Debt, Religious Beliefs, and Life Satisfaction

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The purpose of this study was to explore religious factors as a resource for coping with indebtedness. Using a sample (n = 3,174) extracted from the Health and Retirement Study (HRS), we examined the relationship between household debt and life satisfaction, and tested for stress-buffering (i.e., moderation) from religious identification, religious beliefs, and prayer frequency. Results suggest that some religious factors may play a small role in moderating the relationship between indebtedness and life satisfaction, and that such moderation is itself dependent on one's religious identification. Implications for practice (particularly faith-based providers of financial counseling) and recommendations for future research are discussed.

Keywords: life satisfaction; debt; religiosity; complex data analysis

INTRODUCTION

The objective of personal financial counseling and planning is to help clients enhance their financial well-being (Association for Financial Counseling and Planning Education, 2018). The term "well-being" is often used to refer to utility or satisfaction in an economic context (Plagnol, 2011), but more generally refers to the condition of being free from want or worry (Joo, 2008). As such, research in this area is often oriented toward understanding how practitioners can help clients best manage their resources and cope with financial stress. Stress mitigation has been the subject of considerable study in health-related disciplines, and over the past several decades researchers have taken an interest in religiosity and prayer as coping mechanisms (Ai et al., 2007; Hill & Pargament, 2003; Smith, McCullough, & Poll, 2003; Stein et al., 2013; Whittington & Scher, 2010). Some have proposed that a relationship with God could be considered a resource for coping with stress (Bonab, Miner, & Proctor, 2013; Kirkpatrick & Shaver, 1990). While several studies have explored

relationships between religious variables and financial aspects of well-being (Asebedo & Seay, 2014; Martos & Kopp, 2012), few have explored the role of religious factors as moderators of financial stress, or controlled for differences in religious tradition or denomination. This study adds to the literature by doing both. To the extent that religious traditions differ significantly with regard to the nature of the divine (Ridenour, 2001) and are a fundamental part of an individual's worldview (Mazereeuw-van der Duijn Schouten, Graafland, & Kaptein, 2014), we make a significant contribution by controlling for religious identification. Further, we provide evidence to suggest that religious beliefs may be a resource for coping with financial stress, but that such moderating benefits are dependent on one's religious tradition.

LITERATURE REVIEW

Debt, Stress, and Life Satisfaction

Theoretically, individuals desire to maintain an even level of consumption over their lifetimes, which leads to borrowing when young and gradually de-levering over time (Ando & Modigliani, 1963). Households carry various types of debt (e.g., mortgages, student loans, and consumer debt) to finance the purchase of assets and consumption. This borrowing creates an obligation that reduces financial flexibility and increases insolvency risk (Brealey, Myers, & Allen, 2014). If debt increases without a corresponding increase in assets or income, the borrower will have an even greater obligation to meet using the same resources as before. As the borrower considers how they will satisfy their obligations in the future, they may experience stress and a reduced sense of well-being (Fitch, Hamilton, Bassett, & Davey, 2011). Indeed, research has shown that debt is among the leading financial stressors for U.S. households (ORC International, 2015). Considering that household debt has been on the rise for the past several quarters, debt management remains an important issue for practitioners and their clients (Federal Reserve Bank of New York, 2018).

Medical researchers have taken an interest in debt as a predictor of physical and mental health, and evidence generally suggests that debt has a negative association with health and well-being (Fitch et al., 2011; Ramsey et al., 2016; Richardson, Elliott, & Roberts, 2013; Sweet, Nandi, Adam, & McDade, 2013; Tucker-Seeley, Li, Subramanian, & Sorensen, 2009). This is generally consistent with findings from the financial counseling and planning literature (Archuleta, Dale, & Spann, 2013; Garrett & James, 2013). Clients may wish to reduce this stressor by quickly paying-off debt; however, the reality is that de-levering can take years. As such, clients need non-financial resources for coping with indebtedness while working with a practitioner to enhance their financial position and well-being.

Religiosity, Prayer, and Coping with Stress

Religious beliefs have long been considered a possible resource for coping with stress (Hill & Pargament, 2003; Smith et al., 2003). The current evidence suggests that religious factors are complex and have both direct and indirect relationships with well-being (Siegel, Anderman, & Schrimshaw, 2001; Smith et al., 2003; Whittington & Scher, 2010). The nature and sign of the direct relationships reported in the literature vary depending on which

religious factors have been examined and how they have been operationalized (Stein et al., 2013; Waddell & Jacobs-Lawson, 2010). Evidence of indirect relationships has generally come from tests of stress-buffering models, and these studies suggest that religious belief or activity moderates the relationship between stressors and life satisfaction (Dezutter, Robertson, Luyckx, & Hutsebaut, 2010; Park, Cohen, & Herb, 1990; Siegel et al., 2001; Smith et al., 2003). Some researchers have proposed that the buffering effects of religious factors may be related to the perceived support one receives from having a relationship with God (Bonab et al., 2013; Kirkpatrick & Shaver, 1990).

For all the research in this area, however, religious factors have received relatively little attention in a specifically financial context. Keyword searches for religiosity in the eight core financial planning journals (Grable, 2006; Grable & Ruiz-Menjivar, 2014) returned only 54 results; and searches for prayer returned only 19 results. Evidence from the studies that have looked at the influence of religious factors on financial stress and well-being is generally mixed or inconclusive. For example, Sipon, Othman, Ghani, and Radzi (2014) claimed that "religiosity plays a big role in preventing any person from going overboard in daily expenses" (p. 303), but their results actually show a positive relationship between religiosity and debt which suggests the opposite. Van Praag, Romanov, and Ferrer-i-Carbonell (2010) found that religiosity had a positive relationship with both financial and life satisfaction among Jews and Arabs living in Israel. Conversely, Asebedo and Seay (2014) reported a weak, negative relationship between religiosity and retirement satisfaction, although they did not control for any moderating relationships. Thus, the available evidence suggests that religious factors could be a valuable resource for coping with financial challenges such as indebtedness.

Differences in Religious Belief and Practice

Whereas many studies have explored relationships between religious factors and well-being, few have controlled for religious affiliation (Baker, 2008; Whittington & Scher, 2010). Yet many religions differ greatly in their worldview, and research suggests that it is important to control for these differences (Bonab et al., 2013; Clark & Lelkes, 2009; Ridenour, 2001; Van Praag et al., 2010). A challenge in this regard, however, is the vast number of different beliefs about the divine. Methodological practicality generally necessitates collapsing many different belief systems into just a few groups (such as seen in the HRS). It is impractical to summarize the core beliefs of the all world's various religions in a single paper. Considering that the current study sample is taken from the United States, and that research suggests over 70% of the U.S. population identifies themselves as Christian (Pew Research Center, 2015), we limit our discussion here to the core beliefs of Biblical Christianity as compared to other religious worldviews.

Biblical Christianity – a subset of Christian beliefs based strictly on the Bible – is distinguished from other worldviews by its assertion that no one can earn their way to heaven, and its emphasis on a personal relationship with God (Glaser, 1986; Ridenour, 2001). Christians believe that Jesus of Nazareth was the Messiah foretold by the Jewish prophets, and that a relationship with God is made possible only by Jesus' substitutionary death. Within the Christian paradigm, Jesus credited the sin of the world to his account and willingly suffered the punishment for sin, thereby satisfying God's requirement for justice,

and in exchange, transferred his own sinlessness to the world (Waterhouse, 2006). Thus, the fundamental teaching of Christianity is that God created a way for a rebellious people to be forgiven for their sins and enter into a relationship with their creator, being adopted as children of God – the only requirement to participate in this transaction is for one to believe Jesus' claim as truth. This contrasts with other belief systems where the individual is required to do something to appease God: perform good works, participate in rituals, or work toward a higher level of consciousness (Ridenour, 2001).

Despite the belief that forgiveness is not earned by one's works, however, Christians do expect their beliefs to influence behavior (Schaeffer, 2006; Waterhouse, 2006). This aspect of Christian belief mirrors the theory of planned behavior (Ajzen, 1991), wherein belief precedes intentions and behaviors. Consequently, Christians do engage in various practices, such as prayer, that resemble those of other religions, but there are key differences (Nabti, 1998). Concerning prayer, for example, Abshier (2013) characterized biblical Christian prayer as a believer's act of intimate communion with their Heavenly Father, which contrasts with more obligatory or ritualistic forms of prayer (Ridenour, 2001; Whittington & Scher, 2010). Given these differences in belief, it seems likely that religiosity and prayer have different effects for Christians than for non-Christians.

THEORETICAL FRAMEWORK

Attachment theory (Bowlby, 1969) has been used previously to explain associations between religious factors and well-being (Beck & McDonald, 2004; Kirkpatrick & Shaver, 1990; Miner, 2009). Attachment theory explains that children desire closeness with their primary caregiver for the protection they provide. In times of distress, the child seeks proximity to this attachment figure in order to increase their sense of security. Building on the work of others, Kirkpatrick and Shaver (1990) applied the theory to include one's relationship with God. When stressed, those who believe they have a relationship with God are able to cope by drawing upon that relationship. Thus, not only does a relationship with God directly confer meaning to the individual, but it also helps to buffer stress (Asebedo & Seay, 2014; Bonab et al., 2013; Dezutter et al., 2010). In a financial context, debt has a negative influence on life satisfaction, all else equal (Fitch et al., 2011); but this relationship may be moderated by the strength and frequency of one's engagement in a relationship with God (Park et al., 1990). However, this beneficial moderation likely varies according to one's belief about their relationship with God. Given Christianity's emphasis on a personal relationship with God, Christians may experience greater moderation from their religiosity and prayer frequency than non-Christians (Baker, 2008; Kirkpatrick & Shaver, 1990; Steensland et al., 2000; Whittington & Scher, 2010). Thus, the following hypotheses are tested:

H_1: Debt is negatively associated with life satisfaction.

H_2: Religious self-identification moderates the relationship between debt and life satisfaction.

H₃: Religious beliefs and practices moderate the relationship between debt and life satisfaction.

H₄: The degree to which religious beliefs and practices moderate the relationship between debt and life satisfaction is dependent on religious self-identification.

METHODS

Sample

This study utilized a sample of n = 3,174 respondents extracted from the 2012 wave of the Health and Retirement Study (HRS). The HRS is a complex, longitudinal panel study designed to be nationally representative of the U.S. population over the age of 50. We use the HRS and focus on older adults because research has shown that this population tends to be at higher risk for experiencing depression (Lue, Chen, & Wu, 2010). As such, financial stress may be particularly acute with older age, making it particularly important to understand how religious beliefs and practices may serve as a resource for coping with such stress (Moos, Brennan, Schutte, & Moos, 2006).

In an effort to make the HRS data more accessible to researchers, the RAND Center for the Study of Aging has created a user-friendly subset of HRS data. The HRS also administers the Leave-Behind Questionnaire, which is a survey left with select respondents after an in-person interview to be completed and returned by mail. The 2012 Leave-Behind Questionnaire was administered to only half of households participating in the HRS. The RAND file was combined with the 2012 Leave-Behind Questionnaire to create the data set for this study. The complex sampling design of the HRS requires the use of stratification, cluster, and weighting variables or else standard errors will be biased (Leacock, 2006). These sampling and weight variables are assigned a value of zero if the respondent does not meet the requirements to be included in the study (i.e., if the respondent is younger than 50 years old). As such, only respondents at least 50 years of age were included in the study sample.

Dependent Variable

The purpose of this study was to explore the influence of debt on life satisfaction, and the degree to which religious factors moderate this relationship. Accordingly, the dependent variable for this study was life satisfaction. Life satisfaction was measured ordinally by a single item from the Leave-Behind Questionnaire which asked respondents to rate the extent to which they felt satisfied with life as a whole on a scale from 1 (*completely satisfied*) to 5 (*not at all satisfied*). Responses were reverse coded so that higher scores indicated greater life satisfaction.

Independent Variables

Financial Resources. Previous studies have shown that the availability of financial resources influence life satisfaction. The HRS collects detailed information on the income, assets, and debt of participating households. Total household income was measured by a

single item from the RAND data file which aggregated several income items from the HRS Core interviews. The value of total household assets was measured as the sum of 11 asset categories; and the value of total household debt was measured as the sum of four debt categories. The value of household income, assets, and debt were log-transformed.

Religious Factors. The HRS asked respondents to identify their religious preference as Protestant, Catholic, Jewish, none/no preference, or other. Even though both Protestants and Catholics belong to the larger domain of Christians, we did not consolidate these respondents into a single category. Rather, we preserved the groups found in the HRS so that potential differences between Protestants and Catholics could be observed.

Theoretically, since Christians believe they have an intimate personal relationship with God, the strength and frequency of their engagement in that relationship may moderate the association between debt and life satisfaction. We use four items from the Leave-Behind Questionnaire, based on the work of the Fetzer Institute (2003), as a proxy for such relational engagement. Respondents were asked to rate their agreement with following four statements on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*):

- I believe in a God who watches over me.
- The events in my life unfold according to a divine or greater plan.
- I try hard to carry my religious beliefs over into all my other dealings in life.
- I find strength and comfort in my religion.

Some researchers have used these items to create an index of religiosity (Asebedo & Seay, 2014), but this may obscure the importance of each specific belief. We treated each item as a separate variable in order to explore which particular beliefs might be the most important for coping with financial stress.

An important element of human relationship formation is the belief that the other party reciprocates interest (Beck & Clark, 2010). The first item represents this belief: that God is a personal, relational being who takes an interest in the respondent. Similarly, the second item measures the degree to which one views God as actually being involved in their life. The is an important item because the belief that God takes a personal interest in His creation differs greatly from the belief that God created the universe but does not desire a relationship with people and now remains aloof (Ridenour, 2001; Waterhouse, 2006). Research has also shown that various types of behavior can influence relationship quality and persistence (Birditt, Brown, Orbuch, & McIlvane, 2010). This is also an important concept within Biblical Christianity: Luke records Jesus as asking a crowd of people, "Why do you call me 'Lord, Lord,' and do not do what I say?" (Luke 6:46, Holman Christian Standard Bible). Thus, dependent on one's belief regarding the Divine, the degree to which one strives to live according to their religious beliefs may provide some indication of the quality and health of their relationship with God (Ajzen, 1991; Nabti, 1998; Schaeffer, 2006; Waterhouse, 2006). The fourth item provides a more direct assessment of the quality and health of the respondent's relationship with God, again dependent on their beliefs about the nature of the Divine.

Lastly, prayer frequency was measured by a single item which asked respondents to rate on a scale 1 (*daily*) to 7 (*never/not relevant*) how often they prayed privately in places other than a church or synagogue. Prayer frequency is used as a proxy for engagement with God – more frequent prayer outside of formal services represents a higher level of relational engagement. In order to facilitate interpretation of the interaction between prayer frequency and the log of household debt, responses to this item were first reverse coded, and then rescaled to create an index of prayer frequency from 0 (*low frequency*) to 6 (*high frequency*).

Psychological Factors. Previous research has demonstrated that it is important to control for various psychological factors when modeling life satisfaction. Following the methods of Asebedo and Seay (2014), two dichotomous variables were included in order to proxy for psychological engagement: (a) whether or not the respondent worked on a hobby each day, and (b) whether or not the respondent read the newspaper each day. Additionally, two variables were included to control for social support received from family and friends. Family support was measured by three-items related to familial social support (e.g., "how much do they really understand the way you feel about things"). Respondents were asked to rate how much support they received in these three areas on a scale from 1 *(a lot)* to 4 (*not at all*). Responses were reverse coded and then averaged to create an index of familial social support ranging from 1 to 4, with higher scores indicating more support (α = .86). Social support from friends was measured following the same procedure using the appropriate three items dealing with social support from friends (α = .84).

Asebedo and Seay (2014) also showed that perceived mastery, dispositional optimism, and having a sense of purpose are positively associated with life satisfaction. Mastery was measured by five items which asked respondents to rate their agreement with the five statements related to personal achievement on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*). Responses to these items were average to create a scale from 1 to 6, with higher responses indicating greater levels of perceived mastery (α = .90). Optimism was measured by three items included in the Leave-Behind Questionnaire related to their expectations for the future (e.g., "I'm always optimistic about my future"). Respondents were asked to rate their agreement with each statement on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*). Responses to each item were averaged to create a scale ranging from 1 to 6, with higher responses indicating greater levels of optimism (α = .80). Sense of purpose was measured by seven items, which asked respondents to rate their agreement with seven statements related to sense of purpose and drive in life on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*). Responses for items reverse-coded as necessary and then averaged to create a scale measuring one's sense of purpose, ranging from 1 to 6, with higher scores indicating a stronger sense of purpose (α = .77).

Control Variables. Research has demonstrated that it is important to control for various socioeconomic factors (i.e., age, sex, race, marital status, homeownership, employment status, and educational attainment) and physical health when modeling life satisfaction. Age was measured by a single item which calculated years of age by subtracting the respondent's birth date from the beginning interview date and dividing the resultant number of months by 12. The square of respondent age was also included in the statistical

models in order to control for nonlinear effects. Sex was measured by a single dichotomous item which asked respondents to identify their sex as either male or female. Race was measured by a single item which asked respondents to identify their race as either white, black, or other. The marital status item from the RAND data file was used to categorize respondents as either married, cohabitating, or single (including divorced and widowed respondents).

Homeownership was measured by a single dichotomous item which asked respondent to indicate whether they owned their home or had some other arrangement. Employment status was measured by a single dichotomous item which asked respondents to indicate whether or not they were working for pay. Educational attainment was measured by a single categorical item indicating respondents' highest level of education completed: less than a high school education, high school education (including completion of a general equivalency diploma), some college, or an earned college degree. Health status was measured by a single item which asked respondents to rate their health on a scale from 1 (*excellent*) to 5 (*poor*). Responses were reverse coded so that higher scores indicated a high level of self-reported health.

Sample Characteristics

Descriptive statistics for the study sample using the cluster, strata, and weight variables from the HRS are shown in Table 1. The average age was 67.22 years (*SE* = 0.27), and approximately 26% of the respondents were male. A majority of respondents where white (86%), single (49%), and owned their home (73%). Over half of all respondents reported completing at least some college education (56%). The average respondent reported household income of $81,043 (*SE* = $3,817.99), household assets of $583,680 (*SE* = $32,997.00), and household debt of $56,800 (*SE* = $4,333.61). A majority of respondents identified themselves as being Christian (85%), with a 59% identifying as Protestant and 26% identifying as Catholic. On average, respondents slightly agreed with the statement that they believe in a God who watches over them (*M* = 4.21, *SE* = 0.04). Responses to other religious belief statements suggest that, on average, respondents neither agreed nor disagreed that their life follows a divine plan (*M* = 3.67, *SE* = 0.05), that they try to live life according to their religious beliefs (*M* = 3.73, *SE* = 0.05) or that they find strength in their religion (*M* = 3.92, *SE* = 0.05). Respondents also reported praying in private about once per week (*M* = 4.04, *SE* = 0.05) on average. Weighted descriptive statics by self-reported religious preference are reported in Table 2.

Table 1

Weighted Sample Characteristics (*n* = 3,174)

	M	*SE*
Life satisfaction	3.65	0.03
Age	67.22	0.27
Male	0.26	0.01
Race		
White	0.86	0.01
Black	0.09	0.01
Other	0.05	0.01
Marital status		
Married	0.48	0.01
Cohabitating	0.03	0.00
Single	0.49	0.01
Educational attainment		
Less than high school	0.11	0.01
High school graduate	0.33	0.01
Some college	0.28	0.01
College graduate	0.29	0.01
Health status	3.23	0.02
Work on hobby each day	0.08	0.01
Read newspaper each day	0.61	0.01
Family relationship quality	2.93	0.02
Friend relationship quality	3.16	0.02
Sense of accomplishment	4.81	0.02
Positive outlook	4.48	0.02
Sense of purpose	4.66	0.02
Own home	0.73	0.01
Working	0.40	0.01
Household income	81,043.00	3,817.99
Household assets	583,680.00	32,997.00
Household debt	56,800.00	4,333.61
Religious identification		
Protestant	0.59	0.01
Catholic	0.26	0.01
Jewish	0.02	0.00
Other	0.02	0.00
None	0.10	0.01
Religious beliefs		
Belief in God	4.21	0.04
Life follows divine plan	3.67	0.05
Live by beliefs	3.73	0.05
Find strength in religion	3.92	0.05
Prayer frequency	4.04	0.05

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Table 2

Descriptive Statistics by Respondent Religious Self-Identification

	Religious Self-Identification				
	Protestant	Catholic	Jewish	Other	None
Life satisfaction	3.64	3.72	3.85	3.54	3.59
Age	67.86	67.41	67.85	62.04	63.94
Male	0.24	0.23	0.35	0.35	0.41
Race					
White	0.84	0.91	0.99	0.64	0.88
Black	0.12	0.02	0.01	0.13	0.07
Other	0.04	0.07	0.00	0.24	0.04
Marital status					
Married	0.48	0.48	0.49	0.52	0.46
Cohabitating	0.03	0.02	0.03	0.02	0.04
Single	0.49	0.50	0.47	0.46	0.50
Educational attainment					
Less than high school	0.11	0.12	0.03	0.11	0.11
High school graduate	0.36	0.35	0.08	0.20	0.21
Some college	0.28	0.25	0.17	0.35	0.33
College graduate	0.26	0.28	0.72	0.34	0.36
Health status	3.19	3.27	3.67	3.34	3.30
Work on hobby each day	0.07	0.08	0.14	0.08	0.10
Read newspaper each day	0.62	0.60	0.79	0.61	0.55
Family relationship quality	2.93	3.04	2.73	2.68	2.74
Friend relationship quality	3.14	3.17	3.32	3.32	3.20
Sense of accomplishment	4.76	4.88	4.91	4.88	4.91
Positive outlook	4.48	4.46	4.79	4.47	4.46
Sense of purpose	4.64	4.69	4.85	4.72	4.67
Own home	0.72	0.74	0.74	0.67	0.76
Working	0.38	0.36	0.56	0.48	0.52
Household income	75,471.00	81,321.00	180,597.00	112,195.00	84,491.00
Household assets	499,756.00	668,094.00	2,095,907.00	420,672.00	573,957.00
Household debt	48,739.00	59,894.00	172,437.00	83,288.00	65,038.00
Religious beliefs					
Belief in God	4.44	4.53	2.20	2.96	2.75
Life follows divine plan	3.96	3.82	1.67	2.57	2.23
Live by beliefs	4.00	3.89	2.09	3.37	2.21
Find strength in religion	4.18	4.15	2.69	3.31	2.20
Prayer frequency	4.35	4.28	1.79	3.62	2.13

Analytical Methods

The dependent variable, life satisfaction, was measured by ordinal categories with non-equidistant intervals between categories. The appropriate analytical method for modeling such variables is cumulative logistic regression (Asebedo & Seay; 2014; Garrett & James, 2013) which was used to model the life satisfaction S of respondent i as a function of the log of household debt D, religious identification γ, religious beliefs ζ, prayer frequency η, and a vector of other factors $\boldsymbol{X}$ as shown in Equation 1. The term α represents the intercept and ε represents estimation error.

$$S_i = \alpha + \beta_1 D_i + \beta_2 \gamma_i + \boldsymbol{\zeta}_i \beta + \beta_3 \eta_i \, \boldsymbol{X}_i \beta + \varepsilon \tag{1}$$

Where $\boldsymbol{X}$ = (*log of household income, log of household assets, family support, friend support, perceived mastery, optimistic disposition, sense of purpose, age, age squared, sex, race, marital status, homeownership, employment status, educational attainment, health status*)

We then tested for moderating effects from religious identification by including interaction terms between religious identification and the log of household debt, as shown in Equation 2.

$$S_i = \alpha + \beta_4 D_i + \beta_5 \gamma_i + \boldsymbol{\zeta}_i \beta + \beta_6 \eta_i + \beta_7 (D_i \times \gamma_i) + \boldsymbol{X}_i \beta + \varepsilon \tag{2}$$

We next tested for moderating effects from religious beliefs by including interaction terms between the belief statements, prayer frequency, and the log of household debt, as shown in Equation 3.

$$S_i = \alpha + \beta_8 D_i + \beta_9 \gamma_i + \boldsymbol{\zeta}_i \beta + \beta_{10} \eta_i + (D_i \times \boldsymbol{\zeta}_i)\beta + \beta_{11}(D_i \times \eta_i) + \boldsymbol{X}_i \beta + \varepsilon \tag{3}$$

Finally, we tested for moderating effects of religious belief dependent on religious identification by including multiple interactions: the interaction of religious identification with religious belief, prayer frequency, and the log of household debt, as shown in Equation 4.

$$S_i = \alpha + \beta_{12} D_i + \beta_{13} \gamma_i + \boldsymbol{\zeta}_i \beta + \beta_{14} \eta_i + (\gamma_i \times D_i \times \boldsymbol{\zeta}_i)\beta + \beta_{15}(\gamma_i \times D_i \times \eta_i) + \boldsymbol{X}_i \beta + \varepsilon \tag{4}$$

In all analyses, the lowest level of life satisfaction was the reference group and the Taylor series method was used to incorporate sampling and weight variables (Leacock, 2006; Nielsen & Seay, 2014). The respondent-level weight was used in the present analyses.

RESULTS

Cumulative logistic regression results testing Equations 1 through 3 are shown in Table 3. Consistent with theoretical predictions and prior findings, the log of household debt was negatively associated with life satisfaction. The only religious factor which had a statistically significant association with life satisfaction was the belief that life follows a

divine plan. Religious self-identification had no influence on life satisfaction. Consistent with prior studies (Asebedo & Seay, 2014), the quality of family relationships, having a sense of accomplishment, a positive outlook, and a sense of purpose were all positively associated with life satisfaction.

The interaction terms for religious self-identification and debt were not statistically significant, suggesting that the association between debt and life satisfaction is not dependent on religious identification. The interaction between belief in God and debt was statistically significant and negative. Interaction terms must be interpreted carefully in this model. Consider the simplified equation shown in Equation 5.

$$Satisfaction = \alpha + \beta_1 Debt + \beta_2 Belief + \beta_3(Debt \text{ x } Belief) + \varepsilon \tag{5}$$

The coefficient on the interaction term β_3 is interpreted as the influence of one factor on satisfaction with respect to the other factor. This is made most apparent by taking the partial derivative of Equation 5, as shown below in Equation 6.

$$\partial Satisfaction/\partial Debt = \beta_1 + \beta_3(Belief) \tag{6}$$

Equation 6 simply states that the effect of debt on satisfaction is dependent on the strength of one's belief in God. In the present analysis, the direct effect of debt on life satisfaction, corresponding to β_1 in Equation 6, was statistically no different than zero (β_3 = -0.04, $p<.05$). Thus, these results suggest that the influence of debt on life satisfaction is dependent on one's belief in God. For a given level of debt, stronger belief in God is associated with a lower level of life satisfaction.

The purpose of the next analysis was to determine if the moderating effects of religious beliefs were dependent on religious self-identification. This analysis corresponds to testing Equation 4 and the result of cumulative logit regression results are shown in Table 4. Again, interaction terms must be interpreted carefully in this model. Consider the simplified model in Equation 7 and its partial derivative in Equation 8.

$$Satisfaction = \alpha + \beta_1 Debt + \beta_2 Belief + \beta_3 Jewish + \beta_4(Debt \text{ x } Jewish \text{ x } Belief) + \varepsilon \tag{7}$$

$$\partial Satisfaction/\partial Debt = \beta_1 + \beta_4(Jewish \text{ x } Belief) \tag{8}$$

Equation 8 simply states that the effect of debt on satisfaction is dependent on the interaction of one's self-identification as being Jewish and the strength of their belief in God. The religious self-identification variables are dichotomous. In this example, if the individual self-identified as Jewish then the variable *Jewish* is assigned a value of 1, and assigned a value of 0 otherwise. In the present analysis, the direct effect of debt on life satisfaction, corresponding to β_1 in Equation 8 is statistically no different than zero, and β_4 = -0.06, $p<.10$. These results suggest that the influence of debt on life satisfaction is dependent on one's belief in God, but only for respondents who identify as Jewish. Specifically, belief in God appears to moderate the relationship between debt and life satisfaction for Jewish

respondents, but in a way where stronger belief in God is actually associated with lower life satisfaction.

Results of this analysis also suggested that belief that one's life follows a divine plan moderated the relationship between debt and life satisfaction, but only for those who identified as Catholic or Jewish. These interaction terms were positive, suggesting that for a given level of debt, stronger belief that one's life unfolds according to divine intervention was associated with greater life satisfaction. The interaction between one's finding strength in their religion and debt was positive and statistically significant only for those who identified with a religion other than Protestantism, Catholicism, or Judaism.

Table 3

OLS Regression Results Predicting Life Satisfaction by Religious Identification and Beliefs

Variable	b	SE	b	SE	b	SE
Age	0.04	0.06	0.04	0.06	0.04	0.06
Age^2	0.00	0.00	0.00	0.00	0.00	0.00
Male	-0.02	0.09	-0.01	0.08	-0.03	0.09
Race vs. white						
Black	-0.38**	0.13	-0.38**	0.13	-0.39**	0.13
Other	-0.13	0.21	-0.12	0.21	-0.13	0.21
Marital status vs. married						
Cohabitating	-0.21	0.20	-0.22	0.20	-0.18	0.21
Single	-0.57***	0.10	-0.56***	0.10	-0.57***	0.10
Education vs. less than high school						
High school	0.08	0.14	0.09	0.14	0.10	0.14
Some college	0.00	0.18	0.00	0.19	0.01	0.18
College graduate	-0.08	0.16	-0.08	0.16	-0.07	0.16
Health status	0.60***	0.06	0.60***	0.06	0.61***	0.06
Work on hobby each day	-0.20	0.18	-0.19	0.17	-0.21	0.18
Read newspaper each day	0.01	0.11	0.01	0.11	0.01	0.11
Family relationship quality	0.22***	0.05	0.22***	0.05	0.21***	0.05
Friend relationship quality	0.06	0.07	0.06	0.07	0.06	0.07
Sense of accomplishment	0.38***	0.06	0.38***	0.06	0.39***	0.06
Positive outlook	0.31***	0.05	0.30***	0.05	0.30***	0.05
Sense of purpose	0.61***	0.07	0.62***	0.07	0.61***	0.07
Home owner	0.15	0.10	0.15	0.10	0.15	0.10
Working	-0.19	0.12	-0.19	0.12	-0.18	0.12
Ln income	0.07*	0.03	0.07*	0.03	0.07*	0.03
Ln assets	0.03†	0.02	0.03†	0.02	0.03	0.02
Ln debt	-0.04***	0.01	-0.04	0.03	-0.01	0.02

Debt, Religious Beliefs, and Life Satisfaction

Religious identification vs. none						
Protestant	-0.01	0.15	0.02	0.24	-0.02	0.16
Catholic	0.08	0.18	0.09	0.26	0.06	0.18
Jewish	0.17	0.29	-0.44	0.47	0.17	0.28
Other	-0.14	0.30	-0.38	0.43	-0.15	0.27
Religious beliefs						
Existence of God	-0.10	0.07	-0.09	0.07	0.14	0.13
Life follows divine plan	0.14*	0.06	0.14*	0.06	0.07	0.09
Live by religious beliefs	0.04	0.05	0.03	0.05	0.06	0.07
Find strength in religion	0.00	0.06	0.00	0.06	-0.12	0.10
Prayer frequency	-0.03	0.02	-0.03	0.02	-0.06†	0.03
Interactions						
Protestant x debt			0.00	0.03		
Catholic x debt			0.00	0.03		
Jewish x debt			0.09	0.05		
Other x debt			0.04	0.05		
Belief in God x debt					-0.04**	0.01
Life follows divine plan x debt					0.01	0.01
Live by religious beliefs x debt					0.00	0.01
Find strength in religion x debt					0.02	0.01
Prayer frequency x debt					0.00	0.00
Concordance ratio	0.78		0.78		0.78	

†*p*<.10, **p*<.05, ***p*<.01, ****p*<.001

Table 4

Cumulative Logistic Regression Results Predicting Life Satisfaction, with Multiple Interactions

Variable	b	SE
Age	0.05	0.06
Age^2	0.00	0.00
Male	-0.02	0.09
Race vs. white		
Black	-0.39**	0.14
Other	-0.13	0.21
Marital status vs. married		
Cohabitating	-0.16	0.22
Single	-0.56***	0.10
Education vs. less than high school		
High school	0.10	0.14
Some college	0.03	0.18
College graduate	-0.06	0.16
Health status	0.60***	0.06
Work on hobby each day	-0.17	0.18
Read newspaper each day	0.00	0.11
Family relationship quality	0.22***	0.05
Friend relationship quality	0.06	0.07
Sense of accomplishment	0.38***	0.06
Positive outlook	0.30***	0.05
Sense of purpose	0.61***	0.07
Home owner	0.15	0.10
Working	-0.17	0.12
Ln income	0.07*	0.03
Ln assets	0.03	0.02
Ln debt	-0.04†	0.02
Religious identification vs. none		
Protestant	0.04	0.18
Catholic	0.11	0.20
Jewish	-0.27	0.48
Other	-0.27	0.44
Religious beliefs		
Belief in God	0.06	0.11
Life follows divine plan	0.08	0.09
Live by religious beliefs	0.03	0.06
Find strength in religion	-0.08	0.10

Prayer frequency	-0.05†	0.03
Interactions		
Protestant x belief in God x debt	-0.03	0.02
Catholic x belief in God x debt	-0.02	0.02
Jewish x belief in God x debt	-0.06†	0.03
Other x belief in God x debt	-0.04	0.02
Protestant x divine plan x debt	0.01	0.01
Catholic x divine plan x debt	0.02†	0.01
Jewish x divine plan x debt	0.06†	0.03
Other x divine plan x debt	0.03	0.03
Protestant x live beliefs x debt	0.00	0.01
Catholic x live beliefs x debt	0.00	0.02
Jewish x live beliefs x debt	0.01	0.05
Other x live beliefs x debt	-0.03	0.03
Protestant x strength x debt	0.02	0.02
Catholic x strength x debt	-0.01	0.02
Jewish x strength x debt	0.02	0.04
Other x strength x debt	0.08†	0.05
Protestant x prayer x debt	0.00	0.00
Catholic x prayer x debt	0.00	0.00
Jewish x prayer x debt	0.00	0.02
Other x prayer x debt	-0.02	0.03
Concordance ratio	0.78	

†$p<.10$, *$p<.05$, **$p<.01$, ***$p<.001$

DISCUSSION

U.S. households carry a sizeable debt burden, contributing to feelings of financial stress and anxiety (Federal Reserve Bank of New York, 2018; ORC International, 2015). Since it can take a considerable amount of time to pay-off debt, clients need non-financial resources for coping with indebtedness while making progress toward their financial goals. Some have suggested that religious beliefs and one's relationship with God may serve as such a non-financial resource for coping with debt (Sipon et al., 2014; Smith et al., 2003). Yet there is generally little research in this area. This is not a great surprise when considering that, at least in the United States, the topics of religion and money are often considered taboo for polite conversation – how much more to discuss the two together. However, a sizeable proportion of the U.S. population identifies with some religious tradition, which suggests that religious beliefs are an important aspect of life for many clients (Pew Research Center, 2015; Sussman & Dubofsky, 2009). Thus, we braved the taboo in order to better understand how these factors might enable clients to cope with their financial situation.

The few studies of financial wellbeing that have included religious variables have done so in an over-generalized fashion. For example, Asebedo and Seay (2014) created an index of general religiosity, but failed to account for the varied content and subject of those beliefs by controlling for religious self-identification. Followers of Jesus, Judaism, and Islam may all express a strong belief in God, but their concept of who God is and what God is like are quite different (Ridenour, 2001; Whittington & Scher, 2010). As such, it stands to reason that if religious variables are to be included in models of retirement or life satisfaction, then these differences and complex relationships should be captured to the fullest extent possible (Bonab et al., 2013; Clark & Lelkes, 2009; Van Praag et al., 2010). Such was the main purpose of the present study.

Assets, Debt, and Financial Stress

The present results are generally consistent with the hypotheses implied by the theoretical framework. Consistent with previous studies, debt generally appears to have a negative association with life satisfaction (Archuleta et al., 2013; Garrett & James, 2013). Our results provide a more nuanced explanation for other findings regarding observed relationships between net worth and life satisfaction (Asebedo & Seay; 2014). Debt seems to have more of a negative influence on satisfaction than assets have a positive influence. To the extent that individuals view assets in terms of future economic gains and debt as future economic losses (Ammerman & MacDonald, 2018), it makes sense that carrying debt would feel more painful than carrying an equal amount of assets would feel pleasurable (Kahneman &Tversky, 1979). The implication for research and practice is that it may be more informative and beneficial to assess client financial position by viewing assets and debt separately rather than aggregating the two into net worth.

Religious Factors and Stress Buffering

The present results also suggest that some religious beliefs moderate the influence of debt on life satisfaction, and that the degree of moderation is itself dependent on religious self-identification. This is not surprising considering that prior research has shown that various attitudes and beliefs impact financial behavior (Angulo-Ruiz & Pergelova, 2015; Xiao, 2008). In the present case, religious beliefs provide some insight for how one's general worldview influences their relationship with debt and wellbeing. More directly, the present findings provide a counterpoint to aggregating religious beliefs into a single index without controlling for religious identification or interactions (e.g., Asebedo & Seay, 2014). Interestingly, belief in God appeared to moderate the relationship between debt and life satisfaction, but only for those who identified as Jewish. This is contrary to our expectation that belief in God functions as a resource for coping with debt. Why is it, then, that stronger belief in God for those of the Jewish faith is associated with less life satisfaction, given some level of debt? A possible answer may be found in the Jewish scriptures. In the book of Deuteronomy, borrowing is associated with curses for disobedience to God: "But if you do not obey the Lord your God to observe faithfully all His commandments and laws which I enjoin upon you this day, all these curses shall come upon you and take effect...the stranger in your midst shall rise above you higher and higher, while you sink lower and lower: he shall be your creditor, but you shall not be his" (Deuteronomy 28:15-44, Jewish Publication

Society). It may be that those who follow the Jewish faith and have a strong belief in God consequently view their debt as something of a curse and accordingly experience lower life satisfaction.

The book of Deuteronomy is also included in the Christian scriptures, so why is it that this relationship did not seem to hold for those who identified as Protestant or Catholic? In this case, it is necessary to turn to the New Testament scriptures. In one section, the scriptures report that "As He [Jesus] was passing by, He saw a man blind from birth. His disciples questioned Him: 'Rabbi, who sinned, this man or his parents that he was born blind'" (John 9:1-2, Holman Christian Standard Bible)? It seems that Jesus' disciples associated negative events or circumstances in one's life with disobedience to God (Blum, 1984). The scriptures continue, "'Neither this man nor his parents sinned,' Jesus answered. 'This came about so that God's works might be displayed in him'" (John 9:3, Holman Christian Standard Bible). In another section of the scriptures, Jesus is approached by a group of people who seem to have a similar question regarding the murder of some Jewish Galileans.

> "At that time, some people came and reported to Him about the Galileans whose blood Pilate had mixed with their sacrifices. And He [Jesus] responded to them, 'Do you think that these Galileans were more sinful than all Galileans because they suffered these things? No, I tell you; but unless you repent, you will all perish as well! Or those 18 that the tower in Siloam fell on and killed — do you think they were more sinful than all the people who live in Jerusalem? No, I tell you; but unless you repent, you will all perish as well'" (Luke 13:1-5, Holman Christian Standard Bible).

Jesus seems to be saying that while God may intervene in human affairs to judge the nations, as stated in the book of Deuteronomy and recorded in the Old Testament scriptures, not all bad things in life can be attributed to divine judgment (Blum, 1984; Martin, 1984). More importantly for those of the Christian faith, Jesus seems to be admonishing his followers to repent of their sins and follow God in loving faith lest they suffer eternal condemnation and *spiritual* death (Martin, 1984; Waterhouse, 2006). As such, it stands to reason that Christians may not view negative circumstances, including indebtedness, as a divine judgment. Considered together, these findings illustrate why it is important to control for religious self-identification when including religious variables in econometric models (Bonab et al., 2013; Clark & Lelkes, 2009; Van Praag et al., 2010).

The relationship between debt and life satisfaction appeared to be moderated by the belief that life unfolds according to a divine plan, but only for those who identified as Catholic or Jewish. The positive coefficients on these interaction terms in Table 4 suggests that, for a given level of debt, stronger belief in this regard was associated with higher levels of life satisfaction. This suggests that, for those of the Catholic and Jewish faith, the belief in divine intervention may serve as a resource for coping with debt. It is particularly interesting that this relationship is statistically significant for followers of Judaism, given the negative associations with belief in God as discussed above. This leads to an important implication for faith-based providers of financial counseling who serve the Jewish community (e.g., the Jewish United Fund): while those of the Jewish faith with a strong belief in God and who find themselves in debt may experience lower life satisfaction, reminders of God's love and

sovereignty may help them cope with their financial situation. To the extent, the following verses are instructive: "…You, being a forgiving God, gracious and compassionate, long-suffering and abounding in faithfulness, did not abandon them [the Hebrews who did not obey God after the Exodus]" (Nehemiah 9:17, Jewish Publication Society). "Your eyes saw my unformed limbs; they were all recorded in your book; in due time they were formed, to the very last one of them" (Psalm 139:16, Jewish Publication Society).

Other Important Factors

Despite these interesting findings, it should be noted that the factors with the most significant influence on life satisfaction were having a sense of accomplishment, a positive outlook, and a sense of purpose were all positively associated with life satisfaction. After reviewing these results, we were curious about possible correlations between religious factors and one's sense of purpose, accomplishment, and positive outlook. We completed post hoc correlation analyses, the results of which are reported in Table 5. Religious self-identification generally had low or no correlation with these psychological factors. Correlations between specific religious beliefs and these psychological factors were positive and statistically significant, though somewhat low in magnitude. This raises some questions regarding the extent to which one's sense of purpose is derived from their religion. We did not explore this question further, however, determining that it was outside the scope of the present study.

It should also be noted that racial identification as Black was consistently associated with lower life satisfaction. The relatively large and negative coefficient on this categorical variable is concerning and may speak to larger societal issues. Certainly, further research is needed to better understand the nature of racial and ethnic differences and how they relate to life satisfaction in a financial context. Additionally, being single was also consistently associated with lower levels of life satisfaction. Given the importance of family relationships, this result is not surprising. While the focus on the present study was on one's relationship with God as a resource for coping with stress, these results suggest that relationships with other humans might be more significant.

Limitations

There are, of course, limitations with this study. It must be noted that the religious identification categories used in the HRS, and therefore in this study, are imperfect. There is great variety among the world's religions and paradigms concerning the existence of God, the nature of God, and how God relates to the physical world (Ridenour, 2001). Even within broad categories there can be great diversity in belief (Baker, 2008; Hackett & Lindsay, 2008; MacGeorge et al., 2010; Steensland et al., 2000). For example, Protestantism includes a variety of views on divine determinism (McCall, 2008), ranging from those who believe that God necessarily determines all events and actions of life, to those who believe that God in His sovereignty has allowed humans to make choices, including the choice to not believe and obey Him (Waterhouse, 2006). Further, the religious identification category of "other" may include respondents from many diverse beliefs and perspectives (e.g., Muslims and Hindus). Second, religious self-identification does not necessarily mean a respondent knows or

ascribes to the core beliefs of that religious system. Some may identify with a particular tradition for cultural rather than spiritual reasons (Mancini, 2008). For example, it is possible that someone may identify as Jewish because they are ethnically Jewish, not because they have strong belief in God or the writings of Moses. By including items related to both religious self-identification and specific beliefs we sought to somewhat disentangle the confluence of culture and belief. As discussed, however, there is relatively little research in this area and so more study is needed (e.g., Fetzer Institute, 2003), especially to understand how religious beliefs and worldview influence financial behavior.

It must also be stated that the findings from this cross-sectional study imply only correlation and not causation. As such, we cannot say that belief in God causes lower levels of life satisfaction for those of the Jewish faith. We can only say that there is an association. An area for future research in this regard include using longitudinal data to explore how changes in religious belief are related to changes in life satisfaction over time.

Implications for Practice

Despite these limitations, the present study offers some useful insights and implications for practitioners. This study provides additional empirical evidence to support the view that religious belief may be important for many clients (Asebedo & Seay, 2014; Pargament, 2011; Sussman & Dubofsky, 2009; Van Praag et al., 2010). It seems likely, given the present findings, that one's religious worldview plays at least a small role in how they relate to money. Further, the present findings suggest that some religious beliefs may be a resource for coping with indebtedness, particularly for clients from a particular religious background. Certainly, professional ethics forbid one from using their position to proselytize clients (Weld & Eriksen, 2007). However, it may be appropriate for financial counselors and family therapists to include a few items relative to clients' religious or spiritual beliefs, especially as they concern money, on client intake forms. The items listed in the present study may be a good starting point for practitioners interested in gathering such data. This information could help practitioners better understand clients' fundamental beliefs and worldview from the outset of an engagement, thereby informing the counseling and therapeutic process. As noted, practitioners may be able to help clients use their religious beliefs and spirituality as a resource for coping with financial stress. Additionally, informed practitioners may be able to help clients identify and develop healthy financial habits that are consistent with, and reinforced by, their religious beliefs. Along these lines, the present implications may be strongest for faith-based providers of financial counseling (e.g., the Jewish United Fund and Kingdom Advisors). To the extent that clientele seek services from faith-based providers specifically because the organization's stated religious beliefs align with their own, the discussion of such beliefs could be ethical, beneficial, and expected by clients.

Table 5

Correlations Between Psychological Variables and Religious Variables

	1	2	3	4	5	6	7	8	9	10	11	12
1. Sense of accomplishment												
2. Positive outlook	0.37***											
3. Sense of purpose	0.40***	0.38***										
4. Protestant	-0.05**	0.02	0.00									
5. Catholic	0.04*	-0.01	0.00	-0.74***								
6. Jewish	-0.01	0.01	0.00	-0.16***	-0.07***							
7. Other	0.00	0.00	0.00	-0.19***	-0.09***	-0.02						
8. No religious preference	0.03	-0.01	0.00	-0.40***	-0.18***	-0.04*	-0.05**					
9. Belief in God	0.07***	0.10***	0.07***	0.16***	0.08†	-0.18***	-0.07***	-0.29***				
10. Life follows divine plan	0.07***	0.12***	0.07***	0.19***	0.03†	-0.17***	-0.07***	-0.26***	0.77***			
11. Live by beliefs	0.07***	0.16***	0.11***	0.19***	0.02	-0.15***	-0.03†	-0.28***	0.70***	0.72***		
12. Find strength in religion	0.07***	0.14***	0.12***	0.19***	0.05**	-0.13***	-0.04*	-0.33***	0.79***	0.74***	0.83***	
13. Prayer frequency	0.01	0.08***	0.11***	0.16***	0.03*	-0.14***	-0.02	-0.25***	0.39***	0.39***	0.45***	0.47***

†*p*<.10, **p*<.05, **p<.01, ***p<.001

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