Untying Financial Stress and Financial Anxiety: Implications for Research and Financial Practitioners

Yoon G. Lee, Ph.D.
Heather H. Kelley, M.S.
Utah State University

Jae Min Lee, Ph.D.
Minnesota State University, Mankato

The purpose of this study is to test for differences in the predictors of financial stress and financial anxiety using data from the 2018 FINRA Investor Education Foundation's National Financial Capability Study (NFCS). This study further investigated how financial stress and financial anxiety are associated with financial satisfaction. The results revealed similarities and differences in the predictors of financial stress and financial anxiety. Furthermore, the findings show that financial stress and financial anxiety are negatively associated with financial satisfaction, with a stronger effect of financial anxiety than financial stress with financial satisfaction. Researchers and practitioners often use financial stress and financial anxiety interchangeably; however, the results of this study offer evidence of variation in the characteristics associated with each construct. Implications for research and financial practitioners working with individuals and families dealing with financial stress and financial anxiety are discussed.

Keywords: financial anxiety, financial literacy, financial practitioners, financial satisfaction, financial stress

In the United States, overall household debt at the end of the third quarter of 2022 has reached over $16.5 trillion, including nearly $11.67 trillion in mortgage debt, $930 billion in credit card debt, $1.52 trillion in automobile debt, $1.57 trillion in student loan debt, and $490 billion in other debt such as retail cards and other consumer loans (Federal Reserve Bank of New York, 2022). The high level of household debt can lead to financial difficulties because the financial lives of families and individuals are often challenged by ongoing regular bills and increasing rent or mortgage payments (Heckman et al., 2014; Lee et al., 2019; Roll et al., 2016). Almost everyone experiences financial stress to some degree. Although stress has the potential to lead to both improved and detrimental outcomes (Patterson, 1988), financial stress has most often been linked with poorer outcomes (Lee & Dustin, 2021).

For some, these challenges have been exacerbated by job loss, income loss, or changes in the broader economic environment, such as the COVID-19 pandemic (Friedline et al., 2021; Rodriguez et al., 2021). As of June 2022, the high inflation rate of 9.1%, the largest 12-

ISSN: 1945-7774

month increase since 1981, has further decreased individuals' ability to pay bills and maintain household needs such as gas and groceries (Duggan, 2022; U.S. Bureau of Labor Statistics, 2022). Indeed, 45% of American families reported experiencing severe or moderate hardship due to inflation increases (Picchi, 2021). These financial situations can lead to stress or anxiety and affect overall financial satisfaction (Falconier & Epstein, 2011; Tsuchiya et al., 2020).

As difficult financial situations intersect with a person's feelings or emotions, they can result in financial anxiety and other mental and physical health issues (Choi, 2009; Shapiro & Burchell, 2012; Tran et al., 2018). Clinicians, including financial counselors and therapists, are trained to help individuals and families navigate these difficulties (Archuleta et al., 2013, 2020). As these professionals help individuals and families deal with emotional stress from their financial difficulties, it is important and timely that these financial professionals understand and can recognize the similarities and differences between the predictors of *financial stress* and *financial anxiety* and their associations with financial satisfaction. Increased understanding of the similarities and differences between predictors of financial stress and financial anxiety and their association with financial satisfaction can help practitioners, including financial therapists, financial counselors, or marriage counselors, to improve clients' ability to cope with financial stress and financial anxiety through specific and differentiated strategies and skills.

Current Study

Financial *stress* is an emotional or physiological reaction to money issues or the inability to meet individuals' financial responsibilities (Britt et al., 2015a; Friedline et al., 2021). For some, financial stress can turn into financial *anxiety*. Distinct from financial stress, financial anxiety is more severe. Financial anxiety is the long-term (e.g., six months or more) emotional distress an individual experiences related to financial views, situations, and behaviors (Hardie & Lucas, 2010). Further, while financial stress is often triggered by external events (e.g., not having enough money to pay a bill), financial anxiety can remain even without external stressors (American Psychological Association, 2020). Despite the differences between these two terms, financial *stress* and financial *anxiety* have often been used interchangeably in previous literature and clinical settings (Lurtz, 2020). As research informs practice, this gap in the literature needs to be addressed to help clinicians best serve their clients.

Research Questions

Given the important differences between financial stress and financial anxiety, it is crucial and timely for researchers, practitioners, and personal finance professionals to give more attention to separating the use of the term financial stress from financial anxiety (Archuleta et al., 2011; Archuleta et al., 2013; Britt et al., 2016). Thus, it is valuable to understand differences in the factors associated with financial stress and those associated with financial anxiety (RQ1). It is also useful to understand how financial stress and financial anxiety may be distinctly associated with other constructs, such as financial satisfaction (RQ2). Given these research questions, this study aimed to elucidate differences between

ISSN: 1945-7774

predictors of financial stress and financial anxiety. Further, this study identified how financial stress and financial anxiety are associated with financial satisfaction while controlling for several sociodemographic characteristics along with other important predictive factors, such as financial stressors (e.g., high debt, income drop, and other financial distress) and financial literacy (e.g., financial knowledge and financial capability). The findings of this study can contribute to the literature and practice by increasing understanding of the differences between financial stress and financial anxiety and their associations with financial satisfaction.

LITERATURE REVIEW

Financial Stressors

Financial stressors are external events that influence the financial circumstances of individuals and families, often leading to financial stress (Archuleta et al., 2011). A primary financial stressor in America includes the rapidly rising levels of debt, negatively impacting many individuals and families (Juselius & Drehmann, 2015). Americans carry various types of debt, including mortgages, auto loans, credit cards, student loans, and medical debt (Lee et al., 2019). Carrying and encountering unexpected debt, such as medical debt, can make it difficult for individuals and families to meet preexisting financial responsibilities (Dobkin et al., 2018; Santacroce et al., 2020; Valero-Elizondo et al., 2019). Other common financial stressors include unexpected drops in income and an inability to pay bills (Britt et al., 2017; Falconier & Epstein, 2011). These financial stressors can trigger emotional responses from people (Drentea & Reynolds, 2015; Heckman et al., 2014); specifically, financial stressors often lead to financial stress, which is the subjective feeling or emotional response to one or several external sources or events (Joo & Grable, 2004; Falconier & Epstein, 2011). However, while much of the research investigates the association between financial stressors and financial stress, little research has explored the relationship between financial stressors and financial anxiety.

Financial Stress

Financial stress can vary based on individuals' perceptions of financial stressors and the resources available to cope with the stressors (Heckman et al., 2014; Park & Kim, 2018). Financial stress can further impact individuals' emotional, physical, and mental health as well as their relationships with others (Santacroce et al., 2020; Tsuchiya et al., 2020) and financial well-being (Consumer Financial Protection Bureau, 2020). Although research has focused on the negative outcomes of financial stress (e.g., Archuleta et al., 2013; Hardie & Lucas, 2010; Hubler et al., 2016; Lee et al., 2011; Sages et al., 2013; Santacroce et al., 2020; Shah et al., 2012; Tsuchiya et al., 2020; Weller, 2012), research has also found that financial stress can provide opportunities for growth and improved outcomes (Dew et al., 2018; Kelley et al., 2022; LeBaron et al., 2020).

ISSN: 1945-7774

Financial Anxiety

Financial anxiety is defined as worry, fear, or unease about money and is often viewed as an unhealthy attitude. Financial anxiety might lead to emotional and physiological symptoms such as agitation, worry, restlessness, fatigue, concentration difficulty, and panic attacks (Grable et al., 2015; Grable et al., 2020; Shapiro & Burchell, 2012). While financial stress is directly related to financial stressors, financial anxiety can exist with or without financial stressors. In other words, while external events generate financial stress, financial anxiety stems from internal experiences (Shapiro & Burchell, 2012).

Financial anxiety is further differentiated from financial stress by its duration. In the literature, financial anxiety is defined as the long-term (e.g., six months or more) emotional distress that individuals experience due to poor financial circumstances (Hardie & Lucas, 2010). For example, financial stress often goes away when the stressor is removed (e.g., paying off credit card debt, getting a raise, etc.), but financial anxiety persists even after financial stressors subside. Additionally, financial anxiety is identified as distinct from general anxiety and is associated with slower processing of financial information (Shapiro & Burchell, 2012).

While most of the literature has focused on financial stress (which sometimes includes financial anxiety as part of financial stress), a few studies have specifically explored financial anxiety (Archuleta et al., 2013; Klontz et al., 2012). Later studies have found that financial anxiety hurts various aspects of individuals' and families' lives (Archuleta et al., 2013; Hardie & Lucas, 2010). For example, several studies have linked financial anxiety to poorer financial behaviors (Archuleta et al., 2013; Shapiro & Burchell, 2012). Grable and colleagues (2015) found that the combination of low physiological arousal and high financial anxiety was associated with perceived helplessness in financial behaviors. This suggests that, like financial stress, it is important to acknowledge that financial anxiety does not solely lead to only negative outcomes. However, research on financial anxiety has typically focused on negative outcomes. Financial anxiety might lead to positive and negative outcomes in combination with other factors.

Financial Satisfaction

Research has found that financial stressors, debt holding, and financial stress are negatively related to financial satisfaction (Aboagye & Jung, 2018; Joo & Grable, 2004; Lee & Dustin, 2021). For example, Joo and Grable found that financial stressors, financial knowledge, financial behavior, and financial stress were all associated with financial satisfaction and demographic characteristics. Further, financial stress was the second most important predictor of financial satisfaction, falling closely behind financial behaviors in terms of its total effect. Those who experienced higher levels of financial stress were less satisfied with their personal financial situation than others (Joo & Grable). Lee and Dustin (2021) looked at the influence of financial stress, financial anxiety, and financial worry on financial satisfaction. They found that they were negatively associated with financial satisfaction among married couples.

ISSN: 1945-7774

Research also shows that financial anxiety is associated with financial satisfaction and well-being (Grable et al., 2020; Pijoh et al., 2020). Pijoh et al. argued that financial anxiety should be a separate construct from depression and general anxiety when examining factors related to the financial well-being of top management-level employees. Grable et al. (2020) also discussed that decreasing financial anxiety could improve subjective and objective financial well-being and overall life satisfaction.

Financial Literacy and Financial Satisfaction

Although financial literacy is not the primary focus of this study, its close association with the variables we are interested in suggests that it is important to include and address. Financial literacy is defined and operationalized in different ways. Financial literacy includes skills and applications beyond arithmetic skills and knowledge about personal finance (Hung et al., 2009; Huston, 2010; Warmath & Zimmerman, 2019). Huston (2010) defined financial literacy as "measuring how well an individual can understand and use personal finance-related information" (p.306), which consists of a knowledge dimension (knowledge about personal finance concepts and products) and an application dimension (ability and confidence to use financial knowledge).

The U.S. Financial Literacy and Education Commission (2020) also defined financial literacy as "the skills, knowledge, and tools that equip people to make individual financial decisions and actions to attain their goals; this may also be known as financial capability" (p. 2). Warmath and Zimmerman (2019) discussed financial literacy as a combination of three domains representing one's capacity to make effective financial decisions. The three domains include financial skills (psychomotor domain), financial self-efficacy (affective domain), and financial knowledge (cognitive domain).

Financial literacy is positively associated with financial well-being and satisfaction (Huston, 2010). Financial knowledge and skills are associated with desired financial behaviors, which can lead to individuals performing more effectively in the marketplace (Atkinson & Messy, 2012; Hilgert & Hogarth, 2003) and lead to higher financial satisfaction (Joo et al., 2008). Xiao et al. (2014) found that financial capability was positively related to financial satisfaction. However, among subjective and objective financial literacy, only subjective financial literacy significantly contributed to financial satisfaction in their study. Lee et al. (2020) also discussed the importance of financial knowledge. Lee et al. used financial knowledge with behavioral engagement to examine its effect on financial satisfaction and identified the benefits of using these two constructs together in understanding financial satisfaction. Thus, the current study assumes that financial literacy, financial stress, and financial anxiety are related to financial satisfaction.

Theoretical Framework and Hypotheses

Joo and Grable's (2004) theoretical model on the determinants of financial satisfaction provides insight into the factors associated with one's financial satisfaction, highlighting the complexity of this construct. The theoretical framework presents that together, demographic characteristics, financial stressors, and financial knowledge lead to

ISSN: 1945-7774

one's financial solvency, financial behaviors, and risk tolerance. These factors then determine an individual's financial stress, which is directly associated with their financial satisfaction. In addition to these indirect associations, Joo and Grable also proposed direct relationships from demographic characteristics, financial stressors, and financial knowledge to financial stress as well as financial satisfaction.

While our study focuses specifically on financial stress and financial anxiety in relation to financial satisfaction, in employing Joo and Grable's (2004) model, we first investigated the associations between salient demographic characteristics, financial stressors, and dimensions of financial knowledge (i.e., financial literacy) with financial stress and financial anxiety (RQ1), after which, we investigated the association of financial stress and financial anxiety with financial satisfaction (RQ2). In previous literature, financial stress and financial anxiety are both negatively related to financial satisfaction (Archuleta et al., 2011; Archuleta et al., 2013; Lee & Dustin, 2021). Despite the distinctions between financial stress and financial anxiety, these two terms have often been combined or used interchangeably. However, the reviewed literature demonstrates why financial stress and financial anxiety should be treated as distinct constructs.

While Joo and Grable's (2004) framework did not specify financial anxiety as a distinct determinant of financial satisfaction, consistent with this literature, the current study hypothesizes that the predictors of financial anxiety are distinct from financial stress. Thus, we present the following two hypotheses.

To address RQ1, we propose Hypothesis 1:

> H1: Given the differences between financial stress and financial anxiety, there will be differences in how various dimensions of financial stressors, financial literacy, and sociodemographic characteristics are associated with financial stress and financial anxiety.

To address RQ2, we propose Hypothesis 2:

> H2: Given the long-term nature of financial anxiety, we anticipate that financial anxiety will have a stronger association with financial satisfaction than financial stress.

METHOD

Data and Sample

This study employed data from the 2018 National Financial Capability Study (NFCS), funded by the Financial Industry Regulatory Authority (FINRA). The NFCS measures various indicators of financial capability in American adults. Some of these indicators include financial resources, financial knowledge, financial skills, financial decision making, and sociodemographic characteristics. Data from the 2018 NFCS comprised a nationally representative sample of 27,091 respondents. The current study included only individuals

ISSN: 1945-7774

who responded to the survey questions relevant to this study, including financial stress, financial anxiety, financial literacy, and financial satisfaction. Thus, the respondents who answered "don't know" and "prefer not to say" were excluded from the study sample. After the data cleaning procedures, the final study sample included 9,209 individuals 18 and older.

Dependent Variables

Table 1 presents the measurements of the key variables included in our empirical analyses. The three dependent variables in the regression models are (a) financial stress, (b) financial anxiety, and (c) financial satisfaction. To measure financial stress, we used a question that asked, "Discussing my finances can make my heart race or make me feel stressed." In contrast, to measure financial anxiety, we used a question that asked, "Thinking about my personal finances can make me feel anxious." The responses to these two questions were measured on a 7 point-Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). While we recognize the limitations inherent in these questions (discussed further in the limitations section), from a face validity standpoint (i.e., do they appear to measure what we want to measure?), there is value in utilizing these measures. To address RQ1, these variables were included as ordinal variables.

Table 1.

Measurements and Sample Characteristics

Variables	Measurements	% Mean (Median)
Financial Stressors:		
Too much debt:		
High debt	1 if R perceived too much debt 5-7, 0 otherwise	35.6%
(Low debt)	1 if R perceived too much debt 1-4, 0 otherwise	64.4%
Inability to pay bills:		
Yes difficulty	1 if R somewhat/very difficult, 0 otherwise	39.2%
(No difficulty)	1 if R no difficulty in paying bills, 0 otherwise	60.8%
Unpaid medical bills:		
Yes medical bills	1 if R had unpaid medical bills, 0 otherwise	21.7%
(No medical bills)	1 if R no unpaid medical bills, 0 otherwise	78.3%
Large income drops:		
Yes large income drops	1 if R had large income drops, 0 otherwise	21.5%
(No large income drops)	1 if R no income drops in 12 months, 0 otherwise	78.5%
Financial Literacy:		
Perceived knowledge	Continuous, how would you assess your overall financial knowledge, 1=very low, 7=very high	5.7 (6.0)
Financial quiz score	Continuous, Sum of six knowledge questions 1=zero corrected, 7=all corrected	5.4 (6.0)
Financial capability	Continuous, I'm good at dealing w/ day to day finances, 1=strongly disagree, 7=strongly agree	6.2 (7.0)

ISSN: 1945-7774

Financial self-efficacy:		
High self-efficacy	1 if R reported somewhat/very confident, 0 otherwise	85.4%
(Low self-efficacy)	1 if R reported no/little confidence, 0 otherwise	14.6%
Socio-Demographics:		
Age/Generation:		51(52)
Millennial/Z gen, 18-37	1 if R's age 18-37, 0 otherwise	30.5%
Gen Xers, 38-53	1 if R's age 38-53, 0 otherwise	24.8%
Baby boomers, 54-72	1 if R's age 54-62, 0 otherwise	38.4%
(Silent generation, 73+)	1 if R's age 73+, 0 otherwise	6.3%
Gender:		
Female	1 if R is female, 0 otherwise	34.7%
(Male)	1 if R is male, 0 otherwise	65.3%
Race/Ethnicity**:**		
Black	1 if R is Black, 0 otherwise	11.0%
Hispanic	1 if R is Hispanic, 0 otherwise	11.9%
Asian/Other	1 if R is Asian/Other, 0 otherwise	9.0%
(White)	1 if R is White, 0 otherwise	68.1%
Marital Status:		
Unmarried single	1 if R separated, divorced, widowed, 0 otherwise	14.1%
Never-married	1 if R never married, 0 otherwise	26.6%
(Married)	1 if R married, 0 otherwise	59.2%
Education:		
High school	1 if R high school drop/graduate, 0 otherwise	20.5%
Some college	1 if R some college, 0 otherwise	37.1%
College graduate	1 if R college graduate, 0 otherwise	24.2%
(Post college)	1 if R post college degree, 0 otherwise	18.2%
Employment Status:		
Self-employed	1 if R self-employed, 0 otherwise	8.9%
Full/part time	1 if R part/full time working, 0 otherwise	54.4%
Retired	1 if R retired, 0 otherwise	24.5%
(Not-working)	1 if R students/sick/disabled/other, 0 otherwise	12.2%
Income Levels:		
(Less than $25,000)	1 if HH income <$25,000; 0 otherwise	13.0%
$25,000 - $49,999	1 if HH income $25,000-$49,999, 0 otherwise	20.5%
$50,000 - $74,999	1 if HH income $50,000-$74,999, 0 otherwise	19.6%
$75,000 - $99,999	1 if HH income $75,000-$99,999, 0 otherwise	18.4%
$100,000 or more	1 if HH income $100,000+, 0 otherwise	28.6%
Dependent Variables:		
Financial Stress	Discussing my finances make me feel stressed	3.7 (4.0)
	1=strongly disagree	22.8%
	2	12.7%
	3	10.0%
	4=neither agree nor disagree	15.9%
	5	12.3%
	6	9.9%
	7=strongly agree	16.3%

ISSN: 1945-7774

Financial Anxiety	Thinking about my finances make me feel anxious	4.1 (4.0)
	1=strongly disagree	17.1%
	2	10.8%
	3	9.4%
	4=neither agree nor disagree	14.9%
	5	15.4%
	6	13.1%
	7=strongly agree	19.2%
Financial Satisfaction	Continuous, overall thinking of your assets, debts, and savings, how satisfied are you with your personal financial condition, 1=not at all satisfied, 10=extremely satisfied	6.7 (7.0)

*Not*e. Weighted results. ( ) represents a reference group in multivariate analyses.

To measure financial satisfaction, we used a question that asked, "Overall, thinking of your assets, debts and savings, how satisfied are you with your current personal financial condition?" The responses to this question ranged on a 10 point-Likert scale ranging from 1 (*not at all satisfied*) to 10 (*extremely satisfied*). To address RQ2, this financial satisfaction variable was included as a continuous variable in our empirical analyses.

Independent Variables

Employing Joo and Grable's (2004) conceptual framework, financial stressors, financial literacy, and sociodemographic variables were included as key predictors of the financial stress and financial anxiety regression models (RQ1). These variables were also included as independent variables in our regression models alongside our financial stress and financial anxiety measures in predicting financial satisfaction (RQ2). The measurements of these key variables included in the multivariate analyses are presented in Table 1.

In this study, financial stressors were measured by four dimensions: (a) too much debt, (b) inability to pay bills, (c) unpaid medical bills, and (d) large income drops. The logistic regression analyses included these four variables as dummy categorical variables. We used this question in the NFCS survey to measure *too much debt*: "How strongly do you agree or disagree with the following statement? – I have too much debt right now." The answer was measured on a 7 point-Likert scale where 1 = strongly disagree, 4= neither agree nor disagree, and 7= strongly agree. This scale was recoded to measure having too much debt, where 1= if participants reported 5-7, 0 if otherwise. To measure the inability to pay bills, we used a question that asked, "In a typical month, how difficult is it for you to cover your expenses and pay all your bills?" The response for this question is formatted as 1= very difficult, 2= somewhat difficult, and 3=not at all difficult. This variable was recoded to measure the inability to pay bills, where 1 if participants responded 1-2, 0 if otherwise.

In the NFCS survey, unpaid medical bills and large income drops are asked in a yes-and-no-question format. To measure unpaid medical bills and large income drops, we used the following dichotomous measures: "Do you currently have any unpaid bills from a health

ISSN: 1945-7774

care or medical service provider that are past due?" and "In the past 12 months, have you [has your household] experienced a large drop in income which you did not expect?", respectively. Both variables were coded as 1 if the participant reported having unpaid medical bills or having experienced a large income drop and 0 otherwise.

In this study, to measure financial literacy, we used four dimensions. Specifically, subjective financial knowledge, financial quiz score (objective financial knowledge), financial ability, and financial self-efficacy were included in the analyses.[1] Subjective financial knowledge was measured by the individual's perception of their financial skills using the following 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?" As objective financial knowledge, the financial quiz score was measured by summing the correct answers for the six financial knowledge questions, including numeracy, inflation, bonds, mortgage, stock diversification, and compound interest. The responses were coded as 1 if respondents had zero correct answers to 7 if they answered all six questions correctly, and this variable was included as a continuous variable in analyses.

Financial capability was measured by the question, "How strongly do you agree or disagree with the following statements? – I am good at dealing with day-to-day financial matters, such as checking accounts, credit and debit cards, and tracking expenses." Responses to this question ranged from 1 (*strongly disagree*) to 7 (*strongly agree*). We note that while there are additional, potentially better measures of financial capability, this item has been used to successfully measure financial capability in previous research (Xiao et al., 2014). Financial self-efficacy was measured by the question, "If you were to set a financial goal for yourself today, how confident are you in your ability to achieve it?." Responses to this question included 1=not at all confident, 2=not very confident, 3=somewhat confident, and 4=very confident; then, we recoded 1 and 2 as not having financial self-efficacy, and 3 and 4 as having financial self-efficacy. We note that there are better measures of financial self-efficacy (Lown, 2011); however, this item was the one measure available in the NFCS dataset and has been successfully used in prior research to measure financial self-efficacy (Zhao & Zhang, 2020). Socio-demographic characteristics include age/generation, gender, race/ethnicity, marital status, education, employment status, and income as described in Table 1.

[1] As conceptual definitions of financial literacy are diverse, its measurements also vary by studies. Previous studies have used performance tests (test scores), including the correct responses to quiz questions about basic financial concepts and principles across multiple content domains in personal finances (Allgood & Walstad, 2016; Kim et al., 2021; Lusardi & Mitchell, 2014; Xiao et al., 2014) and multi-items constructed as a scale (Houts & Knoll, 2020), to measure actual financial literacy and self-reports (How would you assess your overall financial knowledge?) to measure perceived financial literacy (Allgood & Walstad, 2016; Kim et al., 2021; Xiao et al., 2014). Other studies have focused on financial self-efficacy as an important part of financial literacy (Hira, 2010; Lown, 2011). Based on this previous research and the items available to us, we consider these four items as measures of financial literacy.

ISSN: 1945-7774

Analyses

To obtain descriptive statistics on all independent and dependent variables included in the current study, frequencies, percentages, means, and medians were obtained. To identify factors associated with financial stress and financial anxiety, ordered logistic regression analyses were performed (RQ1). To examine the associations of financial stress, financial anxiety, financial stressors, financial literacy, and socio-demographics with financial satisfaction, Ordinary Least Squares (OLS) regression analyses were conducted (RQ2). To answer the RQ2, we ran two OLS regressions, one which included financial stress as an independent variable (Model 1) and one that included financial anxiety as an independent variable (Model 2). We did not include the financial stress and financial anxiety in the same model given the high correlation between the two variables; however, both regression models included the same measures of financial stressors, financial literacy, and sociodemographic characteristics as control variables.

All analyses were completed in SAS 9.4 (SAS Institute, 2013). Using Variance Inflation Factor (VIF), we assessed for multicollinearity using a cutoff value of 10. None of the variables approached this value, suggesting that they were unique enough that they did not confound the model. Additionally, we used the weight variable (wgt_n2) from the 2018 NFCS data for both descriptive and multivariate analyses to make the results more representative of the current population in the United States.

RESULTS

Sample Characteristics and Descriptive Results

Table 1 shows descriptive information about the study sample with weight. As for the socio-demographic characteristics, the majority of the sample can be described as Baby boomers (i.e., age 54-72 in 2018; 38.4%), men (65.3%), White (68.1%), having some college education (37.1%), being married (59.2%), being employed (63.3%), and having an annual household income of more than $100,000 (28.6%). As for financial literacy, the mean level of subjective financial knowledge was 5.7, on a scale of 1-7, while the mean financial quiz score was 5.4, on a scale of 1-7. Perceived financial capability was 6.2 where 1=not good at managing finances and 7=very good at managing finances. In the study sample, 85.4% of participants reported they are somewhat/very confident in reaching their financial goals.

Table 1 also shows descriptive statistics related to key variables of this study such as financial stressors, financial stress, financial anxiety, financial literacy, and financial satisfaction. In terms of financial stressors, 35.6% of the respondents reported that they were experiencing too much debt currently, 39.2% reported that it was somewhat or very difficult to pay on-going bills, 21.7% reported that they had unpaid medical bills, and 21.5% reported that they had experienced unexpected large income drops in the past 12 months.

The mean level of financial anxiety (4.1) was higher than that of financial stress (3.7), on a scale of 1-7, indicating that the respondents reported higher levels of financial anxiety than stress. Distributions of both of these variables are reported in Table 1. The mean level

ISSN: 1945-7774

of financial satisfaction was 6.7, on a scale of 1-10 where 1 is not at all satisfied with their financial condition and 10 is very satisfied with their financial condition.

RQ1: Predictors of Financial Stress and Financial Anxiety

This study investigated factors associated with financial stress and financial anxiety. In particular, we hypothesized that there would be differences in how various dimensions of financial stressors, financial literacy, and sociodemographic characteristics are associated with financial stress and financial anxiety (H1). Since there were some differences in the predictors of financial stress and financial anxiety, Hypothesis 1 was supported.

Table 2 shows the ordered logit regression results, suggesting that all else being equal, four dimensions of the financial stressors were all statistically significant and positive across the financial stress and financial anxiety models. For example, with all other variables held constant, those having too much debt had 161.3% higher predicted odds of being in a higher level of financial stress and 190.7% higher predicted odds of being in a higher level of financial anxiety than those who did not perceive too much debt. Similarly, those who were not able to pay bills, those who held unpaid medical bills, and those who experienced large income drops had 178.1%, 72.0%, and 105.5% higher predicted odds of being in a higher level of financial stress, respectively, than those who did not have such financial stressors. As we looked at the financial anxiety model, the ordered logistic regression results indicated that those who were not able to pay bills, had unpaid medical bills, and experienced large income drops had 212.6%, 66.3%, and 80.2%, respectively, higher predicted odds of being in a higher level of financial anxiety than their counterparts.

Table 2.

Ordered Logit Regression Results of Financial Stress and Financial Anxiety

	Financial Stress			Financial Anxiety		
Variables	Coefficient	Odds Ratio	Sig	Coefficient	Odds Ratio	Sig
Financial Stressors:						
Too much debt	0.961	2.613	***	1.067	2.907	***
Inability to pay bills	1.023	2.781	***	1.140	3.126	***
Unpaid medical bills	0.542	1.720	***	0.508	1.663	***
Large income drops	0.720	2.055	***	0.589	1.802	***
Financial Literacy:						
Perceived knowledge	-0.053	0.949	**	-0.117	0.889	***
Financial quiz score	-0.147	0.864	***	-0.089	0.915	***
Financial capability	-0.066	0.936	***	-0.010	0.990	
Financial self-efficacy	-0.651	0.522	***	-0.777	0.460	***

ISSN: 1945-7774

Socio-Demographics:						
Age/Generation: (Silent)						
Millennial/Z gen, 18-37	0.623	1.864	***	0.550	1.733	***
Gen Xers, 38-53	0.381	1.464	***	0.436	1.546	***
Baby boomers, 54-72	0.229	1.258	**	0.223	1.250	**
Gender: (Male)						
Female	0.173	1.188	***	0.175	1.192	***
Race/Ethnicity**:** (White)						
Black	-0.043	0.958		0.105	1.111	
Hispanic	-0.012	0.988		0.006	1.006	
Asian/Other	0.167	1.182	*	0.001	1.001	
Marital Status: (Married)						
Unmarried single	-0.040	0.961		-0.036	0.965	
Never-married	0.026	1.026		0.059	1.060	
Education: (Post-college)						
High school	-0.049	0.952		-0.094	0.910	
Some college	0.081	1.084		0.039	1.040	
College graduate	0.010	1.010		0.037	1.037	
Employment: (Not work)						
Self-employed	-0.007	0.993		-0.044	0.957	
Full/part time	0.175	1.191	**	0.068	1.070	
Retired	-0.070	0.932		-0.187	0.830	*
Income Levels: (<$25,000)						
$25,000 - $49,999	0.042	1.043		0.040	1.041	
$50,000 - $74,999	0.030	1.031		0.031	1.031	
$75,000 - $99,999	0.193	1.213	*	0.079	1.082	
$100,000 or more	0.036	1.037		-0.052	0.950	
Intercept 7	-1.862	0.2096	***	-1.692	0.2099	***
Intercept 6	-0.994	0.2086	***	-0.667	0.2091	**
Intercept 5	-0.137	0.2083		0.323	0.2089	
Intercept 4	0.810	0.2084	***	1.200	0.2092	***
Intercept 3	1.386	0.2088	***	1.777	0.2096	***
Intercept 2	2.171	0.2094	***	2.548	0.2104	***
-2 Log Likelihood	34097.274			34368.940		
χ^2	803.736***			765.847***		
Concordance	75.7%			76.5%		

Note. Weighted results. $^{*}p < .05$, $^{**}p < .001$, $^{***}p < .0001$

Table 2 also showed that all else being equal, almost all dimensions of the four financial literacy variables were statistically significant and negative across the financial stress and financial anxiety models. However, financial capability was not statistically significant for the financial anxiety model. These findings suggest that financial literacy played an important role in curbing financial stress and financial anxiety. This means that individuals who had higher subjective and objective financial knowledge and perceived high confidence in their ability to reach their financial goals tended to feel less financially stressed

ISSN: 1945-7774

and financially anxious. Further, the more individuals reported that they were good at dealing with day to day finances, the less they felt financially stressed, however, it was not significantly associated with financial anxiety.

Regarding socio-demographic characteristics, age/generation, gender, and employment status were statistically significant for both financial stress and financial anxiety regression models. As some similarities, we found that all age groups were more likely to report experiencing financial stress and financial anxiety when compared to respondents in the silent generation (i.e., age 73+ in 2018). Women were more likely to report experiencing both financial stress and financial anxiety than men. Table 2 also showed that full/part-time employees were more likely to report experiencing financial stress, while retired individuals were less likely to report experiencing financial anxiety than were not-working individuals.

As predictors of financial stress and financial anxiety, we also found some differences among socio-demographics. Specifically, race/ethnicity and annual household income were statistically significant only for the financial stress model, but not significant for the financial anxiety model. Table 2 showed that those who responded Asian/other and those who were making incomes of $75,000-$99,999 were more likely to report experiencing financial stress than their reference groups such as White individuals and those who were making incomes of less than $25,000, respectively. However, marital status and education were not significant across the financial stress and financial anxiety models.

RQ2: Associations Between Financial Stress, Financial Anxiety, and Financial Satisfaction

For our second hypothesis, we proposed that financial anxiety would have a stronger association with financial satisfaction than financial stress (H2). Table 3 presents the OLS regression results from the two regression models. In Model 1 where financial stress is the key independent variable, we could see that there was a significant and negative association between financial stress and financial satisfaction. In Model 2 where financial anxiety is the key independent variable, we also found that there was a significant and negative association between financial anxiety and financial satisfaction. In Table 3, as we compared the associations of financial stress and financial anxiety with financial satisfaction, we found that financial anxiety had a larger standardized coefficient (b=-0.114) than that of financial stress (b=-0.059). Since the standardized coefficient associated with financial anxiety was larger than that of financial stress, it can be said that financial anxiety had a stronger association with financial satisfaction than financial stress. Thus, the findings support Hypothesis 2.

ISSN: 1945-7774

Table 3.

OLS Results: Associations between Financial Stress, Financial Anxiety, and Financial Satisfaction

	Financial Satisfaction Model 1				Financial Satisfaction Model 2			
Variables	β	Sig.	SE	b	β	Sig.	SE	b
Financial Stress/Financial Anxiety:								
Financial stress	-0.075	***	0.012	-0.059				
Financial anxiety					-0.147	***	0.013	-0.114
Financial Stressors:								
Too much debt	-0.858	***	0.054	-0.152	-0.784	***	0.054	-0.139
Inability to pay bills	-1.008	***	0.057	-0.181	-0.920	***	0.057	-0.166
Unpaid medical bills	0.273	***	0.062	0.042	0.291	***	0.061	0.044
Large income drops	0.404	***	0.061	0.061	0.420	***	0.061	0.064
Financial Literacy:								
Perceived knowledge	0.574	***	0.021	0.244	0.562	***	0.021	0.238
Financial quiz score	-0.349	***	0.018	-0.178	-0.351	***	0.018	-0.179
Financial capability	0.099	***	0.018	0.048	0.101	***	0.018	0.049
Financial self-efficacy	1.664	***	0.067	0.217	1.619	***	0.067	0.211
Socio-demographics:								
Age/Generation: (Silent, 73+)								
Millennial/Zs, 18-37	0.028		0.112	0.005	0.063		0.111	0.011
Gen Xers, 38-53	-0.579	***	0.107	-0.092	-0.544	***	0.107	-0.087
Baby boomers, 54-72	-0.223	*	0.092	-0.040	-0.204	*	0.092	-0.037
Gender: (Male)								
Female	-0.221	***	0.045	-0.039	-0.213	***	0.045	-0.037
Race/Ethnicity: (White)								
Black	0.275	***	0.073	0.032	0.279	***	0.072	0.032
Hispanic	-0.053		0.067	-0.006	-0.051		0.067	-0.006
Asian/Other	-0.071		0.074	-0.008	-0.084		0.074	-0.009
Marital Status: (Married)								
Unmarried single	-0.265	***	0.065	-0.034	-0.266	***	0.065	-0.034
Never-married	-0.054		0.055	-0.009	-0.048		0.055	-0.008
Education: (Post-college)								
High school	-0.015		0.073	-0.002	-0.026		0.073	-0.004
Some college	-0.178	**	0.063	-0.032	-0.177	**	0.063	-0.032
College graduate	-0.076		0.065	-0.012	-0.073		0.065	-0.012
Employment: (Not work)								
Self-employed	0.521	***	0.095	0.055	0.514	***	0.094	0.054
Full/part-time	0.529	***	0.071	0.097	0.525	***	0.071	0.096
Retired	1.186	***	0.086	0.188	1.158	***	0.085	0.184
Income Levels: (<$25,000)								
$25,000 - $49,999	0.203	**	0.077	0.030	0.214	**	0.076	0.032
$50,000 - $74,999	0.664	***	0.081	0.097	0.671	***	0.081	0.098
$75,000 - $99,999	1.313	***	0.085	0.187	1.311	***	0.085	0.187
$100,000+	1.218	***	0.086	0.203	1.212	***	0.085	0.202
Constant	3.081	***	0.228	0	3.426	***	0.228	0
F	292.66***				299.35			
Adj-R^2	.47				.48			

Note. Weighted results. *p<.05, **p<.01, ***p<.001

ISSN: 1945-7774

Determinants of Financial Satisfaction

While employing Joo and Grable's (2004) theoretical model of the determinants of financial satisfaction, we explored additional factors associated with financial satisfaction. As Joo and Grable's model suggested, we included demographic characteristics, financial stressors, and financial knowledge, along with financial stress and financial anxiety in the OLS regression models to predict factors associated with financial satisfaction. The OLS results in Table 3 indicated that the associations of financial stressors, financial literacy, and socio-demographics with financial satisfaction were not different in terms of significance and directions in both Model 1 and Model 2.

Among financial stressors, while the coefficients associated with too much debt and an inability to pay bills were negatively associated with levels of financial satisfaction, the coefficients associated with unpaid medical bills and large income drops were positively associated with financial satisfaction. As for financial literacy, while subjective financial knowledge, financial capability, and financial self-efficacy were positively associated with levels of financial satisfaction for both models, objective quiz scores were negatively associated with levels of financial satisfaction.

Moving to demographic characteristics, Table 3 showed that age/generation, gender, race/ethnicity, marital status, education, employment, and income were significant predictors of financial satisfaction. Specifically, Gen-Xers and baby boomers reported lower levels of financial satisfaction than the silent generation. However, there was no significant difference in levels of financial satisfaction between the millennial/Z generation and the silent generation. Women reported lower levels of financial satisfaction than men, while unmarried, single individuals reported lower levels of financial satisfaction than their married counterparts. The OLS results also showed that while Black individuals reported higher levels of financial satisfaction than White individuals, those with some college education reported lower levels of financial satisfaction than those with post-college degrees. On the other hand, self-employed individuals, full/part-time individuals, and retired individuals reported higher levels of financial satisfaction than non-working individuals. Similarly, compared to those in the lowest income group (<$25,000), all other income groups reported significantly higher levels of financial satisfaction.

DISCUSSION

The first objective of this study was to elucidate the differences between predictors of financial stress and financial anxiety (RQ1). The results indicate several similarities and differences between predictors of financial stress and financial anxiety, supporting our first hypothesis (H1). The regression results indicated that the coefficients associated with the four financial stressor variables were statistically significant, with the same directions in both financial stress and financial anxiety models (similarity). While most dimensions of financial literacy variables were significant and negative in both financial stress and financial anxiety models, financial capability was associated negatively with the probability of being in a higher level of financial stress but was not significantly associated with the probability of being in a higher level of financial anxiety (difference). It is noted that across both models,

ISSN: 1945-7774

financial self-efficacy appeared to have the strongest negative associations with financial stress and financial anxiety compared to the other financial literacy variables.

Regarding financial stressors, the odds ratios associated with "too much debt" and "inability to pay bills" were higher in the financial anxiety model than those with "too much debt" and "inability to pay bills" in the financial stress model. As for other financial stressor dimensions, "unpaid medical bills" and "large income drops," the differences in the odds ratios associated with these stressors were minor across the financial stress and financial anxiety models. The ordered logit regression results also showed similarities and differences in socio-demographic factors associated with experiencing financial stress and financial anxiety.

The second objective of this study was to examine the association between financial stress, financial anxiety, and financial satisfaction (RQ2). To identify their associations with financial satisfaction, we ran two OLS regression models, each of which included the same salient predictors of financial satisfaction proposed by Joo and Grable (2004). The only difference was that one model investigated financial stress, and the other investigated financial anxiety alone. The OLS regression results show that financial stress and financial anxiety were negatively associated with financial satisfaction. In other words, as financial stress and financial anxiety increased, financial satisfaction decreased. However, the association of financial anxiety with financial satisfaction was larger than that of financial stress. This finding was consistent with our hypothesis (H2) that, given the long-term nature of financial anxiety, financial anxiety would have a stronger negative association with financial satisfaction than financial stress. These findings provide additional support for the arguments stating that these are two very different constructs (Lurtz, 2020). It similarly illustrates how combining financial stress and financial anxiety into a single construct may reduce the accuracy of research on this topic.

As we included four dimensions of the financial stressors in our financial satisfaction models, we found that long-term aspects of financially distressful situations, such as having too much debt and the inability to pay bills in a typical month, were negatively associated with financial satisfaction. On the other hand, we also found that short-term aspects of financially distressful situations, such as having unpaid medical bills and experiencing large income drops in the previous 12 months, were positively associated with financial satisfaction. While it makes conceptual sense that these long-term financial stressors would have a stronger negative impact on one's financial satisfaction than the shorter-term financial stressors, we were surprised by the positive associations between unpaid medical bills and large income drops with levels of financial satisfaction. Thus, more research is needed to elucidate this positive association.

Further, our findings highlight that financial literacy was not only related to reduced financial stress and financial anxiety (RQ1) but also associated with improved financial satisfaction above and beyond financial stress and financial anxiety (RQ2). These findings demonstrate the importance of financial literacy. Longitudinal research is needed to understand whether targeting financial literacy might reduce financial stress and financial anxiety, while increasing individuals' financial satisfaction.

ISSN: 1945-7774

Implications

This study's findings suggest some distinct differences in the predictors of financial stress and financial anxiety. While it is recognized in our field that financial stress and financial anxiety are distinct constructs, research often fails to treat them as such. Our findings support calls to investigate these constructs separately (Lurtz, 2020). While more research that distinguishes financial stress from financial anxiety is needed, we provide tentative suggestions for financial practitioners in clinical settings, drawing heavily from the literature on this topic as we present a conceptual argument for which our study provides empirical support.

First, it is important for financial therapists or those working with family financial problems or difficulties to assess whether their clients are experiencing financial stress or financial anxiety. Based on previous theory and research (American Psychological Association, 2020; Hardie & Lucas, 2010; Lurtz, 2020), if they are experiencing *financial stress*, it may be helpful to focus on the specific external stressor that is creating stress for them. However, if their clients are experiencing *financial anxiety*, focusing solely on external stressors is unlikely to provide the help and relief they seek. In addressing financial anxiety, financial therapists and financial professionals may need to take a more holistic approach to understand their clients' money scripts and beliefs (Britt et al., 2015b; Klontz et al., 2011) and their financial behavior patterns (Xiao, 2008) to address the long-term effects of financial anxiety. We note that the two variables included in this 2018 NFCS data lack the sophistication to assess whether a client is experiencing financial stress, financial anxiety, or both. Intake forms with validated questions and follow-up questions from the practitioners may be useful in distinguishing whether the client is experiencing financial stress or financial anxiety (Grable et al., 2015; Grable et al., 2020; Shapiro & Burchell, 2012).

Thus, when financial practitioners work with clients, if the client's financial stress is not associated with other psychological distress, such as anxiety and depression, then traditional financial planning may be enough for them to achieve financial health (Klontz et al., 2008). However, if financial stress is related to psychological distress, financial therapy could target emotions and dysfunctional thoughts to help them improve financial health (Klontz et al., 2008). Previous literature suggests that Solution-Focused Financial Therapy (SFFT) may be particularly helpful in these situations as financial therapists work to understand their clients' struggles better and provide them with tools to reduce their financial anxiety (Archuleta et al., 2020). Further, financial therapists can provide clients with opportunities to explore these psycho-physiological anxiety symptoms due to money, and offer solutions to reduce them. These opportunities, in turn, can help clients make better financial decisions, establish financial goals, and explore their underlying feelings and motivations connected to money. In working with those experiencing financial anxiety, financial therapists should be aware of the severity of their client's financial anxiety and refer them to an anxiety specialist when symptoms are extreme (Britt et al., 2015b).

Second, the findings also suggest that focusing on helping clients improve their financial literacy may be instrumental in reducing both financial stress and financial anxiety. Based on the results of our study, of the various measures of financial literacy, increasing

ISSN: 1945-7774

financial self-efficacy may be the most important factor to focus on for reducing financial stress and anxiety and enhancing financial satisfaction. Our results further suggest that in addressing financial anxiety specifically, helping clients improve their subjective financial knowledge may be useful. Further, increasing objective financial knowledge and perceived capability may be particularly beneficial for decreasing financial stress. In sum, while financial stress and financial anxiety should not be used interchangeably in clinical settings, focusing on improving financial literacy may be useful in reducing financial stress and financial anxiety.

Third, the significant associations of financial stressors with financial stress and financial anxiety have important implications. Specifically, we note that the financial stressors that appear longer-term in nature had stronger associations with financial anxiety. This is consistent with financial anxiety being a chronic issue and suggests that chronic stressors may transform financial stress into financial anxiety. While more research is needed here, these findings, along with the literature on the topic (Grable et al., 2020; Lurtz, 2020; Pijoh et al., 2020), suggest that there is value in financial practitioners helping their clients separate their short-term financial stressors from their long-term financial stressors. In doing so, financial practitioners can help clients recognize when different approaches to coping with financial stressors are needed.

Limitations and Future Directions

While this study had notable strengths, including our use of a large, nationally representative sample, there were also noteworthy limitations. First, we note the limitations of secondary data in which we are constrained to the items included in the survey, many of which are less than ideal measures of the constructs, specifically for financial stress and financial anxiety. In particular, using one-item questions for financial stress and financial anxiety may have limited our ability to find differences between these two constructs. While these two items were instrumental in exploring whether there may be differences in predictors of financial stress and financial anxiety, as well as in exploring how financial stress and financial anxiety are associated with financial satisfaction, validated scales using multiple items for both financial stress and financial anxiety would produce more robust results. Future research should use validated measures of financial stress (Northern et al., 2010) and financial anxiety (Archuleta, 2013) to further our understanding of the nuance in these two constructs.

Further, we note that Shapiro and Burchell (2012) included both of the measures used in this study in their Financial Anxiety Scale and that both measures loaded well onto the scale. Given the similarities and potentially high correlations between financial stress and financial anxiety, we emphasize the need for measures that continually assess whether items measure financial *stress* or financial *anxiety*. Specifically, we emphasize the need to improve current financial stress and anxiety measures. In particular, current measures fail to capture the chronic vs. acute nature of financial stress and financial anxiety. They also fail to capture the potentially beneficial aspects of financial stress as opposed to the more debilitating nature of financial anxiety. More work is needed in this area.

ISSN: 1945-7774

We also note that our decision to remove participants who responded "don't know" and "prefer not to say" from the analysis may have introduced some bias to our sample. Additionally, we acknowledge the cross-sectional nature of this study as a limitation, particularly as financial anxiety could be a more long-term issue, whereas financial stress is tied to external stressors and may come and go. Thus, longitudinal research that delves into the differences between these two constructs over time is needed.

CONCLUSION

Our study provided support for treating financial stress and financial anxiety as distinct constructs in both research and clinical settings. While these two constructs have often been used interchangeably given their many similarities, separating financial stress and anxiety from each other can provide additional insights that can be instrumental in getting individuals and families facing these challenging situations and emotions the help they need. Continued research that further elucidates the differences in predictors (e.g., financial literacy, money scripts, etc.) of financial stress and financial anxiety is needed, in addition to further research on differences in coping with these two constructs.

ISSN: 1945-7774

REFERENCES

Aboagye, J., & Jung, J. Y. (2018). Debt holding, financial behavior, and financial satisfaction. *Journal of Financial Counseling and Planning*, *29*(2), 208-218. https://doi.org/10.1891/1052-3073.29.2.208

American Psychological Association (2020, September 21). *What's the difference between stress and anxiety? Knowing the difference can ensure you get the help you need.* American Psychological Association. https://www.apa.org/topics/stress/anxiety-difference

Archuleta, K. L., Britt, S. L., Tonn, T. J., & Grable, J. E. (2011). Financial satisfaction and financial stressors in marital satisfaction*. Psychological Reports, 108*(2), 563-576. https://doi.org/10.2466/07.21.PR0.108.2.563-576

Archuleta, K. L., Dale, A., & Spann, S. M. (2013). College students and financial distress: Exploring debt, financial satisfaction, and financial anxiety. *Journal of Financial Counseling and Planning*, *24*(2), 50-62.

Archuleta, K. L., Mielitz, K. S., Jayne, D., & Le, V. (2020). Financial goal setting, financial anxiety, and solution-focused financial therapy (SFFT): A quasi-experimental outcome study. *Contemporary Family Therapy*, *42*(1), 68-76. https://doi.org/10.1007/s10591-019-09501-0

Atkinson, A., & Messy, F. A. (2012). Measuring financial literacy: Results of the OECD/International Network on Financial Education, working papers on finance, insurance and private pensions. Paris: OECD. https://doi.org/10.1787/20797117

Britt, S. L., Ammerman, D. A., Barrett, S. F., & Jones, S. (2017). Student loans, financial stress, and college student retention. *Journal of Student Financial Aid*, *47*(1), 25-37. http://publications.nasfaa.org/jsfa/vol47/iss1/3

Britt, S. L., Canale, A., Fernatt, F., Stutz, K., & Tibbetts, R. (2015a). Financial stress and financial counseling: Helping college students. *Journal of Financial Counseling and Planning*, *26*(2), 172-186. https://doi.org/10.1891/1052-3073.26.2.172

Britt, S. L., Klontz, B. T., & Archuleta, K. L. (2015b). Financial therapy: Establishing an emerging field. *Financial Therapy: Theory, Research, & Practice*, 3-13. https://doi.org/10.1007/978-3-319-08269-1_1

Britt, S. L., Mendiola, M. R., Schink, G. H., Tibbetts, R. H., & Jones, S. H. (2016). Financial stress, coping strategy, and academic achievement of college students. *Journal of Financial Counseling and Planning*, *27*(2), 172-183. https://doi.org/10.1891/1052-3073.27.2.172

Choi, L. (2009). Financial stress and its physical effects on individuals and communities. *Community Development Investment Review*, *5*(3), 120-122.

Consumer Financial Protection Bureau (2020). *Find out your financial well-being.* Consumer Financial Protection Bureau. https://www.consumerfinance.gov/consumer-tools/financial-well-being/

Dew, J., LeBaron, A., & Allsop, D. (2018). Can stress build relationships? Predictors of increased marital commitment resulting from the 2007–2009 recession. *Journal of Family and Economic Issues*, *39*(3), 405-421. https://doi.org/10.1007/s10834-018-9566-7

ISSN: 1945-7774

Dobkin, C., Finkelstein, A., Kluender, R., & Notowidigdo, M. J. (2018). Myth and measurement: The case of medical bankruptcies. *The New England Journal of Medicine*, *378*(12), 1076-1078. https://doi.org/10.1056/nejmp1716604

Drentea, P., & Reynolds, J. R. (2015). Where does debt fit in the stress process model? *Society and Mental Health*, *5*(1), 16-32. https://doi.org/10.1177/2156869314554486

Duggan, W. (2022, December 13). *Why is Inflation So High?* Forbes Advisor. https://www.forbes.com/advisor/investing/why-is-inflation-rising-right-now/

Falconier, M. K., & Epstein, N. B. (2011). Couples experiencing financial strain: What we know and what we can do. *Family Relations*, *60*(3), 303-317. https://doi.org/10.1111/j.1741-3729.2011.00650.x

Federal Reserve Bank of New York (2022). *Total household debt reaches $16.51 trillion in Q3 2022; Mortgage and auto loan originations decline.* Federal Reserve Bank of New York. https://www.newyorkfed.org/newsevents/news/ research/2022/20221115

Friedline, T., Chen, Z., & Morrow, S. P. (2021). Families' financial stress & well-being: The importance of the economy and economic environments. *Journal of Family and Economic Issues*, *42*(1), 34-51. https://doi.org/10.1007/s10834-020-09694-9

Grable, J., Heo, W., & Rabbani, A. (2015). Financial anxiety, physiological arousal, and planning intention. *Journal of Financial Therapy, 5*(2), 1-18. https://doi.org/10.4148/1944-9771.1083

Grable, J., Archuleta, K. L., Ford, M. R., Kruger, M., Gale, J., & Goetz, J. (2020). The moderating effect of generalized anxiety and financial knowledge on financial management behavior. *Contemporary Family Therapy*, *42*(1), 15-24. https://doi.org/10.1007/s10591-019-09520-x

Hardie, J., & Lucas, A. (2010). Economic factors and relationship quality among young couples: Comparing cohabitation and marriage. *Journal of Marriage and Family*, *72*(5), 1141-1154. https://doi.org/10.1111/j.1741-3737.2010.00755.x

Heckman, S., Lim, H., & Montalto, C. (2014). Factors related to financial stress among college students. *Journal of Financial Therapy*, *5*(1), 19-39. http://doi.org/10.4148/1944-9771.1063

Hilgert, M., & Hogarth, J. (2003). Household financial management: The connection between knowledge and behavior. *Federal Reserve Bulletin, 89*(7), 309–322.

Hubler, D. S., Burr, B. K., Gardner, B. C., Larzelere, R. E., & Busby, D. M. (2016). The intergenerational transmission of financial stress and relationship outcomes. *Marriage & Family Review*, *52*(4), 373-391. https://doi.org/10.1080/01494929.2015.1100695

Hung, A., Parker, A. M., & Yoong, J. (2009). *Defining and measuring financial literacy*. Working Paper, no WR-708. Rand Corporation. https://www.rand.org/content/dam/rand/pubs/working_papers/2009/RAND_WR708.pdf

Huston, S.J. (2010). Measuring financial literacy. *The Journal of Consumer Affairs, 44*(2), 296-316. https://doi.org/10.1111/j.1745-6606.2010.01170.x

Joo, S. H., & Grable, J. E. (2004). An exploratory framework of the determinants of financial satisfaction. *Journal of Family and Economic Issues*, *25*(1), 25-50. https://doi.org/10.1023/B:JEEI.0000016722.37994.9f

ISSN: 1945-7774

Joo, S. H., Durband, D. B., & Grable, J. (2008). The academic impact of financial stress on college students. *Journal of College Student Retention: Research, Theory & Practice*, *10*(3), 287-305. https://doi.org/10.2190/CS.10.3.c

Juselius, M., & Drehmann, M. (2015). Leverage dynamics and the real burden of debt. *Bank for International Settlements, Working Paper No. 501*, Available at SSRN: https://ssrn.com/abstract=2604099

Kelley, H. H., Lee, Y., LeBaron-Black, A., Dollahite, D. C., James, S., Marks, L. D., & Hall, T. (2023). Change in financial stress and relational wellbeing during COVID-19: Exacerbating and alleviating influences. *Journal of Family and Economic Issues*, 44, 34-52. https://doi.org/10.1007/s10834-022-09822-7

Klontz, B., Britt, S. L., & Mentzer, J. (2011). Money beliefs and financial behaviors: Development of the Klontz Money Script Inventory. *Journal of Financial Therapy*, *2*(1), 1-22. https://doi.org/10.4148/jft.v2i1.451

Klontz, B., Britt, S. L., Archuleta, K. L., & Klontz, T. (2012). Disordered money behaviors: Development of the Klontz money behavior inventory. *Journal of Financial Therapy*, *3*(1), 17-42. https://doi.org/10.4148/jft.v3i1.1485

Klontz, B., Kahler, R., & Klontz, T. (2008). *Facilitating financial health: Tools for financial planners, coaches, and therapists*. Cincinnati: The National Underwriter Company.

LeBaron, A. B., Curran, M. A., Li, X., Dew, J. P., Sharp, T. K., & Barnett, M. A. (2020). Financial stressors as catalysts for relational growth: Bonadaptation among lower-income, unmarried couples. *Journal of Family and Economic Issues*, *41*(3), 424-441. https://doi.org/10.1007/s10834-020-09666-z

Lee, C. Y. S., Lee, J., & August, G. J. (2011). Financial stress, parental depressive symptoms, parenting practices, and children's externalizing problem behaviors: Underlying processes. *Family Relations*, *60*(4), 476-490. https://doi.org/10.1111/j.1741-3729.2011.00656.x

Lee, J. M., Lee, Y. G., & Kim, S. (2019). Loan type and debt delinquency among millennial and non-millennial households. *Family and Consumer Sciences Research Journal*, *47*(4), 342-358. https://doi.org/10.1111/fcsr.12315

Lee, J. M., Lee, J., & Kim, K. T. (2020). Consumer financial well-being: Knowledge is not enough. *Journal of Family and Economic Issues*, *41*(2), 218-228. https://doi.org/10.1007/s10834-019-09649-9

Lee, Y. G., & Dustin, L. (2021). Explaining financial satisfaction in marriage: The role of financial stress, financial knowledge, and financial behavior. *Marriage & Family Review*, *57*(5), 397-421. https://doi.org/10.1080/01494929.2020.1865229

Lown, J. M. (2011). Development and validation of a financial self-efficacy scale. *Journal of Financial Counseling and Planning, 22*(2), 54-63. http://ssrn.com/abstract=2006665

Lurtz, M. (2020, April 9). *Financial stress & anxiety. Helping those you serve deal with financial stress anxiety during the COVID-19 emergency.* Consumer Financial Protection Bureau. https://www.youtube.com/watch?v=63sUiwmZxxg

Northern, J. J., O'Brien, W. H., & Goetz, P. W. (2010). The development, evaluation, and validation of a financial stress scale for undergraduate students. *Journal of College Student Development*, *51*(1), 79-92. https://doi.org/10.1353/csd.0.0108

Park, W., & Kim, J. (2018). How are money worries affecting middle-aged, young-old, and old–old people's perceived couple relationship? *Journal of Family and Economic Issues, 39*(1), 34-48. https://doi.org/10.1007/s10834-017-9547-2

ISSN: 1945-7774

Patterson, J. M. (1988). Families experiencing stress: The family adjustment and adaptation response model. *Family System Medicine, 5*, 202-237. http://dx.doi.org/10.1037/h0089739

Picchi, A. (2021, December 2). *Inflation causing hardship for almost half of American households.* CBS News. https://www.cbsnews.com/news/inflation-prices-hardship-americans/

Pijoh, L. F. A., Indradewa, R., & Syah, T. Y. R. (2020). Financial literacy, financial behaviour, and financial anxiety: Implication for financial well being of top management level employees. *Journal of Multidisciplinary Academic*, *4*(6), 381-386.

Rodriguez, L. M., Litt, D. M., & Stewart, S. H. (2021). COVID-19 psychological and financial stress and their links to drinking: A dyadic analysis in romantic couples. *Psychology of Addictive Behaviors, 35*(4), 377-390. https://doi.org/10.1037/adb0000724

Roll, S. P., Taylor, S. H., & Grinstein-Weiss, M. (2016). Financial anxiety in low-and moderate-income households: Findings from the household financial survey, Center for Social Development Research Brief, 16-41.

Santacroce, S. J., Killela, M. K., Kerr, G., Leckey, J. A., & Kneipp, S. M. (2020). Fathers' psychological responses to pediatric cancer–induced financial distress. *Pediatric Blood & Cancer*, *67*(6), 1-8. https://doi.org/10.1002/pbc.28281

Sages, R. A., Britt, S. L., & Cumbie, J. A. (2013). The correlation between anxiety and money management. *College Student Journal, 47*(1), 1–11.

SAS Institute (2013). *SAS 9.4.* SAS Institute Inc.

Shah, S. J., Krumholz, H. M., Reid, K. J., Rathore, S. S., Mandawat, A., Spertus, J. A., & Ross, J. S. (2012). Financial stress and outcomes after acute myocardial infarction. *PloS one*, *7*(10), e47420.

Shapiro, G. K., & Burchell, B. J. (2012). Measuring financial anxiety. *Journal of Neuroscience, Psychology, and Economics*, *5*(2), 92-103. https://doi.org/10.1037/a0027647

Tran, A., Lam, C., and Legg, E. (2018). Financial stress, social supports, gender, and anxiety during college: A stress-buffering perspective. *The Counseling Psychology, 46*(7), 846-869. https://doi.org/10.1177/0011000018806687

Tsuchiya, K., Leung, C. W., Jones, A. D., & Caldwell, C. H. (2020). Multiple financial stressors and serious psychological distress among adults in the USA. *International Journal of Public Health*, *65*(3), 335-344. https://doi.org/10.1007/s00038-020-01354-x

U.S. Bureau of Labor Statistics (2022, July 18). *Consumer prices up 9.1 percent over the year ended June 2022, largest increase in 40 years.* U.S. Bureau of Labor Statistics. https://www.bls.gov/opub/ted/2022/consumer-prices-up-9-1-percent-over-the-year-ended-june-2022-largest-increase-in-40-years.htm

U.S. Financial Literacy and Education Commission (2020). *U.S. National Strategy for Financial Literacy 2020*. https://home.treasury.gov/system/files/136/US-National-Strategy-Financial-Literacy-2020.pdf

Valero-Elizondo, J., Khera, R., Saxena, A., Grandhi, G. R., Virani, S. S., Butler, J., Samad, Z., Desai, N.R., Krumholz, H.M., & Nasir, K. (2019). Financial hardship from medical bills among nonelderly US adults with atherosclerotic cardiovascular disease. *Journal of the American College of Cardiology*, *73*(6), 727-732.

ISSN: 1945-7774

Warmath, D., & Zimmerman, D. (2019). Financial literacy as more than knowledge: The development of a formative scale through the lens of Bloom's domains of knowledge. *The Journal of Consumer Affairs, 53*(4), 1602-1629. https://doi.org/10.1111/joca.12286

Weller, S. A. (2012). Financial stress and the long-term outcomes of job loss. *Work, Employment and Society*, *26*(1), 10-25. https://doi.org/10.1177/0950017011426307

Xiao, J. J. (2008). Applying behavior theories to financial behavior. In J. J. Xiao, (Ed.) *Handbook of Consumer Finance Research*, 69-81. Springer.

Xiao, J. J., Chen, C., & Chen, F. (2014). Consumer financial capability and financial satisfaction. *Social Indicators Research*, *118*(1), 415-432. https://doi.org/10.1007/s11205-013-0414-8

Zhao, H., & Zhang, L. (2020). Talking money at home: The value of family financial socialization. *International Journal of Bank Marketing, 38*(7), 1617-1634. https://doi.org/10.1108/IJBM-04-2020-0174

ISSN: 1945-7774