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*Johannes Binswanger and Katherine Carman*

## The Role of Decision Making Processes in the Correlation between Wealth and Health

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# The Role of Decision Making Processes in the Correlation between Wealth and Health

Johannes Binswanger<sup>\*</sup>  
Katherine Grace Carman<sup>†</sup>  
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## Abstract

There are many pathways explaining the relationship between socioeconomic status and health; one possibility is that some normally unobservable characteristic causes people to invest both in their financial well-being and their health. Here we consider the possibility that the decision making processes are similar across domains and that the steps individuals take to make decisions can help to explain the correlation in outcomes across domains. We focus particularly on retirement savings decisions and decisions in the health domain. Choices in both domains have long-term consequences and therefore require foresight and the ability to process complex information. Our results suggest that up to 44% of the correlation between wealth and health is due to the processes that people use to make these choices.

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<sup>\*</sup> [J.Binswanger@uvt.nl](mailto:J.Binswanger@uvt.nl), Department of Economics, CentER and Netspar, Tilburg University, P.O. Box 90153, 5000 LE, Tilburg, The Netherlands.

<sup>†</sup> Corresponding Author: [k.g.carman@uvt.nl](mailto:k.g.carman@uvt.nl); Department of Economics, CentER and Netspar, Tilburg University, P.O. Box 90153, 5000 LE, Tilburg, The Netherlands; +31 13 466 8758.

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## **I. Introduction**

The correlation between socioeconomic status (SES) and health has been documented in many papers and many different arenas.<sup>1</sup> Individuals of higher SES can be expected to live longer, have fewer chronic conditions, and report better self-reported health. We investigate whether the steps individuals take to make decisions in the domains of health and wealth contribute to the long-observed positive gradient characterizing the relationship: higher SES tends to be correlated with better health. These steps may include research of alternatives, calculations of costs and benefits, or seeking advice. We find that decision making can explain up to 44% of the correlation between health and wealth.

While the gradient between SES and health has been documented in many papers, there has been much debate over the causal nature of this relationship. While many possible explanations have been considered, they can be summarized in three main categories: better health is caused by higher SES; higher SES causes better health; or a third factor causes both variables to be correlated.

First, the causal relationship may run from SES to health. This relationship has been shown to be particularly important during childhood. Education (Lleras-Muney 2005), higher parental income (Case et al. 2002 and Condliffe and Link 2008), and even better economic indicators during childhood (van den Berg et al. 2006) can have long lasting effects on health. There is less evidence to suggest that shocks to income or wealth later in life improve health (Carman 2010, Meer et al. 2003 and Snyder and Evans 2006) or that SES after retirement causes health (Adams et al. 2003), although income volatility may play a role (Sullivan and von Wachter 2009). One possible explanation is that education improves knowledge and cognition and thus improves health behaviors (Avitabile et al. 2008, Cutler and Lleras-Muney 2010, and Cutler et al. 2006) or use of medical services (Goldman and Smith 2002 and 2005).

Second, worse health may lower socioeconomic status in adulthood. In particular, those who are sick as children may accumulate less human capital and thus have lower socioeconomic status throughout the life course (Currie and Stabile 2006 and Currie 2009). An alternative pathway is that poor health may force households to spend down their wealth and reduce their labor supply (Smith 1999).

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<sup>1</sup> Smith (1999) and Smith (2004) provide reviews of the literature; other examples include Currie (2009) and Marmot et al. (1991).

Third, Fuchs (1982) posited that some third characteristic, such as discount rates, might improve both health and SES, leading to the positive correlation. Those who take an interest in their future are more likely to invest in both their health and wealth. Cutler and Lleras-Muney (2010) find no evidence that discounting, risk aversion or the value of the future contribute to the correlation between socio-economic status and health, but that social networks may play a role. However there is some evidence that discount rates may affect some health behaviors and health outcomes, in particular smoking (Khwaja et al. 2007a and 2007b), cancer screening (Picone et al. 2004) and obesity (Borghans and Golsteyn 2006 and Smith et al. 2005).<sup>2</sup>

We consider another possible third factor: how people approach complex decisions. Preferences over decision making and the steps one takes to make decisions may contribute to the correlation observed across domains. Individuals who prefer to spend more time and effort on decision making may do so in multiple domains. If these efforts are effective and lead to better outcomes regardless of the domain, then we would expect to see similar outcomes in different domains.

Individuals face complicated decisions about their future in both the health and wealth domains. These decisions are likely to rely on many things, such as utility maximization, discount rates, risk aversion, information, and, in this case, the processing of complex information. In particular, the complexity of the choices and the costs of making choices may influence the choices that people make (Ford et al. 1989, Payne et al. 1993 and Ford et al. 1989). If it is costly to make a decision, some individuals will find it to be worthwhile to invest in a careful approach, while others may take shortcuts, choose randomly, or choose the path of least resistance. The costs of decision making could arise, for example, from the costs of accumulating information, the availability of experts in your social network, or patience for reading complex materials. Individuals with lower cognitive abilities, less patience, or less time may use simplified processes for making choices. Importantly for this paper, the way a person approaches complex decisions may cause that person to make similar choices in different domains.

In this paper, we investigate how the sophistication of decision making can lead to a correlation in outcomes across the domains of health and wealth accumulation. In particular we

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<sup>2</sup> Barsky et al. (1997) also consider the effect of time and risk preferences on behavior. They find that risk preferences play a role, but due to data problems are unable to find conclusive evidence about time preferences.

quantify the share of the correlation between health and wealth that can be explained by decision making processes. We also consider the possibility that individuals may rely on friends, family members, or experts to make these complex decisions.

We use a survey, fielded in the American Life Panel, specifically designed to measure outcomes and decision processes in the domains of retirement savings and health. We focus on wealth accumulation for retirement purposes because this is a measure of SES where current decisions are likely to play a role. The survey measures outcomes such as the amount saved for retirement, having a tax deferred account, purchasing long-term care insurance or health insurance, and use of health care. In addition, we ask people about how they have made decisions in these domains in the past. We assign sophistication scores for each of 6 choices: retirement planning, long-term care insurance, health insurance, health choices, dietary choices, and frequency of doctor visits. Sophistication scores are highest for individuals who engage in careful calculations and research about various alternatives.

We find evidence that individuals do indeed use similar processes across the two domains. In addition, we observe pronounced effects of the sophistication of decision making on accumulated retirement savings and health. Finally, our results, using a Blinder-Oaxaca decomposition, indicate that decision processes explain up to 44% of the relationship between wealth and health. Taken together, these results point to the importance of decision making processes in explaining the relationship between socioeconomic status and health.

As an alternative explanation, we consider the possibility that individuals may rely on friends, family or experts in making a decision. We do not find evidence that reliance on these groups contributes significantly to the health-wealth gradient.

The rest of the paper is organized as follows. Section 2 provides more information about decision processes and a discussion of additional relevant literature. Section 3 presents our data and outlines the measures of decision making used for analyzing the data. Section 4 presents simple OLS regressions predicting the measures of decision making as a function of demographics. Section 5 investigates the relationship between retirement wealth accumulation, health, and decision making. Section 6 considers whether individuals rely on friends or experts and how that might affect the correlation between wealth and health. Section 7 concludes.

## 2. Decision Processes

The motivation for considering decision making processes comes from previous findings in the literature. The importance of decision processes and planning has been discussed in the psychological literature (Gollwitzer 1999 and Gollwitzer et al. 2004). In economics, several papers have shown that how households approach retirement planning can affect wealth accumulation. Those who plan for their retirement accumulate more wealth (Ameriks et al. 2003 and Lusardi and Mitchell (2007)). In other work (Binswanger and Carman 2010), we show that both sophisticated planning and simple rules of thumb lead to higher levels of wealth accumulation than having no systematic approach towards savings.

This paper focuses on decision making in two domains: saving for retirement and health. In the domain of retirement savings we focus on choices about the accumulation of wealth. In the domain of health, we consider a variety of choices about health insurance, long-term care insurance, research about health interventions, doctor visits, and diet. In either case, how the person approaches decision making is likely to influence both health and wealth outcomes and the correlation between these outcomes.

Each of these choices involves many facets. The consequences of the choices do not occur until the future and involve risk, the need to consider many possible outcomes, and the need to synthesize complex mathematical and scientific information. For most people, neither finance nor medical science are their areas of expertise, thus choices in these domains require people to step beyond their normal skills and expertise. As a consequence, the complexity of the decisions and the strategies used to tackle them may be similar across domains.

The most meticulous and conscientious people are likely to address decisions very carefully in both domains and, as a result, make very sophisticated decisions. For example they would research and possibly calculate the costs and benefits of their choices. People who do care but are less thorough may decide to use a rule of thumb in both domains. Finally, there are people who do not take care in making decisions. These people may be more impulsive or make decisions arbitrarily without much thought. Ultimately this may boil down to a combination of personality and ability. If this is the case we expect similar decision processes in both domains.

We would expect those who take more care and use more sophisticated decision processes to achieve better outcomes than those who take little care. Planning for retirement will

tend to lead to higher levels of retirement wealth than taking no particular approach.<sup>3</sup> Similarly we would expect those who are meticulous about healthy eating habits to enjoy better health than those who eat whatever appeals to them at the moment. Thus, those who follow a more sophisticated decision process are likely to have better outcomes, regardless of the domain.

We define a decision process to consist of a series of steps that one takes to make a choice. Decision processes differ in terms of the degree of their sophistication and therefore how costly they are to implement. Gathering detailed information either about retirement plans, insurance, or the efficacy of treatment may require a substantial amount of time and effort. In contrast, following a simple rule of thumb, such as a constant savings rate or just choosing the cheapest alternative does not require a large time investment. Importantly, the costs of researching many alternatives may differ across individuals. It may require little effort for someone with substantial mathematical or scientific training. On the other hand, it may be very burdensome for people with low planning skills and to those with a high disutility of thinking about technical issues.

Decision processes should be distinguished from preferences over lifetime utility profiles. Intertemporal preferences determine the optimal choice of lifetime utility profiles. However, since decision processes may be costly, some individuals may make choices that differ from the first-best choice that they would make if decision making were costless.

If sophisticated decision processes are effective and actually lead to better outcomes, then we would expect individuals who take similar steps in different domains to achieve similar outcomes in those domains. If careful research is beneficial, then those who carefully research both retirement and health decisions can expect to have both better health and higher wealth; while those who do less research can expect worse outcome. This would lead to a correlation between health and SES.

The paper most closely related to this one is Cutler and Lleras-Muney (2010) in that they also document factors that may help to explain the correlation between SES and health. There are two main differences between our paper and theirs. First, they focus on specific health behaviors and outcomes, such as smoking and obesity. In contrast, we consider overall self-reported health. Second, they use education as their measure of SES and we use retirement wealth. However, Cutler and Lleras-Muney's strategy is similar to ours: how does the

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<sup>3</sup> See Binswanger and Carman (2010).



correlation of interest change when we control for other related factors. Another important difference is that they focus on the changes in coefficients in regressions when new controls are added. We use this strategy as well, but also include a Blinder-Oaxaca decomposition to further estimate how each factor contributes to the overall correlation between wealth and health.

Much of the literature on the correlation between SES and health, including Cutler and Lleras-Muney 2010 and those discussed in the introduction, has focused on the long-term relationship between the two variables. For example, many papers have considered the effect of childhood on health at older ages. This paper, in contrast, considers current retirement wealth accumulation and current choices regarding health care financing, health care and health behaviors. This allows us to consider the role of similarity in decision making in explaining the correlation between health and wealth. Were we to focus on choices during childhood, it would likely be difficult for most people to remember what they had done. More recent choices are more likely to be salient.

Another closely related paper is Khwaja et al. (2007b). They investigate whether or not financial planning is related to smoking planning. They find that while financial planning does predict wealth, it does not relate to smoking planning. The key similarity in Khwaja et al. 2007b and our paper is the relationship between financial planning and health. However, they focus on a very specific type of health planning: planning to smoke. Because smoking is addictive, the nature of planning to smoke may be very different from planning in other areas of health.

### **3. Data**

Our data come from a survey module fielded in the RAND American Life Panel (ALP). The ALP is an Internet panel where respondents fill out questionnaires online.<sup>4</sup> Our module was fielded in August 2008. All respondents in our sample participate in the labor market. The ALP provides us with information on respondents' background characteristics such as age, gender, education, etc. Our sample includes 653 observations. Table 1 includes summary statistics of the main demographic characteristics of our sample. Our sample is slightly older and better

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<sup>4</sup>The respondents in the ALP are recruited from among individuals aged 18 and older who are respondents to the Monthly Survey (MS) of the University of Michigan's Survey Research Center (SRC). Those without internet access prior to participation in the panel are provided with internet access through WebTVs. Respondents are paid proportionally to the length of a questionnaire. For an interview of thirty minutes, a respondent typically obtains \$20.



educated than the general population. However, this may be a more relevant group for understanding retirement planning and wealth accumulation.

Table 1 also contains summary statistics for our main outcome variables. As a measure of health, individuals report their self-reported health on a scale from excellent to poor. Self-reported health has been shown to be a reliable measure of health.<sup>5</sup> Nearly three fourths of the sample report to be in excellent or good health. As a measure of wealth we use wealth accumulated for the purposes of retirement. While the mean wealth accumulated for retirement is \$188,532, the median is considerably lower: \$62,500.

Retirement wealth, as opposed to overall financial wealth, is considered because it is more likely to be the result of an individual's decision process. One must choose to designate wealth as retirement wealth, usually in an IRA or 401(k) account. Overall wealth may be the result of bequests and therefore less affected by decision processes. While people may expect to receive a bequest, the size of that bequest (and therefore the impact on wealth) is often out of their control. Thus overall wealth may be less related to decision processes.<sup>6</sup>

Table 2 contains detailed information about the sophistication scores. Several questions were asked in each of 6 decision making domains: retirement planning, long-term care insurance, health insurance, health choices, dietary choices, and frequency of doctor visits. Table 2 includes the exact wording of each of the questions. These questions were written to identify those who take the most care in making a decision, those who take a moderate amount of care or use a simplified rule to make choices, and those who have a more carefree attitude towards making decisions. For example, in the case of choices about health insurance: some carefully calculate the total expected cost of insurance including premiums and out of pocket expenditures. Others simply choose the plan with the cheapest premiums. Still others seem to use no systematic approach to selecting a plan.

For each domain, several questions were asked about how individuals made choices in the past. They could respond to these questions using a 5 point scale: 1= strongly disagree to 5=strongly agree. The answers to these questions were then added together and normalized to range from zero to one so that all scores have a comparable magnitude. In order to avoid acquiescence response bias, some statements were used that were associated with less

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<sup>5</sup> See Idler and Benyamini (1997) for a review of studies on this topic.

<sup>6</sup> Our results are robust to using overall wealth, not wealth accumulated for retirement. These results are available from the authors.

sophisticated decision making. These statements then were subtracted from the overall score for the domain. An overall average score, the average across each of the 6 domains, was also calculated. Table 2 also includes summary statistics for each question and score. The table also reports the formulas used to calculate each score. Scores are reported in the last row of each panel. Figure 1 depicts the distribution of each of the 7 scores. All 7 scores, including the average, exhibit similar distributions, with middle values being more common than extremes.

While the selection of specific scores is subjective, our results are robust to other definitions of scores or including each question separately in the regressions. We use scores in our analysis because this eases the interpretation of the answer to our main research question: do decision making processes contribute to the correlation between wealth and health.

The 6 decision making domains investigated here represent both financial choices and choices about health related behaviors. The retirement planning, long-term care insurance and health insurance domains represent financial choices. Health choices, dietary choices, and choices about the frequency of doctor visits represent behavioral choices. Because they combine financial and health choices, long-term care insurance and health insurance choices are likely to fall somewhere between the retirement planning domains and the health domains.

Questions about health insurance were only asked to a limited sample. Roughly 45% of our sample reported that they had insurance purchased through their employer and that their employer offered only one choice of health insurance policies. These individuals were not asked additional questions about their decision making process. For these individuals, the choice regarding health insurance was relatively simple and not likely to depend on the sophistication of decision making processes. While these individuals might have considered insurance purchased on the private market, rarely would this be a financially attractive option. The single health insurance package offered by their employer is likely a dominant alternative.

#### **4. Correlates of Decision Processes**

This section examines which people have the highest sophistication scores. We investigate which demographic characteristics are most associated with the sophistication scores. In addition, we examine the correlation between scores.

Table 3 presents the results of 7 regressions predicting each of the various scores, including the average across all six areas. We include homeownership as a proxy for income,

and education as a proxy for income and cognitive ability. For the most part, higher levels of education are associated with higher scores. Men are more likely to have higher scores for retirement planning; women are more likely to have higher scores for choices about health, choices about diet and choices about the frequency of doctor visits. Homeownership is associated with more sophisticated decision making for the financial choices, perhaps because homeownership often requires a mortgage, which can involve complicated decision making. Other variables are not significant.

Table 4 considers the correlation in decision making between the retirement planning domain and all other domains. Each column represents a separate regression predicting the sophistication score for the retirement planning domain. For example, the first column contains sophistication in decision making in the long-term care domain as an explanatory variable. In all cases, the coefficients on the other controls remain roughly the same as those in Table 3: men, homeowners, and those with more education use more sophisticated decision making processes. More sophisticated decision making in the retirement planning domain is associated with more sophisticated decision making in each of the five health domains. Increasing the sophistication score in one of the health decision domains from 0 to 1 is associated with increasing the retirement planning score by 0.06 to 0.39; the strongest relationships are for health insurance and health research domains and the least for frequency of doctor visits. For any sophistication score, an increase of 0.05 to 0.1 is equivalent to moving up one step on a 5-point Likert scale, for example, from agree to strongly agree for one question.

The correlation in decision making is statistically significant in all cases. This suggests that those who use more sophisticated decision making processes in one domain are likely to do so in other domains. Similar decision making processes may help to explain the correlation between wealth and health, which we turn to in the next section.

## **5. Decision Making Processes, Health and Wealth**

This section examines how decision making processes influence the correlation between health and wealth. First we investigate whether or not decisions making processes affect health and/or wealth independently. Then we turn to the joint relationship between wealth and health.

Table 5 examines the determinants of self-reported health. Here we see that homeownership (which proxies for SES) is associated with higher levels of self-reported health.

Relative to those with only a high school education, those with some college have worse health. Other control variables are not significant. The sophistication of decision making does play an important role. Each regression considers sophistication in a different domain. The first column examines the relationship between self-reported health and the average sophistication score. An increase in the average sophistication score from zero to one would increase self reported health by 0.96 points on a scale from one to five, suggesting that the most sophisticated decision makers report nearly 1 full point better health on a five point scale, even when controlling for education. If we consider the individual measures of sophistication, we see that health choices and dietary choices have the largest impact on health, but choices in financial domains (with the exception of health insurance) are still significant. This suggests that those who are more able to make complex choices, even controlling for education, enjoy better health. The effects of financial choices on health tend to be smaller than the effects of health choices, this could occur because financial choices don't directly influence health, but rather serve as a proxy for decision making in the health domain. Nevertheless, the coefficients on financial choices are still sizeable.

Table 6 considers the effect of decision making on the accumulation of wealth for retirement. Wealth accumulation is positively associated with gender, homeownership, marital status, and education. Again, the sophistication of decision making plays an important role. As in Table 5, each regression considers sophistication in a different domain. The first column examines the relationship between wealth and the average sophistication score. An increase in the average sophistication score from zero to one would increase retirement wealth by 8.54 log points. Moving from agree to strongly agree on one question is associated with a 23% percent increase in wealth. While these effects seem large, the variation in wealth accumulated for retirement is very large. The 25<sup>th</sup> percentile is \$10,000 and the 75<sup>th</sup> percentile is \$200,000. If we consider the individual measures of sophistication, we see that retirement planning and health insurance choices have the largest impact on wealth, but choices in the other domains are still significant. This suggests again that those who are more able to make complex choices, controlling for education, enjoy higher wealth. Similar to the previous table, the effects of financial choices on wealth tend to be larger than the effects of health choices; this likely occurs because health choices don't directly influence wealth, but rather serve as a proxy for decision making in the wealth domain.

The next three tables address the role of decision making on the joint relationship between wealth and health. We present 3 different specifications supporting the view that decision making helps to explain the relationship between wealth and health. In Table 7, we present OLS regressions that consider the impact of health on wealth (in logs). Model 1, in the first column, does not control for decision making. Here we see that a 1 point increase in health (on a 5 point scale) is associated with approximately a 38% percent increases retirement wealth. In the next seven columns we consider the effect of adding the decision making sophistication scores. The addition of the sophistication scores tends to reduce the magnitude of the coefficient on self reported health, and at times that coefficient becomes insignificant. The coefficient on health is reduced by up to 62% depending on the specification, with the largest reduction associated with the average sophistication score. Because the average score combines information across multiple domains, it is likely to be the measure of decision making processes that exhibits the least noise. It is worth noting that the percentage reduction in the coefficient is not necessarily statistically significant. Furthermore, this methodology makes it difficult to measure the statistical significance of the contribution of decision making to the correlation between health and wealth; therefore we consider a Blinder-Oaxaca decomposition below. However, the results suggest that the sophistication of decision making does indeed play a role in the correlation between retirement wealth accumulation and health. Those who use more sophisticated decision making processes tend to be healthier and to accumulate more wealth for their retirement.

Table 8 presents an instrumental variables analysis. We use decision making in the health domain as an instrument for the retirement planning score. Using decision making in the health domain as an instrument for retirement decision making allows us to focus on the part of decision making that is common across domains. This common decision making process may reflect fixed personality characteristics or cognition. In addition, we use self-assessed mathematical skills as an instrument, which provides an exogenous source of variation in decision making in complex mathematical problems, as described in Ameriks et al. (2003). Columns 1 and 2 in Table 8 repeat the results from columns 1 and 3 in Table 7 for comparison. Comparing column 1, the OLS results without controlling for retirement sophistication, to column 3, the IV results controlling for retirement sophistication, we see that common aspects of sophistication across domains again reduce the impact of health on wealth. Comparing columns

2 and 3, OLS and IV with sophistication scores, there is no economically significant difference. The IV strategy reduces the coefficient on retirement planning to measure the effect of the variation in retirement planning that is explained by variation in decision making processes in health. The sophistication score is significant in both the OLS and IV, which shows that it is not merely endogeneity between wealth and financial planning causing the statistical significance.

Tables 7 and 8 suggest that decision making processes influence the correlation between wealth and health. Those who use sophisticated decision process have better outcomes in both domains. But this analysis does not allow us to fully measure the contribution decision making processes make to the correlation. A Blinder-Oaxaca decomposition can be used to quantify what proportion of a correlation can be attributed to observable and unobservable factors and to test the statistical significance of this contribution (Blinder 1973 and Oaxaca 1973). The decomposition provides the strongest evidence of the contribution of decision making processes to the correlation between health and wealth.

Blinder-Oaxaca decompositions are typically used to explain differences in wages across groups, such as genders. Differences between groups can then be attributed to an explained portion, due to their observable characteristics, and an unexplained portion, which can be due to unobservable differences or in the case of the labor market, discrimination. In our case, differences between the groups, the healthy and the less healthy, can be attributed to an explained part due to observable characteristics, such as the sophistication of decision making and demographic characteristics, or an unexplained part. The unexplained part may be due to unobservable characteristics, as is normally the case with a Blinder-Oaxaca decomposition, or due to the causal link between health and SES status. In particular, there may be a direct causal relationship because those who are in better health can anticipate a longer life expectancy and therefore have greater need for retirement wealth accumulation. With a Blinder-Oaxaca decomposition, everything that is not explained by the observed characteristics is attributed to the unexplained part. If there is a direct causal link between health and SES then this will not be picked up by the observed characteristics and, as a result, will end up in the unexplained part.

We conduct a Blinder-Oaxaca decomposition that investigates what portion of the difference between the wealth of the healthy and the wealth of the less healthy is explained by differences in decision making sophistication. Here, we separate our sample into two groups based on their health. The less healthy group reports health to be poor, fair or good, and

represents one fourth of our sample. The healthy group reports health to be very good or excellent, and represents three fourths of our sample.

Table 9 presents the results of this analysis. The difference in retirement wealth accumulation for the healthy versus the less healthy is 1.188 log points. The first column shows that if we do not control for decision making, only 48% of the relationship between health and wealth accumulation is accounted for. When we add the average sophistication score in the second column, this jumps to 83%. In addition, 44% of the total difference can be attributed to differences in the average sophistication score. This suggests that nearly one half of the relationship between retirement wealth accumulation and health can be attributed to decision making. The average sophistication score is the best measure of decision making because it combines information across domains and thus is likely to capture more fully the individual's overall approach to decision making. This is our preferred specification. In fact, the proportion explained by the average score (44%) is greater than the proportion explained by any of the individual scores.

The other six columns consider the individual decision making scores in each separate domain. Column 3 considers retirement planning sophistication. The total explained portion of the difference decreases from 83% in column 2 to 68% in column 3. Here, 27% of the difference in the wealth of the healthy vs. the less healthy can be attributed to difference in retirement planning. This is still a sizeable contribution and suggests that decision making in the specific domains also contributes to the difference in health and retirement wealth accumulation. Considering columns 4 through 8 confirms this observation. While retirement planning has a large effect, the other domains also contribute, although the differences are not always significant. One notable case is health insurance sophistication which does explain a 35% of the difference for the subset of the population for whom we can measure health insurance sophistication.

Taken all together the results of Tables 7 through 9 suggest that decision making does influence the relationship between health and retirement wealth accumulation. The Blinder-Oaxaca decompositions suggest that the role of decision making is quite large. We find that more variation is explained when we consider the average sophistication score across domains rather than any of the domain-specific sophistication scores. These sophistication scores were designed to measure the degree of research, planning, and calculations that go into decision



making in each domain. Of course, all are measured with some error, thus the average may explain more of the variation because it comes closer to measuring the “true” underlying personality trait or decision process.

## **6. The Role of Friends and Experts**

So far, we have considered the role of one aspect of the decision making process, focusing on the degree of sophistication and complexity of decision making. However, there are many possible routes that one may take towards a decision. Those who are less willing or able to make sophisticated decisions, as described above, may rely on others to help them to make choices. This could occur in both the health and financial domain. If you are uncertain of the best investment strategy, insurance product, or health behavior, one possibility is to turn to friends or experts for help. In addition, those who feel unable to evaluate their options may turn to advisors. Alternatively, it is also possible that the people who seek advice are those who are sophisticated enough to realize that they could benefit from help. Individuals who regularly seek advice could have better outcomes in multiple domains, if they are able to find good advisors, and if they are able to find these advisors in multiple domains. These behaviors might also contribute to the correlation between SES and health.

Our survey also included questions about individuals’ reliance on friends, family or colleagues in 3 domains (the retirement planning domain, the health insurance domain, and the health choices domain) and questions about individuals’ reliance on expert advice in all 6 domains.<sup>7</sup> For the financial domain, the expert could be a financial advisor or a financial planning calculator. The text of these questions is included in the appendix, Tables A1 and A2. The questions are all normalized to be measured on a scale from 0 to 1 to be comparable to the sophistication scores in the previous section.

Table 10 investigates which characteristics are correlated with talking to friends, family or co-workers about financial planning, health insurance, and health choices. The first column considers the average of all three domains and the next three columns consider each domain separately. Almost none of the variables help to explain talking to friends about these

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<sup>7</sup> Sample sizes vary across specifications. Individuals who had never heard of long-term care insurance were not asked about reliance on experts. Similarly those who had not seen a doctor in 5 years were excluded from questions about how closely they followed their doctor’s advice. Again, those who reported no choices for health insurance were excluded from those questions.

complicated choices. The most interesting result is that women are more likely to talk to their friends about health choices than men and men are more likely to talk to their friends about retirement planning than women, although the latter effect is not statistically significant. The other coefficients are never significant.

Table 11 shows that those who talk to their friends about health insurance or health choices also discuss financial planning. As in Table 10, nearly all of the other coefficients are insignificant, except for the coefficients on homeowner and male, suggesting that men do talk more to friends and family members about retirement planning.

Tables 12 and 13 investigate whether those who talk to their friends have better health or more wealth. Table 12 shows that relying on friends does not contribute to health, but columns 1 and 2 of Table 13 suggest that talking to friends or family, especially about retirement planning, is associated with more wealth.

Unlike the case of decision making sophistication, when looking at reliance on friends, we don't see much of an impact of decision making on outcomes like health and wealth. Table 14 examines the effect of talking to friends on the joint relationship between wealth and health. Here we see the talking to friends does reduce the correlation between health and wealth but not nearly as much as seen when considering the effects of decision making in Table 7. Disregarding the health insurance case, where neither coefficient is statistically significant, the coefficient on health drops by 10% or less when we control for reliance on friends. While we can only speculate on why this is the case, it may be that most individuals do not have friends with a wide enough set of experiences to advise on both health and savings matters. Alternatively, the advice of friends and family may be of mixed quality; some may be beneficial but some may be detrimental.

In addition to relying on friends, one might turn to experts, such as financial planners, doctors, or diet gurus. Relying on expert advice could take the form of speaking with an expert, or just relying on the recommendations of an expert from a website or book. Table 15 examines which individuals are most likely to report relying on experts. We see that relying on experts tends to increase with homeownership and education. Men are more likely to rely on their doctor to make health decisions, and women are more likely to follow an expert diet. Other effects are insignificant.

In Table 16, we consider correlations across domains. We see that individuals who rely on experts for retirement planning are also likely to rely on experts when making choices about long-term care. This is not surprising, since purchasing long-term care insurance often occurs as part of retirement planning. Similarly, people who closely follow the advice of their doctor also closely follow the advice of their financial advisors. However, we do not observe correlations in other domains.

Table 17 and 18 consider the effect of experts on health and wealth. Table 17 shows that relying on experts has no relationship to health, except for how closely you follow your doctor's suggestions. In Table 18, relying on financial experts, for retirement planning or long-term care decisions, is associated with greater wealth as is relying on experts for diets. Perhaps this is because the wealthy are more likely to diet and/or seek financial planning advice.

Table 19, like Tables 7 and 14, considers whether relying on experts mitigates the relationship between wealth and health. As with relying on friends, expert advice doesn't reduce the coefficient on health much, and even sometimes increases the correlation between health and retirement wealth. The change in the coefficient ranges from -35% to 16% (excluding the coefficient on health insurance which becomes insignificant due to sample size). However these changes are not necessarily statistically significant. To address this point, we again turn to the Blinder-Oaxaca decomposition.

Finally, Table 20 considers Blinder-Oaxaca decompositions like those in Table 9. Here we find that relying on friends and experts does not contribute to explaining the relationship between wealth and health. The percent change explained by these variables is small (1%-4%) and not statistically significant. We present only specifications with the average reliance on friends or experts across domains as the main variable of interest. Results for the domain specific measures described in Tables A1 and A2 confirm there is no significant effect. Thus while sophistication in decision making contributes to the correlation between health and wealth, reliance on friends, family and experts does not.

## **7. Conclusion**

This paper considers how people address decision making in the domains of health and retirement planning. These decisions are often complicated and a well-informed decision can require the acquisition and processing of complex information. Some individuals may take the

time and care to research decisions; others make quick and simple choices; still others may rely on friends and experts. If people use similar processes across domains we might expect those processes to help to explain the correlation between outcomes in different domains.

The results of this paper suggest that the sophisticated decision maker who searches out information and tries to evaluate that information will be both healthier and wealthier. Based on a Blinder-Oaxaca decomposition, sophistication in decision making explains 44% of the correlation between wealth and health. In contrast, relying on friends and experts does not contribute to the relationship between health and wealth. One explanation for the lack of an effect of relying on friends could be that individuals' friendship networks tend not to be broad enough to improve both health and wealth. This doesn't imply that friends and experts can not positively contribute to health or financial decisions, but rather that they don't explain the joint relationship between health and wealth. For example, people who have friends that are very helpful in the health domain may not also know people who are helpful in the financial domain. Perhaps doctors and financial advisors tend not to socialize in the same circles.

A large literature has been devoted to understanding the correlation between SES status and health. While most of the literature focuses on identifying a causal relationship where health causes higher SES status or SES status causes better health, some literature has considered the possibility that a third factor, such as decision making, discount rates or risk attitudes, influences both.

The role of decision making in the relationship between health and wealth could represent discount rates. Those who place a high weight on the future, are likely to save for their retirement, protect their health, and be willing to engage in tedious research to determine the best course of action in these complicated domains. While this may contribute to our results, previous literature suggests the effect of discount rates is small.<sup>8</sup>

The fact that we see a strong correlation in decision making across domains suggests that how people approach complex decisions may be a fundamental personality trait or may be related to cognitive ability in a way that can not be controlled for with education. Those who are conscientious or for whom the costs of gathering and processing information are low can expect to achieve better outcomes in multiple domains. Those who think carefully about all of the decisions they face, may achieve better outcomes. The person who simplifies decisions may end

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<sup>8</sup> Cutler and Lleras-Muney (2010).

up less well off. Finally, ignoring complex issues complete is likely to lead to the worst outcomes.

The paper most related to ours is Cutler and Lleras-Muney (2010); however our results differ significantly from theirs. While their methodology, and even some of their measures that may mitigate the relationship between SES and health, are similar to ours, their measures of SES and health are different. They focus on education while we consider wealth; they focus on health behaviors while we consider general self-reported health. They find no evidence that planning plays a significant role in mitigating the relationship between SES and health, while we find that decision making plays a statistically and economically significant role. The difference in these results is likely attributable to the different measures of SES and health. Our measure of health is more general and thus may pick up factors that influence health through different channels for different individuals. And our measure of SES is closely related to current behavior while their measure, education, was completed years earlier for most survey respondents. Finally, they find a significant effect of social support while we find no effect of relying on friends and family for advice. This suggests that it is not the transfer of information that leads to the mitigation of the relationship between health and SES; rather it may be a general effect of social capital.

Our results suggest that the use of sophisticated decision making processes can explain 44% of the correlation between wealth and health. How people approach decisions influences the relationship between SES and health, however our data do not allow us to precisely describe the causal mechanism. It may be that merely the act of making a careful decision can lead to better outcomes. Or it may be that this represents a fundamental personality trait. These are important topics for future research.

## References

- Adams, Peter, Michael D. Hurd, Daniel McFadden, Angela Merrill, Tiago Ribeiro (2003). "Healthy, wealthy, and wise? Tests for direct causal paths between health and socioeconomic status," *Journal of Econometrics*, vol. 112 (1): 3-56.
- Ameriks, John, Andrew Caplin, and John Leahy (2003), "Wealth Accumulation and the Propensity to Plan," *Quarterly Journal of Economics*, vol. 118(3), 1007-1047.
- Avitabile, Ciro, Tullio Jappelli, and Mario Padula (2008) "Screening tests, information, and the health-education gradient," CSEF Working Papers 187.
- Barsky, Robert B. and F. Thomas Juster, Miles S. Kimball, Matthew D. Shapiro (1997). "Preference Parameters and Behavioral Heterogeneity: An Experimental Approach in the Health and Retirement Study," *Quarterly Journal of Economics*, 1997, vol.112:2, pp. 537-579.
- Binswanger, Johannes and Katherine Carman (2010), "How Real People Make Long-term Decisions: The Case of Retirement Preparation," Working paper.
- Blinder, Alan (1973). "Wage Discrimination: Reduced Form and Structural Estimates," *Journal of Human Resources*, vol. 8, pp. 436-455.
- Borghans, Lex and Bart H.H. Golsteyn (2006). "Time discounting and the body mass index: Evidence from the Netherlands," *Economics & Human Biology*, vol. 4(1), pp. 39-61.
- Carman, Katherine (2010). "Inheritances, Intergenerational Transfers, and the Accumulation of Health," Working Paper.
- Case, Anne, Darren Lubotsky, and Christina Paxson (2002) "Economic Status and Health in Childhood: The Origins of the Gradient," *American Economic Review*, Vol. 92(5), pp. 1308-1334.
- Condliffe, Simon, and Charles R. Link (2008) "The Relationship between Economic Status and Child Health: Evidence from the United States," *American Economic Review*, vol. 98(4), pp. 1605-1618.
- Currie, Janet (2009) "Healthy, Wealthy, and Wise: Socioeconomic Status, Poor Health in Childhood, and Human Capital Development," *Journal of Economic Literature*, vol. 47(1), pp. 87-122.
- Currie, Janet, and Mark Stabile (2006). "Child mental health and human capital accumulation: the case of ADHD," *Journal of Health Economics*, vol. 25(6), pp. 1094-1118.
- Cutler, David M., Mary Beth Landrum, and Kate A. Stewart (2006), "How Do The Better Educated Do It? Socioeconomic Status and Ability to Cope with Underlying Impairment," in

David Wise, ed., *Developments in the Economics of Aging*, Chicago: University of Chicago Press, 2009

Cutler, David and Adrianna Lleras-Muney (2010) "Understanding Differences in Health Behaviors by Education," *Journal of Health Economics*, vol.29, pp. 1-28.

Ford, Kevin J., Neal Schmitt, Susan L. Schechtman, Brian M. Hults, and Mary L. Doherty (1989), "Process Tracing Methods: Contributions, Problems, and Neglected Research Questions," *Organizational Behavior and Human Decision Processes*, vo. 43, pp. 75-117.

Fuchs, Victor R., (1982). "Time preference and health: an exploratory study," In: Fuchs, Victor R. (Ed.), *Economic Aspects of Health*. University of Chicago Press, Chicago.

Goldman, Dana P. and James P. Smith (2002). "Can patient self-management help explain the SES health gradient?" *Proceedings of the National Academy of Sciences*, vol. 99(16), pp. 10929-10934.

Goldman, Dana P. and James P. Smith (2005). "Socioeconomic differences in the adoption of new medical technologies," *American Economic Review*, vol. 95(2), pp. 234-237.

Gollwitzer, Peter M. (1999). "Implementation Intentions: Strong Effects of Simple Plans," *American Psychologist*, vol. 54(7), pp. 493-503.

Gollwitzer, Peter M., Kentaro Fujita, and Gabriele Oettingen(2004), "Planning and the Implementation of Goals," in: Baumeister, R.F. and K.D. Vohs, (Eds.), *Handbook of Self-Regulation: Research, Theory and Applications*, New York: Guilford Press, pp. 211-228.

Idler, Ellen L and Yael Benyamini (1997), "Self-Rated Health and mortality: A Review Twenty-Seven Community Studies," *Journal of Health and Social Behavior*, vol. 38, pp. 21-37.

Khwaja, Ahmed, Dan Silverman, and Frank Sloan (2007a). "Time preference, time discounting, and smoking decisions," *Journal of Health Economics*, vol. 26(5), pp. 927-949.

Khwaja, Ahmed, Dan Silverman, Frank Sloan, and Yang Wang (2007b). "Smoking, wealth accumulation and the propensity to plan," *Economics Letters*, vol. 94(1), Pages 96-103.

Lleras-Muney, Adriana (2005). "The Relationship Between Education and Adult Mortality in the United States," *Review of Economic Studies*, vol. 72(1), pp. 189-223.

Lusardi, Annamaria, and Olivia S. Mitchell (2007), "Baby Boomer Retirement Security: The Roles of Planning, Financial Literacy, and Housing Wealth," *Journal of Monetary Economics*, vol. 54(1), pp. 205-224.

Marmot, Michael, George Davey Smith, Stephan Stansfeld, Chandra Patel, Fiona North, Jenny Head, Ian White, Eric Brunner, Amanda Feeney, (1991). "Health inequalities among British civil servants: the Whitehall II study," *Lancet*, vol. 337(8754), pp. 1387-1393.



Meer, Jonathon, Douglas L. Miller, and Harvey S Rosen (2003). "Exploring the health-wealth nexus," *Journal of Health Economics*, vol. 22(5), pp. 713-730.

Oaxaca, Ronald (1973). "Male-Female Wage Differentials in Urban Labor Markets," *International Economic Review*, vol. 14, pp. 693-709.

Payne, John W., James R. Bettman, and Eric J. Johnson (1993), *The Adaptive Decision Maker*, Cambridge University Press, Cambridge.

Picone, Gabriel, Frank Sloan and Donald Taylor (2004). "Effects of Risk and Time Preference and Expected Longevity on Demand for Medical Tests," *Journal of Risk and Uncertainty*, vol. 28(1), 39-53.

Smith, James P. (1999) "Healthy Bodies and Thick Wallets: The Dual Relation between Health and Economic Status," *Journal of Economic Perspectives*, vol. 13(2), pp. 145-167.

Smith, James P. (2004) "Unraveling the SES-health connection," *Population and Development Review* (Supplement: Aging, Health and Public Policy: Demographic and Economic Perspectives) 30 (2004), pp. 108–132.

Smith, James P. (2007). "The impact of socioeconomic status on health over the life-course," *Journal of Human Resources*, vol. 42(4), pp. 739-764.

Smith, Patricia K. and Barry Bogin, David Bishai (2005). "Are time preference and body mass index associated?: Evidence from the National Longitudinal Survey of Youth," *Economics & Human Biology*, vol. 3(2), July 2005, Pages 259-270.

Snyder, Stephen E. and William N. Evans (2006). "The effect of income on mortality: Evidence from the social security notch," *Review of Economics and Statistics*, vol. 88(3), pp. 482-495.

Sullivan, Daniel and Till von Wachter (2009) "Average Earnings and Long-Term Mortality: Evidence from Administrative Data," *American Economic Review*, vol. 99(2), pp. 133-138.

Van den Berg, Gerard J., Maarten Lindeboom, and France Portrait. 2006. "Economic Conditions Early in Life and Individual Mortality," *American Economic Review*, vol. 96(1), pp. 290–302.

**Table 1** Summary Statistics

<i>Variable</i>	<i>Mean</i>	<i>Std. Dev.</i>
Self-reported health	3.940	0.782
% Excellent	23.43	
% Very good	51.3	
% Good	21.29	
% Fair	3.83	
% Poor	0.15	
Wealth for retirement	191,826	366,025
Ln wealth for retirement	10.001	3.616
Age	47.605	10.274
Home owner	0.783	0.413
Married	0.675	0.469
Male	0.485	0.500
% With some college	0.328	0.470
% with college degree	0.302	0.459
% with advanced degree	0.240	0.428
Sample size	653	

Note: Self-reported health is measured on a scale from 1=poor to 5=excellent

**Table 2 Sophistication Scores**

<i>Name</i>	<i>Question</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Median</i>
<b>Financial Domain</b>				
<i>retneeds</i>	I've tried to determine my financial needs during retirement.	3.364	1.245	4
<i>savper</i>	I have a savings target of regularly saving some percentage of my income, e.g. 5, 10, 15, or . . . . percent.	3.370	1.491	4
<i>savamt</i>	I have a savings target of regularly saving some amount of money, such as e.g. \$100, \$500, \$1000 or . . . per month.	3.110	1.482	3
<i>sophret</i>	<b>Retirement Planning Sophistication Score:</b> $(retneeds + \max(savper, savamt) - 2) / 8$	0.636	0.268	0.75
<b>Long-term Care</b>				
<i>ltcneeds</i>	I spent time calculating my expected needs for long-term care.	2.178	1.183	2
<i>ltcnever</i>	I never thought about long-term care insurance.	2.421	1.219	2
<i>ltcdk</i>	I don't know anything about long-term care insurance.	2.650	1.276	2
<i>sophltc</i>	<b>Long-Term Care Sophistication Score:</b> $(ltcneeds + (6 - ltcnever) + (6 - ltcdk) - 3) / 12$	0.464	0.267	0.5
<b>Health Insurance Domain (Sample limited n=394)</b>				
<i>hicalc</i>	I calculated the annual costs of insurance premiums and my out-of-pocket costs to figure out which plan would be cheapest.	3.033	1.415	3
<i>hiloprem</i>	I chose the plan that had the lowest monthly premiums.	2.652	1.362	2
<i>hilopock</i>	I chose the plan that had the lowest out-of-pocket costs.	2.856	1.284	3
<i>hnotworth</i>	Given the costs of health insurance, I don't think it's worth it for me.	3.042	1.515	3
<i>Sophhi</i>	<b>Health Insurance Domain Sophistication Score:</b> $(hicalc + 6 - \max(hiloprem, hilopock) + (6 - hnotworth) - 3) / 12$	0.595	0.204	0.667
<b>Health Choices</b>				
<i>hresearch</i>	When I have to make a decision about health care, I do a lot of research to find out what all of the options are, e.g. on the internet or in the library.	3.889	1.054	4
<i>hlife</i>	I think that I lead a healthy lifestyle without making too much effort.	3.187	1.082	3
<i>sophhc</i>	<b>Health Choices Sophistication Score:</b> $(hresearch + hlife - 2) / 8$	0.635	0.189	0.625
<b>Dietary Choices</b>				
<i>dccount</i>	I count calories.	2.412	1.305	2
<i>dccareful</i>	I am careful about what I eat.	3.671	1.002	4
<i>dcworry</i>	I don't worry about what I eat.	2.349	1.143	2
<i>sophdc</i>	<b>Dietary Choices Sophistication Score:</b> $(dccountcal + dceatcarf + 6 - dcworry - 3) / 12$	0.561	0.221	0.583
<b>Doctor Visits</b>				
<i>docyear</i>	I go to the doctor every year or every couple of years for a check-up.	4.037	1.387	5
<i>docavoid</i>	I only go to the doctor if something is wrong.	2.837	1.500	3
<i>sophdv</i>	<b>Doctor Visits Sophistication Score:</b> $(docyear + 6 - docavoid - 2) / 8$	0.650	0.303	0.625
<b>Average Sophistication</b>				
<i>soph</i>	<b>Average Sophistication Score:</b> Average of <i>sophret</i> , <i>sophltc</i> , <i>sophhi</i> (when measured), <i>sophhc</i> , <i>sophdc</i> , <i>sophdv</i>	0.590	0.141	0.597

Note: All questions are measure with a Likert scale with 1=fully disagree to 5=fully agree. All sophistication scores are calculated to range from 0 to 1.

**Table 3** OLS Regressions Predicting Scores in Each Domain

Dependent Variable	<i>Model 1</i> Average Sophistication	<i>Model 2</i> Retirement	<i>Model 3</i> Long-term Care	<i>Model 4</i> Health Insurance	<i>Model 5</i> Health Research	<i>Model 6</i> Diet	<i>Model 7</i> Doctor Visits
Age	-0.002 (0.004)	-0.007 (0.007)	-0.008 (0.007)	0.007 (0.008)	-0.002 (0.005)	0.006 (0.006)	0.003 (0.008)
Age squared	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)
Home owner	0.069*** (0.016)	0.103*** (0.029)	0.090*** (0.027)	0.107*** (0.030)	0.035* (0.021)	0.016 (0.024)	0.082*** (0.031)
Married	0.013 (0.012)	0.038 (0.024)	0.002 (0.023)	0.057** (0.023)	-0.021 (0.017)	0.011 (0.019)	0.016 (0.027)
Male	-0.016 (0.011)	0.036* (0.021)	-0.003 (0.021)	-0.034* (0.020)	-0.008 (0.015)	-0.035** (0.017)	-0.055** (0.023)
Dummy for some college	0.043** (0.018)	0.075** (0.035)	0.077** (0.033)	0.010 (0.039)	-0.002 (0.026)	-0.002 (0.030)	0.070* (0.039)
Dummy for college degree	0.062*** (0.018)	0.066* (0.035)	0.118*** (0.034)	0.035 (0.039)	0.033 (0.026)	0.050* (0.029)	0.053 (0.040)
Dummy for advanced degree	0.074*** (0.019)	0.103*** (0.036)	0.110*** (0.035)	0.080** (0.038)	0.023 (0.027)	0.054* (0.031)	0.066 (0.041)
Constant	0.464*** (0.082)	0.558*** (0.157)	0.391** (0.153)	0.292* (0.172)	0.621*** (0.099)	0.369*** (0.132)	0.376** (0.172)
Observations	653	653	653	379	653	653	653
R-squared	0.115	0.064	0.064	0.127	0.016	0.029	0.056

Note: Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 4** OLS Regressions Investigating the Correlation of Decision Processes across Domains

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>
Score for long-term care	0.245*** (0.039)				
Score for health insurance		0.388*** (0.069)			
Score for health research			0.266*** (0.056)		
Score for diet				0.219*** (0.049)	
Score doctor visits					0.060* (0.035)
Age	-0.005 (0.007)	0.003 (0.010)	-0.007 (0.007)	-0.009 (0.007)	-0.007 (0.007)
Age squared	0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Home owner	0.081*** (0.028)	0.097*** (0.035)	0.093*** (0.027)	0.099*** (0.028)	0.098*** (0.029)
Married	0.037 (0.023)	0.008 (0.029)	0.044* (0.024)	0.036 (0.024)	0.037 (0.024)
Male	0.037* (0.020)	0.054** (0.027)	0.038* (0.020)	0.043** (0.021)	0.039* (0.021)
Dummy for some college	0.057 (0.035)	0.105** (0.049)	0.076** (0.034)	0.076** (0.034)	0.071** (0.035)
Dummy for college degree	0.037 (0.035)	0.056 (0.047)	0.057* (0.034)	0.055 (0.035)	0.063* (0.035)
Dummy for advanced degree	0.076** (0.035)	0.086* (0.049)	0.097*** (0.034)	0.091** (0.035)	0.099*** (0.036)
Constant	0.462*** (0.150)	0.149 (0.221)	0.392** (0.156)	0.477*** (0.156)	0.536*** (0.158)
Observations	653	379	653	653	653
R-squared	0.120	0.163	0.099	0.096	0.069

Note: Dependent variable in all models is Retirement Planning Sophistication Score. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 5** OLS Regressions Predicting Self-Reported Health

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>	<i>Model 6</i>	<i>Model 7</i>
Average sophistication	0.958*** (0.238)						
Score for retirement planning		0.308** (0.120)					
Score for long-term care			0.246** (0.119)				
Score for health insurance				0.320 (0.220)			
Score for health research					0.981*** (0.163)		
Score for diet						0.477*** (0.152)	
Score doctor visits							-0.090 (0.103)
Age	-0.010 (0.024)	-0.010 (0.024)	-0.010 (0.024)	-0.010 (0.032)	-0.010 (0.024)	-0.015 (0.024)	-0.012 (0.024)
Age squared	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Home owner	0.184** (0.087)	0.218** (0.089)	0.228*** (0.088)	0.164 (0.111)	0.215** (0.084)	0.242*** (0.086)	0.257*** (0.088)
Married	0.069 (0.073)	0.069 (0.074)	0.081 (0.074)	0.138 (0.097)	0.102 (0.072)	0.076 (0.073)	0.082 (0.074)
Male	-0.065 (0.060)	-0.092 (0.061)	-0.080 (0.061)	-0.089 (0.084)	-0.073 (0.059)	-0.064 (0.061)	-0.085 (0.062)
Dummy for some college	-0.230** (0.102)	-0.212** (0.102)	-0.208** (0.103)	-0.222 (0.152)	-0.187* (0.098)	-0.188* (0.100)	-0.182* (0.103)
Dummy for college degree	-0.008 (0.102)	0.031 (0.101)	0.023 (0.104)	-0.018 (0.148)	0.019 (0.097)	0.028 (0.100)	0.057 (0.102)
Dummy for advanced degree	-0.071 (0.105)	-0.032 (0.104)	-0.027 (0.105)	-0.048 (0.151)	-0.022 (0.099)	-0.026 (0.102)	0.006 (0.104)
Constant	3.614*** (0.538)	3.886*** (0.532)	3.962*** (0.526)	3.863*** (0.747)	3.449*** (0.525)	3.883*** (0.526)	4.092*** (0.524)
Observations	653	653	653	379	653	653	653
R-squared	0.065	0.050	0.046	0.047	0.094	0.057	0.040

Note: Dependent variable in all models is Self-reported health. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 6** OLS Regressions Predicting Log of Wealth

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>	<i>Model 6</i>	<i>Model 7</i>
Average sophistication	8.541*** (1.010)						
Score for retirement planning		5.144*** (0.542)					
Score for long-term care			2.295*** (0.498)				
Score for health insurance				6.292*** (1.093)			
Score for health research					1.201* (0.687)		
Score for diet						1.204** (0.577)	
Score doctor visits							1.208*** (0.464)
Age	0.116 (0.089)	0.138* (0.082)	0.119 (0.094)	0.227 (0.140)	0.103 (0.097)	0.094 (0.097)	0.098 (0.098)
Age squared	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.002 (0.002)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
Home owner	2.054*** (0.396)	2.115*** (0.390)	2.437*** (0.420)	1.975*** (0.536)	2.602*** (0.428)	2.625*** (0.428)	2.545*** (0.424)
Married	0.615** (0.292)	0.530* (0.283)	0.721** (0.306)	0.170 (0.372)	0.751** (0.310)	0.712** (0.311)	0.707** (0.307)
Male	0.658*** (0.237)	0.338 (0.233)	0.530** (0.252)	1.070*** (0.324)	0.532** (0.255)	0.565** (0.254)	0.589** (0.253)
Dummy for some college	0.216 (0.505)	0.195 (0.482)	0.407 (0.522)	1.538** (0.740)	0.586 (0.512)	0.585 (0.515)	0.499 (0.511)
Dummy for college degree	0.968* (0.500)	1.160** (0.477)	1.231** (0.520)	2.025*** (0.722)	1.460*** (0.506)	1.441*** (0.511)	1.436*** (0.502)
Dummy for advanced degree	1.911*** (0.490)	2.013*** (0.468)	2.290*** (0.504)	3.010*** (0.706)	2.515*** (0.490)	2.478*** (0.496)	2.462*** (0.487)
Constant	-0.919 (1.951)	0.171 (1.749)	2.144 (2.032)	-3.343 (3.141)	2.295 (2.142)	2.597 (2.094)	2.587 (2.113)
Observations	653	653	653	379	653	653	653
R-squared	0.313	0.352	0.243	0.350	0.220	0.221	0.225

Note: Dependent variable in all models is log of wealth accumulated for retirement. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1



**Table 7** OLS Regressions Investigating the Relationship between Wealth and Health

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>	<i>Model 6</i>	<i>Model 7</i>	<i>Model 8</i>
Self-reported health	0.384** (0.178)	0.145 (0.165)	0.205 (0.154)	0.322* (0.176)	0.271 (0.196)	0.333* (0.180)	0.344* (0.183)	0.401** (0.178)
Average sophistication		8.402*** (1.009)						
Score for retirement planning			5.081*** (0.539)					
Score for long-term care				2.216*** (0.502)				
Score for health insurance					6.205*** (1.077)			
Score for health research						0.874 (0.692)		
Score for diet							1.040* (0.592)	
Score doctor visits								1.245*** (0.461)
Age	0.105 (0.097)	0.117 (0.089)	0.140* (0.082)	0.122 (0.094)	0.230* (0.139)	0.106 (0.097)	0.099 (0.097)	0.102 (0.098)
Age squared	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.002 (0.002)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
Home owner	2.548*** (0.436)	2.028*** (0.402)	2.070*** (0.396)	2.363*** (0.425)	1.931*** (0.537)	2.530*** (0.435)	2.542*** (0.435)	2.442*** (0.432)
Married	0.694** (0.309)	0.605** (0.293)	0.516* (0.284)	0.695** (0.305)	0.133 (0.378)	0.717** (0.309)	0.686** (0.310)	0.673** (0.305)
Male	0.553** (0.256)	0.668*** (0.238)	0.357 (0.234)	0.555** (0.252)	1.095*** (0.324)	0.556** (0.255)	0.587** (0.254)	0.624** (0.252)
Dummy for some college	0.656 (0.515)	0.249 (0.508)	0.239 (0.486)	0.474 (0.524)	1.598** (0.742)	0.648 (0.515)	0.650 (0.518)	0.572 (0.512)
Dummy for college degree	1.481*** (0.507)	0.969* (0.501)	1.154** (0.477)	1.223** (0.520)	2.030*** (0.721)	1.454*** (0.507)	1.431*** (0.511)	1.413*** (0.504)
Dummy for advanced degree	2.542*** (0.492)	1.921*** (0.491)	2.019*** (0.469)	2.299*** (0.505)	3.023*** (0.707)	2.522*** (0.492)	2.486*** (0.497)	2.460*** (0.489)
Constant	1.482 (2.228)	-1.442 (2.093)	-0.624 (1.860)	0.867 (2.140)	-4.391 (3.252)	1.146 (2.244)	1.261 (2.223)	0.947 (2.252)
Reduction in coefficient on health from column 1		62%	47%	16%	29%	13%	10%	-4%
Observations	653	653	653	653	379	653	653	653
R-squared	0.222	0.314	0.354	0.247	0.353	0.224	0.226	0.233

Note: Dependent variable in all models is log of wealth accumulated for retirement. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 8** IV Regressions Investigating the Relationship between Wealth, Health and Retirement Sophistication

Dependent variable	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
Model type	Log of Wealth OLS	Log of Wealth OLS	Log of Wealth IV	Retirement Sophistication First Stage
Self-reported health	0.384** (0.178)	0.205 (0.154)	0.196 (0.169)	0.015 (0.014)
Retirement planning sophistication		5.081*** (0.539)	5.228*** (1.827)	
Age	0.105 (0.097)	0.140* (0.082)	0.143* (0.083)	-0.008 (0.007)
Age squared	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	0.000 (0.000)
Home owner	2.548*** (0.436)	2.070*** (0.396)	2.037*** (0.421)	0.087*** (0.028)
Married	0.694** (0.309)	0.516* (0.284)	0.520* (0.287)	0.034 (0.024)
Male	0.553** (0.256)	0.357 (0.234)	0.358 (0.248)	0.034 (0.021)
Dummy for some college	0.656 (0.515)	0.239 (0.486)	0.225 (0.516)	0.080** (0.034)
Dummy for college degree	1.481*** (0.507)	1.154** (0.477)	1.144** (0.489)	0.044 (0.034)
Dummy for advanced degree	2.542*** (0.492)	2.019*** (0.469)	2.016*** (0.507)	0.085** (0.035)
Health research	1.482 (2.228)	-0.624 (1.860)	-0.711 (1.986)	0.200 (0.162)
Diet				0.192*** (0.058)
Doctor visits				0.169*** (0.050)
Math confidence				0.034 (0.035)
Constant				0.030*** (0.010)
Reduction in coef. on health from column 1		47%	49%	
Observations	653	653	652	652
R-squared	0.222	0.354	0.354	0.136

Note: Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 9** Blinder-Oaxaca Decompositions Comparing Healthy and Less Healthy

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>	<i>Model 6</i>	<i>Model 7</i>	<i>Model 8</i>
Wealth if health is poor	9.113*** (0.308)	9.113*** (0.308)	9.113*** (0.308)	9.113*** (0.308)	9.152*** (0.397)	9.113*** (0.308)	9.113*** (0.308)	9.113*** (0.308)
Wealth if health is excellent or very good	10.301*** (0.156)	10.301*** (0.156)	10.301*** (0.156)	10.301*** (0.156)	10.274*** (0.219)	10.301*** (0.156)	10.301*** (0.156)	10.301*** (0.156)
Difference	-1.188*** (0.345)	-1.188*** (0.345)	-1.188*** (0.345)	-1.188*** (0.345)	-1.123** (0.454)	-1.188*** (0.345)	-1.188*** (0.345)	-1.188*** (0.345)
Amount explained	-0.571*** (0.165)	-0.989*** (0.200)	-0.808*** (0.207)	-0.673*** (0.174)	-0.794*** (0.274)	-0.658*** (0.179)	-0.633*** (0.173)	-0.582*** (0.168)
Percent explained	48%	83%	68%	57%	71%	55%	53%	49%
Amount unexplained	-0.617* (0.328)	-0.199 (0.303)	-0.379 (0.294)	-0.514 (0.327)	-0.329 (0.364)	-0.530 (0.329)	-0.554* (0.333)	-0.605* (0.324)
Percent unexplained	52%	17%	32%	44%	29%	45%	47%	51%
Amount explained by sophistication score		-0.526*** (0.125)	-0.315** (0.132)	-0.136** (0.063)	-0.398** (0.168)	-0.090 (0.067)	-0.073 (0.045)	-0.032 (0.035)
Percent explained by sophistication score		44%	27%	11%	35%	8%	6%	3%
Measure of sophistication	None	Average Score	Score for Retirement Planning	Score for Long-Term Care	Score for Health Insurance	Score for Health Research	Score for Diet	Score Doctor Visits
Sample size	653	653	653	653	379	653	653	653

Note: Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 10** OLS Regressions Predicting whether Individuals Rely on Friends and Family in Making Decisions

Dependent Variable	<i>Model 1</i> Average of Rely on Friends and Family in all Three Domains	<i>Model 2</i> Rely on Friends and Family in Financial Domain	<i>Model 3</i> Rely on Friends and Family in Health Insurance Domain	<i>Model 4</i> Rely on Friends and Family in Health Research Domain
Age	0.002 (0.006)	-0.004 (0.007)	0.011 (0.014)	0.007 (0.007)
Age squared	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Home owner	-0.004 (0.021)	0.022 (0.030)	-0.029 (0.052)	-0.007 (0.024)
Married	0.004 (0.019)	0.011 (0.025)	-0.017 (0.041)	-0.014 (0.023)
Male	-0.007 (0.017)	0.029 (0.023)	0.024 (0.037)	-0.037* (0.020)
Dummy for some college	0.006 (0.027)	0.037 (0.039)	-0.040 (0.068)	-0.002 (0.034)
Dummy for college degree	0.013 (0.027)	0.013 (0.039)	-0.042 (0.067)	0.020 (0.034)
Dummy for advanced degree	-0.006 (0.028)	-0.008 (0.039)	-0.018 (0.069)	0.005 (0.034)
Constant	0.456*** (0.122)	0.355** (0.163)	0.242 (0.336)	0.607*** (0.155)
Observations	653	653	332	653
R-squared	0.008	0.009	0.012	0.028

Note: Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 11** OLS Regressions Investigating the Relationship between Relying on Friends and Family in Different Domains

	<i>Model 1</i>	<i>Model 2</i>
Rely on friends and family in health insurance domain	0.347*** (0.045)	
Rely on friends and family in health research domain		0.258*** (0.045)
Age	-0.009 (0.010)	-0.006 (0.007)
Age squared	0.000 (0.000)	0.000 (0.000)
Home owner	0.077** (0.038)	0.024 (0.029)
Married	-0.048 (0.030)	0.015 (0.025)
Male	0.081*** (0.029)	0.038* (0.022)
Dummy for some college	0.052 (0.063)	0.037 (0.038)
Dummy for college degree	-0.047 (0.062)	0.007 (0.038)
Dummy for advanced degree	-0.049 (0.063)	-0.009 (0.039)
Constant	0.370 (0.233)	0.198 (0.166)
Observations	332	653
R-squared	0.225	0.059

Note: Dependent variable in all models is Rely on friends and family in retirement planning. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 12** OLS Regressions Predicting Self-Reported Health: The Effect of Friends and Family

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
Average of rely on friends and family in all three domains	0.136 (0.143)			
Rely on friends and family in retirement planning domain		0.142 (0.107)		
Rely on friends and family in health insurance domain			0.006 (0.131)	
Rely on friends and family in health research domain				0.083 (0.126)
Age	-0.012 (0.024)	-0.011 (0.024)	-0.013 (0.035)	-0.012 (0.024)
Age squared	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Home owner	0.251*** (0.088)	0.247*** (0.088)	0.177 (0.124)	0.251*** (0.088)
Married	0.081 (0.074)	0.079 (0.074)	0.099 (0.101)	0.082 (0.074)
Male	-0.080 (0.061)	-0.085 (0.061)	-0.050 (0.088)	-0.077 (0.062)
Dummy for some college	-0.189* (0.102)	-0.194* (0.102)	-0.292* (0.164)	-0.188* (0.102)
Dummy for college degree	0.050 (0.102)	0.050 (0.101)	-0.105 (0.158)	0.050 (0.102)
Dummy for advanced degree	0.001 (0.104)	0.001 (0.103)	-0.130 (0.161)	-0.000 (0.104)
Constant	3.996*** (0.527)	4.008*** (0.522)	4.123*** (0.802)	4.008*** (0.531)
Observations	653	653	332	653
R-squared	0.040	0.042	0.032	0.040

Note: Dependent variable in all models is Self-reported health. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 13** OLS Regressions Predicting log of Wealth: The Effect of Friends and Family

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
Average of rely on friends and family in all three domains	1.515** (0.590)			
Rely on friends and family in retirement planning domain		2.071*** (0.429)		
Rely on friends and family in health insurance domain			0.443 (0.453)	
Rely on friends and family in health research domain				-0.390 (0.514)
Age	0.097 (0.097)	0.109 (0.094)	0.149 (0.150)	0.104 (0.097)
Age squared	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.002)	-0.001 (0.001)
Home owner	2.650*** (0.427)	2.599*** (0.421)	1.958*** (0.561)	2.642*** (0.430)
Married	0.720** (0.308)	0.703** (0.304)	0.468 (0.350)	0.720** (0.310)
Male	0.533** (0.255)	0.463* (0.253)	1.157*** (0.306)	0.508** (0.258)
Dummy for some college	0.574 (0.509)	0.507 (0.503)	1.686** (0.763)	0.582 (0.514)
Dummy for college degree	1.481*** (0.502)	1.474*** (0.497)	1.885** (0.745)	1.508*** (0.506)
Dummy for advanced degree	2.552*** (0.486)	2.559*** (0.481)	2.909*** (0.733)	2.544*** (0.491)
Constant	2.350 (2.131)	2.306 (2.048)	1.720 (3.396)	3.278 (2.116)
Observations	653	653	332	653
R-squared	0.224	0.243	0.248	0.217

Note: Dependent variable in all models is log of wealth accumulated for retirement. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 14** OLS Regressions Predicting log of Wealth: The Effect of Friends and Family and Health

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>
Self-reported health	0.384** (0.178)	0.369** (0.179)	0.344** (0.172)	0.006 (0.170)	0.388** (0.178)
Average of rely on friends and family in all three domains		1.464** (0.595)			
Rely on friends and family in retirement planning domain			2.022*** (0.427)		
Rely on friends and family in health insurance domain				0.443 (0.454)	
Rely on friends and family in health research domain					-0.422 (0.517)
Age	0.105 (0.097)	0.102 (0.097)	0.113 (0.094)	0.149 (0.150)	0.108 (0.097)
Age squared	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.002)	-0.001 (0.001)
Home owner	2.548*** (0.436)	2.558*** (0.434)	2.515*** (0.428)	1.957*** (0.566)	2.544*** (0.437)
Married	0.694** (0.309)	0.690** (0.307)	0.675** (0.303)	0.467 (0.355)	0.688** (0.309)
Male	0.553** (0.256)	0.563** (0.255)	0.493* (0.253)	1.157*** (0.306)	0.538** (0.257)
Dummy for some college	0.656 (0.515)	0.644 (0.511)	0.574 (0.506)	1.688** (0.768)	0.656 (0.516)
Dummy for college degree	1.481*** (0.507)	1.463*** (0.504)	1.457*** (0.499)	1.886** (0.745)	1.489*** (0.507)
Dummy for advanced degree	2.542*** (0.492)	2.551*** (0.487)	2.559*** (0.483)	2.910*** (0.734)	2.544*** (0.493)
Constant	1.482 (2.228)	0.874 (2.251)	0.928 (2.171)	1.695 (3.452)	1.723 (2.212)
Reduction in coef. on health from column 1		4%	10%	98%	-1%
Observations	653	653	653	332	653
R-squared	0.222	0.230	0.248	0.248	0.223

Note: Dependent variable in all models is log of wealth accumulated for retirement. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1



**Table 15** OLS Regressions Predicting Who Relies on Experts

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model5</i>	<i>Model 6</i>	<i>Model 7</i>
Dependent variable	Average of All Expert Questions	Rely On Expert In Financial Domain	Rely On Expert In Long-term Care Domain	Rely On Expert In Health Insurance Domain	Rely On Expert In Health Research Domain	Rely On Expert In Diet Domain	Rely On Expert In Health Care Visits Domain
Age	-0.003 (0.004)	-0.013 (0.010)	-0.006 (0.009)	0.015 (0.013)	-0.007 (0.007)	-0.004 (0.008)	0.007 (0.008)
Age squared	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)
Home owner	0.044*** (0.014)	0.137*** (0.035)	0.054* (0.032)	-0.032 (0.047)	0.042 (0.027)	-0.012 (0.030)	0.016 (0.026)
Married	0.020 (0.013)	0.037 (0.033)	0.010 (0.029)	0.040 (0.039)	0.003 (0.023)	0.030 (0.026)	0.023 (0.024)
Male	-0.001 (0.011)	-0.001 (0.030)	-0.010 (0.026)	0.039 (0.035)	0.052*** (0.020)	-0.066*** (0.024)	0.006 (0.020)
Dummy for some college	0.025 (0.018)	0.015 (0.049)	0.056 (0.041)	-0.029 (0.063)	0.036 (0.035)	0.043 (0.037)	-0.019 (0.030)
Dummy for college degree	0.054*** (0.018)	0.061 (0.049)	0.084** (0.041)	0.061 (0.061)	0.047 (0.035)	0.058 (0.038)	-0.014 (0.030)
Dummy for advanced degree	0.052*** (0.019)	0.109** (0.052)	0.069 (0.043)	0.056 (0.064)	0.001 (0.037)	0.048 (0.039)	-0.010 (0.032)
Constant	0.436*** (0.095)	0.365* (0.218)	0.256 (0.192)	0.321 (0.296)	0.778*** (0.143)	0.210 (0.188)	0.640*** (0.183)
Observations	640	653	490	332	653	653	640
R-squared	0.040	0.041	0.013	0.035	0.031	0.020	0.008

Note: Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 16** OLS Regressions Predicting Who Relies on Experts in the Financial Domain: The Effect of Health Domains

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>
Rely on expert in long-term care domain	0.353*** (0.062)				
Rely on expert in health insurance domain		0.005 (0.068)			
Rely on expert in health research domain			-0.019 (0.060)		
Rely on expert in diet domain				-0.032 (0.048)	
Rely on expert in health care visits domain					0.144** (0.057)
Age	-0.011 (0.011)	-0.019 (0.016)	-0.013 (0.010)	-0.013 (0.010)	-0.014 (0.010)
Age squared	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Home owner	0.128*** (0.042)	0.125** (0.054)	0.138*** (0.035)	0.136*** (0.035)	0.135*** (0.035)
Married	0.032 (0.037)	0.048 (0.045)	0.037 (0.033)	0.037 (0.032)	0.039 (0.032)
Male	-0.013 (0.034)	0.018 (0.043)	-0.000 (0.030)	-0.003 (0.030)	0.001 (0.030)
Dummy for some college	0.025 (0.058)	-0.003 (0.080)	0.016 (0.049)	0.017 (0.049)	0.023 (0.049)
Dummy for college degree	0.052 (0.059)	0.042 (0.078)	0.062 (0.049)	0.063 (0.050)	0.074 (0.050)
Dummy for advanced degree	0.102* (0.061)	0.087 (0.081)	0.109** (0.052)	0.111** (0.052)	0.119** (0.052)
Constant	0.271 (0.244)	0.525 (0.353)	0.380* (0.221)	0.372* (0.219)	0.279 (0.218)
Observations	490	332	653	653	640
R-squared	0.107	0.039	0.041	0.041	0.051

Note: Dependent variable in all models is reliance on expert in retirement planning. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 17** OLS Regressions Predicting Self-Reported Health: The Effect of Relying on Experts

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>	<i>Model 6</i>	<i>Model 7</i>
Average of expert questions	0.167 (0.224)						
Rely on expert in retirement planning		0.111 (0.080)					
Rely on expert in long-term care domain			0.037 (0.122)				
Rely on expert in health insurance domain				0.074 (0.130)			
Rely on expert in health research domain					-0.084 (0.132)		
Rely on expert in diet domain						-0.131 (0.108)	
Rely on expert in health care visits domain							0.258* (0.146)
Age	-0.002 (0.024)	-0.010 (0.024)	-0.007 (0.029)	-0.014 (0.035)	-0.012 (0.024)	-0.012 (0.024)	-0.004 (0.024)
Age squared	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Home owner	0.243*** (0.088)	0.235*** (0.088)	0.261** (0.111)	0.180 (0.124)	0.253*** (0.087)	0.248*** (0.088)	0.246*** (0.087)
Married	0.087 (0.075)	0.077 (0.074)	0.110 (0.087)	0.096 (0.101)	0.081 (0.074)	0.085 (0.074)	0.084 (0.074)
Male	-0.073 (0.061)	-0.080 (0.061)	-0.109 (0.071)	-0.053 (0.088)	-0.076 (0.061)	-0.089 (0.061)	-0.075 (0.061)
Dummy for some college	-0.190* (0.105)	-0.190* (0.102)	-0.183 (0.130)	-0.290* (0.162)	-0.186* (0.102)	-0.183* (0.103)	-0.181* (0.104)
Dummy for college degree	0.066 (0.105)	0.045 (0.102)	0.054 (0.128)	-0.109 (0.157)	0.056 (0.101)	0.059 (0.102)	0.078 (0.103)
Dummy for advanced degree	-0.004 (0.106)	-0.012 (0.105)	-0.013 (0.129)	-0.135 (0.160)	0.000 (0.103)	0.006 (0.104)	0.007 (0.105)
Constant	3.750*** (0.537)	4.018*** (0.521)	3.923*** (0.626)	4.100*** (0.797)	4.124*** (0.521)	4.086*** (0.530)	3.658*** (0.537)
Observations	640	653	490	332	653	653	640
R-squared	0.043	0.042	0.040	0.033	0.040	0.041	0.048

Note: Dependent variable in all models is Self-reported health. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 18** OLS Regressions Predicting log of Wealth: The Effect of Relying on Experts

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>	<i>Model 6</i>	<i>Model 7</i>
Average of expert questions	4.531*** (0.855)						
Rely on expert in retirement planning		2.060*** (0.285)					
Rely on expert in long-term care domain			1.140*** (0.434)				
Rely on expert in health insurance domain				0.309 (0.448)			
Rely on expert in health research domain					-0.313 (0.528)		
Rely on expert in diet domain						0.733* (0.404)	
Rely on expert in health care visits domain							0.225 (0.577)
Age	0.110 (0.095)	0.127 (0.095)	0.033 (0.109)	0.150 (0.148)	0.098 (0.097)	0.104 (0.096)	0.095 (0.099)
Age squared	-0.001 (0.001)	-0.001 (0.001)	-0.000 (0.001)	-0.001 (0.002)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
Home owner	2.437*** (0.420)	2.363*** (0.419)	1.921*** (0.480)	1.955*** (0.561)	2.657*** (0.430)	2.653*** (0.428)	2.634*** (0.432)
Married	0.647** (0.309)	0.650** (0.307)	0.788** (0.330)	0.448 (0.353)	0.726** (0.310)	0.703** (0.312)	0.734** (0.311)
Male	0.563** (0.248)	0.525** (0.248)	0.420 (0.269)	1.155*** (0.311)	0.539** (0.257)	0.571** (0.259)	0.558** (0.254)
Dummy for some college	0.238 (0.499)	0.552 (0.495)	0.523 (0.638)	1.677** (0.762)	0.595 (0.513)	0.552 (0.514)	0.356 (0.509)
Dummy for college degree	1.049** (0.489)	1.374*** (0.485)	1.881*** (0.601)	1.848** (0.744)	1.515*** (0.507)	1.458*** (0.507)	1.295*** (0.498)
Dummy for advanced degree	2.050*** (0.478)	2.317*** (0.469)	2.577*** (0.605)	2.884*** (0.731)	2.543*** (0.490)	2.507*** (0.491)	2.288*** (0.485)
Constant	1.497 (2.093)	2.288 (2.078)	5.208** (2.281)	1.728 (3.394)	3.285 (2.135)	2.887 (2.077)	3.330 (2.212)
Observations	640	653	490	332	653	653	640
R-squared	0.244	0.260	0.201	0.247	0.216	0.219	0.212

Note: Dependent variable in all models is log of wealth accumulated for retirement. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 19** OLS Regressions Predicting log of Wealth: The Effect of Health and Relying on Experts

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>	<i>Model 6</i>	<i>Model 7</i>	<i>Model 8</i>
Self-reported health	0.384** (0.178)	0.323* (0.173)	0.332* (0.170)	0.517*** (0.186)	0.003 (0.168)	0.382** (0.179)	0.399** (0.178)	0.345* (0.177)
Average of expert questions		4.477*** (0.849)						
Rely on expert in retirement planning			2.024*** (0.282)					
Rely on expert in long-term care domain				1.121*** (0.428)				
Rely on expert in health insurance domain					0.308 (0.448)			
Rely on expert in health research domain						-0.281 (0.524)		
Rely on expert in diet domain							0.785** (0.397)	
Rely on expert in health care visits domain								0.136 (0.574)
Age	0.105 (0.097)	0.111 (0.095)	0.130 (0.095)	0.036 (0.107)	0.150 (0.149)	0.103 (0.097)	0.109 (0.096)	0.097 (0.099)
Age squared	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.000 (0.001)	-0.001 (0.002)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
Home owner	2.548*** (0.436)	2.358*** (0.427)	2.285*** (0.425)	1.786*** (0.480)	1.954*** (0.565)	2.561*** (0.437)	2.554*** (0.434)	2.549*** (0.438)
Married	0.694** (0.309)	0.619** (0.309)	0.625** (0.306)	0.731** (0.325)	0.448 (0.358)	0.695** (0.309)	0.669** (0.311)	0.705** (0.311)
Male	0.553** (0.256)	0.586** (0.248)	0.551** (0.249)	0.477* (0.270)	1.156*** (0.311)	0.568** (0.257)	0.606** (0.259)	0.584** (0.254)
Dummy for some college	0.656 (0.515)	0.300 (0.501)	0.615 (0.497)	0.618 (0.636)	1.678** (0.767)	0.665 (0.515)	0.625 (0.516)	0.418 (0.510)
Dummy for college degree	1.481*** (0.507)	1.028** (0.491)	1.359*** (0.487)	1.853*** (0.600)	1.848** (0.743)	1.494*** (0.508)	1.435*** (0.508)	1.268** (0.500)
Dummy for advanced degree	2.542*** (0.492)	2.051*** (0.480)	2.321*** (0.470)	2.584*** (0.605)	2.884*** (0.732)	2.543*** (0.492)	2.504*** (0.493)	2.285*** (0.487)
Constant	1.482 (2.228)	0.288 (2.213)	0.955 (2.192)	3.179 (2.382)	1.717 (3.452)	1.710 (2.261)	1.255 (2.206)	2.068 (2.306)
Reduction in coef. on health from column 1		16%	14%	-35%	99%	1%	-4%	10%
Observations	653	640	653	490	332	653	653	640
R-squared	0.222	0.249	0.265	0.216	0.247	0.223	0.227	0.217

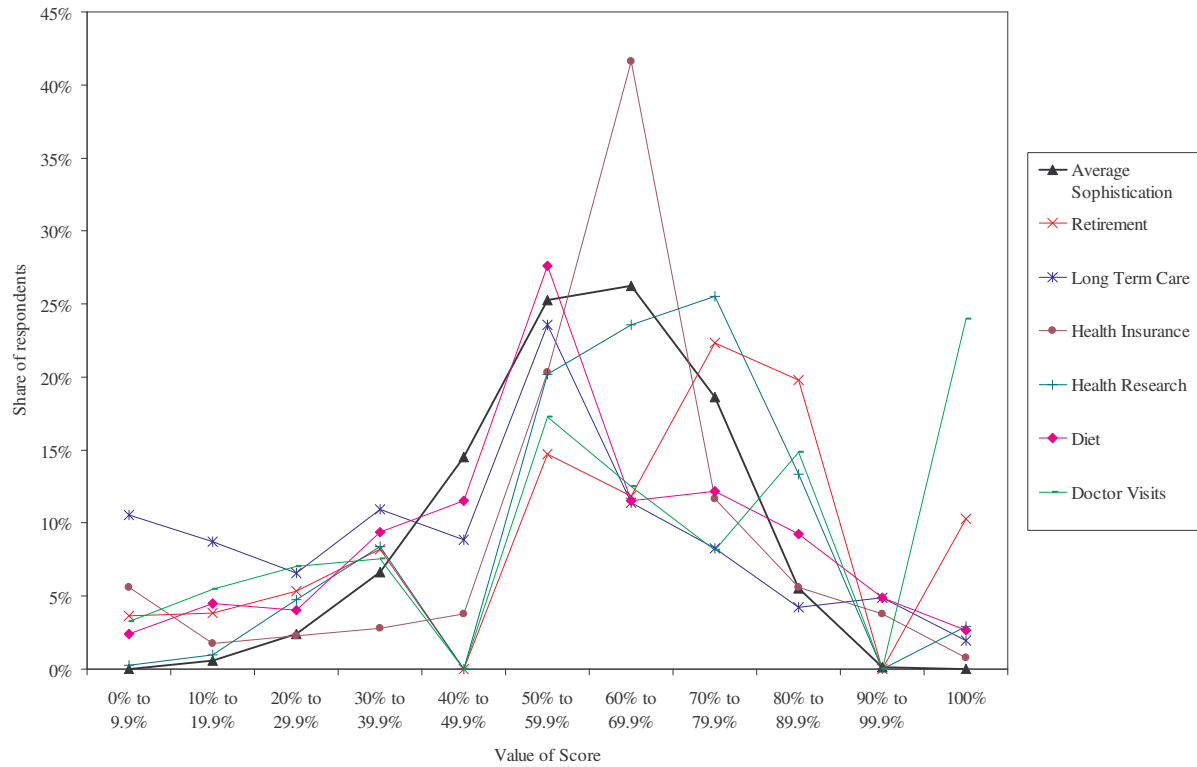
Note: Dependent variable in all models is log of wealth accumulated for retirement. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 20** Blinder-Oaxaca Decompositions Comparing Healthy and Less Healthy

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>
Wealth if health is poor	9.113*** (0.308)	9.113*** (0.308)	9.204*** (0.305)
Wealth if health is excellent or very good	10.301*** (0.156)	10.301*** (0.156)	10.350*** (0.155)
Difference	-1.188*** (0.345)	-1.188*** (0.345)	-1.146*** (0.342)
Amount explained	-0.571*** (0.165)	-0.589*** (0.166)	-0.607*** (0.179)
Percent explained	48%	50%	53%
Amount unexplained	-0.617* (0.328)	-0.598* (0.327)	-0.539* (0.314)
Percent unexplained	52%	50%	47%
Amount explained by decision making		-0.016 (0.028)	-0.049 (0.062)
Percent explained by decision making		1%	4%
Measure of decision making	None	Average Reliance on friends or family	Average Reliance on experts
Sample size	653	653	640

Note: Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Figure 1** Distributions of Sophistication Scores



**Appendix Table A1** Description of Questions about Relying on Friends and Family

<i>Name</i>	<i>Question</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Median</i>
<b>Relying on Friends, Family and Colleagues</b>				
<i>friend_fin</i>	Talking to my friends helped me to come up with a plan to prepare for retirement.	0.312	0.285	0.25
<i>friend_hi</i>	I talked to my friends or colleagues to figure out which health insurance plan was best.	0.389	0.326	0.375
<i>friend_hc</i>	When I have to make a decision about health care, I talk to friends, family and/or colleagues to figure out what is best.	0.639	0.252	0.75
<i>friends</i>	<b>Average friend score:</b> $(friend\_fin+friend\_hi+friend\_hc)/3$	0.463	0.208	0.5



**Appendix Table A2** Description of Questions about Relying on Experts

<i>Name</i>	<i>Question</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Median</i>
<b>Retirement Planning Domain</b>				
<i>exp_fin</i>	How closely do you follow the suggestions of the financial advisor, software or calculator? You may check more than one answer. I closely follow the suggestions. I loosely follow the suggestions. I rarely follow the suggestions. I generally save less than is suggested. I generally save more than is suggested. There are some needs that are neglected. exp_fin3=1 if following closely exp_fin3=5/6 if follow closely and loosely exp_fin3=4/6 if follow loosely or save less or save more exp_fin3=3/6 if follow rarely and loosely fin3=2/6 if follow rarely exp_fin3=0 if don't use advisor, software, or calculator	0.166	0.321	0
<b>Other Domains</b>				
<i>exp_hf</i>	I relied on advice from a financial advisor or insurance broker to decide if I should buy long-term care insurance.	0.243	0.291	0
<i>exp_hi</i>	I chose a [health insurance] plan based on the hospitals and doctors that participated in the network.	0.620	0.315	0.75
<i>exp_hr</i>	When I have to make a decision about health care, I rely on whatever my doctor tells me to do.	0.647	0.248	0.75
<i>Exp_food</i>	I follow a diet such as the Atkins diet, the Best Life Diet, Weight Watchers or some other diet plan.	0.186	0.291	0
<i>exp_doc</i>	How closely do you follow the suggestions of your doctor? Please indicate which of the below statements fits best your situation. You may check several answers. I closely follow the suggestions of my doctor. I loosely follow his/her suggestions. I rarely follow his/her suggestions. I would like to follow the suggestions, but I don't manage to do so. exp_doc=1 if follow closely exp_doc=5/6 if follow closely and loosely exp_doc=4/6 if follow loosely exp_doc=3/6 if follow rarely and loosely exp_doc=2/6 if follow rarely exp_doc=0 if don't follow	0.831	0.238	1
<b>Average Expert Reliance</b>				
<i>expert</i>	<b>Average Expert Score:</b> Average of <i>exp_fin</i> , <i>exp_hf</i> , <i>exp_hi</i> , <i>exp_hr</i> , <i>exp_food</i> , <i>exp_doc</i>	0.456	0.147	0.45

Note: Sample sizes vary across measures. Individuals who had never heard of long-term care insurance were not asked about reliance on experts. Similarly those who had not seen a doctor in 5 years were excluded from questions about how closely they followed their doctor's advice. Again, those who reported no choices for health insurance were excluded from those questions.