



The Role of Secured and Unsecured Debt in Retirement Planning

Zibei Chen¹ · Karen A. Zurlo²

Accepted: 8 February 2022 / Published online: 26 February 2022

© The Author(s), under exclusive licence to Springer Science+Business Media, LLC, part of Springer Nature 2022

Abstract

Nearly 40 percent of Americans approaching retirement felt heavily indebted. Understanding the role of secured and unsecured debt in retirement planning becomes an urgent concern for researchers and policymakers alike. Using data from the 2015 National Financial Capability Study (NFCS), the current study identified secured debt (mortgage and auto loan) and unsecured debt (medical debt and credit card debt) among a national sample of pre-retirees aged 51–61 years. Logit regression models were estimated to examine and compare each debt's relationship retirement planning among pre-retirees. We found a relatively large portion of the pre-retiree sample approached retirement in debt, and having debt was negatively associated with retirement planning. We also found that secured debt does not seem to facilitate retirement planning, and unsecured debt had a strong negative association with retirement planning. Our findings highlight differential impact that debt from different sources can have on retirement security, calling for closer examination on the role of debt in retirement security across income groups and those without retirement plans. Findings of this study yield policy implications on access to retirement accounts and financial education provision towards financial health and solvency of older Americans.

Keywords Retirement security · Unsecured debt · Secured debt · Pre-retirees

Introduction

Americans are living longer and are projected to spend more years in retirement than any prior generation. Living more years in retirement requires early retirement planning to ensure sufficient disposable income and financial resources during retirement years. Given that American workers accumulate most of their retirement savings through employment (Pew Charitable Trusts, 2016), being employed with access to a retirement plan is critical to economic security in old age. As reported by the U.S. Bureau of Labor Statistics (2020), almost a third of American workers do not

have access to a retirement benefit plan as of March, 2020. Among 71 percent of civilian workers with access to a plan, 22 percent are not participating in a retirement plan (U.S. Bureau of Labor Statistics, 2020).

Not only is the lack of participation in a retirement savings worrisome, the amount of savings in existing retirement accounts is concerningly low. Studies have shown that the median retirement account balance was only \$3000 for all working-age households, and \$12,000 for near-retirement households (e.g., Rhee, 2013). Approximately 40 percent of households headed by someone aged 55–64 do not hold any assets in retirement savings (Rhee, 2013). In addition to low savings amounts, many adults have little emergency savings. Despard et al. (2020) indicated that U.S. households have insufficient savings to cope with income losses, expenditure shocks, and other financial emergencies. Lacking emergency savings often leads to retirement account withdrawal that undermines retirement savings and security.

The alarming landscape of retirement savings should be examined in the context of policy shifts in the 1970s. Since the early 1970s, legislation and policies have shifted responsibility for retirement planning from the corporation to the individual. Defined benefit plans were a form of support granted to union members decades ago. As unions

This is one of several papers published together in Journal of Family and Economic Issues on the “Special Issue on Financial capability and asset building for family financial wellbeing”.

✉ Zibei Chen
Zibei.Chen@usm.edu
Karen A. Zurlo
kzurlo@ssw.rutgers.edu

¹ School of Social Work, University of Southern Mississippi, 118 College Drive #5114, Hattiesburg, MS 39406, USA

² School of Social Work, Rutgers, The State University of New Jersey, New Brunswick, NJ, USA

become less prominent, corporations shifted how they provided a retirement benefit to an employee. The passing of the Employee Retirement Income Security Act of 1973 and the Pension Protection Act of 2006 steadily shifted retirement planning to the individual. Since then, the United States Department of Labor has reported a steady increase in the number of defined contribution plans and in the number of participants in these plans. Conversely, the number of plans and participants in defined benefit plans decreased linearly.

Paralleled with the responsibility shift is the upward trend in financial debt held by older adults. Research has shown that the amount of financial debt held by older adults has grown substantially over the past two decades (Brown et al., 2019; Haurin et al., 2019). Among those ages 50–64, the average (and median) total debt sharply increased from \$80,000 in 1992 to \$120,000 in 2016 with a peak of \$140,000 in 2010 (Ebrahimi, 2020). For those who are in an early retirement stage, the proportion of households holding any debt and headed by individuals aged 65 and older increased from 37.8 percent to 61.1 percent. Nearly 40 percent of pre-retirees (aged 51–61 years) reported that they used credit card expensively and felt heavily indebted.

While debt can provide resources that help smooth consumption and facilitate life transitions (Dwyer et al., 2011; Hodson et al., 2014), the implications of having debt can be detrimental for people who are near or in retirement. Debt burden in later adulthood can have serious implications on one's retirement well-being. For one, debt burden affects the financial resources that older adults can use for retirement planning. In fact, studies have shown that adults nearing retirement age who carry debt are more likely to have lower levels of retirement savings (Elliott et al., 2013). In addition, having debt can affect one's retirement decisions. Older adults with debt are often compelled to work longer and delay retirement (Butrica & Karamcheva, 2013, 2020). Furthermore, rising consumer debt is negatively associated with mental and physical health (Turunen & Hiilamo, 2014), and such association is particularly strong among older adults (Drentea & Reynolds, 2012). Moreover, when debt burden is excessive, many older adults are required to declare bankruptcy. Bauchet and Evans (2019) claimed that age and credit card debt were associated with filing for bankruptcy.

In this study, we explore whether various types of debt affect retirement planning differently. With a sample of pre-retirees, this paper examines retirement planning and its relationship to four types of debt, which are mortgage, auto loan, medical debt, and credit card debt. Mortgages and auto loans are often considered secured debt because they are collateralized debt that are borrowed against a home and vehicle, whereas medical debt and credit card debt are unsecured debt because they are noncollateralized debts and are typically borrowed at higher interest rates (Sun & Houle, 2020). As an increasing number of older adults carry

high levels of both secured and unsecured debt and experience high rates of default (Brown et al., 2019; Mann, 2011), how different debt affects retirement planning among older adults approaching retirement becomes a critical question and is pertinent to retirement security and policy issues. This study examines the relationships between different types of debt and retirement planning among pre-retirees. Also, we explore the role of having a retirement account in planning for retirement in addition to holding debt. The following section offers a brief background on prior studies of the four sources of debt among older adults in the U.S. context.

Literature Review

Compared to earlier cohorts, older adults not only carry higher amounts of debt, but also have different debt portfolios. While mortgages remain the predominant type of debt among households in their 50s and 60s (Lee et al., 2019), the amount of home mortgage debt has increased substantially between 1980 and 2015 (Collins et al., 2020). Although housing debt is traditionally considered good debt that builds assets, older households with mortgage debt accumulate less home equity and many of them have difficulty making monthly mortgage payments (Consumer Financial Protection Bureau [CFPB], 2014). In fact, foreclosure rates among older Americans have increased to a great extent such that mortgage debt is increasingly threatening retirement security (CFPB, 2014).

Compared to younger adults, older adults hold more unsecured debt, such as credit card debt, medical debt, and student debt, which is the type of debt that is not tied to an asset. Unsecured debt is often used to supplement household income and borrowed at high cost (Sun & Houle, 2020). The amount of unsecured debt such as credit card debt and medical debt has climbed substantially since the mid to late 1990s (Burtricia & Karamcheva, 2020). According to a national survey, older adults aged 50 or older have higher overall credit card debt than younger adults (Traub, 2013). Similarly, Pottow (2011) also found that elder debtors carried 50 percent more credit card debt than younger debtors, and credit card debt was a driving force of elder bankruptcy filings. The prevalence of unsecured debt is disproportionately seen among lower- and middle-income families, single women (Anguelov & Tamborini, 2010), and racial minorities (e.g., Lee et al., 2007; Lichtenstein, 2017; Wiltshire et al., 2016). Haurin et al. (2019) found that unsecured debt is associated with greater financial stress than secured debt, such as mortgage debt.

A review of the literature indicated an increasing share of older borrowers have increased balances across a variety of debt types (Collins et al., 2020; Lusardi et al., 2018). While numerous studies have documented the phenomenon of

indebtedness and its implications on financial stress and poor health (Richardson et al., 2013), only a small body of literature focuses on older adults, and even fewer studies have examined and compared the impact of different debts on retirement planning. There is an extensive literature related to retirement planning indicating a wide range of factors that contribute to retirement planning and savings. These factors include economic factors such as income, assets, and retirement account ownership (e.g., Butrica et al., 2010), as well as noneconomic factors ranging from behavioral, psychological, physical and general demographics (e.g., Poterba et al., 2011). Retirement account ownership has been mostly linked to retirement planning in the relationship to financial literacy, suggesting that those having a retirement account were more likely to plan for retirement (e.g., Lusardi & Mitchell, 2011). However, few studies have examined the role of retirement account in the context of debt and retirement planning.

We build on previous studies by empirically exploring the differential impact of each of four types of debt on retirement planning with a population focus on pre-retirees. Research by Lusardi and Scheresberg (2016) examined pre-retirees' financial capabilities, which showed that almost half of pre-retirees reported having too much debt. While their study is a comprehensive documentation on pre-retirees' financial situation, the study is descriptive and unable to make empirical connection between debt and retirement planning. Lusardi et al. (2018) further studied the borrowing practices of people close to retirement (age 56–61) and found that recent cohorts of older adults had substantially more debt and less financial security than their predecessors. Moreover, Lusardi et al. (2020a; b) identified factors associated with indebtedness illustrating that sizeable debt carried by older adults came from student loans and unpaid medical bills. These studies converge to show that pre-retirees carry large amounts of debt and are financially vulnerable putting their retirement security at great risk. Moreover, the literature indicates differences in debt levels when they are stratified by gender, marital status and race. For example, Ebrahimi (2020) reported that married households have higher levels of debt than single men or single women. These differences in debt are heightened between the age of 50 and 70 and diminish in later life. Ebrahimi (2020) also compared household debt by race. He found that prior to retirement and in early retirement a greater share of White households reported any type of debt compared to Black households. While this consumer debt category decreased for older White households over time, it remained constant for older Black households; they were more adversely affected by debt before and during retirement compared to White households.

We extend this research body by empirically examining whether pre-retirees' debt holding affects their retirement

planning and whether different types of debt have differential impacts on planning for retirement. In the context of Americans' increased longevity and low levels of savings, the question of whether and how their debt holding affects retirement planning can have important policy implications when it comes to the Social Security program, long-term care, and other programs that support retirement well-being.

Method

This study uses data from 2015 National Financial Capability Study (NFCS), a nationally representative dataset focusing on financial behavior, knowledge, attitudes, and economic situations of American households. The NFCS was first commissioned in 2009 by the Financial Industry Regulatory Authority Investor Education Foundation, in collaboration with U.S. Department of Treasury and President Bush's Advisory Council on Financial Literacy, and was conducted by Applied Research & Consulting. The NFCS was continued in 2012, 2015, and 2018 with updated measures (FINRA, 2015). The NFCS consists of three separate but related surveys conducted online; they include a national, a state-by-state, and a military questionnaire (FINRA, 2015). This study uses data collected from the 2015 state-by-state survey, the largest dataset among the three and from approximately 500 respondents per state. The full sample of 2015 NFCS includes 27,564 American adults, 20.46 percent ($n = 5642$) were aged 51–61, and 4730 respondents of them were not retired and their spouse or partner was also not retired at the time of survey.

Data Collection

The sample for the 2015 NFCS state-by-state survey was recruited online by Applied Research and Consulting using non-probability quota sampling methods. Three established panels composed of millions of individuals who are recruited to join online and offered incentives in exchange for their participation (FINRA, 2015). The three panels (i.e., Survey Sampling International, EMI Online Research Solutions, and Research Now) used industry-standard techniques to verify the identities of their respective panel members to ensure demographic characteristics are accurate (FINRA, 2015). The NFCS established quotas for each state to approximate distributions on key variables (age, gender, ethnicity, education levels, and income) based on the American Community Survey of the U.S. Bureau of the Census (FINRA, 2015). Details on sampling procedures can be found on the NFCS website.

Measures

The dependent variable of this study was retirement planning and was measured by questions asking non-retired respondents whether they have ever tried to figure out how much is needed to save for retirement. Four answer options were offered including *yes*, *no*, *don't know*, and *prefer not to say*. Positive responses were coded 1, negative responses, don't know response, and prefer not to say response were coded 0.

The key independent variable was debt, which had four measures assessing whether respondents had a mortgage, auto loan, medical debt, and any credit card issue, respectively. For questions regarding mortgage, auto loan, and medical debt, positive responses to these questions were coded 1, negative responses were coded 0. Credit card use was assessed with five questions asking whether in the past 12 months respondents had the following experiences including (1) carried over a balance and was charged interest, (2) paid minimum payment only, (3) was charged a late fee for late payment, balance, (4) was charged an over the limit fee for exceeding credit line, (5) used the cards for a cash advance. Responses were coded 1 if at least one situation occurred, 0 if none had occurred to respondents.

Retirement account holder was another key independent variable and is assessed by one question asking respondents whether they had a retirement account. Positive responses were coded 1, negative responses were coded 0. Other independent variables of this study include gender, race, marital status, educational attainment, household income, employment status, number of financially dependent children, and financial knowledge. All but the financial knowledge variable was coded dichotomously. Financial knowledge was assessed by a scale with six questions about savings, interest, inflation rate, bond prices, borrowing interest, mortgage, and risk diversification. Four of the six questions are multiple-choice questions and the other two items are true or false questions. The number of correct answers were counted, value ranges between 0 and 6.

Analytical Approach

Descriptive and bivariate analyses were conducted to examine pre-retiree sample characteristics. A series of multivariate logit regression models were estimated to predict factors contributing to the possibility of planning for retirement in STATA 14. First, the model was regressed on debt ownership with demographic and socioeconomic variables as well as financial knowledge variables. Then retirement account ownership was added to the model to examine the relationship between retirement account, debt, and retirement planning. This was followed by regression models estimating each of the four types of debts (mortgage, auto

loans, medical debt, credit card issue), along with the same set of demographic and socioeconomic variables as well as the financial knowledge variable to predict retirement planning. The retirement account variable was added to examine whether having a retirement account was associated with the possibility of retirement planning.

Findings

Sample Characteristics

The pre-retiree sample consists of male (54.1 percent), White (77.5 percent), married individuals (57.8 percent) without financially dependent children (69.1 percent). A majority was either self-employed or had full-time employment (68.1 percent) and had a household annual income of \$35,000 or above (69.6 percent). About a fifth (21.0 percent, $n = 994$) had a bachelor's degree, and 11.4 percent ($n = 538$) completed post-graduate education.

A total number of 4730 respondents, aged 51–61 identified as a non-retired household, were asked about their retirement planning. About half of them (46.7 percent) reported they have tried to figure out how much is needed to save for retirement, while a similar percentage (49 percent) of respondents never had tried to figure out how much is needed to save for retirement, and 142 (3 percent) reported they don't know and 59 (1.3 percent) responded that they prefer not to say. Over two-thirds (69.2 percent) had a retirement account either through employment or other platforms, and among those individuals, 62.6 percent had a retirement account through an employer. A correlation test showed that retirement planning and having a retirement account were positively correlated (Pearson's $R = 0.37$) (see Table 1).

Retirement Planning and Debt

Table 2 shows results from logit regression Models 1 and 2 in which having at least one kind of debt was regressed on retirement planning without and with the retirement account variable, respectively. Only 13.3 percent ($n = 545$) of the sample reported having no debt, while the majority (86.7 percent, $n = 3642$) had debt of at least one kind. Results from the regression model estimating the role of having debt of at least one kind in the possibility of planning retirement show that having debt was negatively associated with retirement planning ($OR\ 0.60, z = -4.82$). When a retirement account variable was added, results showed that the negative association between retirement planning and debt remained ($OR\ 0.63, z = -4.31$). Also, it shows that having a retirement account had a strong, positive association with retirement planning ($OR\ 3.21, z = 11.79$). Results also indicate that educational attainment, household income, and

Table 1 Sample characteristics of pre-retirees (Aged 51–61, N=4730)

Socio-demographic	n (%)
<i>Gender</i>	
Female	2177 (45.05)
Male	2177 (54.95)
<i>Ethnicity</i>	
White	3934 (81.42)
Nonwhite	898 (18.58)
<i>Marital status</i>	
Married	2833 (58.63)
Otherwise	1999 (41.37)
<i>Have financially dependent children</i>	
Yes	1493 (30.90)
No	3339 (69.10)
<i>Employment status</i>	
Full-time & self-employed	4315 (89.30)
Others	571 (10.70)
<i>Household annual income</i>	
Less than \$35 K	1478 (30.59)
\$35 K and above	3345 (69.41)
<i>Educational attainment</i>	
High school or less	1271 (26.30)
Associate degree & some college	2013 (41.67)
College graduate	1009 (20.88)
Post-graduate education	539 (11.15)
<i>Number of correct response to financial knowledge test</i>	
0	251 (5.19)
1	357 (7.39)
2	644 (13.33)
3	1012 (20.94)
4	1049 (21.71)
5	968 (20.03)
6	551 (11.40)
<i>Type of debt^a</i>	
Having home mortgage	2026 (59.40)
Having auto title loan	1592 (33.15)
Having medical debt	954 (20.10)
Having credit card borrowing issue	2046 (54.62)

^aPercentages are calculated with the number of participants reporting owning a home, having a car, and using at least one credit card

employment status were significant predictors of retirement planning, while gender, race, and dependent children were not. Financial knowledge was positively related to retirement planning.

Retirement Planning and Secured Debt

A majority (n = 3359, 71.0 percent) of the pre-retiree sample owned their current home; 59.5 percent (n = 2000) had

a home mortgage, while 15.3 percent (n = 515) had home equity loans. Logistic regression was estimated using a sample of respondents who reported owning their current home. About a third (33.1 percent, n = 1564) reported having an auto loan. Table 3 shows results from logit regression models that estimate secured loans (i.e., home mortgage and auto loans) and their relationships with retirement planning. Models 3 and 5 regressed home mortgage and auto loans, respectively, on retirement planning, with the same set of socioeconomic variables. Results indicated no significant association exists between retirement planning and home mortgage (*OR* 0.92, $z = -1.01$) nor with auto loans (*OR* 1.07, $z = 0.96$). Models 4 and 6 show results from the same regression models with the addition of a retirement account variable. After adding the retirement account variable, the association between home mortgage and retirement planning was negative and significant (*OR* 0.85, $z = -2.00$), the association between auto loans and retirement planning was negative but not statistically significant (*OR* 1.00, $z = 0.00$). Across the models, several variables showed consistent patterns of relationship with retirement planning. Results showed that those who were married, completed a college education or higher, had an annual household income of \$35,000 or above, and had full-time employment were more likely to plan for retirement. Variables such as gender, race, and dependent children had no significant association with retirement planning. The financial knowledge variable showed a positive association with retirement planning across the models. Those with more correct responses to the financial knowledge questions were more likely to plan for retirement, where the odds ratio ranged from 1.30 to 1.38. Odds ratios of having a retirement account on retirement planning were rather large: respondents with retirement account were 3 to 4 times more likely to plan for retirement (*OR* 4.23, $z = 11.90$; *OR* 3.22, $z = 12.99$) (see Table 4).

Retirement Planning and Unsecured Debt

Unsecured debt includes medical debt and credit card debt. One fifth (20.0 percent, n = 927) of the pre-retiree sample had medical debt. Logistic models were estimated to assess the relationship between retirement planning and medical debt. Model 8 includes Model 7 and the retirement account variable. Results showed a negative association between medical debt and retirement planning (*OR* 0.75, $z = -3.23$), however such association lost statistical significance after adding retirement account variable (*OR* 0.85, $z = -1.79$). Having a retirement account shows a positive association with retirement planning (*OR* 3.20, $z = 12.18$). Similar to models with secured debt, several demographic and socioeconomic variables including marital status, educational attainment, household income, employment status showed a significant relationship with retirement planning. The

Table 2 Logit regression estimates on debt and retirement planning

	Odds ratio (SE)	
	Model 1	Model 2
Having at least one debt	0.55 (0.06)***	0.59 (0.06)***
Having a retirement account	/	3.13 (0.32)***
Female	0.92 (0.07)	0.87 (0.07)
White	0.99 (0.09)	1.00 (0.10)
Married	1.30 (0.10)**	1.18 (1.00)
Associated degree or higher	2.12 (0.18)***	2.07 (0.18)***
Income of \$35,000 or higher	2.37 (0.23)***	1.67 (0.18)***
Work full time/self-employed	0.70 (0.06)***	0.82 (0.07)*
Having financially dependent children	1.04 (0.03)	1.04 (0.08)
Financial knowledge	1.32 (0.03)***	1.28 (0.03)***
Model significance	LR Chi ² (9) = 753.39***	LR Chi ² (10) = 873.89***

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

associations among gender, race, and having financially dependent children and retirement planning were not statistically significant. Financial knowledge remains positively associated with retirement planning (OR 1.35, $z = 11.72$; OR 1.29, $z = 9.72$).

Regarding credit card behavior, a fifth (19.8 percent, $n = 937$) of the pre-retirees did not have a credit card, 15.7 percent ($n = 743$) had one credit card, one-third (32.1 percent, $n = 1519$) had 2–3 credit cards, and one-quarter (26.0 percent, $n = 1228$) had 4–8 credit cards. Approximately four percent ($n = 173$) had 9–12 credit cards. Among 3721 pre-retirees who reported using at least one credit card, about half (49.9 percent, $n = 1860$) paid their credit cards in full, and about half (49.3 percent, $n = 1834$) carried over a balance and were charged with interest. About a third (27.7 percent, $n = 1031$) paid the minimum payment only, and 10.5 percent ($n = 392$) were charged a late fee for late payments. A small portion (8.6 percent, $n = 319$) used the cards for a cash advance, a smaller portion (3.8 percent, $n = 143$) was assessed an over the limit fee for exceeding the credit line. The credit card debt variable was coded 1 if at least one credit card issue was reported. Logistic regressions were estimated to assess the relationship between credit debt and retirement planning. Results from regression models indicated that credit card debt was negatively associated with retirement planning (OR 0.62, $z = -6.41$; OR 0.65, $z = -5.67$). Similar findings were found on demographic variables, socioeconomic variables, in addition to retirement planning (OR 3.29, $z = 10.77$) and financial knowledge (OR 1.34, $z = 10.11$; OR 1.28, $z = 8.49$).

Discussion

Understanding the role of secured and unsecured debt in retirement planning is an urgent concern given that debt is an influential factor in determining financial well-being and economic security in retirement. The current study focuses on pre-retirees' secured and unsecured debts and their relationships with retirement planning. One main finding was that a relatively large portion of the pre-retiree sample approached retirement in debt. When it comes to unsecured debt, 20 percent had medical debt and 50 percent had credit card payment issues that potentially could become uncollateralized credit card debt. This finding echoes previous studies showing similar portions of older adults with unsecured debt (e.g., Zurlo et al., 2014). This is concerning given that debt exerts financial stress over pre-retirees and will likely reduce the financial resources that would have supported an individual in retirement.

Debt, in general, drains financial resources; therefore, it can be detrimental to retirement planning. Yet, different kinds of debt may have distinctively different impacts. The present study examined four types of debts and their relationships to retirement planning. In theory, collateral debt such as a home mortgage, for example, is one way to potentially accrue equity and build a long-term asset. Our study shows that these debts don't seem to facilitate planning for long-term goals such as retirement. While this study didn't test the negative association between income and retirement planning thoroughly, we speculate the negative relationship may have a larger magnitude among lower-income pre-retirees because of the limited financial resources. The finding that the negative correlation between secured debt and retirement planning, although statistically nonsignificant, highlights a possibility that

Table 3 Logit regression estimates on secured loans and retirement planning

	Odds ratio (SE)			Odds ratio (SE)		
	Model 3	Model 4	Model 5	Model 5	Model 6	Model 6
Home mortgage	0.87 (0.07)	0.82 (0.07)*	/	/	/	/
Auto loan	/	/	1.04 (0.07)	1.04 (0.07)	0.79 (0.07)	0.79 (0.07)
Having a retirement account	/	4.16 (0.52)***	/	/	3.17 (0.29)***	3.17 (0.29)***
Female	0.96 (0.08)	0.91 (0.08)	0.98 (0.07)	0.98 (0.07)	0.92 (0.07)	0.92 (0.07)
White	1.00 (0.11)	1.03 (0.12)	1.05 (0.09)	1.05 (0.09)	1.03 (0.09)	1.03 (0.09)
Married	1.27 (0.12)*	1.18 (0.11)	1.37 (1.02)***	1.37 (1.02)***	1.25 (0.10)	1.25 (0.10)
Associated degree or higher	2.14 (0.20)***	2.06 (0.20)***	2.04 (0.16)***	2.04 (0.16)***	1.97 (0.16)***	1.97 (0.16)***
Income of \$35,000 or higher	2.65 (0.31)***	1.69 (0.21)***	2.53 (0.22)***	2.53 (0.22)***	1.71 (0.17)***	1.71 (0.17)***
Work full time/self-employed	1.53 (0.14)***	1.33 (0.13)**	1.49 (0.11)**	1.49 (0.11)**	1.25 (0.10)**	1.25 (0.10)**
Having financially dependent children	1.05 (0.90)	1.08 (0.09)	1.00 (0.07)	1.00 (0.07)	0.99 (0.07)	0.99 (0.07)
Financial knowledge	1.34 (0.04)***	1.30 (0.04)***	1.33 (0.30)***	1.33 (0.30)***	1.28 (0.03)***	1.28 (0.03)***
Model significance	LR Chi ² (9) = 567.22***	LR Chi ² (11) = 704.21***	LR Chi ² (10) = 914.53***	LR Chi ² (10) = 914.53***	LR Chi ² (11) = 1057.78***	LR Chi ² (11) = 1057.78***

*p < 0.05, **p < 0.01, ***p < 0.001

Table 4 Logit regression estimates on unsecured loans and retirement planning

	Odds ratio (SE)		
	Model 7	Model 8	Model 9
Medical debt	0.74 (0.06)***	0.82 (0.07)**	/
Credit card debt	/	/	0.59 (0.04)***
Having a retirement account	/	3.11 (0.29)***	/
Female	0.98 (0.07)	0.94 (0.07)	0.93 (0.07)
White	1.05 (0.09)	1.04 (0.09)	1.11 (0.11)
Married	1.37 (0.10)***	1.25 (0.10)*	1.38 (0.12)***
Associated degree or higher	2.04 (0.16)***	1.10 (0.16)***	2.13 (0.12)***
Income of \$35,000 or higher	2.52 (0.23)***	1.73 (0.17)***	2.05 (0.22)***
Work full time/self-employed	1.47 (0.11)**	1.24 (0.10)**	1.50 (0.12)***
Having dependent children	1.00 (0.07)	0.99 (0.07)	1.08 (0.09)
Financial knowledge	1.31 (0.03)***	1.26 (0.03)***	1.28 (0.03)***
Model statistics	LR Chi ² (10) = 910.88***	LR Chi ² (10) = 1047.39***	LR Chi ² (10) = 597.34***
		(11) = 1047.39***	(11) = 709.077***

*p < 0.05, **p < 0.01, ***p < 0.001

investment-type loans can still harm people's ability to plan for retirement. It is possible that debt plays a different role dependent upon one's stage of life. This finding calls for a closer examination of the role of seemingly benign debt and its influence among people approaching retirement and in retirement.

Medical debt and credit card debt are often considered unsecured debt because no collateral is borrowed against the debt. Previous studies have shown that unsecured debt had a negative association with mental health among older adults. Yet, little research has linked unsecured debt to retirement planning, despite retirement security is a central concern among older adults. This study shows a strong negative association between unsecured debt and retirement planning. A comparison of odds ratios indicates that the negative associations were stronger between medical debt than credit card debt and retirement planning. This may partly be due to the focus of the pre-retiree population of this study, who has more medical needs and less credit card use than their younger counterparts. The present study contributes to the literature comparing the potential impact of unsecured and secured debt on retirement planning. The negative relationship between unsecured debt and retirement planning among pre-retirees is particularly concerning given that unsecured debt could have a deteriorating impact on pre-retirees' financial security approaching retirement.

Having a retirement account was found to be a strong, positive predictor of retirement planning across all models. This finding was consistent with previous studies and implies that having a retirement account could facilitate retirement planning (e.g., Lusardi et al., 2019). However, the positive association between retirement savings account and retirement planning is only correlational due to the nonexperimental data of this study. It is possible that a retirement savings account can exert a nudging effect on saving behaviors. Individuals who have a retirement savings account, especially accounts linked to employment and have a payroll deduction, are more likely to have savings in a retirement account. What is less known is whether and to what degree that having a retirement account affects retirement planning among those with low-paid jobs that provide little support for retirement planning behaviors. It is well documented that structural support (e.g., a retirement account with payroll deduction saving mechanism) is essential to behavior changes such as saving for retirement (Thaler & Sunstein, 2009). As the amount of debt grows among the older population, having access to a retirement plan with structural support is more important than ever to economic security in old age. In line with this, we propose retirement programs sponsored by state governments for employees who do not have a retirement plan option through their employer. Findings on retirement account and financial knowledge in this study and other behavioral studies seem to suggest that access to

retirement accounts combined with financial education have an positive impact on individuals' retirement planning.

Lastly, several variables besides having a retirement account were positively correlated to retirement planning, including household income, educational attainment, employment status, and financial knowledge. While much attention has been paid to savings, this study demonstrates that it is crucial to examine the role of debt in retirement planning. Our study shows that each of the four types of debt may have a unique impact on retirement planning or the lack thereof. Further research should seek to gain a better understanding of the underlying factors that affect these debt levels and the household's ability to plan for retirement.

Limitations

The limitations to this study include those related to the cross-sectional research design. The relationships found in this study were correlational, not causal. Another limitation was that our analysis did not include student loans as well as debt from using alternative financial services, such as payday loans, because of the small portion of the pre-retiree sample had either debt. However, student loans can affect retirement planning, especially among those taking on student loans later in life. Moreover, we were unable to account for individual investment accounts, which can play a role in retirement security. These accounts are investment vehicles that an individual can personally manage, where funds are available for future expenditures in retirement, such as long-term care. However, we don't have measures to assess whether people have such accounts. Additionally, while this study only examined two income groups and found that people with annual income \$35,000 or higher were more likely to plan for retirement. More research is granted to examine the role of income in relation to the association between debt and retirement planning, given that people with lower income were less likely to have retirement planning and more likely to be impacted by debt. Future studies should fully test the relative magnitude of the negative impact that debt has on retirement planning among multiple income groups. Lastly, debt from using alternative financial services and products were not included in the analyses but can have an impact on pre-retirees' retirement income and savings. Given the potential negative impacts of these debts, future research should consider factors that include potential sources of revenue, income, in particular, and debt.

Conclusion

As pre-retirees approach retirement, it is critical to understand the levels and types of debt they carry and how each type of debt impacts retirement security. Both secured and

unsecured debts affect pre-retirees' retirement decisions and planning, yet each type shows a distinct impact on retirement planning. While secured debt is no longer protective of financial security, unsecured debt can lead to a devastating impact on pre-retirees' financial security. With low levels of saving and increased amounts of debt across all sources, the retirement security of future retirees is precarious. Retirement account ownership remains a strong indicator of retirement planning; however, debt management is no longer ignorable when it comes to economic security in retirement. Understanding the consequences of the various sources of debt is a critical area of inquiry in the context of the growing financial debt among older adults.

Moreover, social workers, as frontline workers, are in a prime position to advocate for change in the retirement security sector. As professionals, social workers are equipped to understand the economic challenges of their clients, and to promote changes that lead to a more financially secure future. Social work researchers and practitioners need to continue assessing the forthcoming demographic shift in the population, and understanding how current levels of retirement income, namely Social Security, pensions, retirement income, and investments can meet the increasing costs of housing and health care that older adults must bear. As an increasingly number of older adults are struggling to secure sufficient income for life necessities, many of them rely heavily, if not solely, on their Social Security income in their retirement. Social workers are well-positioned to conduct advocacy, analysis, and the evaluation of programs that promote the financial health and solvency for all older Americans, and especially the most financially disadvantaged in both the clinical and macro arenas.

Funding No funding was used for this project.

Data availability Data is available for downloading on the website of National Financial Capability Study.

Declarations

Conflict of interest The authors acknowledge the project is in full compliance with ethical standards. There is no potential conflicts of interest.

Ethical approval The paper has received ethical approval from the institution where the author is affiliated.

Consent to participate and Consent for publication I consent to participate and consent for publication.

Research Involving Human and Animal Participants This project is a secondary data analysis that does not involve human participants or animals.

References

- Anguelov, C. E., & Tamborini, C. R. (2010). Retiring in debt—An update on the 2007 Near-Retiree Cohort Note. *Social Security Bulletin*, 70(4), 69–76. <https://heionline.org/HOL/P?h=hein.journals/ssbul70&i=391>
- Bauchet, J., & Evans, D. (2019). Personal bankruptcy determinants among U.S. households during the peak of the great recession. *Journal of Family and Economic Issues*, 40, 577–591. <https://doi.org/10.1007/s10834-019-09627-1>
- Brown, J., Dynan, K., & Figinski, T. (2019). *The risk of financial hardship in retirement: A cohort analysis*. Wharton Pension Research Council Working Papers. https://repository.upenn.edu/prc_papers/532
- Butrica, B., Zedlewski, S. R., & Issa, P. (2010). *Understanding early withdrawals from retirement accounts*. Washington, The Urban Institute. Retrieved from <https://www.urban.org/sites/default/files/publication/28706/412107-Understanding-Early-Withdrawals-from-Retirement-Accounts.PDF>
- Butrica, B. A., & Karamcheva, N. S. (2013). Does household debt influence the labor supply and benefit claiming decisions of older Americans? *Social Science Research Network*. <https://doi.org/10.2139/ssrn.2368389>
- Butrica, B. A., & Karamcheva, N. S. (2020). Is rising household debt affecting retirement decisions? *Social Science Research Network*. <https://doi.org/10.2139/ssrn.3540387>
- Collins, J. M., Hembre, E., & Urban, C. (2020). Exploring the rise of mortgage borrowing among older Americans. *Regional Science and Urban Economics*, 83, 103524. <https://doi.org/10.1016/j.regsciurbeco.2020.103524>
- Consumer Financial Protection Bureau. (2014). *Snapshot of older consumers and mortgage debt*. CFPB Office for Older Americans.
- Despard, M. R., Friedline, T., & Martin-West, S. (2020). Why do households lack emergency savings? The role of financial capability. *Journal of Family and Economic Issues*, 41, 542–557.
- Drentea, P., & Reynolds, J. R. (2012). Neither a borrower nor a lender be: The relative importance of debt and SES for mental health among older adults. *Journal of Aging and Health*, 24(4), 673–695. <https://doi.org/10.1177/0898264311431304>
- Dwyer, R. E., McCloud, L., & Hodson, R. (2011). Youth debt, mastery, and self-esteem: Class-stratified effects of indebtedness on self-concept. *Social Science Research*, 40(3), 727–741. <https://doi.org/10.1016/j.ssresearch.2011.02.001>
- Ebrahimi, Z. (2020). *The impact of rising household debt among older Americans*. Social Science Research Network. <http://papers.ssrn.com/abstract=3555391>
- Elliott, W., Grinstein-Weiss, M., & Nam, I. (2013). *Student debt and declining retirement savings*. St Louis, University of Washington at St Louis. Retrieved from https://openscholarship.wustl.edu/csd_research/385/
- FINRA. (2015). *2015 National Financial Capability Study: State-by-state survey methodology*. Retrieved from http://www.usfinancialcapability.org/downloads/NFCS_2015_State_by_State_Meth.pdf
- Haurin, D., Loibl, C., & Moulton, S. (2019). *Debt stress and mortgage borrowing in older age: Implications for economic security in retirement*. University of Wisconsin-Madison Center for Financial Security.
- Hodson, R., Dwyer, R. E., & Neilson, L. A. (2014). Credit card blues: The middle class and the hidden costs of easy credit. *The Sociological Quarterly*, 55(2), 315–340. <https://doi.org/10.1111/tsq.12059>
- 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.

- Lee, Y. G., Lown, J. M., & Sharpe, D. L. (2007). Predictors of holding consumer and mortgage debt among older Americans. *Journal of Family and Economic Issues*, 28, 305–320.
- Lichtenstein, B. (2017). Debt, death, and divorce: Aging into foreclosure in the U.S. deep South. *Housing and Society*, 44(3), 173–189. <https://doi.org/10.1080/08882746.2017.1378051>
- Lusardi, A., & Mitchell, O. S. (2011). *Financial literacy and planning: Implications for retirement wellbeing*. Cambridge, National Bureau of Economic Research. Retrieved from https://www.nber.org/system/files/working_papers/w17078/w17078.pdf
- Lusardi, A., Mitchell, O. S., & Oggero, N. (2019). *Debt close to retirement and its implications for retirement well-being* (SSRN Scholarly Paper ID 3476324). Social Science Research Network. <https://papers.ssrn.com/abstract=3476324>
- Lusardi, A., & de Bassa Scheresberg, C. (2016). Americans' troubling financial capabilities: A profile of pre-retirees. *Public Policy & Aging Report*, 26(1), 23–29.
- Lusardi, A., Mitchell, O. S., & Oggero, N. (2018). The changing face of debt and financial fragility at older ages. *AEA Papers and Proceedings*, 108, 407–411. <https://doi.org/10.1257/pandp.20181117>
- Lusardi, A., Mitchell, O. S., & Oggero, N. (2020a). Understanding debt in the older population (SSRN Scholarly Paper ID 3537858). *Social Science Research Network*. <https://doi.org/10.2139/ssrn.3537858>
- Lusardi, A., Mitchell, O. S., & Oggero, N. (2020b). Debt and financial vulnerability on the verge of retirement. *Journal of Money, Credit and Banking*, 52(5), 1005–1034.
- Mann, A. (2011). The effect of late-life debt use on retirement decisions. *Social Science Research*, 40, 1623–1637.
- Poterba, J., Venti, S., & Wise, D. (2011). The composition and draw-down of wealth in retirement. *Journal of Economic Perspectives*, 25(4), 95–118. <https://doi.org/10.1257/jep.25.4.95>
- Pottow, J. A. E. (2011). *The rise in elder bankruptcy filings and failure of U.S. bankruptcy law* (SSRN Scholarly Paper ID 1669298). Social Science Research Network. <https://papers.ssrn.com/abstract=1669298>
- Rhee, N., & Boivie, II. (2016). The continuing retirement savings crisis. *Journal of Insurance and Financial Management*, 2(1), 44–77.
- Richardson, T., Elliott, P., & Roberts, R. (2013). The relationship between personal unsecured debt and mental and physical health: A systematic review and meta-analysis. *Clinical Psychology Review*, 33(8), 1148–1162. <https://doi.org/10.1016/j.cpr.2013.08.009>
- Sun, A. R., & Houle, J. N. (2020). Trajectories of unsecured debt across the life course and mental health in midlife. *Society and Mental Health*, 19(1), 61–79.
- Thaler, R., & Sunstein, C. R. (2009). *Nudge: Improving decisions about health, wealth, and happiness*. Penguin Books.
- Traub, A. (2013). *In the red: Older Americans and credit card debt*. Retrieved from https://www.aarp.org/content/dam/aarp/research/public_policy_institute/security/2013/older-americans-and-credit-card-debt-AARP-ppi-sec.pdf
- The Pew Charitable Trusts. (2016). *Employer-sponsored retirement plan access, uptake, and savings*. <https://www.pewtrusts.org/-/media/assets/2016/09/employersponsoredretirementplanaccessuptakeandsavings.pdf>
- Turunen, E., & Hiilamo, H. (2014). Health effects of indebtedness: A systematic review. *BMC Public Health*, 14(1), 489. <https://doi.org/10.1186/1471-2458-14-489>
- U.S. Bureau of Labor Statistics (2020). Retirement benefits: Access, participation, and take-up rates. https://www.bls.gov/news.release/ebs2.t01.htm#ncs_nb_table1.f.3
- Wiltshire, J. C., Elder, K., Kiefe, C., & Allison, J. J. (2016). Medical debt and related financial consequences among older African American and White adults. *American Journal of Public Health*, 106(6), 1086–1091. <https://doi.org/10.2105/AJPH.2016.303137>
- Zurlo, K. A., Yoon, W., & Kim, H. (2014). Unsecured consumer debt and mental health outcomes in middle-aged and older Americans. *The Journals of Gerontology: Series B*, 69(3), 461–469. <https://doi.org/10.1093/geronb/gbu020>

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.