural equation modeling. The full structural constrained model had a marginal fit for CFI, TLI, and SRMR. After adding latent variables as moderators, the complexity of the model was significantly increased and resulted in a model that would not converge.

Marsh et al. (2004) identified that latent variables as moderators resulted in poor fit and suggested pairing the most significant relationship between the independent variables and moderating variables and using only the most significant interaction relationships. After using Marsh et al.'s (2004) approach, the personal resources moderator converged but with marginal results for CFI, TLI, and SRMR. The disadvantage of the matching pair strategy was that not every measurement indicator was used in the model; only the most significant relationship between the independent variables and the moderating variable was included in the model. This strategy helped to reduce the complexity of the model and converged.

The matched pair strategy did not work for the second moderator, financial resources, nor the moderating effect of personal resources on perceived thoughts on difficulty paying bills. Neither of these tests converged successfully.

Suggestions for Future Research

There are several different directions that one could pursue to explore this area of interest further. The NFCS data set did not have information available regarding the number of years married, the number of years since the widows/widowers lost their spouses, the number of marriages, the quality of marriage, or the age when married. The data set also did not have net worth, which would explain the total resources available to married individuals and widows/widowers. Other data sets may have some of this information or primary data could be collected for future studies asking respondents specific questions about married individuals' and widows'/widowers' experience with financial stress and financial worry.

Another area of interest would be to develop an experiment with a control group that did not receive an intervention and another group or groups that received different treatments based on the study. This approach could be especially helpful with the focus on improving an individual's personal resources in self-efficacy, financial knowledge, and numeracy.

Another area of interest is the use of propensity score matching, a method used to estimate causal relationships when a controlled experiment is not feasible or practical (Cameron & Trivedi, 2005). This is done by obtaining data from a set of potentially comparable units that are not necessarily drawn from the same population as the treated units but whose observable characteristics match those of the treated units to some degree of closeness (Cameron & Trivedi, 2005). These units are matched one by one from the treated to the untreated to find the closest characteristics that match. The widowed population was far less than the married population; therefore, this strategy may be helpful in matching a widowed individual to the closest married individual in terms of characteristics.

It was disappointing to have the full structural equation modeling not converge after having good fit statistics for the CFAs and the measurement model. Because the full structural equation model did not converge, there were challenges in conducting tests for specific hypotheses in the study. It was possible to constrain the groups to be equal, indicating no group differences. Future studies should also look at an Ordinary Least Squares (OLS) model with interaction effects or another model to study personal resources and financial resources on financial worry. Understanding the influence of personal resources and financial resources could be an important determinant of financial worry. It would also be interesting to include other marital statuses of single, divorced, and separated individuals to determine if there are any significant differences between all marital statuses.

Conclusion

This study was designed to explore the group effect of married individuals compared to those of widow/widower marital status in the outcome of financial worry through the Stress Process model framework (Pearlin et al., 1981), using financial stressors in the outcome of financial worry, moderated by personal resources. This study contributed to expanding knowledge on the determinants of financial worry with respect to the comparison of married and widowed individuals. The study highlights that subjective financial stressors (what married and widowed individuals think about their financial situation) are significant over objective financial stressors. It also highlighted that personal resources matter significantly for married individuals and, to a lesser extent widowed individuals, in alignment with Pearlin et al.'s (1981) Stress Process framework. Understanding the determinants of financial worry can help financial practitioners and financial educators as they work with clients to create plans and strategies for coping with financially stressful situations and the resulting financial worry. It will be especially

useful for financial planners, financial counselors, and financial therapists who work with married and widowed individuals. The application of these findings and further research can help reduce the levels of financial stress and financial worry for married and widowed individuals.

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