Financial Regret at Older Ages and Longevity Awareness

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Draft - Not for Circulation

The authors acknowledge research support for this work from the Health and Retirement Study at the University of Michigan, and the Pension Research Council/Boettner Center at The Wharton School of the University of Pennsylvania. We thank Yong Yu for excellent programming. All findings and conclusions expressed are those of the authors and not the official views of any institutions with which the authors are affiliated. This research is part of the NBER Aging program and the Household Portfolio workshop. © 2023 Hurwitz and Mitchell

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Abstract

Many older people express regret about undersaving; here we extend prior work by reporting regret regarding five additional financial topics. With a controlled randomized experiment in the Health and Retirement Study, we first demonstrate that people expressing regret about their financial decisions differ significantly from those who do not. In an experiment, we show that informing people about objective survival probabilities increases regret about not purchasing lifetime income by 49% for the full sample, and by 75% for participants in good health. These results may explain past findings about the role of life expectancy information in altering financial decisions.

Keywords: retirement, insurance, benefit claiming, annuitization, financial dependence JEL codes: D14, D15, D83, G22, G41, G51

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1. Introduction

As the world's population ages, researchers and policymakers have proposed numerous strategies to spur retirement saving¹ and boost the demand for insurance products crucial to later life.² One motivation for such effort is that around 60% of older survey respondents in the United States express regret not having saved more during their working years to ensure adequate retirement consumption.³ Nevertheless, it remains unclear if people's current insurance levels adequately meet their needs. Moreover, most older people do not purchase long-term care⁴ or longevity insurance,⁵ leaving them susceptible to health shocks and running out of money in old age.

Some prior work has explored how demographic characteristics, wealth, personality traits, and external shocks affect elders' saving regret. For instance, Börsch-Supan et al. (2023) reported that personality traits explained only a small fraction of the variation in saving regret, and that the most influential factor (explaining only 7.13% of the variation in regret) was shocks experienced earlier in life. In an experimental setting, Hurwitz et al. (2022a) reported that informing people about both life expectancy and longevity risk boosted their interest in lifetime income annuities. Other studies have found that peoples' decisions to save or buy insurance of various types are correlated with subjective survival probabilities.⁶ Unfortunately, some people exhibit systemic biases when predicting their expected survival probabilities,⁷ and others prefer to avoid thinking about mortality.⁸

To determine how lack of understanding drives poor financial decision making, we analyze how longevity expectations shape financial regret in later life using an experimental

¹C.f., Thaler & Benartzi (2004); Beshears et al. (2021); and O'Donoghue & Rabin (1999).

² C.f., Heimer et al. (2019); Horneff et al. (2020); Hurwitz & Sade (2020); Post & Hanewald (2013); and Remler & Glied (2003).

³ C.f., Mitchell & Moore (1998), Lusardi & Mitchell (2007); and Börsch-Supan et al. (2018). Morrison & Roese (2011) reported that 10% of the American adults they surveyed reported a financial regret; their experiment was quite different from ours, however, in that those participants had to report one salient regret in detail, and then provide more information about that specific regret. The 12 domains they reviewed included education, romance, career, family, parenting, leisure, spirituality, finances, community, health, friends, and self-improvement. In a related study, Gruber et al. (2022) found that many who retired prior to a Finnish pension reform raising the retirement age returned to work afterwards.

⁴ C.f., Zhou-Richter et al. (2010); Brown et al. (2012); and Finkelstein & McGarry (2006).

⁵ C.f., Beshears et al. (2014); Brown (2001); and Finkelstein & Poterba (2004).

⁶ C.f., Bloom et al. (2007); Hurd et al. (2004); and Salm (2010).

⁷ C.f., Elder (2013); and Wu et al. (2015).

⁸ C.f., McGarry (2022).

module we designed and fielded on older Americans in the Health and Retirement Study (HRS). A first group of respondents (the Control group) is not asked nor informed about either subjective or objective longevity. In two other groups, we elicit older peoples' *subjective* survival probabilities; thereafter Treatment group 1 receives no additional information, while Treatment group 2 is also informed about the *objective* risks of living a long time using relevant survival tables. We then assess whether our respondents report regret regarding the financial decisions made at younger ages, by asking all of them about their prior decisions regarding savings, insurance, financial dependence, and benefit claiming ages.

Our results reveal that many older Americans experience high levels of financial regret. Specifically, half of the respondents regret not having saved more, a third regret not buying Long Term Care (LTC) insurance and not working longer, over a quarter regret not having purchased lifetime income payments, closer to a fifth regret not delaying claiming social security benefits, and almost a tenth regret having to depend financially on others. We also find that those who regret their financial decisions differ significantly from those who do not along gender, race, education, income, wealth, and health status dimensions; importantly, they also differ in terms of their longevity optimism. We then demonstrate that providing people with information about longevity risk significantly impacts their expressed remorse regarding the financial decisions they made. Specifically, in our full sample, the provision of objective survival probability information results in a noteworthy increase in regret of approximately 49% (=0.129/0.26), related to having insufficient lifetime income.

This effect is even more pronounced for some subgroups, especially those in good health. When presented with objective survival probabilities, the latter group's regret related to having insufficient lifetime income increases by a substantial 75% (=0.165/0.22). Moreover, regret about having claiming social security benefits too early rise by 43%(=0.086/0.2). There is also other heterogeneity regarding regret in our older sample. Among Black respondents asked only about subjective survival probabilities, the likelihood of expressing regret for not buying lifetime income insurance rises by 54%, compared to the mean across all Black respondents. Furthermore, giving Black respondents both subjective and objective information about survival probabilities boosts their regret by 63%, compared to the mean across all Black respondents. These findings highlight the potential importance of providing people information about objective survival probabilities, if they otherwise would misestimate their chances of living a long time.

Some prior studies suggest that people experience regret when they compare the potential results from having made one choice to those from other choices, while regret is less

likely when people are unable to compare the results of the choices they made versus other outcomes.⁹ For instance, if someone does not understand or does not think about her anticipated longevity, she may be less likely to experience regret in later life regarding financial decisions made when young. Moreover, regret aversion could lead individuals to avoid information about other possible outcomes, as well as the risks of the chosen option (Golman et al. 2017). Accordingly, we hypothesize that since many people are unaware of (or avoid) objective survival information, informing them about the facts will increase their chances of experiencing regret and potentially alter financial choices relevant for old age.

2. Data and Methodology

We fielded a special-purpose module in the 2020 HRS assessing older Americans' expost regrets about savings, insurance, financial dependency, and retirement age.¹⁰ For our research, the survey organization randomly selected 1,612 individuals over the age of 50 to participate in this module, and then it randomly assigned respondents to one of three conditions. The Control group (C) is only asked the regret questions (and not about subjective survival expectations nor provided with objective survival probabilities). The T1 group is asked about subjective survival probabilities, followed by the regret questions; and group T2 is asked about subjective survival probabilities followed by objective information about longevity, and thereafter the regret questions. This design is intended to draw peoples' attention to their subjective assessments of potential longevity, and for the T2 group, also to show them objective longevity information might not understand the potential consequences of their financial decisions or the possible outcomes of options not chosen. Hence, making this concept more salient would be expected to draw their attention to their financial decisions both taken and not taken, and consequently to shape their reported regret.

In our sample, the average age of respondents is 71.4, over half (56%) are female, and 62% are married; moreover, 84% of respondents are White, 10% Black, and 7% Hispanic. Around 10% have less than a high school education, 30% completed high school, 25% have some college, and 35% completed college or had advanced degrees. A majority (67%) is retired, and three-quarters rate themselves in good or better health. Table 1 and Appendix Table 1 provide summary statistics for the entire sample and each of the treatment groups.

⁹ E.g., Zeelenberg and Pieters (2004, 2007); Muermann et al. (2006); and George & Dane (2016).

¹⁰ The HRS is a nationally representative panel study of Americans age 50+; for further information see <u>About</u> <u>Health and Retirement Study (umich.edu)</u>, All results reported herein use HRS sample weights.

Table 1 here

To evaluate how people rate their subjective chances of survival to older ages, we ask two questions of respondents in both T1 and T2 regarding their subjective longevity expectations. First, we ask: *What is the percent chance that you will live at least [F3*Sex*Current age] more years?* Next, we ask: *And what is the percent chance that you will live at least [F4*Sex*Current age] more years?*¹¹ Participants in the second group (T2) are then informed about objective survival probabilities as follows: *According to statistics, out of 100 [men/women (specify R's Sex)] your age, about [F5*Sex*current age] will live at least [F4*Sex*current age] more years on average. Would you say your chances of living at least [F4*Sex*current age] more years are higher than that, lower than that, or about the same?* Control group participants are not asked these two additional questions.

To consistently measure longevity optimism, we then compare peoples' subjective survival probabilities obtained from the HRS core dataset (participants in the Control group of the module are not asked nor informed about survival probabilities) and US cohort life tables from 2021. This enables us to calculate the variable SLE LE, which represents the difference between peoples' subjective and objective survival probabilities (as in Hurwitz et. al, 2022a).¹² To assess financial regret, we ask all respondents about decisions they might have taken in the past, in various financial contexts. Specifically, to evaluate saving regret, we ask: Think about your saving over your life: do you think that what you saved was too little, about right, or too much? and we code the variable Undersaving regret such that it takes the value of 1 if participant i saved too little (as in Börsch-Supan et al. 2023). Extending the same logic to LTC insurance purchase, we first ask: Do you currently have Long Term Care insurance? (Insurance for nursing home care?) And for those who answer they do not, we then ask: If you could do it all over again, do you think you would purchase more Long Term Care Insurance? Next, we code the variable LTC regret such that it takes the value of 1 if participant i answers yes. Similarly, we ask about social security claiming: If you could do it all over again, do you think you would have delayed claiming social security until later, in exchange for higher benefit payments? and we code the variable Social Security early claim regret such that it takes the value of 1 if participant *i* answers yes. For life annuities, we ask participants who mention purchasing longevity insurance: If you could do it all over again, do you think you would have

¹¹ The questionnaire and look-up tables appear online at <u>Module9_Longevity_and_Regret_2020B-A.pdf</u> (<u>umich.edu</u>).

¹² A positive value reflects survival optimism, while a negative value indicates survival pessimism. The sample mean is -0.04, indicating slight pessimism overall.

purchased a higher lifetime payment in exchange for a higher premium? And we further ask those with no longevity insurance: If you could do it all over again, do you think you would have purchased a lifetime payment from an insurance provider? We then code the variable Lifetime income regret such that it takes the value of 1 if participant i answers yes to either question. Regarding financial dependence on others, the respondents are first asked: Do you feel financially dependent on someone other than yourself? as well as: If you could do it all over again, do you think you would save more for retirement to avoid depending on them? We then code the variable Fin. dependence regret such that it takes the value of 1 if participant i answers yes to both questions. Finally, regarding working longer, we ask: If you could do it all over again, do you think you would have worked longer, stopped at about the same age, or stopped working sooner? We code the variable Quit work too soon regret such that it takes the value of 1 if the respondent answers that she would have worked longer.

Results in Table 1 document that a majority of older Americans in this nationally representative survey regret their past financial decisions. Over half (52%) regret not having saved more,¹³ and the two most common reasons for insufficient saving are not planning ahead (27%), and living day to day (29%). One third (33%) express regret for not having bought Long Term Care (LTC) insurance, 34% regret not working longer, 26% regret not having purchased more lifetime income, 19% regret taking social security benefits early, and 9% regret being financially dependent on others. In other words, older respondents report regret over quite a wide range of important financial decisions critical for old age wellbeing.

Table 1 here

Figure 1 presents further insights indicating significant differences between subgroups who express regret regarding their financial decisions, versus those who do not.¹⁴ Specifically, there are notable differences between those expressing regret about not saving enough, versus others. Specifically, a smaller percentage of Whites (79% vs. 90%) do so, married persons (56% vs. 68%), and educated respondents (24% vs. 47% with a college or higher education). Additionally, a lower proportion of participants in good health (71% vs. 87%) regret saving too little, and those who express regret have significantly less wealth. Moreover, participants who regret are significantly less optimistic regarding their chances of survival, compared to those not experiencing undersaving regret.

¹³ This is comparable to the 59% of the age 60-79 respondents in the RAND American Life Panel; Börsch-Supan et al. (2023). Only 1.5% in our sample say they "saved too much."

¹⁴ A full comparison between those who do/do not regret each financial decision appears in Online Appendix Table 1.

Regarding insurance decisions, when we inquire about participant regret regarding not having purchased long-term care and lifetime income insurance, we find that women are more likely to regret not buying LTC insurance (63% vs. 53%), but other groups do not, such as Whites (72% vs. 90%), married persons (52% vs. 66%), and the better-educated (27% vs. 36%). Additionally, fewer respondents in good health (72% vs. 83%) regret their lack of LTC insurance, and those who do regret their decision have significantly lower wealth. Likewise, women are more likely to regret not having bought lifetime annuities (64% vs. 54%), but fewer Whites do so (67% vs. 90%), married persons (49% vs. 66%), and better-educated (19% vs. 40%). Furthermore, only two-thirds (67%) of those in good health, versus 83% of those who are not, regret their annuity decisions. As with those regretting not having bought LTC insurance. Interestingly, people whose subjective life expectancy is closer to their life table figures are less likely to regret virtually every financial decision.

Figure 1 here

3. Multivariate Results

To explore these patterns further, we estimate a multivariate regression model across our sample of i individuals, for each of the six dependent regret variables (j):

$$regret_{i,i} = \alpha_i + \beta_{1,i}T1_i + \beta_{2,i}T2_i + \gamma_iX'_i + \epsilon_{i,i}$$

Controls include an indicator for being in the Treatment group 1 asked only about subjective survival probabilities $(T1_i)$; or for being in Treatment group 2 asked about subjective probabilities and who additionally see the objective survival table information $(T2_i)$. The reference group is the Control. We also include a vector of controls, X'_i , including the respondent's *Age* (in years); *Female*=1 if the respondent is female (else 0); indicators of race/ethnicity (*Black, Hispanic,* and *Other*, with White as the reference group); *Married*=1 if respondent is married (else 0); indicators of educational levels (*high school, some college, college+;* the reference group is high school dropout); employment status (*working, retired; reference group is other including unemployed, disabled, homemaker); an indicator of Good health* =1 if self-reported health is good/very good/excellent (else 0); *Memory* score;¹⁵ and *CESD* or depression score.¹⁶ In additional specifications we control on household net wealth

¹⁵ The memory score totals the number of words correctly recalled immediately from a list of 10 words read to the respondent and after a delay of five minutes.

¹⁶ This measures symptoms of depression computed from eight questions taken from the Center for Epidemiologic Studies Depression Scale (CESD); see Steffick (2000). A higher score indicates more depressive symptoms.

and income (divided by 1,000 in \$2020; *HH total wealth; HH total income*); and *Financial planning horizon* which takes values 1-5 indicating the time horizon over which the respondent makes financial plans (next few months, next year, next few years, next 5-10 years, longer than 10 years; Khwaja et al. 2006). Finally, we include a variable we term call *longevity optimism*, measured as the gap between subjective and life table survival probabilities. Some models (see the appendix) also include interactions between *Age, Female, Married, Good health*, and race/ethnicity variables, along with indicators for the treatment groups (*T1* and *T2*), to test for differences in how participants respond to the information provided.

Next we summarize the factors associated with each of the six financial regret outcomes examined here, after which we highlight the impact of the two treatments compared to the Control group, to show how providing longevity information shapes older peoples' evaluation of their past financial decisions. We provide results for the full sample as well as for subgroups by gender, race, health status, income, wealth, and longevity optimism.

Factors associated with financial regret at older ages

Table 2 summarizes our main findings relative to regret at older ages across the six financial domains of interest, where each column includes a parsimonious set of controls. Overall, the evidence indicates that regret regarding saving and being financially dependent decline with age, while regret for claiming social security too early rise with age. Nevertheless, older people are no more likely to regret not having bought LTC insurance or higher lifetime income. Women are 22% (=-0.042/0.19) less regretful than men about having claimed social security early, yet they are 61% (=0.055/0.09) more disappointed about being financially dependent. Black respondents are notably more regretful than Whites, particularly regarding having claimed social security benefits too early (54% more likely), not having bought LTC (91% more likely), and not having purchased more lifetime income (120% more likely). These results are consistent with previous research finding that Black households are less likely to save.¹⁷ Hispanics also regret not having lifetime income (84% more likely) than Whites. Low levels of LTC demand by Americans may stem from beliefs about the likelihood of needing this insurance, along with the availability of substitutes for formal care (Zhou-Richter et al. 2010; Brown et al. 2012).

Table 2 here

¹⁷ E.g., Galenson (1972); Rha et al. (2006); Hogarth & Anguelov (2003); and Yuh & Hanna (2010). The higher likelihood of regretting not buying LTC insurance among Blacks and Hispanics is consistent with racial disparities in LTC purchase reported by McGarry & Temkin-Greener (2014), as is the likelihood of persons from minority groups and with higher depression scores to reside in poor quality nursing homes (Fennell et al. 2010).

These results also show that better-educated respondents express less regret compared to high school dropouts regarding saving too little, quitting work too soon, not having purchased LTC and lifetime income, and being financially dependent. Likewise, healthier respondents are 29% less prone to regret having saved too little. Persons who score higher on the memory recall test are somewhat less likely to regret not purchasing lifetime income and quitting their job too early. Those scoring higher on depression scores are more likely to regret undersaving and claiming social security too early, as well as not having bought LTC and lifetime insurance.¹⁸ Moreover, in an additional specification (Appendix Tables 2a and 2b), we show that there is a negative relation between wealth and regretting saving too little and depending financially on others. This last result contributes to the vast literature about the relationship between wealth and insurance. While some theoretical studies have predicted a negative correlation between wealth and insurance purchase (Gollier 2003; Koijen et al. 2016), there is also evidence that wealthier people hold more insurance (Eisenhauer & Halek 1999; Fang & Kung 2021). In this older population, we confirm that regret over saving too little, quitting work too soon, and depending financially on others, are negatively associated with being wealthier.

Longevity awareness and financial regret

Table 2 also indicates whether and how the two different information treatments we provided shape respondent reports of financial regret. In the full sample, which includes those who do and do not regret, simply asking people about their subjective survival probabilities (T1) marginally alters reported savings regret. By contrast, respondents who receive the objective longevity information (T2) are 49% (=0.129/0.26) significantly more likely than average to regret not having purchased higher lifetime income payments. Since annuities provide insurance protection against old-age risk, this is an important finding, implying that information provision can be a potent, as well as cost-effective, method of alerting people to and helping them protect against running out of money in old age.

To further evaluate the effects of our interventions on specific subgroups, we perform supplementary analysis summarized in Table 3 on those least likely to experience regret. Specifically, we examine the effects of our treatments by gender, race, health status, income, and survival optimism, by estimating the models for each subgroup. Panel A reveals that information regarding survival probabilities leads to a 50% (=0.149/0.3) increase in regret

¹⁸ The findings with regard to age, education, wealth, and health for saving regret are similar to those in Börsch-Supan et al. (2023). That study did not examine the additional financial regret outcomes explored here.

among women regarding their decision not to purchase lifetime income insurance. Additionally, it results in a 50% (=0.092/0.19) increase in regret among females regarding claiming social security benefits too early. Panel B shows that men given this information are 56% more likely to regret not having bought lifetime income insurance.

Table 3 here

The effect of the information treatment among Whites (Panel C) is mainly evident with respect to lifetime income insurance: those receiving the survival probability information are 44% more likely to express regret for not having purchased the insurance. Among Black respondents (Panel D), both Treatment 1 (inquiring about subjective survival probabilities) and Treatment 2 (providing additional objective information) have an impact. Thus Blacks only asked about subjective survival probabilities are 54% more likely to express regret for not purchasing lifetime income, whereas Blacks who additionally receive the objective information have a 63% higher chance of regretting not having bought lifetime income.¹⁹ The subgroup most affected by the longevity information is persons in good health, as shown in Panel E. Merely inquiring about survival probabilities (T1) results in a 49% increase in regret regarding lifetime income. Giving people additional objective survival probability information results in a 75% increase in regret about not buying lifetime income, and a 43% increase in regret for claiming social security benefits early. Interestingly, for those not in good health (Panel F), giving them objective survival information decreases their undersaving regret by 43.6%. However, when only asked about subjective survival probabilities, they are 46% more likely to express regret for stopping work too early, versus the Control group. While regret among the low-income (Panel G) does not change significantly if asked about survival probabilities or when provided with objective information, it does among the high-income (Panel H). Specifically, giving them objective information increases their regret about not having annuitized more and saved too little. Panels I and J reveal that, among people with a pessimistic survival outlook, merely asking about this boosts regret about quitting their job too early. Furthermore, providing people persons who expect to live longer than the life tables with objective survival information amplifies regret for not having bought lifetime income, and also among those optimistic about their survival chances.

¹⁹ Consistent with Roebuck Bulanda et al. (2009); Hurd & McGarry (1995); Irby-Shasanmi (2013); Mirowsky (1999); Palloni & Novak (2016): and Hurwitz et al. (2022b).

4. Conclusions and Implications

This research confirms that providing longevity information can affect older peoples' regrets related to financial decisions that shape later life wellbeing, including the purchase of long term care insurance and annuities, and social security claiming behavior. To this end, our special-purpose HRS module allows us to assess saving, work, and insurance regret, by randomly assigning participants to a Control and two Treatment groups. One treatment group is asked about longevity perceptions, and the second receives objective longevity information.

Our first important finding is that many older Americans regret having made key financial decisions when young. Over half (52%) of the participants express regret about having undersaved; about one third regret not having purchased LTC and not working longer; 26% regret not annuitizing; 19% regret claiming social security too early; and 9% regret depending on others for financial matters. These findings add to the ongoing debate about whether policymakers should do more to guide financial choices pertaining to retirement saving and insurance. Second, we show that people regretting their financial decisions differ from those who do not, along gender, race, education, income, wealth, and health status dimensions, and most importantly, in their longevity optimism. In particular, Black and Hispanic respondents are notably more regretful than are Whites, particularly about having claimed social security benefits too early, not buying annuities, and not having long term care insurance.

Last, we document that providing information about longevity can significantly influence older persons' expressed regret regarding financial decisions. In particular, overall, giving objective survival probability information leads to a notable 49% increase in regret related to the lack of lifetime income. Additionally, making people aware of their objective survival probabilities has a marked effect on regret among population subgroups, particularly those in good health where merely inquiring about survival probabilities (T1) results in a 49% increase in regret regarding not having enough lifetime income. Furthermore, giving people in good health information about their objective survival probabilities increases their regret about not having sufficient lifetime income by 75%, as well as their regret about having claiming social security benefits too early by 43%.

Our results illuminate a major reason that many older persons experience financial regret, namely because their perceptions of longevity were inaccurate at the time they made key saving, insurance, and benefit claiming decisions. Furthermore, our results can explain past evidence showing that peoples' subjective survival probabilities are correlated with financial behavior. Moreover, informing people about survival probabilities can alter their financial

decisions, suggesting that providing people with objective longevity information when they make key financial decisions could help them avoid making mistakes and hence avoid regret in later life. Our results can also inform researchers and policymakers interested in saving and insurance decisions, since we show that giving people survival information can influence some key financial decisions including how long to work, as well as whether to buy annuities and long term care insurance. We conclude that better understanding of these risk management tools could substantially strengthen old age financial resilience.

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Panel f. Subjective vs. life table survival probabilities %

Note: Confidence intervals indicate +/- 5% significance around the estimated mean. All data weighted; for variable definitions, see text.

	Full sample		Treatme	ent 1	Treatme	ent 2	Control	
Variable	Mean	Std.Err.	Mean	Std.Err.	Mean	Std.Err.	Mean	Std.Err.
Undersaving regret	0.52	0.02	0.54	0.03	0.52	0.02	0.50	0.03
LTC regret	0.33	0.02	0.33	0.02	0.35	0.02	0.32	0.03
Lifetime income regret	0.26	0.01	0.25	0.03	0.32	0.03	0.21	0.02
Fin. dependence regret	0.09	0.01	0.11	0.02	0.08	0.01	0.08	0.02
Social Security early claim								
regret	0.19	0.01	0.21	0.03	0.20	0.02	0.17	0.02
Quit work too soon regret	0.34	0.02	0.35	0.04	0.36	0.04	0.31	0.03
Ν	1,612		539		518		555	

Table 1. Descriptive Statistics of Regret Variables: Overall and by Treatment Group

Notes: Treatment 1 group is asked about subjective survival probabilities and thereafter about regrets; Treatment 2 group is asked about subjective survival probabilities, followed by receiving objective information about longevity, and thereafter about regrets. Control group only asked regret questions. All data weighted; for variable definitions, see text.

	Undersaving regret	LTC regret	Lifetime income regret	Fin. dependence regret	Social Security early claim regret	Quit work too soon regret
Treatment 1	0.061 *	-0.003	0.039	0.014	0.043	0.058
	(0.04)	(0.03)	(0.04)	(0.02)	(0.03)	(0.05)
Treatment 2	0.042	0.013	0.129 ***	-0.010	0.033	0.059
	(0.04)	(0.04)	(0.03)	(0.02)	(0.03)	(0.05)
Age	-0.010 ***	0.000	-0.002	-0.006 ***	0.006 ***	-0.005
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Female	-0.004	0.106 ***	0.082 **	0.055 ***	-0.042 *	0.072
	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)	(0.05)
Black/African American	0.071	0.302 ***	0.313 ***	-0.023	0.102 ***	0.040
	(0.06)	(0.04)	(0.05)	(0.02)	(0.03)	(0.06)
Hispanic	0.063	0.059	0.219 ***	0.004	0.060	0.057
	(0.07)	(0.06)	(0.08)	(0.04)	(0.07)	(0.10)
Married	-0.098 **	-0.062 *	-0.067 **	0.063 ***	-0.024	-0.075 *
	(0.04)	(0.03)	(0.03)	(0.02)	(0.02)	(0.04)
Education, high school	-0.124 *	-0.078	0.024	-0.029	-0.002	-0.100
-	(0.06)	(0.05)	(0.04)	(0.02)	(0.04)	(0.07)
Education, some college	-0.153 **	-0.127 ***	-0.030	-0.048 **	0.044	-0.068
	(0.07)	(0.05)	(0.05)	(0.02)	(0.04)	(0.07)
Education, college+	-0.331 ***	-0.133 **	-0.116 ***	-0.085 ***	-0.013	-0.176 ***
	(0.06)	(0.05)	(0.04)	(0.02)	(0.04)	(0.06)
Employment, working	0.004	-0.018	0.031	-0.051 **	-0.049	
1, , , ,	-0.08	(0.05)	(0.04)	(0.03)	-0.04	
Employment, retired	-0.088	-0.048	-0.021	-0.030	-0.010	-0.090
1	(0.06)	(0.05)	(0.04)	(0.02)	(0.03)	(0.06)
Good health	-0.151 ***	-0.051	-0.066 *	-0.027	-0.012	-0.049
	(0.04)	(0.04)	(0.04)	(0.03)	(0.03)	(0.05)
Memory score	0.000	-0.005	-0.006 *	-0.002	-0.001	-0.012 *
	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)	(0.01)
CESD	0.040 ***	0.016 *	0.019 **	0.008	0.013 ***	0.013
	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)
SLE LE	-0.055	-0.012	0.050	0.013	0.004	-0.116
	(0.08)	(0.06)	(0.03)	(0.03)	(0.04)	(0.07)
SubpopN	1,527	1,528	1,528	1,529	1,529	1,060
Ftest	9.07	12.26	12.47	2.85	6.18	3.46
P value	0.00	0.00	0.00	0.00	0.00	0.00
– Mean of dep var.	0.52	0.33	0.26	0.09	0.19	0.34

Table 2. Multivariate Models of Regret regarding Undersaving, Insurance, and other Financial Decisions.

Notes: Column (1) refers to regret about undersaving; Column (2) refers to regret about not having long term care insurance; Column (3) refers to regret about insufficient lifetime income; Column (4) regret for being financially dependent on others; Column (5) regret for having claimed social security early; and Column (6) refers to regret for quitting work too soon. Treatment 1 group asked about subjective survival probabilities; Treatment 2 group provided with objective survival probabilities as well. Other controls include other race. Standard errors in parentheses * p<0.10, ** p<0.05, *** p<0.01 All data weighted; for variable definitions, see text.

A: Female	Undersaving regret	LTC regret	Lifetime income regret	Fin. dependence regret	Social Security early claim regret	Quit work too soon regret
Treatment 1	0.016	0.075	0.040	-0.014	0.067 *	0.077
	(0.07)	(0.05)	(0.05)	(0.02)	(0.03)	(0.06)
Treatment 2	-0.039	0.068	0.149 ***	-0.001	0.095 ***	0.080
	(0.06)	(0.06)	(0.05)	(0.02)	(0.03)	(0.07)
SubpopN	715	715	716	717	717	549
Mean of dep var.	0.52	0.38	0.30	0.10	0.19	0.36

Table 3. Multivariate Models of Financial Regret by Population Subgroup

B: Male	Undersaving regret	LTC regret	Lifetime income regret	Fin. dependence regret	Social Security early claim regret	Quit work too soon regret
Treatment 1	-0.026	-0.022	0.041	0.021	0.013	0.047
	(0.08)	(0.06)	(0.05)	(0.02)	(0.06)	(0.08)
Treatment 2	0.013	-0.050	0.118 *	-0.009	-0.008	0.086
	(0.07)	(0.05)	(0.06)	(0.01)	(0.06)	(0.09)
SubpopN	523	524	523	524	523	386
Mean of dep var.	0.50	0.29	0.21	0.06	0.26	0.31

C: White	Undersaving regret	LTC regret	Lifetime income regret	Fin. dependence regret	Social Security early claim regret	Quit work too soon regret
Treatment 1	-0.038	0.050	0.020	-0.006	0.055 *	0.038
	(0.05)	(0.04)	(0.04)	(0.02)	(0.03)	(0.06)
Treatment 2	-0.026	0.035	0.093 **	-0.018	0.041	0.064
	(0.05)	(0.05)	(0.04)	(0.02)	(0.04)	(0.07)
SubpopN	929	928	929	930	930	714
Mean of dep var.	0.48	0.30	0.21	0.08	0.20	0.32

D: Black	Undersaving regret	LTC regret	Lifetime income regret	Fin. dependence regret	Social Security early claim regret	Quit work too soon regret
Treatment 1	0.147	-0.048	0.313 ***	0.200	0.005	0.001
	(0.14)	(0.12)	(0.09)	(0.24)	(0.04)	(0.10)
Treatment 2	0.001	-0.031	0.367 ***	-0.022	0.062	-0.010
	(0.14)	(0.10)	(0.08)	(0.05)	(0.06)	(0.10)
SubpopN	223	225	224	161	224	163
Mean of dep var.	0.67	0.63	0.58	0.05	0.33	0.42

E: Good health	Undersaving regret	LTC regret	Lifetime income regret	Fin. dependence regret	Social Security early claim regret	Quit work too soon regret
Treatment 1	0.004	0.055	0.109 **	0.011	0.068 *	0.028
	(0.04)	(0.05)	(0.05)	(0.02)	(0.04)	(0.06)
Treatment 2	0.022	0.017	0.165 ***	0.004	0.086 **	0.082
	(0.05)	(0.06)	(0.04)	(0.02)	(0.04)	(0.06)
SubpopN	922	924	923	925	924	671
Mean of dep var.	0.45	0.31	0.22	0.07	0.20	0.30

F: Not good health	Undersaving regret	LTC regret	Lifetime income regret	Fin. dependence regret	Social Security early claim regret	Quit work too soon regret
Treatment 1	-0.152 **	0.008	-0.093	-0.020	0.000	0.208 **
	(0.07)	(0.10)	(0.07)	(0.02)	(0.06)	(0.08)
Treatment 2	-0.314 ***	0.025	0.115	-0.019	-0.044	0.098
	(0.10)	(0.08)	(0.09)	(0.02)	(0.05)	(0.10)
SubpopN	316	315	316	316	316	264
Mean of dep var.	0.72	0.44	0.41	0.11	0.29	0.45

G: Low income (<\$71,000)	Undersaving regret	LTC regret	Lifetime income regret	Fin. dependence regret	Social Security early claim regret	Quit work too soon regret
Treatment 1	0.008	-0.020	0.015	-0.003	0.046	0.072
	(0.04)	(0.05)	(0.05)	(0.00)	(0.04)	(0.06)
Treatment 2	-0.071	0.005	0.087 *	-0.003	0.032	0.032
	(0.05)	(0.04)	(0.05)	(0.00)	(0.03)	(0.05)
SubpopN	862	864	863	865	864	681
Mean of dep var.	0.59	0.38	0.32	0.08	0.26	0.38

H: High income (>=\$71,000)	Undersaving regret	LTC regret	Lifetime income regret	Fin. dependence regret	Social Security early claim regret	Quit work too soon regret
Treatment 1	-0.038	0.129 *	0.110	0.030	0.021	0.036
	(0.08)	(0.08)	(0.07)	(0.03)	(0.03)	(0.09)
Treatment 2	0.184 *	0.067	0.283 ***	0.011	0.036	0.192
	(0.10)	(0.07)	(0.08)	(0.02)	(0.04)	(0.12)
SubpopN	376	375	376	376	376	254
Mean of dep var.	0.38	0.26	0.16	0.09	0.16	0.24

I: SLE_LE<0	Undersaving regret	LTC regret	Lifetime income regret	Fin. dependence regret	Social Security early claim regret	Quit work too soon regret
Treatment 1	0.016	0.065	0.059	0.014	0.047	0.138 *
	(0.06)	(0.06)	(0.07)	(0.02)	(0.05)	(0.07)
Treatment 2	0.064	-0.039	0.137 ***	0.007	0.051	0.119
	(0.07)	(0.05)	(0.05)	(0.02)	(0.05)	(0.09)
SubpopN	619	619	619	620	619	464
Mean of dep var.	0.54	0.35	0.28	0.09	0.21	0.38

J: SLE_LE≥0	Undersaving regret	LTC regret	Lifetime income regret	Fin. dependence regret	Social Security early claim regret	Quit work too soon regret
Treatment 1	-0.011	-0.025	0.017	-0.026	0.068 *	-0.058
	(0.08)	(0.07)	(0.05)	(0.02)	(0.04)	(0.06)
Treatment 2	-0.086	0.081	0.121 **	-0.021	0.049	0.001
	(0.07)	(0.07)	(0.05)	(0.03)	(0.05)	(0.06)
SubpopN	619	620	620	621	621	471
Mean of dep var.	0.47	0.32	0.24	0.06	0.23	0.28

Notes: Standard errors in parentheses * p<0.10, ** p<0.05, *** p<0. For additional controls see Table 2. All data weighted; for variable definitions, see text.

Appendix Table 1. Descriptive statistics

	Full sample		Treatmen	nt 1	Treatment	2	Control	
		Std.		Std.		Std.		Std.
Variable	Mean	Err.	Mean	Err.	Mean	Err.	Mean	Err.
Undersaving regret	0.52	0.02	0.54	0.03	0.52	0.02	0.50	0.03
LTC regret	0.33	0.02	0.33	0.02	0.35	0.02	0.32	0.03
Lifetime income regret	0.26	0.01	0.25	0.03	0.32	0.03	0.21	0.02
Fin. dependence regret	0.09	0.01	0.11	0.02	0.08	0.01	0.08	0.02
Social Security early								
claim regret	0.19	0.01	0.21	0.03	0.20	0.02	0.17	0.02
Quit work too soon regret	0.34	0.02	0.35	0.04	0.36	0.04	0.31	0.03
Age	71.40	0.28	71.29	0.39	71.30	0.50	71.62	0.34
Female	0.56	0.01	0.61	0.03	0.55	0.03	0.53	0.03
White	0.84	0.01	0.85	0.02	0.81	0.02	0.86	0.02
Black/African American	0.10	0.01	0.09	0.01	0.13	0.02	0.08	0.01
Other race	0.06	0.01	0.06	0.01	0.06	0.02	0.06	0.01
Hispanic	0.07	0.01	0.09	0.02	0.06	0.01	0.08	0.01
Married	0.62	0.02	0.64	0.03	0.61	0.03	0.61	0.03
Education, < HS	0.10	0.01	0.08	0.01	0.10	0.01	0.10	0.01
Education, HS	0.30	0.02	0.32	0.03	0.29	0.03	0.29	0.03
Education, some college	0.25	0.01	0.25	0.03	0.25	0.02	0.26	0.03
Education, college+	0.35	0.02	0.35	0.03	0.36	0.03	0.34	0.03
Employment, working	0.20	0.02	0.18	0.03	0.19	0.03	0.22	0.03
Employment, retired	0.67	0.02	0.68	0.03	0.66	0.03	0.67	0.03
Good health	0.79	0.01	0.78	0.02	0.79	0.03	0.80	0.02
Memory score	10.67	0.14	11.00	0.21	10.61	0.19	10.39	0.21
CESD (depression score)	1.28	0.07	1.42	0.11	1.17	0.11	1.25	0.12
HH total wealth								
(\$2020)/1000	1,007.55	166.49	745.03	95.60	861.92	103.36	1,407.18	486.76
HH total income	00.17	5.00	01.02	(22	05.50	- - 4	06.00	10.20
(\$2020)/1000 Einensist stansing	88.17	5.02	81.93	6.22	85.56	5.74	96.82	10.38
Financial planning horizon	3.34	0.04	3.32	0.07	3.26	0.06	3.43	0.07
Cognition score	23.58	0.04	24.04	0.07	23.64	0.00	23.08	0.07
Subjective survival prob.	0.51	0.21	0.51	0.04	0.52	0.29	0.51	0.01
Objective survival prob.	0.51	0.01	0.51	0.02	0.52	0.02	0.51	0.02
SLE LE	-0.04	0.01	-0.06	0.01	-0.03	0.01	-0.03	0.01
		0.01		0.02		0.02		0.02
SubpopN	1,612		539		518		555	

Notes: For variable definitions see Section 3. All data weighted; for variable definitions, see text.

Appendix Table 2a. Multivariate Models of Regret regarding LTC, Lifetime Income, and Financial Dependence on Treatment Effects, with interactions

		LTC regret		Lifet	ime income regre		Fin.	dependence regre	t
reatment 1	-0.003	0.006	0.552 *	0.039	0.521	0.772 ***	0.014	0.940 ***	0.882 *
	(0.03)	(0.42)	(0.30)	(0.04)	(0.38)	(0.13)	(0.02)	(0.05)	(0.42)
reatment 2	0.013	0.650 ***	0.690 ***	0.129 ***	0.816 ***	0.844 ***	-0.010	0.057	0.034
	(0.04)	(0.11)	(0.07)	(0.03)	(0.06)	(0.03)	(0.02)	(0.40)	(0.33)
.ge	0.000	0.004	0.005	-0.002	0.003	0.004	-0.006 ***	-0.003	-0.002
0	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
emale	0.106 ***	0.049	0.032	0.082 **	0.095 *	0.079	0.055 ***	0.061 **	0.042 *
emare	(0.03)	(0.06)	(0.07)	(0.03)	(0.05)	(0.05)	(0.02)	(0.03)	(0.02)
lack/African American	0.302 ***	0.285 ***	0.313 ***	0.313 ***	0.240 ***	0.133 *	-0.023	-0.003	-0.037 *
nack / tirlean / tillerican	(0.04)	(0.07)	(0.09)	(0.05)	(0.07)	(0.07)	(0.02)	(0.05)	(0.02)
Others, race	0.209 **		0.258	0.101	0.067	0.120	-0.018	-0.043	-0.030
Juners, race		0.187							
r	(0.09)	(0.14)	(0.17)	(0.07)	(0.15)	(0.19)	(0.03)	(0.03)	(0.02)
lispanic	0.059	0.100	0.079	0.219 ***	0.235 *	0.198 *	0.004	0.029	0.027
	(0.06)	(0.10)	(0.12)	(0.08)	(0.12)	(0.12)	(0.04)	(0.05)	(0.04)
farried	-0.062 *	-0.034	0.004	-0.067 **	-0.041	-0.028	0.063 ***	0.067 ***	0.052 *
	(0.03)	(0.06)	(0.06)	(0.03)	(0.04)	(0.04)	(0.02)	(0.02)	(0.02)
Education, high school	-0.078	-0.079 *	-0.061	0.024	0.024	0.055	-0.029	-0.018	-0.013
	(0.05)	(0.05)	(0.05)	(0.04)	(0.04)	(0.05)	(0.02)	(0.02)	(0.02)
ducation, some college	-0.127 ***	-0.129 ***	-0.106 **	-0.030	-0.031	-0.005	-0.048 **	-0.039 **	-0.013
	(0.05)	(0.04)	(0.05)	(0.05)	(0.04)	(0.05)	(0.02)	(0.02)	(0.01)
ducation, college+	-0.133 **	-0.138 ***	-0.113 *	-0.116 ***	-0.112 ***	-0.066	-0.085 ***	-0.073 ***	-0.029
	(0.05)	(0.05)	(0.06)	(0.04)	(0.04)	(0.05)	(0.02)	(0.02)	(0.02)
mployment, working	-0.018	-0.007	0.013	0.031	0.040	0.113 **	-0.051 **	-0.054 **	-0.022
mproyment, working	(0.05)	(0.05)	(0.06)	(0.04)	(0.04)	(0.05)	(0.03)	(0.02)	(0.01)
malormont actived									
mployment, retired	-0.048	-0.043	-0.026	-0.021	-0.017	0.029	-0.030	-0.036 *	-0.018
	(0.05)	(0.05)	(0.04)	(0.04)	(0.04)	(0.04)	(0.02)	(0.02)	(0.01)
bood health	-0.051	-0.007	0.003	-0.066 *	-0.108 *	-0.114 *	-0.027	-0.071	-0.034
	(0.04)	(0.08)	(0.09)	(0.04)	(0.06)	(0.06)	(0.03)	(0.05)	(0.03)
femory score	-0.005	-0.005	0.024 **	-0.006 *	-0.006 *	0.009	-0.002	-0.002	0.000
	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)
ESD	0.016 *	0.016 *	0.023 **	0.019 **	0.020 **	0.013	0.008	0.008	0.004
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)
LE LE	-0.012	-0.013	0.004	0.050	0.040	0.031	0.013	0.011	0.016
—	(0.06)	(0.06)	(0.07)	(0.03)	(0.03)	(0.04)	(0.03)	(0.03)	(0.02)
IH total wealth (\$100k)	(0.00)	(0.00)	-0.003	(0.00)	(0.02)	-0.002	(0.02)	(0102)	-0.005 *
			(0.00)			(0.00)			(0.00)
IH total income (\$100k)			0.027			0.011			0.016
in total meome (\$100k)									
			(0.03)			(0.03)			(0.01)
inancial planning horizon			-0.021			-0.008			-0.013 *
			(0.02)			(0.01)			(0.01)
Cognition score			-0.027 ***			-0.016 **			0.000
			(0.01)			(0.01)			(0.00)
reatment1*Age		0.000	-0.008		-0.006 *	-0.010 **		-0.008 **	-0.003
		(0.01)	(0.01)		(0.00)	(0.00)		(0.00)	(0.00)
reatment1*Female		0.095	0.109		-0.025	0.000		-0.030	-0.029 *
		(0.10)	(0.11)		(0.05)	(0.06)		(0.02)	(0.01)
reatment1*Black/African Ar	nerican	0.006	-0.070		0.136	0.209 *		-0.009	0.097
		(0.11)	(0.11)		(0.09)	(0.11)		(0.05)	(0.13)
reatment1*Others, race		-0.027	-0.131		0.060	0.038		-0.009	-0.008
,		(0.16)	(0.17)		(0.17)	(0.17)		(0.06)	(0.03)
reatment1*Hispanic		0.000	-0.056		0.032	0.044		-0.044 *	-0.026 *
reament i rispanic									
waatmant 1 * 1 f		(0.12)	(0.13)		(0.10)	(0.12)		(0.02)	(0.02)
reatment1*Married		0.007	0.009		-0.018	0.004		0.011	-0.016
		(0.08)	(0.10)		(0.07)	(0.06)		(0.04)	(0.01)
reatment1*Good health		-0.036	0.015		0.184 *	0.182 *		0.108	0.068
		(0.11)	(0.14)		(0.10)	(0.10)		(0.09)	(0.07)
reatment2*Age		-0.010 **	-0.014 **		-0.010 **	-0.013 ***		-0.001	-0.001
		(0.01)	(0.01)		(0.00)	(0.00)		(0.00)	(0.00)
reatment2*Female		0.091	0.094		-0.023	0.015		-0.019	0.000
		(0.10)	(0.11)		(0.06)	(0.08)		(0.03)	(0.03)
reatment2*Black/African A	nerican	0.031	-0.073		0.047	0.087		-0.030	0.015
		(0.11)	(0.10)		(0.08)	(0.08)		(0.04)	(0.015)
reatment2*Others, race		0.080	-0.138		0.066	0.093		0.203	0.302
reacheniz Others, race									
		(0.16)	(0.13)		(0.18)	(0.18)		(0.25)	(0.33)
reatment2*Hispanic		-0.142	-0.136		-0.092	-0.104 *		0.000	-0.001
		(0.10)	(0.11)		(0.06)	(0.06)		(0.06)	(0.04)
reatment2*Married		-0.085	-0.080		-0.035	-0.016		-0.030	-0.027 *
		(0.07)	(0.08)		(0.05)	(0.06)		(0.02)	(0.01)
reatment2*Good health		-0.098	-0.064		-0.006	0.012		0.069	0.063
		(0.08)	(0.11)		(0.06)	(0.06)		(0.08)	(0.08)
ubpopN	1,528	1,528	1,239	1,528	1,528	1,239	1,529	1,529	1,241
	12.26	6.90	3.38	12.47	12.03	6.00	2.85	2.79	3.43
test									
etest Value	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes: Column (1) refers to regret about not having long term care insurance; Column (2) refers to regret about insufficient lifetime income; and Column (3) regret for being financially dependent on others. Standard errors in parentheses * p<0.10, ** p<0.05, *** p<0 All data weighted; for variable definitions, see text.

Appendix Table 2b. Multivariate Models of Regret regarding Saving, Social Security, and Quit Work Too Soon on Treatment Effects with Interactions

Undersaving regret		Social Sec	curity early claim	regret	Quit work too soon regret				
Freatment 1	0.061 *	0.449 ***	0.038	0.043	0.074	-0.043	0.058	0.070	0.040
	(0.04)	(0.07)	(0.53)	(0.03)	(0.36)	(0.25)	(0.05)	(0.59)	(0.66)
reatment 2	0.042	0.479 ***	0.617 ***	0.033	0.125	0.261	0.059	0.174	0.447
	(0.04)	(0.05)	(0.10)	(0.03)	(0.47)	(0.65)	(0.05)	(0.46)	(0.40)
lge	-0.010 ***	-0.001	-0.006	0.006 ***	0.007 ***	0.007 ***	-0.005	-0.004	-0.007
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.01)
emale	-0.004	0.035	0.009	-0.042 *	-0.071 **	-0.119 ***	0.072	0.032	0.005
	(0.03)	(0.06)	(0.08)	(0.02)	(0.03)	(0.04)	(0.05)	(0.07)	(0.08)
Black/African American	0.071	0.004	-0.091	0.102 ***	0.114 **	0.125	0.040	-0.009	-0.064
	(0.06)	(0.09)	(0.10)	(0.03)	(0.06)	(0.08)	(0.06)	(0.10)	(0.11)
Others, race	0.140 **	0.063	0.027	0.110 *	0.156	0.106	0.154	0.042	-0.002
	(0.06)	(0.12)	(0.12)	(0.06)	(0.13)	(0.14)	(0.10)	(0.12)	(0.13)
Iispanic	0.063	0.168 *	-0.028	0.060	0.080	0.069	0.057	-0.103	-0.141 *
	(0.07)	(0.10)	(0.13)	(0.07)	(0.08)	(0.09)	(0.10)	(0.09)	(0.08)
farried	-0.098 **	-0.041	0.042	-0.024	0.027	0.031	-0.075 *	-0.117	-0.055
	(0.04)	(0.06)	(0.07)	(0.02)	(0.04)	(0.04)	(0.04)	(0.08)	(0.08)
Education, high school	-0.124 *	-0.124 *	-0.135 **	-0.002	-0.002	0.001	-0.100	-0.105	-0.137 *
	(0.06)	(0.06)	(0.06)	(0.04)	(0.04)	(0.05)	(0.07)	(0.07)	(0.06)
ducation, some college	-0.153 **	-0.165 **	-0.145 **	0.044	0.044	0.054	-0.068	-0.074	-0.091
	(0.07)	(0.07)	(0.07)	(0.04)	(0.04)	(0.05)	(0.07)	(0.07)	(0.07)
ducation, college+	-0.331 ***	-0.343 ***	-0.212 ***	-0.013	-0.019	-0.017	-0.176 ***	-0.177 ***	-0.109
	(0.06)	(0.06)	(0.07)	(0.04)	(0.04)	(0.05)	(0.06)	(0.06)	(0.07)
Imployment, working	0.004	0.015	-0.002	-0.049	-0.047	0.015			
	-0.08	-0.08	-0.11	-0.04	-0.04	-0.06			
Employment, retired	-0.088	-0.084	-0.054	-0.010	-0.012	-0.002	-0.090	-0.085	-0.060
	(0.06)	(0.06)	(0.06)	(0.03)	(0.03)	(0.04)	(0.06)	(0.06)	(0.06)
food health	-0.151 ***	-0.273 ***	-0.194 **	-0.012	-0.098	-0.090	-0.049	0.014	0.039
	(0.04)	(0.05)	(0.09)	(0.03)	(0.06)	(0.07)	(0.05)	(0.05)	(0.05)
Aemory score	0.000	0.000	-0.022 *	-0.001	-0.002	0.013	-0.012 *	-0.012 **	0.003
	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)	(0.02)
CESD	0.040 ***	0.043 ***	0.044 ***	0.013 ***	0.012 ***	0.009 *	0.013	0.011	0.016
	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)
LE_LE	-0.055	-0.051	-0.003	0.004	0.002	-0.012	-0.116	-0.124 *	-0.061
	(0.08)	(0.08)	(0.07)	(0.04)	(0.04)	(0.05)	(0.07)	(0.07)	(0.07)
IH total wealth (\$100k)			-0.043 ***			0.000			-0.005 *
			(0.00)			0.00			(0.00)
IH total income (\$100k)			0.036			-0.004			-0.072 **
			(0.04)			(0.02)			(0.03)
inancial planning horizon			-0.040 **			-0.001			0.000
			(0.02)			(0.01)			(0.02)
Cognition score			0.024 **			-0.013 *			-0.011
			(0.01)			(0.01)			(0.01)
reatment1*Age		-0.012 **	-0.002		-0.001	0.000		0.000	0.000
		(0.01)	(0.01)		(0.00)	(0.00)		(0.01)	(0.01)
reatment1*Female		-0.037	0.026		0.065	0.094		0.052	0.063
		(0.11)	(0.12)		(0.06)	(0.07)		(0.09)	(0.10)
reatment1*Black/African American		0.238 ***	0.220		-0.026	-0.041		0.094	0.100
		(0.09)	(0.15)		(0.04)	(0.05)		(0.16)	(0.18)
reatment1*Others, race		0.210	0.339 **		-0.073	-0.053		0.110	0.133
		(0.13)	(0.16)		(0.05)	(0.09)		(0.18)	(0.19)
reatment1*Hispanic		-0.196	0.083		0.070	0.107		0.260	0.326
		(0.16)	(0.23)		(0.15)	(0.18)		(0.22)	(0.21)
reatment1*Married		-0.088	-0.032		-0.014	0.013		0.085	0.050
		(0.08)	(0.10)		(0.05)	(0.06)		(0.11)	(0.11)
reatment1*Good health		0.157 **	0.102		0.114	0.084		-0.111	-0.119
		(0.07)	(0.12)		(0.11)	(0.11)		(0.08)	(0.08)
reatment2*Age		-0.017 ***	-0.015 **		-0.001	-0.003		-0.002	-0.005
		(0.01)	(0.01)		(0.00)	(0.00)		(0.01)	(0.01)
reatment2*Female		-0.083	-0.060		0.049	0.106		0.063	0.007
		(0.09)	(0.09)		(0.05)	(0.08)		(0.11)	(0.11)
reatment2*Black/African American		0.021	0.048		0.003	-0.039		0.046	-0.036
		(0.12)	(0.14)		(0.05)	(0.06)		(0.14)	(0.14)
reatment2*Others, race		0.118	0.082		0.053	0.162		0.163	0.357 *
		(0.16)	(0.28)		(0.16)	(0.24)		(0.19)	(0.17)
reatment2*Hispanic		-0.159	0.253		-0.107 ***	-0.130 ***		0.334 **	0.384 *
		(0.20)	(0.30)		(0.03)	(0.04)		(0.14)	(0.15)
reatment2*Married		-0.096	-0.055		-0.085 ***	-0.096 ***		0.027	-0.074
		(0.09)	(0.10)		(0.03)	(0.03)		(0.14)	(0.11)
reatment2*Good health		0.237 ***	0.225 *		0.176 *	0.187 *		-0.034	0.012
		(0.07)	(0.13)		(0.10)	(0.11)		(0.09)	(0.09)
ubpopN	1,527	1,527	1,238	1,529	1,529	1,240	1,060	1,060	935
test	9.07	6.21	8.56	6.18	6.75	4.32	3.46	2.31	2.81
value	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
	0.52	0.52	0.51	0.19	0.19	0.22	0.34	0.34	0.34

Notes: Column (1) refers to regret about undersaving; Column (2) to having claimed social security early; and Column (3) refers to regret for quitting work too soon. Standard errors in parentheses * p<0.10, ** p<0.05, *** p<0.01. For variable definitions, see Section 3. All data weighted; for variable definitions, see text.

Panel A. Undersaving regret

	D	id	Did	not	Ttest	
Variable	Mean	Std.Err.	Mean	Std.Err.	Diff.	Ttest
Age	70.66	0.32	72.23	0.35	-1.58	***
Female	0.58	0.02	0.55	0.02	0.03	
White	0.79	0.02	0.90	0.01	-0.11	***
Black/African American	0.12	0.02	0.07	0.01	0.05	***
Other race	0.09	0.01	0.03	0.01	0.05	***
Hispanic	0.10	0.02	0.04	0.01	0.06	***
Married	0.56	0.02	0.68	0.02	-0.12	***
Education, <hs< td=""><td>0.13</td><td>0.01</td><td>0.05</td><td>0.01</td><td>0.08</td><td>***</td></hs<>	0.13	0.01	0.05	0.01	0.08	***
Education, HS	0.34	0.02	0.26	0.02	0.08	***
Education, some college	0.27	0.02	0.23	0.02	0.05	*
Education, college+	0.24	0.02	0.47	0.02	-0.22	***
Employment, working	0.22	0.02	0.17	0.02	0.05	
Employment, retired	0.61	0.02	0.73	0.02	-0.12	***
Good health	0.71	0.02	0.87	0.01	-0.16	***
Memory score	10.38	0.16	11.00	0.20	-0.62	**
CESD (depression score)	1.66	0.09	0.85	0.08	0.81	***
HH total wealth in 2018						
(\$2020)/1000	290.34	24.60	1,796.61	349.24	-1,506.27	***
HH total income in 2018		2 0 1				
(\$2020)/1000	66.80	3.91	111.76	8.27	-44.95	***
Financial planning horizon	3.14	0.06	3.54	0.05	-0.40	***
Cognition score	23.08	0.24	24.13	0.27	-1.04	***
SLE_LE	-0.09	0.02	0.01	0.01	-0.09	***
SubpopN	905					

Panel B. LTC regret

	D	id	Did	not	Ttes	t
Variable	Mean	Std.Err.	Mean	Std.Err.	Diff.	Ttest
Age	71.45	0.41	71.36	0.33	0.09	
Female	0.63	0.02	0.53	0.02	0.11	***
White	0.72	0.03	0.90	0.01	-0.19	***
Black/African American	0.19	0.02	0.06	0.01	0.13	***
Other race	0.10	0.02	0.04	0.01	0.05	**
Hispanic	0.10	0.02	0.06	0.01	0.04	***
Married	0.52	0.03	0.66	0.02	-0.14	***
Education, <hs< td=""><td>0.16</td><td>0.02</td><td>0.06</td><td>0.01</td><td>0.09</td><td>***</td></hs<>	0.16	0.02	0.06	0.01	0.09	***
Education, HS	0.33	0.03	0.29	0.02	0.04	
Education, some college	0.24	0.02	0.26	0.02	-0.01	
Education, college+	0.27	0.03	0.39	0.02	-0.11	***
Employment, working	0.19	0.02	0.20	0.02	-0.01	
Employment, retired	0.64	0.03	0.69	0.02	-0.05	
Good health	0.72	0.02	0.83	0.02	-0.11	***
Memory score	10.14	0.20	10.92	0.16	-0.78	***
CESD (depression score)	1.61	0.12	1.11	0.07	0.50	***

HH total wealth in 2018 (\$2020)/1000 HH total income in 2018	529.63	79.23	1,247.21	243.77	-717.57	***
(\$2020)/1000	69.90	5.34	97.34	6.75	-27.44	***
Financial planning horizon	3.20	0.07	3.40	0.05	-0.20	**
Cognition score	22.47	0.29	24.14	0.26	-1.67	***
SLE_LE	-0.06	0.02	-0.03	0.01	-0.03	
SubpopN	649		961			

Panel C. Lifetime income regret

_						
	D	id	Did	not	Ttes	t
Variable	Mean	Std.Err.	Mean	Std.Err.	Diff.	Ttest
Age	71.37	0.36	71.42	0.33	-0.05	
Female	0.64	0.03	0.54	0.02	0.11	***
White	0.67	0.04	0.90	0.01	-0.23	***
Black/African American	0.22	0.03	0.06	0.01	0.17	***
Other race	0.11	0.02	0.05	0.01	0.06	***
Hispanic	0.14	0.03	0.05	0.01	0.09	***
Married	0.49	0.03	0.66	0.02	-0.17	***
Education, <hs< td=""><td>0.16</td><td>0.02</td><td>0.07</td><td>0.01</td><td>0.09</td><td>***</td></hs<>	0.16	0.02	0.07	0.01	0.09	***
Education, HS	0.38	0.03	0.27	0.02	0.11	***
Education, some college	0.26	0.03	0.25	0.02	0.01	
Education, college+	0.19	0.03	0.40	0.02	-0.21	***
Employment, working	0.19	0.02	0.20	0.02	0.00	
Employment, retired	0.62	0.03	0.69	0.02	-0.07	*
Good health	0.67	0.03	0.83	0.01	-0.16	***
Memory score	9.84	0.20	10.95	0.16	-1.11	***
CESD (depression score)	1.77	0.12	1.11	0.08	0.66	***
HH total wealth in 2018						
(\$2020)/1000	431.18	94.25	1,209.73	226.81	-778.55	***
HH total income in 2018	(1.27	5.0.4	06.50		22.21	***
(\$2020)/1000	64.37	5.04	96.58	6.63	-32.21	
Financial planning horizon	3.15	0.08	3.40	0.05	-0.25	***
Cognition score	22.01	0.30	24.14	0.25	-2.13	***
SLE_LE	-0.06	0.01	-0.03	0.01	-0.03	
SubpopN	527		1,083			

Panel D. Financial dependence regret

	D	id	Did	not	Ttes	t
Variable	Mean	Std.Err.	Mean	Std.Err.	Diff.	Ttest
Age	68.98	0.63	71.64	0.29	-2.66	***
Female	0.69	0.04	0.55	0.02	0.14	***
White	0.83	0.04	0.84	0.01	-0.02	
Black/African American	0.10	0.02	0.10	0.01	0.00	
Other race	0.08	0.03	0.06	0.01	0.02	
Hispanic	0.11	0.02	0.07	0.01	0.04	
Married	0.75	0.04	0.60	0.02	0.15	***
Education, <hs< td=""><td>0.15</td><td>0.03</td><td>0.09</td><td>0.01</td><td>0.06</td><td>*</td></hs<>	0.15	0.03	0.09	0.01	0.06	*
Education, HS	0.38	0.05	0.29	0.02	0.09	*
Education, some college	0.27	0.05	0.25	0.02	0.02	
Education, college+	0.19	0.04	0.37	0.02	-0.18	***
Employment, working	0.15	0.04	0.20	0.02	-0.05	
Employment, retired	0.59	0.06	0.68	0.02	-0.09	
Good health	0.70	0.05	0.80	0.01	-0.10	*
Memory score	10.55	0.31	10.68	0.15	-0.12	
CESD (depression score)	1.78	0.21	1.23	0.08	0.55	**
HH total wealth in 2018 (\$2020)/1000 HH total income in 2018	347.54	43.23	1,072.65	183.52	-725.11	***
(\$2020)/1000	85.85	13.40	88.39	5.30	-2.54	
Financial planning horizon	2.97	0.17	3.37	0.04	-0.40	**
Cognition score	23.50	0.52	23.59	0.23	-0.08	
SLE LE	-0.12	0.03	-0.03	0.01	-0.08	**
SubpopN	157		1,454			

Panel E. Social Security early claim regret

	D	id	Did	not	Ttes	t
Variable	Mean	Std.Err.	Mean	Std.Err.	Diff.	Ttest
Age	73.29	0.38	70.96	0.30	2.33	***
Female	0.52	0.03	0.57	0.02	-0.05	
White	0.75	0.03	0.86	0.01	-0.12	***
Black/African American	0.15	0.03	0.09	0.01	0.07	***
Other race	0.10	0.02	0.05	0.01	0.05	**
Hispanic	0.12	0.03	0.06	0.01	0.06	*
Married	0.55	0.03	0.63	0.02	-0.08	**
Education, <hs< td=""><td>0.14</td><td>0.02</td><td>0.08</td><td>0.01</td><td>0.05</td><td>**</td></hs<>	0.14	0.02	0.08	0.01	0.05	**
Education, HS	0.30	0.04	0.30	0.02	0.00	
Education, some college	0.30	0.03	0.24	0.02	0.06	
Education, college+	0.27	0.03	0.37	0.02	-0.10	***
Employment, working	0.12	0.03	0.22	0.02	-0.10	***
Employment, retired	0.72	0.03	0.66	0.02	0.06	*
Good health	0.71	0.03	0.81	0.01	-0.10	***
Memory score	9.97	0.28	10.84	0.14	-0.87	***
CESD (depression score)	1.74	0.11	1.17	0.07	0.57	***
HH total wealth in 2018 (\$2020)/1000 HH total income in 2018	656.66	141.50	1,092.99	205.50	-436.33	*
(\$2020)/1000	66.24	6.92	93.51	5.79	-27.27	***

Financial planning horizon	3.21	0.10	3.37	0.04	-0.16
Cognition score	22.57	0.39	23.87	0.22	-1.30 ***
SLE_LE	-0.03	0.02	-0.04	0.01	0.02
SubpopN	362		1,249		

Panel F. Quit work too soon regret

	Ι	Did	Di	d not	Tte	st
Variable	Mean	Std.Err.	Mean	Std.Err.	Diff.	Ttest
Age	72.25	0.35	73.42	0.45	-1.17	**
Female	0.64	0.04	0.56	0.02	0.08	*
White	0.78	0.03	0.88	0.01	-0.11	***
Black/African American	0.13	0.02	0.08	0.01	0.06	***
Other race	0.09	0.02	0.04	0.01	0.05	**
Hispanic	0.11	0.03	0.05	0.01	0.06	**
Married	0.53	0.03	0.65	0.02	-0.12	***
Education, <hs< td=""><td>0.15</td><td>0.02</td><td>0.07</td><td>0.01</td><td>0.08</td><td>***</td></hs<>	0.15	0.02	0.07	0.01	0.08	***
Education, HS	0.35	0.04	0.32	0.02	0.02	
Education, some college	0.30	0.03	0.24	0.02	0.05	
Education, college+	0.21	0.02	0.36	0.03	-0.16	***
Employment, working	0.00		0.01	0.01	-0.01	**
Employment, retired	0.80	0.03	0.90	0.01	-0.09	***
Good health	0.67	0.03	0.79	0.02	-0.12	***
Memory score	9.82	0.24	10.73	0.18	-0.91	***
CESD (depression score) HH total wealth in 2018	1.77	0.12	1.17	0.09	0.60	***
(\$2020)/1000 HH total income in 2018	436	47	1,040	96	-604	***
(\$2020)/1000	57.87	5.20	85.99	6.68	-28.12	***
Financial planning horizon	3.22	0.11	3.37	0.05	-0.15	
Cognition score	22.28	0.34	23.68	0.27	-1.40	***
SLE_LE	-0.10	0.02	0.00	0.02	-0.10	***
SubpopN	401		717			

Notes: * p<0.10, ** p<0.05, *** p<0.01. All data weighted; for variable definitions, see text.