How Longevity and Health Information Shape Retirement Advice

32nd Colloquium on Pensions & Retirement Research

IPRA online sessions 12/3/2024

Abigail Hurwitz: Hebrew University of Jerusalem

Olivia S. Mitchell: University of Pennsylvania

Motivation

- Subjective health and survival probabilities shape financial decisions but subjective beliefs are often biased.
  Wu et al. (2013); Bloom et al.(2007); Hurd et al. (2004); Hagen et al. (2024); Elder (2013); and Heimer et al. (2019); Hurwitz et al. (2022)

- Financial advisors can mitigate biases, but:
  - Advisors may be misinformed or act in their own interest.
    Chang and Szydlowski (2020); Gomes et al. (2021); Budescu & Rantilla (2000); Valley et al. (1992); and Jonas et al. (2005)
  - Financial advisors are often not trusted by clients, which may shape the impact of advice provided.
    Sapienza and Zingales (2012), Gervais and Thanassoulis (2024)

Our questions:

1. Do financial advisors base their recommendations more on their *own* health and longevity expectations, or on what they know about their *clients'* health and longevity?

2. How do the recommendations of *professional advisors* differ from those of *amateur advisors*, particularly when given health and longevity information about their clients?

Methodology

- We designed and fielded **two** online experiments:
  - Measure *subjective life expectancies and longevity risk assessments*
  - Next, compare these with life tables
    (SLE_LE: Subjective Life Expectancy vs. Life Expectancy from population data)
  - Also measure self-rated health
  - Then assess **advisors'** responses to different types of health and longevity information provided.

- Experiment 1: Amateur Advisors *(Prolific panel)*
- Experiment 2: Professional Advisors *(Greenwald panel)*

Methodology: Vignettes

- Annuitization recommendation

- Investment recommendation

- Informational treatments: survival and health information

Vignettes

- Vignettes are short stories about hypothetical individuals confronting the same or similar questions.

  van Soest et al. (2011), Brown et al. (2017, 2019), Samek E al. (2019), Hurwitz et. al (2022)

- Survey respondents asked to provide advice to a hypothetical vignette person facing decisions about health, saving, or other economic decisions.

- Advantages:
  - ✓ Randomize treatments.
  - ✓ Compare vignette responses within and across respondents.
  - ✓ Study difference between respondents' own responses versus their recommendations to vignette individuals.
  - ✓ Control variation that might otherwise impart noise to the analysis.

Baseline Annuitization Vignette

Mr. Smith is a single, 60-year-old risk averse man with no children. He will retire and claim his Social Security benefits at 65. When he retires, he will have $100,000 saved for his retirement, and he will receive $1,400 in monthly Social Security benefits. Imagine that Mr. Smith asks you about how to manage his $100,000 retirement savings.

If you had to choose between the following two options, which one would you recommend?
1. Keep the entire $100,000 in his account and use it as he needs it
2. Receive a regular monthly sum of $500 (equal to $6,000 yearly) for the rest of his life

Baseline Investment Vignette

Mr. Jones is a 60-year-old risk averse man who has saved $100,000 for the future and expects to receive $1,400 in monthly Social Security benefits, sufficient to cover his planned expenses when he claims at age 65. He has no heirs. He can invest his savings in one of two different ways. One way is to invest in government bonds that will be worth $100,000 for sure, a year from now. The other way is to invest in a mutual fund that could increase or decrease in value. On average, the mutual fund will be worth $110,000 in a year, but there is a 50/50 chance of it being worth $88,000, and a 50/50 chance of it being worth $132,000.

If you had to choose between the following two options, how would you recommend that Mr. Jones invest his money?
1.   Government bonds
2.   Mutual fund

Informational Treatments*

- Control

- T1: He is in poor health and is aware of having a 21% chance of surviving until the age of 90 or beyond.

- T2: He is in average health and is aware of having a 34% chance of surviving until the age of 90 or beyond.

- T3: He has recently been diagnosed with stomach cancer and he is aware of having a 72% chance of surviving for five more years.

- T4: His father passed away from cancer at age 60.

- T5: He was recently diagnosed with early-stage prostate cancer, and he is aware of having a 21% chance of surviving until the age of 90 or beyond.

*Survival probabilities for T1 and T2 from American Academy of Actuaries and Society of Actuaries' Longevity Illustrator tool. http://www.longevityillustrator.org/, (accessed January 5, 2023). Survival probabilities in T3 from Stomach Cancer: Statistics | Cancer.Net, (accessed May 28, 2023)

Experimental design

- ## Experiment 1: Amateur advisors *(Prolific panel)*:

Vignette Presentation	Control	Poor health (T1)	Average health (T2)	Diagnosed with cancer (T3)	Father passed from cancer (T4)	Less severe cancer (T5)	Total
Annuitization	198	200	197	199	199	202	1,195
Investments	200	200	199	200	201	197	1,197
Total	398	400	396	399	400	399	2,392

- ## Experiment 2: Professional advisors *(Greenwald panel)*

Vignette Presentation	Control	Poor health (T1)	Average health (T2)	Diagnosed with cancer (T3)	Father passed from cancer (T4)	Less severe cancer (T5)	Total
Annuitization& Investments	196	197	197	197	197	167	1,151

D-stats: Professional and amateur advisors

Variable	Professional advisors (Greenwald)			Amateur advisors (Prolific)			T-test
	N	Mean	Std. Dev.	N	Mean	Std. Dev.	Diff
SLE_LE (%)	1,093	24.43	29.91	2,232	25.29	31.38	-0.86
SLE_LE2 (%)	1,100	13.77	28.39	2,252	9.70	30.76	4.08 ***
Age (yr)	1,151	54.53	10.48	2,392	48.37	10.46	6.16 ***
Male	1,151	0.87	0.11	2,392	0.43	0.24	0.44 ***
Post college	1,151	0.47	0.25	2,392	0.23	0.18	0.24 ***
Good health	1,151	0.94	0.06	2,392	0.85	0.13	0.09 ***
FinLit score	1,151	2.93	0.29	2,392	2.62	0.50	0.31 ***
Annuity knowledge	1,151	0.76	0.18	2,392	0.54	0.25	0.22 ***
Present pref	1,151	1.24	1.41	2,392	2.01	1.40	-0.77 ***
Subjective risk preference	1,151	8.26	1.69	2,388	4.32	2.59	3.95 ***
Objective risk preference	1,151	4.51	2.30	2,392	5.30	2.35	-0.78 ***
N	1,151			2,392			

Respondents quite different.

Empirical Methodology

$$Y_i = \alpha + \boldsymbol{\beta_1}(\boldsymbol{SLE - LE})_i + \boldsymbol{\beta_2}\boldsymbol{GoodHealth}_i$$
$$+\boldsymbol{\beta_3}(\boldsymbol{T1}) + \boldsymbol{\beta_4}(\boldsymbol{T2}) + \boldsymbol{\beta_5}(\boldsymbol{T3}) + \boldsymbol{\beta_6}(\boldsymbol{T4}) + \boldsymbol{\beta_7}(\boldsymbol{T5}) + \gamma' X + \in$$

where:

- Y_i = 1 if participant i recommended an annuity/bond (0 else)
- T1-T5: groups 1-5
- X'$_i$: controls (age, sex, education, financial literacy, annuity knowledge, present preference score, subjective risk preferences, and being consistent with respect to expected longevity questions).

Low effect of own survival and health

Own information and annuitization advice

	Chose annuity (Amateur/Prolific)			Chose annuity (Professional/Greenwald)		
	Full sample	Underestimators	Overestimators	Full sample	Underestimators	Overestimators
SLE_LE	0.001 **	0.004	0.001 *	0.001	0.005	0.001
	(0.001)	(0.004)	(0.001)	(0.001)	(0.004)	(0.001)
Good health	0.039	0.008	0.032	-0.021	0.043	-0.087
	(0.042)	(0.064)	(0.058)	(0.068)	(0.092)	(0.110)
Pseudo R2	0.07	0.08	0.09	0.07	0.11	0.07
Mean of Dep.Var	0.38	0.35	0.39	0.39	0.37	0.40

In addition, we control on the informational treatments, age, sex, education, financial literacy, annuity knowledge, present preference score, subjective risk preferences, and being consistent with respect to expected longevity questions.

Own information and <u>investment</u> advice

	Chose bonds (Amateur/Prolific)			Chose bonds (Professional/Greenwald)		
	Full sample	Underestimators	Overestimators	Full sample	Underestimators	Overestimators
SLE_LE	0.000	-0.002	0.000	0.000	0.004	0.000
	(0.001)	(0.005)	(0.001)	(0.001)	(0.004)	(0.001)
Good health	-0.034	-0.021	-0.047	-0.046	-0.020	-0.088
	(0.042)	(0.066)	(0.055)	(0.066)	(0.094)	(0.099)
N	1,119	320	799	1,087	289	798
Pseudo R2	0.03	0.04	0.04	0.03	0.03	0.04
Mean of Dep.Var	0.65	0.65	0.66	0.49	0.50	0.49

In addition, we control on the informational treatments, age, sex, education, financial literacy, annuity knowledge, present preference score, subjective risk preferences, and being consistent with respect to expected longevity questions.

Advisors respond to health and longevity information:

→Professionals respond more

Informational treatments and annuitization advice

	Chose annuity (Amateur/Prolific)			Chose annuity (Professional/Greenwald)		
	Full sample	Underestimators	Overestimators	Full sample	Underestimators	Overestimators
SLE_LE	0.001 **	0.004	0.001 *	0.001	0.005	0.001
	(0.001)	(0.004)	(0.001)	(0.001)	(0.004)	(0.001)
Good health	0.039	0.008	0.032	-0.021	0.043	-0.087
	(0.042)	(0.064)	(0.058)	(0.068)	(0.092)	(0.110)
Poor health (T1)	-0.047	0.084	-0.111 **	-0.130 ***	-0.011	-0.161 ***
	(0.048)	(0.094)	(0.055)	(0.044)	(0.103)	(0.049)
Average health (T2)	0.212 ***	0.175 *	0.236 ***	-0.099 **	-0.124	-0.081
	(0.054)	(0.095)	(0.066)	(0.045)	(0.082)	(0.055)
Diagnosed with cancer (T3)	-0.242 ***	-0.240 ***	-0.243 ***	-0.356 ***	-0.362 ***	-0.349 ***
	(0.039)	(0.068)	(0.047)	(0.030)	(0.057)	(0.036)
Father passed from cancer (T4)	-0.011	-0.031	-0.004	-0.123 ***	-0.118	-0.124 **
	(0.048)	(0.088)	(0.059)	(0.043)	(0.083)	(0.051)
Less severe cancer (T5)	-0.048	-0.058	-0.043	-0.123 ***	-0.055	-0.142 ***
	(0.049)	(0.090)	(0.059)	(0.045)	(0.097)	(0.052)
N	1,111	336	775	1,087	289	798
Pseudo R2	0.07	0.08	0.09	0.07	0.11	0.07
Mean of Dep.Var	0.38	0.35	0.39	0.39	0.37	0.40

In addition, we control on age, sex, education, financial literacy, annuity knowledge, present preference score, subjective risk preferences, and being consistent with respect to expected longevity questions.

Informational treatments and <u>investment</u> advice

	Chose bonds (Amateur/Prolific)			Chose bonds (Professional/Greenwald)		
	Full sample	Underestimators	Overestimators	Full sample	Underestimators	Overestimators
SLE_LE	0.000	-0.002	0.000	0.000	0.004	0.000
	(0.001)	(0.005)	(0.001)	(0.001)	(0.004)	(0.001)
Good health	-0.034	-0.021	-0.047	-0.046	-0.020	-0.088
	(0.042)	(0.066)	(0.055)	(0.066)	(0.094)	(0.099)
Poor health (T1)	0.054	0.117	0.026	0.081	-0.006	0.111 *
	(0.047)	(0.079)	(0.058)	(0.052)	(0.113)	(0.059)
Average health (T2)	0.084 *	0.133 *	0.068	0.014	0.005	0.012
	(0.045)	(0.075)	(0.055)	(0.053)	(0.105)	(0.063)
Diagnosed with cancer (T3)	0.022	0.127	-0.016	0.084	0.035	0.100
	(0.048)	(0.080)	(0.059)	(0.053)	(0.106)	(0.062)
Father passed from cancer (T4)	0.038	0.123	0.009	0.133 **	-0.045	0.195 ***
	(0.047)	(0.079)	(0.057)	(0.052)	(0.107)	(0.058)
Less severe cancer (T5)	0.026	0.062	0.012	-0.006	0.068	-0.037
	(0.048)	(0.092)	(0.056)	(0.055)	(0.110)	(0.064)
N	1,119	320	799	1,087	289	798
Pseudo R2	0.03	0.04	0.04	0.03	0.03	0.04
Mean of Dep.Var	0.65	0.65	0.66	0.49	0.50	0.49

In addition, we control on age, sex, education, financial literacy, annuity knowledge, present preference score, subjective risk preferences, and being consistent with respect to expected longevity questions.

Conclusions

- Advisors do not overly rely on their own subjective health and longevity perceptions when providing advice to others.

- Information about advisees' health and longevity does influence the advice they provide:

  - Severe cancer information decreases annuitization recommendations by 0.242/0.38~63% for amateurs and 91% for professionals.

  - Average health information increases annuitization recommendations by 56% for amateurs and decreases by 25% for professionals.

- *Professional advisors* tend to be more sensitive to the information they receive about their advisees, compared to amateurs.

Our Contribution

- Although many people rely on *informal advice* from friends and family, amateur advisors do not accurately analyze and use key information to provide appropriate advice.

- We highlight the importance of enhancing longevity literacy in the general population to improve financial decision-making.

- Professional advisors can also increase clients' longevity awareness.

Thank you!
Questions?

Appendix slide – additional information about professional advisors

Variable	N	Mean	Std.Dev.
Financial major	1,151	0.70	0.21
Psychology major	1,151	0.03	0.03
Net wealth ($1M)	820	3.84	14.16
Level of #Clients	1,151	2.90	1.58
CFP	1,151	0.32	0.22
CPA	1,151	0.01	0.01
CFA	1,151	0.02	0.02
CLU	1,151	0.05	0.04
CFS	1,151	0.01	0.01
PFS	1,151	0.00	0.00
RICP	1,151	0.02	0.02
Series 7	1,151	0.37	0.23
SLE_confidence	1,151	3.08	0.63
Client longevity assesment	1,151	2.71	0.65
Educating_clients	1,151	3.58	0.55
Health for planning	1,151	0.91	0.08
Smoking for planning	1,151	0.79	0.16
Family health/longevity for planning	1,151	0.87	0.11