

The Effect of Financial Knowledge on Workers' Expectation of Never Retiring

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Abstract

In this study, we extend previous research on factors related to workers stating that they would never retire by analyzing the impact of financial knowledge variables on the expectation. Findings show that the never retire rate is related to objective financial knowledge, with a 20% rate for those who missed all questions, compared to 12% for those who answered all questions correctly. We find a similar pattern between subjective knowledge and the never retire rate. Using logistic regressions, we find that survey respondents who missed questions for objective financial knowledge are more likely to choose a never retire response than those who do not miss any questions. We also find that overconfident respondents are more likely to give a never retire response than underconfident respondents. Our results have implications for financial education and policies related to retirement, as well as for research on retirement adequacy.

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Introduction

A key issue for retirement planning is when to retire. This decision may be a challenge for many workers, however. Hanna et al. (2017) reported that in the 2013 Survey of Consumer Finances (SCF) dataset, 18% of full-time workers aged 35 to 60 gave a “never retire” response when asked at what age they expect to stop working full-time. While a never retire answer might be a reasonable response for some workers, there is evidence that most workers who state that they will never retire failed to engage in retirement planning. It is worth noting that Hanna et al. did not include financial knowledge as an independent variable. Our

research analyzes a combination of the 2016 and 2019 SCF datasets, with financial knowledge variables in addition to the independent variables included by Hanna et al.

The notion of reporting an intention to never retire has important educational and policy implications. Workers who plan to never retire or retire very late may face lower risks from having inadequate retirement income compared to others. Workers who choose to never retire do not need to worry much about saving money in their retirement accounts because their income levels will be less likely to drop at the normal retirement age. Therefore, under certain circumstances,

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choosing never to retire might be a rational decision. However, from 1910 to 2001, the average retirement age of workers substantially decreased, from older than 70 to under 65 (Burtless & Quinn, 2002). Based on this trend, it is unlikely that many workers really expect to never retire, even if they report an unwillingness to retire. Some workers may fail to plan for retirement and then choose the never retire response when asked because they have no idea at what age they can retire. This suggests that providing a never retire response might be an indication of retirement inadequacy. In this regard, Hanna et al. (2017) concluded that the expectation of never retiring is a signal that workers have failed to prepare for their retirement, rather than indicating a preference for working forever. Therefore, investigating the relationship between financial knowledge and the never retire response may provide valuable insights for financial educators and policymakers.

Background

Financial knowledge has been defined in various ways, and sometimes has been used interchangeably with the term financial literacy (Huston, 2010). Financial knowledge is typically measured either objectively (i.e., being able to correctly answer questions related to financial decisions) or subjectively (e.g., a self-described perception of knowledge). Many previous studies have found effects of financial knowledge on financial behavior, so in this study, we focus on the effect of objective financial knowledge, as measured by the proportion of financial questions answered correctly, combined with a person's subjective perception of their financial knowledge.

Some researchers report a lack of financial knowledge among those living in the United States across age bands (Lusardi & Mitchell, 2007; Mandell & Klein, 2009). Some studies find that the relationship between financial knowledge and individuals' behavior to be complicated since financial knowledge does not automatically result in optimal financial decision-making or behavioral outcomes (Braunstein & Welch, 2002). Understanding the relationship between financial knowledge and financial decision-making is increasingly recognized as an area of critical

importance. Objective financial knowledge, which reflects the actual understanding of financial matters, and subjective financial knowledge, which reflects perceived financial knowledge, is known, for example, to significantly impact workers' important financial decisions, such as hardship withdrawals from retirement accounts (Lee & Hanna, 2020; Utkus & Young, 2011).

Financial decisions made by workers can also be impacted by financial knowledge overconfidence, which has been defined as exhibiting an above-average subjective financial knowledge level and a below-average objective financial knowledge level. Lee and Hanna (2020) noted that workers with financial knowledge overconfidence are more likely to make financial decisions that may damage their future retirement income security, such as taking early withdrawals from retirement accounts. In some studies, taking early withdrawals from retirement accounts, also called leakage of retirement assets, leaves household retirement accounts underfunded and insufficient in terms of supporting support expenditures when the account owner retires (Bovbjerg, 2010; Engelhardt, 2002; Munnell & Webb 2015).

Although choosing never to retire could be a rational and reasonable decision, Hanna et al. (2017) argued that most respondents giving a never retire response had not planned for retirement. Analyses of never retire respondents may provide additional insights into retirement planning and retirement adequacy. This study extends the current literature by testing the effect of objective and subjective financial knowledge on expected retirement ages, which is a recommendation made by Hanna et al. Specifically, we extend the Hanna et al. model by testing the effect of financial knowledge on the never retire response. We also test the relationship between overconfidence (i.e., high subjective and low objective knowledge) in financial knowledge and the never retire response. This study focuses on the moderating role of financial knowledge on the never retire response.

Methodology

Data and Sample

For this paper, we used a combination of the 2016 and 2019 SCF datasets (Bhutta et al., 2020). The SCF data has been collected every three years since 1983. The SCF is sponsored by the U.S. Federal Reserve Board and the U.S. Department of the Treasury. The SCF data includes detailed information on household characteristics, family structure, and household financial decisions. The SCF provides an ideal dataset for a retirement-related study because respondents are asked many detailed questions about their retirement attitudes and behaviors, including their expected retirement age, characteristics of retirement pension plans, income, work status, insurance, and financial assets. Combining the 2016 and 2019 SCF datasets allows for more robust estimates of some effects from the two survey years that were somewhat similar.⁴ We did not include the recently released 2022 SCF because of the confounding effects of the COVID-19 pandemic.

When considering the results from this study, it is important to understand how data are collected in the SCF. There is an issue of using information from the household head versus the survey respondent (see Lindamood et al., 2007). This is not an issue for non-couple households, but it can be an issue for partnered households. In the 2016 SCF, for example, the head is not the respondent in 45% of households (Hanna et al., 2018). Traditionally, the head (defined by the SCF as the male in mixed-sex couples) has been the focus of research in terms of labor force participation and earnings, with males traditionally being more consistent in labor force participation. The use of the household head does present some conceptual challenges for studies like this one. In the public dataset, for couple households, the racial/ethnic identification is only available for the respondent. The respondent answers all attitudinal and financial knowledge questions. The expected retirement age of the head is provided by the

respondent, even if they are different persons. These limitations should be considered, but if the respondent can assess what the head of household would answer, in the context of this study, results should not be too biased for expected retirement age. The alternative of using a respondent's expected retirement age would likely produce more distortions. For this study, we assumed that a respondent's objective financial knowledge and subjective assessment of financial knowledge are close to those of the household head. In order to compare our results to those of Hanna et al. (2017), we used information for the head of household for expected retirement age. We performed analyses using a respondent's age, employment status, and expected retirement age, which resulted in a much smaller analytic sample (unweighted N of 2,667 compared to 4,607 using household heads, with 356 "never retire" responses for respondents, compared to 685 for heads). The descriptive patterns for relationships between never retire rates and financial knowledge variables are very similar for respondents and for household heads. The final analytic sample included 4,607 households.

Dependent Variable

The dependent variable for the analysis was created by using responses to a question that asked about the expected age to stop working full-time. If a respondent replied that the head would never retire, the variable "never retire" was coded as 1, otherwise 0. This coding matched Hanna et al. (2017) and Zhang and Hanna (2011).

Independent Variables

We tested three models. Model 1 matched Hanna et al. (2017) in terms of the independent variables. Model 2 included household characteristics, in addition to financial knowledge variables. One focal independent variable was objective financial knowledge. This variable, ranging from 0 to 3, was calculated using three questions in the SCF. These questions, known as the "Big Three" (Hastings et al., 2013), relate to compound

⁴ Our research approach followed Hanna et al. (2017) who used a sample of households with heads who were working full-time and aged 35 to 60 years. We followed their reasoning in the sample selection, including the patterns of labor force participation by

the age of household heads. We obtained results similar to Hanna et al. in that full-time employment decreased rapidly after the age of 60 while being very low before age 35.

interest, real rates of return, and risk diversification. The estimated value of the variable was based on the number of questions answered correctly. If a respondent answered all three questions correctly, their score was 3. If a respondent answered two questions correctly, their score was 2. If a respondent answered one question correctly, the variable was equal to 1. If a respondent answered the three questions incorrectly, they received a score of 0. Another focal variable was subjective financial knowledge. This variable, ranging from 0 to 10, was based on a self-evaluation of financial knowledge by a respondent. If a respondent believed they were not at all financially knowledgeable, they received a score equal to 0. If a respondents believed they were very knowledgeable in the financial domain, their score was equal to 10. Respondents were allowed to choose any integer between 0 and 10. The variable was recoded into four categories: (a) low, (b) some, (c) good, and (d) high. For the logistic regression (described below), we used the subjective financial knowledge score.

In Model 3, we defined financial confidence to align with Lee and Hanna (2020), which was based on whether a respondent had above or below median objective and subjective financial knowledge. The model used four categories of financial confidence: (a) appropriate high confidence, if subjective financial knowledge and objective financial knowledge were both high; (b) appropriate low confidence, if subjective financial knowledge and objective financial knowledge were both low; (c) overconfident, if subjective financial knowledge was high but objective financial knowledge was low; and (d) underconfident if subjective financial knowledge was low but objective financial knowledge was high.

Control Variables

The following control variables were included in the models: (a) racial/ethnic status of the respondent, (b) self-employment, (c) health status, (d) marital status, (e) life expectancy, (f) education, (g) job title of the household head, (h) whether the head of household had a defined benefit pension, (i) whether everyone was covered by health insurance, (j) household

income, (k) net worth, and (l) the expectation to inherit a substantial amount of money. We also included the following control variables not used by Hanna et al. (2017): (a) economic outlook, (b) willingness to take the financial risk, (c) satisfaction of expected retirement income, and (d) a dummy variable for survey year.

Empirical Analysis

We used descriptive analyses to examine the determinants of the never retire response without controlling for other variables. We then used weighted repeated-imputation inference (RII) means tests to ascertain whether differences in the never retire rates in the descriptive analyses were significant (see Hanna et al., 2017; Montalto & Sung, 1996; Montalto & Yuh, 1998). The primary analyses were conducted using logistic regressions for Models 1, 2, and 3. For the logistic regression analyses, we utilized multiple imputation procedures applying the RII technique to estimate the variances appropriately (see Lindamood et al., 2007). The models were estimated as follows:

$$\text{Model 1: } \log \frac{P(nr_i)}{1-P(nr_i)} = \alpha_0 + \alpha_1 H_i \quad (1)$$

where, nr_i represents whether workers' retirement expectation is "never retire"; H_i represents the set of control variables listed above.

$$\text{Model 2: } \log \frac{P(nr_i)}{1-P(nr_i)} = \alpha_0 + \alpha_1 Obj_i + \alpha_2 Sub_i + \alpha_3 C_i \quad (2)$$

where, nr_i represent whether workers' retirement expectation is "never retire"; Obj_i represents household heads' objective financial knowledge; Sub_i represents household heads' subjective financial knowledge; and C_i represents a set of control variables.

$$\text{Model 3: } \log \frac{P(nr_i)}{1-P(nr_i)} = \alpha_0 + \alpha_1 Conf_i + \alpha_2 C_i \quad (3)$$

where, nr_i represents whether workers retire expectation is "never retire"; $Over_i$ represents household heads' financial knowledge confidence; and C_i represents a set of control variables.

Results

Descriptive analysis

The analytic sample included 4,607 households with full-time employed household heads aged from 35 to 60 years, with 2,395 from the 2016 SCF, and 2,212 from the 2019 SCF. The never

retire rate for the combined analytic sample was 15.0%, with 15.2% in 2016 and 14.8% in 2019. The rates were not significantly different. Table 1 shows the descriptive results for that sample by financial knowledge categories.

Table 1. Rate of Never Retire by Household Characteristics, Full-time Worker Households with Head Aged 35-60, 2016 and 2019 SCF

Variable	Distribution	% Never retire	Significance level
Total sample	100.0%	15.03%	
2016 SCF	52.68%	15.22%	Reference
2019 SCF	47.31%	14.82%	0.395
Objective financial knowledge			
No knowledge (0 out of 3 right)	3.33%	18.88%	<.001
Poor knowledge (1 out of 3 right)	14.66%	17.41%	<.001
Fair knowledge (2 out of 3 right)	33.79%	18.32%	<.001
High knowledge (3 out of 3 right)	48.23%	11.73%	Reference
Subjective financial knowledge			
No knowledge	1.96%	29.75%	Reference
Poor knowledge	17.17%	19.52%	<.001
Fair knowledge	53.62%	13.53%	<.001
High knowledge	27.25%	14.09%	<.001
Financial knowledge confidence			
Appropriate low confidence	29.47%	18.68%	0.080
Underconfident	21.98%	11.76%	<.001
Overconfident	22.31%	17.33%	Reference
Appropriate high confidence	26.25%	11.71%	<.001

Notes. $N = 4,607$ households. Weighted analyses with RII means tests.

Objective financial knowledge was estimated using the number of questions a respondent answered correctly. Only 3.3% of respondents answered all three questions incorrectly, while 48.2% answered the three questions correctly. Just under 14.7% answered one question correctly, and 33.8% answered two questions correctly. Of the respondents who answered all three questions incorrectly, 18.9% said they would never retire, but only 11.7% of those who answered all three questions correctly said they would never retire. The never retire rate for those who missed one or more questions was higher

than the rate for those who answered all three questions correctly, and the difference was significantly higher than the rates for those who answered all three questions correctly.⁵

In terms of subjective financial knowledge, 29.8% of those who indicated that they are not financially knowledgeable (levels 0, 1, or 2) expected to never retire, while 14.1% of respondents who believe they are very knowledgeable (levels 9 or 10) gave the never retire response. The rates for “some,” “good,” and “high” levels of subjective knowledge were significantly lower than the rates for those with

⁵ The p values shown in Table 1 are RII means test results for comparisons to the reference group (answered all three questions correctly). For instance, the never retire rate for those who answered the three

questions correctly was significantly lower than the rate for those who answered two questions correctly and also lower than the rate for those who answered one question correctly.

“low” perceived financial knowledge. The rates for “some” and “good” were significantly different, as were the rates for “some” and “high.”

When respondents were categorized into financial knowledge confidence groups, those who were underconfident and those who had appropriately high confidence were significantly less likely to have chosen the never retire response than those who had appropriately low confidence. Those with appropriately low confidence and the overconfident had never retire rates of 18.7% and 17.3%, respectively, compared to 11.8% for those with appropriately high financial confidence levels, and 11.7% for the financially underconfident.

Regression Results

The following discussion highlights results from the three logistic regression models using the never retire response as the outcome variable. Model 1 included the same variables used by Hanna et al. (2017) (Table 2). Model 2 utilized the same independent variables in Model 1, plus dummy variables for objective and subjective financial knowledge (Table 3). Model 3 included the independent variables from Model 1 plus dummy variables for the level of financial knowledge confidence (Table 4).

The results shown in Table 2 are mostly consistent with the results of Hanna et al. (2017), with one exception. Hanna et al. found household income to be negatively related to the never retire response. We observed the effect of household income to be negative; however, the two-tail *p* value was not significant. Hispanic respondents were less likely to give a never retire response

than White respondents. Having a defined benefit plan was negatively associated with the never retire response. Expecting a substantial inheritance and spending less than income was also negatively associated with the never retire response. Those who expected their retirement income to be satisfactory were less likely to give a never retire response than those who expected retirement income to be “enough.” Single males and partnered couples were more likely to give a never retire response than otherwise similar married couples. Being self-employed was also positively associated with the never retire response. Years of education, expecting to live a longer time, and having health insurance also were negatively related to the never retire response. There was no significant difference between 2016 and 2019 in the never retire response.

Table 3 shows the results from Model 2, with the financial knowledge variables added to the independent variable list. Compared to heads in households with high objective financial knowledge levels, heads in households with fair financial knowledge levels were more likely to give a never retire response, with an odds ratio of a never retire response 1.24 times as high as the ratio for those who got all of the questions correct. The association between control variables and the never retire response were similar to the results in Model 1, except that Black respondents were less likely to give a never retire response than White respondents. In addition, those who were willing to take above-average or average risk were less likely to give a never retire response than those unwilling to take any risk.

Table 2. Logistic Regression Analysis of the Likelihood of Full-Time Worker Household Heads Aged 35–60 Years Expecting Never to Retire, Model 1

Variable	Coefficient	Standard Error	Chi-Square <i>p</i> Value	Odd Ratio
Log (net worth) (Ln [.01] if net worth ≤ 0)	-0.0133	0.0096	0.1690	0.9870
Log (income) (Ln [.01] if income ≤ 0)	-0.0282	0.0238	0.2362	0.9722
Racial ethnic status of respondent (reference category = White)				
Black	-0.2183	0.1449	0.1319	0.8038
Hispanic	-0.3146	0.1448	0.0298	0.7300
Asian/other	-0.1733	0.1913	0.3649	0.8410
Have a defined benefit pension plan	-0.8625	0.2039	<.0001	0.4224
Perception of the adequacy of retirement income (reference category = Enough to maintain living standards)				
Very satisfactory	0.0219	0.1331	0.8691	1.0224
Satisfactory	-0.6321	0.1586	0.0001	0.5318
Inadequate	-0.0039	0.1477	0.9787	0.9964
Totally inadequate	0.6015	0.1233	<.0001	1.8250
Head self-employed	0.6370	0.1041	<.0001	1.8910
Years of education of the head	-0.0691	0.0184	0.0002	0.9332
Perceived health status of the head (reference category = Good health)				
Excellent health	-0.0183	0.1073	0.8647	0.9818
Fair health	0.0749	0.1217	0.5383	1.0780
Poor health	-0.2725	0.3646	0.4549	0.7618
All in household covered by health insurance	-0.3675	0.1233	0.0029	0.6926
Age of the head	-0.0033	0.0062	0.5950	0.9966
Expect a substantial inheritance or other transfer	-0.3728	0.1282	0.0036	0.6888
Expectations for the economy (reference category = Better)				
Worse	0.1830	0.1351	0.1757	1.2010
Same	-0.1740	0.1206	0.1493	0.8406
Life expectancy for the head (reference category = Younger than 71 years)				
Live to 71-80 years	-0.6152	0.1455	<.0001	0.5410
Live to 81 years or older	-0.4778	0.1409	0.0007	0.6208
Household type (reference category = Married)				
Partnered couple	0.4551	0.1460	0.0018	1.5764
Single male	0.4068	0.1253	0.0012	1.5020
Single female	0.0067	0.1385	0.9615	1.0066
Spending relative to income (reference category = Same as income)				
More than income	-0.0252	0.1348	0.8515	0.9752
Less than income	-0.1449	0.1061	0.1719	0.8652
Job title of the head (reference category = transportation)				
Executive, admin, manager, teachers	-0.1021	0.1628	0.5306	0.9028
Engineer, technician, office	-0.1794	0.1779	0.3134	0.8358
Protective and miscellaneous service	-0.0338	0.1932	0.8612	0.9670
Construction, production, repair	-0.1129	0.1752	0.5195	0.8934
Farming, fishing, forestry	0.2131	0.2984	0.4752	1.2380
Year = 2019	0.0573	0.0876	0.5133	1.0590
Intercept	0.6934	0.4858	0.1535	
Concordance (averaged for 5 implicates)	71.36%			

Notes. *N* = 4,607 households. Unweighted repeated-imputation inference (RII) analysis of combination of 2016 and 2019 Survey of Consumer Finances dataset (SCF).

Table 3. Logistic Regression Analysis of the Likelihood of Full-Time Worker Household Heads Aged 35–60 Years Expecting Never to Retire, Model 2, With Financial Knowledge Variables

Variable	Coefficient	Standard Error	Chi-Square <i>p</i> Value	Odd Ratio
Objective financial knowledge (0 to 3) (reference category=High knowledge (3 right))				
No knowledge (0 right)	0.0807	0.2506	0.7475	1.0840
Poor knowledge (1 right)	0.1183	0.1450	0.4145	1.1256
Fair knowledge (2 right)	0.2167	0.1067	0.0423	1.2422
Subjective financial knowledge				
Log (net worth) (Ln [.01] if net worth ≤ 0)	-0.0065	0.0098	0.5054	0.9936
Log (income) (Ln [.01] if income ≤ 0)	-0.0181	0.0241	0.4538	0.9822
Racial ethnic status of respondent (reference category = White)				
Black	-0.2898	0.1468	0.0484	0.7484
Hispanic	-0.4346	0.1476	0.0032	0.6474
Asian/other	-0.2366	0.1942	0.2231	0.7892
Have a defined benefit pension plan	-0.8390	0.2025	<.0001	0.4326
Perception of the adequacy of retirement income (reference category = Enough to maintain living standards)				
Very satisfactory	-0.0205	0.1359	0.8802	0.9798
Satisfactory	-0.5788	0.1596	0.0003	0.5608
Inadequate	-0.0303	0.1492	0.8390	0.9702
Totally inadequate	0.4970	0.1255	0.0001	1.6438
Head self-employed	0.6438	0.1068	<.0001	1.9036
Years of education of the head	-0.0514	0.0190	0.0069	0.9500
Perceived health status of the head (reference category = Good health)				
Excellent health	-0.0157	0.1086	0.8848	0.9844
Fair health	0.0489	0.1227	0.6901	1.0502
Poor health	-0.2129	0.3678	0.5627	0.8088
All in household covered by health insurance	-0.3024	0.1248	0.0154	0.7392
Age of the head	0.0004	0.0064	0.9535	1.0006
Expect a substantial inheritance or other transfer	-0.3221	0.1299	0.0132	0.7248
Expectations for the economy (reference category = Better)				
Worse	0.1436	0.1366	0.2934	1.1546
Same	-0.1666	0.1216	0.1708	0.8464
Life expectancy for the head (reference category = Younger than 71 years)				
Live to 71-80 years	-0.6357	0.1473	<.0001	0.5300
Live to 81 years or older	-0.4959	0.1425	0.0005	0.6096
Household type (reference category = Married)				
Partnered couple	0.4323	0.1481	0.0035	1.5408
Single male	0.4334	0.1279	0.0007	1.5424
Single female	-0.0901	0.1416	0.5247	0.9138
Spending relative to income (reference category = Same as income)				
More than income	0.0225	0.1363	0.8690	1.0226
Less than income	-0.0977	0.1078	0.3647	0.9070
Job title of the head (reference category = transportation)				
Executive, admin, manager, teachers	0.0130	0.1663	0.9376	1.0132
Engineer, technician, office	-0.1105	0.1810	0.5414	0.8954
Protective and miscellaneous service	-0.0087	0.1958	0.9647	0.9916
Construction, production, repair	-0.0941	0.1776	0.5960	0.9100
Farming, fishing, forestry	0.3370	0.3034	0.2666	1.4014

Variable	Coefficient	Standard Error	Chi-Square <i>p</i> Value	Odds Ratio
Saving reasons (reference category = other saving reasons)				
Cannot save	0.5585	0.3598	0.1206	1.7482
Retirement	-0.4499	0.0990	<.0001	0.6376
Investment	-0.1330	0.3024	0.6600	0.8758
Financial risk tolerance (reference category = take no risk)				
Substantial risk	0.0758	0.1869	0.6852	1.0788
Above average	-0.5839	0.1380	<.0001	0.5574
Average	-0.5589	0.1151	<.0001	0.5718
Year = 2019	0.0465	0.0891	0.6017	1.0476
Intercept	0.3474	0.5287	0.5112	
Concordance (averaged for 5 implicates)	73.48%			

Notes. *N* = 4,607 households. Unweighted repeated-imputation inference (RII) analysis of combination of 2016 and 2019 Survey of Consumer Finances dataset (SCF).

Table 4 shows results from the Model 3 logistic regression estimation, with financial knowledge confidence variables added to the independent variables from Table 2. The likelihood of the never retire response was higher for those who exhibited overconfidence compared to those who were underconfident. The effects of the other control variables were similar to the results for Models 1 and 2. There was no significant difference in the never retire rates between the 2016 and 2019 SCF respondents.

Conclusion and Implications

In the descriptive analyses, we found that respondents who missed one or more objective financial knowledge questions were significantly more likely to have chosen the never retire response than those who answered all three questions correctly. We found a similar pattern for the subjective financial knowledge question with those who perceived themselves in the lowest subjective knowledge category being significantly more likely to choose the never retire response than those who perceived themselves to be in the highest subjective knowledge category. We also found that those with appropriately low confidence and overconfidence had higher never retire rates than those with appropriately high confidence and with under-confidence.

The relationships between the never retire response and financial knowledge were weaker when other variables were controlled in the

logistic regressions. With both objective and subjective financial knowledge and many other household characteristics controlled, respondents with a fair level of financial knowledge (i.e., missed one question) were more likely to give a never retire response than respondents who got all three questions correct. We also found that household characteristics, financial situation, and financial attitudes had significant relationships with the never retire response. For the Model 3 logistic regression (i.e., the model that included financial knowledge confidence variables and the control variables), financially knowledgeable underconfident respondents were significantly less likely than similar overconfident respondents to give a never retire response, suggesting the importance of teaching workers not only financial knowledge but also the limits of their knowledge.

Financial planners, financial counselors, and financial educators should pay attention to the level of financial knowledge and confidence levels of their clients and also consider risk tolerance and other factors that are directly related to retirement expectations. Educators and policymakers not only need to consider the impacts of financial knowledge on retirement plans and make relevant plans for education and policy but also need to consider how to help people build suitable confidence in financial knowledge. Workers could benefit from these plans by making more rational retirement plans and financial plans based on their own situations.

In summary, evaluations of retirement adequacy need to include careful considerations of what never retire responses mean. Some analyses of the projected retirement adequacy of U.S. workers (e.g., Yuh et al., 1998) assume that those giving a never retire response will retire at age 70. As Hanna et al. (2017) demonstrated, it

is plausible that those households will retire at a much younger age, and therefore will have less retirement adequacy. Therefore, some projections of the proportion of workers on track for an adequate retirement might be too optimistic.

Table 4. Logistic Regression Analysis of the Likelihood of Full-Time Worker Household Heads Aged 35–60 Years Expecting Never to Retire, Model 3, With Confidence in Financial Knowledge Variables

Variable	Coefficient	Standard Error	Chi-Square <i>p</i> Value	Odds Ratio
Financial confidence categories (reference category=overconfident)				
Appropriate low confidence	-0.1472	0.1329	0.2678	0.8630
Appropriate high confidence	-0.0832	0.1237	0.5015	0.9202
Underconfident	-0.3212	0.1432	0.0249	0.7254
Log (net worth) (Ln [.01] if net worth ≤ 0)	-0.0068	0.0098	0.4876	0.9930
Log (income) (Ln [.01] if income ≤ 0)	-0.0187	0.0240	0.4357	0.9812
Racial ethnic status of respondent (reference category = White)				
Black	-0.2969	0.1467	0.0430	0.7432
Hispanic	-0.4441	0.1475	0.0026	0.6414
Asian/other	-0.2311	0.1942	0.2341	0.7934
Have a defined benefit pension plan	-0.8378	0.2026	0.0000	0.4328
Perception of the adequacy of retirement income (reference category = Enough to maintain living standards)				
Very satisfactory	-0.0438	0.1368	0.7487	0.9574
Satisfactory	-0.5878	0.1597	0.0002	0.5558
Inadequate	-0.0278	0.1491	0.8518	0.9728
Totally inadequate	0.4937	0.1255	0.0001	1.6382
Head self-employed	0.6375	0.1067	<.0001	1.8918
Years of education of the head	-0.0516	0.0190	0.0065	0.9496
Perceived health status of the head (reference category = Good health)				
Excellent health	-0.0224	0.1088	0.8367	0.9778
Fair health	0.0507	0.1227	0.6796	1.0520
Poor health	-0.2067	0.3675	0.5738	0.8136
All in household covered by health insurance	-0.2956	0.1249	0.0179	0.7440
Age of the head	0.0004	0.0064	0.9535	1.0006
Expect a substantial inheritance or other transfer	-0.3237	0.1299	0.0127	0.7236
Expectations for the economy (reference category = Better)				
Worse	0.1426	0.1366	0.2966	1.1534
Same	-0.1640	0.1217	0.1778	0.8488
Life expectancy for the head (reference category = Younger than 71 years)				
Live to 71-80 years	-0.6340	0.1473	<.0001	0.5310
Live to 81 years or older	-0.4942	0.1428	0.0005	0.6106
Household type (reference category = Married)				
Partnered couple	0.4441	0.1483	0.0028	1.5590
Single male	0.4381	0.1278	0.0006	1.5496
Single female	-0.0920	0.1414	0.5155	0.9118

Variable	Coefficient	Standard Error	Chi-Square <i>p</i> Value	Odd Ratio
Spending relative to income (reference category = Same as income)				
More than income	0.0193	0.1364	0.8873	1.0194
Less than income	-0.1022	0.1079	0.3435	0.9030
Job title of the head (reference category = transportation)				
Executive, admin, manager, teachers	0.0153	0.1663	0.9269	1.0156
Engineer, technician, office	-0.1116	0.1810	0.5373	0.8946
Protective and miscellaneous service	-0.0078	0.1957	0.9681	0.9924
Construction, production, repair	-0.0945	0.1776	0.5947	0.9102
Farming, fishing, forestry	0.3356	0.3036	0.2689	1.3994
Saving reasons (reference category = other saving reasons)				
Cannot save	0.5640	0.3596	0.1168	1.7576
Retirement	-0.4483	0.0990	<.0001	0.6386
Investment	-0.1483	0.3030	0.6246	0.8624
Financial risk tolerance (reference category = take no risk)				
Substantial risk	0.0659	0.1868	0.7243	1.0682
Above average	-0.5841	0.1380	<.0001	0.5574
Average	-0.5562	0.1151	<.0001	0.5736
Year = 2019	0.0433	0.0890	0.6267	1.0444
Intercept	0.6523	0.4981	0.1904	
Concordance (averaged for 5 implicates)	73.48%			

Notes. *N* = 4,607 households. Unweighted repeated-imputation inference (RII) analysis of combination of 2016 and 2019 Survey of Consumer Finances dataset (SCF).

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