An unrecognized barrier to retirement income security: Poor longevity literacy

Paul J. Yakoboski, TIAA Institute

Annamaria Lusardi, The George Washington University and Global Financial Literacy Excellence Center (GFLEC)

Andrea Sticha, The George Washington University School of Business and Global Financial Literacy Excellence Center (GFLEC)

TIAA Institute

GFLEC
GLOBAL FINANCIAL LITERACY
EXCELLENCE CENTER

Executive summary

Longevity literacy is an understanding of how long people tend to live upon reaching retirement age. It is particularly important since retirement income security requires planning, saving, and preparing for a period that is uncertain in length.

Unfortunately, data from the 2023 *TIAA Institute–GFLEC Personal Finance Index (P-Fin Index)* demonstrate a lack of longevity literacy among the vast majority of U.S. adults. Using three new questions to measure longevity literacy, this report highlights two major groups in the population:

- Only 12% of U.S. adults have *strong longevity literacy*—i.e., they demonstrate an understanding of how long 65-year-olds live on average, as well as the likelihood of living to an advanced age versus the likelihood of dying relatively early.

- 31% have *weak longevity literacy*—i.e., they demonstrate a complete lack of understanding of the distribution of life expectancy at age 65. This is a knowledge gap that can keep them from planning and preparing adequately for retirement.

This matters because longevity literacy is associated with retirement readiness.

- Workers with strong longevity literacy tend to be more confident they will have enough money to live comfortably throughout retirement—69% are very or somewhat confident compared with 53% of workers with weak longevity literacy. They are also more likely to have figured out how much they need to save for retirement (50%); and a larger share actually saves for retirement on a regular basis (72%) compared to those with weak longevity literacy (32% and 58%, respectively).

- Retirees with strong longevity literacy are more likely to report that their current lifestyle meets or exceeds their preretirement expectations (77%) and are confident they have enough money to live comfortably throughout their retirement years (82%). The analogous figures among retirees with weak longevity literacy are 62% and 69%, respectively.

Unfortunately, poor longevity literacy cannot be improved by simply providing individuals with information. Terminology is an obstacle. For example, only one-third of adults understand the practical implications of the term "life expectancy." On the other hand, one-quarter think that "life expectancy" is the age by which the vast majority of a group of individuals will die. So simply providing information such as the life expectancy of a 65-year-old is not enough, additional information regarding the interpretation and practical implications of the information are necessary.

These findings are important given the retirement income security challenges confronting the United States. These challenges are heightened knowing that many adults lack longevity literacy, in addition to the well-established lack of financial literacy in America. Therefore, initiatives that help improve longevity literacy along with financial literacy can better promote retirement security.

Introduction

Many Americans face the prospect of financial insecurity in retirement. While Social Security provides lifetime income, the average annual retirement benefit is only $21,400 per year,[1] and beneficiaries are projected to face a 23% across-the-board benefit cut in 2033.[2] Defined benefit pension coverage has become rare.[3] So individuals must assume primary responsibility for ensuring they have adequate income throughout retirement. However, data from the 2023 *P-Fin Index* show that 59% of workers have not tried to determine how much they need to save for retirement and 35% do not save for retirement on a regular basis.[4]

More fundamentally, planning, saving, and preparing for retirement is complex and a key factor in that complexity is the inherent uncertainty regarding how long one's retirement will last. Nonetheless, decisions must be made in the context of this uncertainty. Making appropriate decisions thus requires a degree of longevity literacy, i.e., a basic understanding of how long people tend to live in retirement.

The TIAA Institute and GFLEC introduced the term "longevity literacy" in a January 2023 report.[5] That report used 2022 *P-Fin Index* survey data to gauge longevity literacy levels among U.S. adults with a single question. This report expands upon that initial research. The 2023 *P-Fin Index* survey assesses longevity literacy with three questions,[6] each related to an aspect of life expectancy among 65-year-olds in the U.S.:

- The average number of years individuals live upon reaching age 65
- The likelihood among 65-year-olds of living to at least age 90
- The likelihood among 65-year-olds of not living beyond age 70

Longevity literacy includes understanding the inherent variability regarding life span, especially the possibility of living well past life expectancy, and these questions evaluate the implicit understanding of the distribution of life expectancy at age 65. This provides a more complete assessment of how individuals perceive the retirement planning horizon. These questions intentionally assess a general understanding of life expectancy, as opposed to how long an individual respondent expects to live.

Responses to the three questions are used to examine longevity literacy levels among the U.S. adult population and across various demographic groups. Links between longevity literacy and various indicators of retirement readiness among current workers and retirees are also examined.

In addition, the survey evaluated understanding of longevity terminology. Such understanding has important implications for communicating with individuals on topics related to retirement planning.

---

1   See Center on Budget and Policy Priorities (2023).
2   See 2023 OASDI Trustees Report.
3   Among private sector retirement plan participants, 12% are in a defined benefit plan, and only 6% of plans are defined benefit. See Employee Benefits Security Administration (2022).
4   The National Retirement Risk Index found that 47% of working-age households are at risk of being unable to maintain their preretirement standard of living in retirement (Yin, et al., 2023). Likewise, the EBRI Retirement Security Projection Model found that 41% of U.S. households are projected to run short of money in retirement (VanDerhei, 2019).
5   See Yakoboski, et al., 2023b.
6   See the methodology section for question wording and response options.

Longevity literacy among U.S. adults

Many American adults lack a basic understanding of how long people tend to live in retirement. Only 35% of survey respondents correctly answered the question regarding how long a 65-year-old will live on average (Figure 1). The incorrect responses are distributed as follows: 25% responded "don't know," 31% chose the response that underestimates life expectancy at age 65, and 10% chose the overestimate response.[7] On net, more than one-half (56%) of U.S. adults display either ignorance regarding the retirement planning horizon for a typical 65-year-old ("don't know" responses) or a perception of the planning horizon length that is too short (underestimate responses). Either case is worrisome as retirement saving and planning should be grounded in an accurate understanding of how long retirement tends to last.

Figure 1. Longevity literacy among U.S. adults
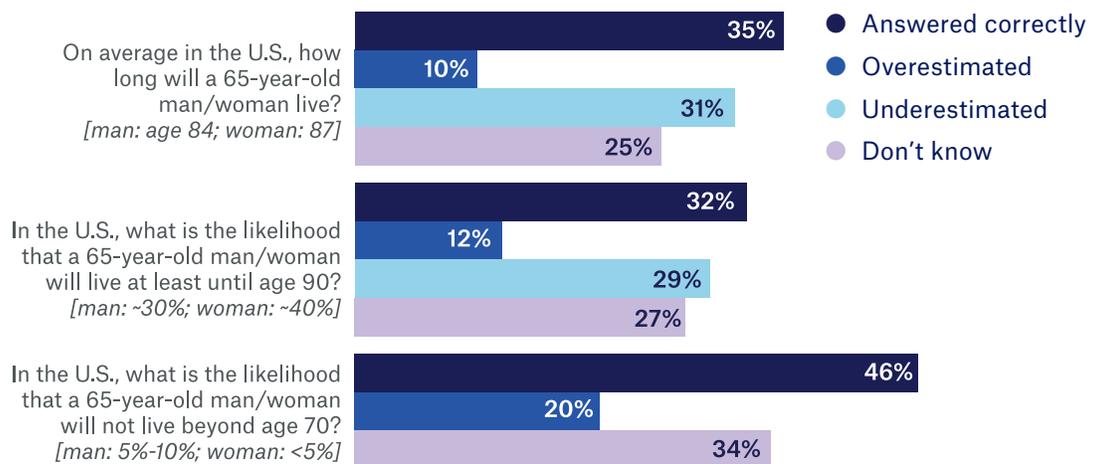
Source: *TIAA Institute-GFLEC Personal Finance Index* (2023).

A good understanding of the retirement planning horizon also involves understanding the likelihoods among 65-year-olds of living to an advanced age as well as living only a few years past age 65 (i.e., ages well beyond and short of average life expectancy). The two additional survey questions assessed people's understanding of such variability regarding life span.

The fact that 30% of 65-year-old men and 40% of 65-year-old women in the U.S. live to at least age 90 should have a significant influence on retirement planning and saving, as well as decumulation decisions. However, only 32% of survey respondents correctly answered this question; 27% responded "don't know," 29% chose the underestimate response, and 12% chose

---

7 The 2022 survey question differed somewhat—*What is life expectancy among 60-year-old men/women in the U.S.?* Nonetheless, aggregate responses are very similar between the two years—in 2022, 37% answered correctly, 28% responded "don't know," 25% chose the response that underestimates life expectancy at age 60, and 10% chose the overestimate response.

the overestimate response (Figure 1). In the aggregate, these responses mirror the responses to the first question. Of particular note, 56% of U.S. adults again demonstrate a worrisome lack of understanding of the retirement planning horizon among 65-year-olds.

It's also noteworthy that while response rates to the first two questions are almost identical in the aggregate, this often does not hold at the individual level. Meaning there is only moderate overlap between the two questions. In fact, only 50% of those who correctly answered the "average life span at age 65" question also correctly answered the "likelihood that a 65-year-old lives to at least 90" question. The strongest correlation was not surprisingly among "don't know" responses; 75% of those who responded "don't know" to the "average life span at age 65" question also responded "don't know" to the "likelihood that a 65-year-old lives to at least 90" question.

The reporting construct is slightly different for the third longevity literacy question addressing the "likelihood that a 65-year-old will not live beyond 70." To make the response options comparable among men and women the underestimate and correct responses were aggregated— responses equivalent to "10% or less" among both men and women were coded as correct.[8] This accounts, at least in part, for the relatively large share (46%) of correct answers to this question (Figure 1). Nonetheless, a larger share (34%) responded "don't know" compared with the first two questions. In addition, 20% chose the overestimate response. Again, more than one-half (54%) of U.S. adults demonstrate a worrisome lack of understanding of the retirement planning horizon for 65-year-olds. In the context of working with a retirement planning horizon that goes in the wrong direction, overestimating the likelihood of early death is equivalent to underestimating average life expectancy and underestimating the likelihood of living to an advanced age.

Composite indicators of longevity literacy

Aggregating responses across the three longevity literacy questions clearly demonstrate the poor state of longevity literacy among U.S. adults (Figure 2). Only 12% of survey respondents demonstrated strong longevity literacy by correctly answering each of the longevity literacy questions. So barely 1 in 10 adults know how long 65-year-olds live on average, as well as the likelihood among 65-year-olds of living to at least age 90 and the likelihood of not living beyond age 70. Strong longevity literacy means an intrinsic understanding of the distribution of life expectancy at age 65.

8   There is no "underestimate" response option for women because the likelihood of dying by age 70 among 65-year-old women is less than 5%. To still make the responses comparable between men and women, we aggregated the underestimate and correct responses for men. In contrast to the first two longevity questions, the underestimate response in this question is less worrisome from a longevity risk perspective because it means that people are planning with a higher likelihood of living past age 70. Therefore, responses equivalent to "10% or less" among both men and women were coded as correct.

Figure 2. Longevity literacy among U.S. adults

Based on knowledge of:
- How long a 65-year-old will live on average
- Likelihood that a 65-year-old will live at least until age 90
- Likelihood that a 65-year-old will not live beyond age 70

Strong longevity literacy (three correct answers) — 12%

One or two correct answers — 53%

No correct answers; at least one answer was incorrect in "right direction" — 4%

Weak longevity literacy (no correct answers; each answer was "don't know" or incorrect in "wrong direction") — 31%
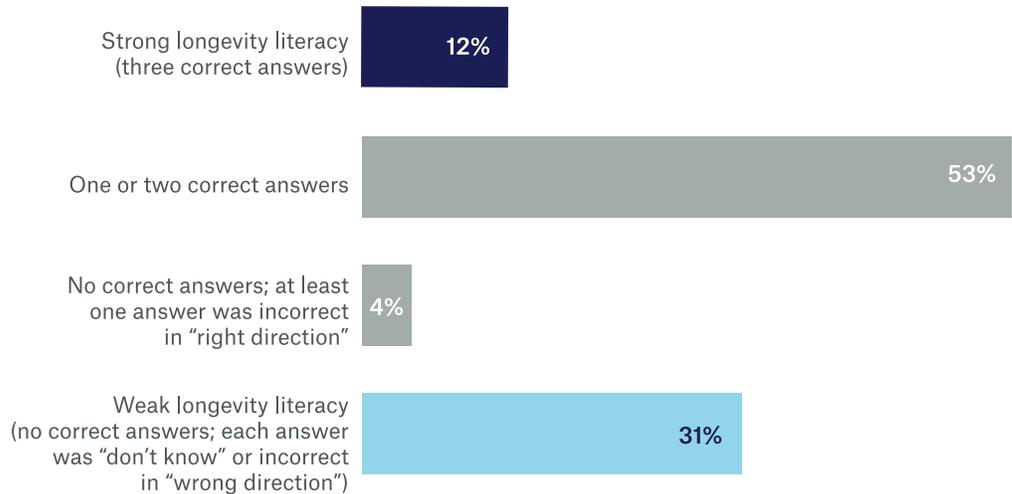
Source: *TIAA Institute-GFLEC Personal Finance Index* (2023).

At the other end of the spectrum are those who did not correctly answer any of the questions. Of particular interest are the 31% who responded either "don't know" or incorrectly in the wrong direction of the retirement planning horizon to each question. These adults are considered to have weak longevity literacy, i.e., they demonstrate a complete lack of understanding of the retirement planning horizon for 65-year-olds.

Strong and weak longevity literacy represent the extremes, which are the focus of this report. Between are those who correctly answered one or two of the questions (53%), as well as those who did not correctly answer any of the questions and had at least one incorrect in the "right direction" of the retirement planning horizon (4%).

The 31% with weak longevity literacy include 17% that answered "don't know" to all three questions, 6% that responded incorrectly in the wrong direction of the retirement planning horizon to all three questions, and 8% that responded with a mix of the two (Figure 3). It is worrisome that approximately one-third of U.S. adults have a complete lack of understanding of the retirement planning horizon, a knowledge gap that can keep them from planning and preparing appropriately for their retirement.

Figure 3. Weak longevity literacy

Based on knowledge of:
- How long a 65-year-old will live on average
- Likelihood that a 65-year-old will live at least until age 90
- Likelihood that a 65-year-old will not live beyond age 70

Weak longevity literacy (no correct answers; each answer was "don't know" or incorrect in "wrong direction")	31%
Responded "don't know" to each question	17%
Responded in "wrong direction" to each question	6%
Mix of "don't know" and "wrong direction" responses	8%

Source: *TIAA Institute-GFLEC Personal Finance Index* (2023).

Demographic variations in longevity literacy

The most striking demographic variation in longevity literacy involves men and women. While essentially equal shares of men and women correctly answered each question (11% and 12%, respectively), men more often demonstrate a complete lack of understanding of the retirement planning horizon—32% of men show weak longevity literacy, compared with 29% of women (Figure 4)—and this difference is statistically significant.

Figure 4. Longevity literacy among men and women

Based on knowledge of:
- How long a 65-year-old will live on average
- Likelihood that a 65-year-old will live at least until age 90
- Likelihood that a 65-year-old will not live beyond age 70

● Men
● Women

	Men	Women
Strong longevity literacy	11%	12%
Weak longevity literacy	32%	29%
Responded "don't know" to each question	16%	18%
Responded in "wrong direction" to each question	7%	4%
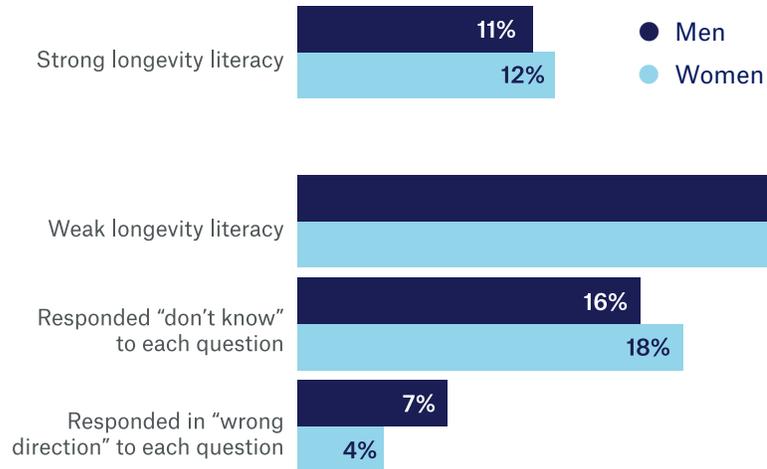
Source: *TIAA Institute-GFLEC Personal Finance Index* (2023).

Analogous gender patterns in longevity literacy appear at the individual question level (Figure 5). Men more often answer the questions in the wrong direction of the retirement planning horizon—underestimating how long a 65-year-old will live on average and the likelihood that a 65-year-old will live to at least age 90, as well as overestimating the likelihood that a 65-year-old will not live past age 70—with the difference ranging from 5 to 9 percentage points. Women, however, more often respond "don't know" to these questions. Again, these differences are statistically significant. On net, men are at least marginally more likely to demonstrate weak longevity literacy on the individual question level.[9]

9　Regression analyses for each of the three longevity literacy questions show that the greater occurrence of weak longevity literacy among men remains even after accounting for sociodemographic differences such as education, income and employment status.

Figure 5. Longevity literacy among men and women

On average in the U.S., how long will a 65-year-old man/woman live?

	Answered correctly	Overestimated	Underestimated	Don't know
Men	33%	9%	35%	23%
Women	36%	11%	26%	26%

In the U.S., what is the likelihood that a 65-year-old man/woman will live at least until age 90?

	Answered correctly	Overestimated	Underestimated	Don't know
Men	33%	10%	32%	25%
Women	31%	13%	27%	28%

In the U.S., what is the likelihood that a 65-year-old man/woman will not live beyond age 70?

	Answered correctly	Overestimated	Don't know
Men	45%	24%	31%
Women	47%	16%	37%
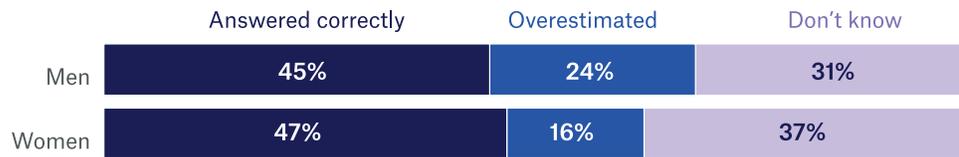
Source: *TIAA Institute-GFLEC Personal Finance Index* (2023).

Furthermore, multivariate analysis demonstrates statistically significant gender differences in longevity literacy. Controlling for other demographic factors, women correctly answer a greater number of longevity literacy questions, while men answer a greater number of questions with either a "don't know" response or a response in the wrong direction of the retirement planning horizon.[10] (See Appendix Figure B1.)

---

10 Men answer a greater number of questions in the wrong direction of the retirement planning horizon, but there is no statistically significant gender difference in the propensity to respond "don't know" to the questions.

The gender patterns in longevity literacy are striking because longevity literacy is highly correlated with financial literacy and financial literacy among women tends to lag that of men and has consistently done so over time.[11] Adults with very high financial literacy (those who correctly answer over 75% of the 28 financial literacy questions in the *P-Fin Index* survey) are three times more likely to demonstrate strong longevity literacy than those with very low financial literacy (those who correctly answer only up to 25% of the financial literacy questions) (19% compared to 6%; Figure 6). At the other end of the spectrum, 49% of those with very low financial literacy demonstrate weak longevity literacy, while only 20% of those with very high financial literacy do so. Those with very low financial literacy are also over five times more likely to respond "don't know" to all three of the longevity literacy questions (38% compared to 7%).[12] Still, even when accounting for financial literacy in the regression analyses on longevity literacy, the gender coefficients remain statistically significant, reinforcing the importance of the gender differences in longevity literacy (Appendix Figure B1).

Figure 6. Longevity literacy by financial literacy

Based on knowledge of:
- How long a 65-year-old will live on average
- Likelihood that a 65-year-old will live at least until age 90
- Likelihood that a 65-year-old will not live beyond age 70
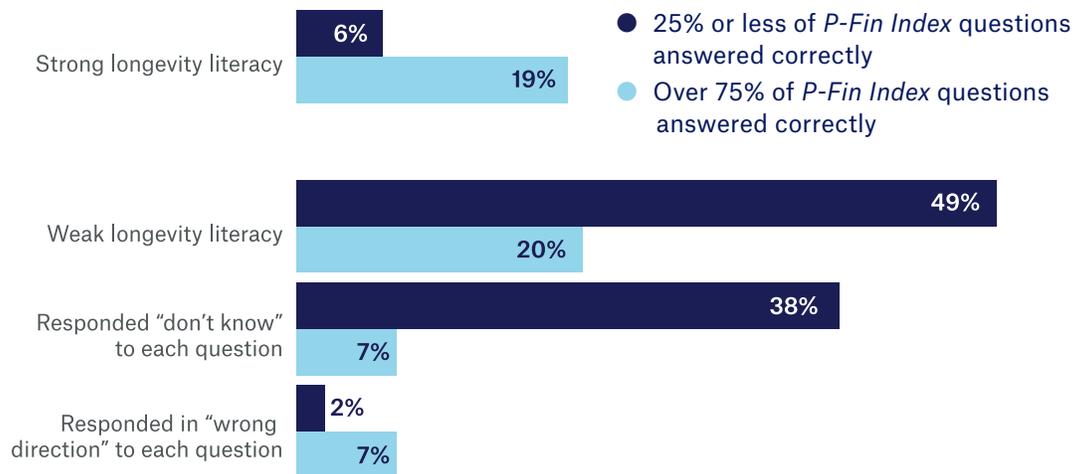
Source: *TIAA Institute-GFLEC Personal Finance Index* (2023).

---

11 Men correctly answered 53% of the 28 financial literacy questions, on average, in the 2023 *P-Fin Index* and 23% of men demonstrated very high financial literacy by answering over 75% of the questions correctly. The analogous figures among women were significantly lower at 43% and 10%, respectively. Regression analysis confirms the financial literacy gender gap: women correctly answer a significantly lower percentage of the *P-Fin Index* questions even when taking various sociodemographic characteristics into account. See Yakoboski, et al. (2023a).

12 Multivariate analysis further demonstrates the positive relationship between financial literacy and longevity literacy. See Appendix Figure B1.

Asians and Whites have somewhat similar levels of longevity literacy (Figure 7). An essentially equal percentage of each demonstrates strong longevity literacy, but weak longevity literacy is significantly more common among Asians (32% compared to 27%). In addition, 19% of Asians responded "don't know" to each of the longevity literacy questions; the analogous figure among Whites is 13%.

Figure 7. Longevity literacy by race and ethnicity

Based on knowledge of:
- How long a 65-year-old will live on average
- Likelihood that a 65-year-old will live at least until age 90
- Likelihood that a 65-year-old will not live beyond age 70

	Asian	Black	Hispanic	White
Strong longevity literacy	14%	8%	9%	13%
Weak longevity literacy	32%	40%	38%	27%
Responded "don't know" to each question	19%	25%	23%	13%
Responded in "wrong direction" to each question	7%	5%	7%	5%

Source: *TIAA Institute-GFLEC Personal Finance Index* (2023).

Blacks and Hispanics have essentially equal levels of longevity literacy, but it tends to be significantly lower than that of Asians and Whites. Fewer than 10% of Blacks and Hispanics demonstrate strong longevity literacy. Approximately 40% of each has weak longevity literacy and one-quarter of each responded "don't know" to each question.[13] (Appendix Figure A1 shows response patterns for the three longevity literacy questions by race and ethnicity.)

The U.S. adult population spans five generations, with seven years of Gen Z now over age 18. There is little difference in the occurrence of strong longevity literacy across generations, but weak longevity literacy is significantly more common among younger generations (Figure 8).[14] Thirty-seven percent of Gen Z have weak longevity literacy; the analogous figure among the Silent Generation is 23%. There is also a 9-percentage point gap between the two in the share responding "don't know" to all longevity literacy questions. It should be noted that multivariate analysis demonstrates that differences in longevity literacy across generations are largely explained by generational or age differences in other demographic variables (See Appendix Figure B1). (Appendix Figure A2 shows response patterns for the three longevity literacy questions across generations.)

---

13 For these longevity literacy indicators, the differences between Blacks and Hispanics are not statistically significant, whereas they are statistically different from those for Asians and Whites.

14   Except for strong longevity literacy, all percentage point differences between Gen Z and the Silent Generation are statistically significant at the 5% level.

Figure 8. Longevity literacy by generation

Based on knowledge of:

- How long a 65-year-old will live on average
- Likelihood that a 65-year-old will live at least until age 90
- Likelihood that a 65-year-old will not live beyond age 70

	Gen Z	Gen Y	Gen X	Boomers	Silent Gen
Strong longevity literacy	10%	12%	11%	13%	12%
Weak longevity literacy	37%	34%	30%	28%	23%
Responded "don't know" to each question	23%	19%	16%	14%	14%
Responded in "wrong direction" to each question	6%	6%	6%	6%	1%

Source: *TIAA Institute-GFLEC Personal Finance Index* (2023).

Understanding longevity terminology

Unfortunately, terminology is an obstacle to improving poor longevity literacy. Words commonly used in this context by financial professionals and other subject-matter experts may not be widely understood by the general population. In fact, they may even be misinterpreted in ways that can lead to unintended consequences in retirement-planning behavior.

"Life expectancy" is an example of such terminology. The life expectancy of a population group is the number of additional years beyond which one-half of the group members will live, while the other one-half will not. This year's *P-Fin Index* survey included a question to assess understanding of this term.

> *If life expectancy among 65-year-old individuals is 20 years, which of the following statements is true?*
>
> - *About one-half of 65-year-olds will live past age 85* [correct]
> - *The vast majority of 65-year-olds will not live past age 85*
> - *About one-half of 65-year-olds will die between age 84 and 86*

The findings are noteworthy along multiple dimensions. Overall, only 35% of survey respondents chose the correct response (Figure 9). So, only one-in-three U.S. adults understand the practical implications of the term "life expectancy." Twenty-eight percent responded "don't know." The remaining 37% misinterpreted the statement which can be particularly troublesome. Consider the one-quarter of respondents who think the statement means that the vast majority of 65-year-olds will die within 20 years. The potential ramifications of such misinterpretation are obvious—making financial (and other) decisions based on a truncated perception regarding how long people tend to live in retirement can result in inadequate preparations for retirement. This implies that simply telling someone the life expectancy at a given age will not provide useful information most of the time even when true.

Figure 9. Understanding terminology

If life expectancy among 65-year-old individuals is 20 years, which of the following statements is true?

About one-half of 65-year-olds will live past age 85 [correct]	35%
The vast majority of 65-year-olds will not live past age 85	25%
About one-half of 65-year-olds will die between age 84 and 86	12%
Don't know	28%
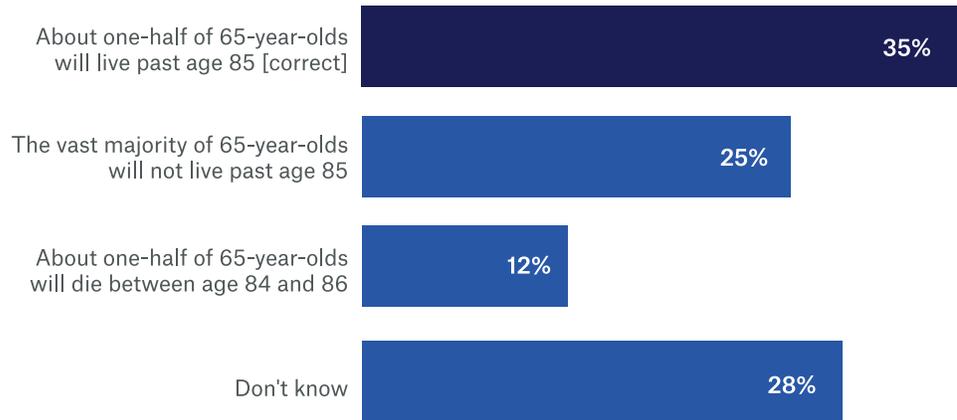
Source: *TIAA Institute-GFLEC Personal Finance Index* (2023).

The vast majority (81%) of those with weak longevity literacy lack understanding of what the term "life expectancy" means (Figure 10). At the same time, this is also surprisingly common among those with strong longevity literacy—47% did not demonstrate a practical understanding of what the term "life expectancy" means. This finding is particularly striking—a factually accurate statement can be readily misinterpreted even by knowledgeable individuals when they are not familiar with the terminology.[15] The assumption should be that additional explanation is necessary to ensure correct interpretation and understanding of the practical implications.

Figure 10. Understanding terminology

If life expectancy among 65-year-old individuals is 20 years, which of the following statements is true?

	Strong longevity literacy	Weak longevity literacy
About one-half of 65-year-olds will live past age 85 [correct]	53%	19%
The vast majority of 65-year-olds will not live past age 85	21%	25%
About one-half of 65-year-olds will die between age 84 and 86	15%	9%
Don't know	12%	47%
	100%	100%

Source: *TIAA Institute-GFLEC Personal Finance Index* (2023).

15   Poor understanding of longevity terminology is common among both men and women, across racial and ethnic groups, and across generations (Appendix Figure A3).

Longevity literacy and retirement readiness

Clear links between retirement readiness and longevity literacy are evident in the 2023 *P-Fin Index* data —greater longevity literacy generally translates into greater retirement readiness and lower longevity literacy is generally associated with lower retirement readiness.[16]

Figure 11 compares workers with strong longevity literacy to workers with weak longevity literacy along various indicators of retirement readiness. It stands out that one-half of workers with strong longevity literacy have tried to figure out how much they need to save for retirement compared with only one-third of those with weak longevity literacy. Moreover, over 70% of those with strong longevity literacy save for retirement on a regular basis, while less than 60% of those with weak longevity literacy do so.[17] Among retirement savers, those with strong longevity literacy tend to have greater confidence that they are saving an adequate amount; 76% are confident compared to 66% of those with weak longevity literacy.

Figure 11. Longevity literacy and retirement readiness

Comparing retirement readiness between workers with strong longevity literacy and those with weak longevity literacy

	Determined how much they need to save for retirement	Saving for retirement on regular basis	Confident they are saving an adequate amount	Have thought about how they will withdraw money from savings	Likely to annuitize some retirement savings	Confident they will have enough money to live comfortably throughout retirement
			(among workers saving for retirement)			
Workers with strong longevity literacy	50%	72%	76%	31%	14%	69%
Workers with weak longevity literacy	32%	58%	66%	28%	11%	53%
Workers who responded "don't know" to each question	24%	52%	69%	26%	9%	51%

Source: *TIAA Institute-GFLEC Personal Finance Index* (2023).

16 Findings are consistent with previous research. See Yakoboski, et al. (2023b).

17 These differences are statistically significant. Further, multivariate regression analyses support this strong relationship. Findings show that the higher the number of correct responses to the longevity literacy questions, the higher the likelihood the respondents have tried to figure out how much they need to save for retirement. Additionally, the more longevity literacy questions were answered with "don't know" or in the wrong direction of the planning horizon the lower the likelihood is the respondents have tried to figure out how much they need to save for retirement.

Smaller percentages of savers in both groups have thought about how they will withdraw money from their savings during retirement to fund living expenses and reported that they will likely convert some of their retirement savings into a payout annuity during retirement. While both appear slightly more common among those with strong longevity literacy compared to those with weak longevity literacy, the differences are not statistically significant. While annuitization shields retirees from longevity risk with a stream of income guaranteed for life, the take-up rate has remained much lower than theory suggests.[18] Improved longevity literacy levels could ultimately lead to greater annuitization rates.

Overall, workers with strong longevity literacy tend to be significantly more confident that they will have enough money to live comfortably throughout retirement—69% are very or somewhat confident compared with 53% of workers with weak longevity literacy.

These findings are expected since strong longevity literacy signals an intrinsic understanding of the distribution of life expectancy at age 65 and thus an accurate perception of the retirement planning horizon. Meanwhile, weak longevity literacy signals a complete lack of understanding of the retirement planning horizon at age 65 as these individuals respond either "don't know" or incorrectly in the wrong direction of the planning horizon to all three questions.

Analogous links between longevity literacy and retirement readiness are apparent among retirees (Figure 12). It's particularly noteworthy that individuals with strong longevity literacy tend to experience better financial outcomes in retirement and these differences are statistically significant. Seventy-seven percent of retirees with strong longevity literacy report that their lifestyle in retirement meets or exceeds their preretirement expectations; the analogous figure among those with weak longevity literacy is 62%. Moreover, as with workers, retirees with strong longevity literacy tend to be more confident that they will have enough money to live comfortably throughout retirement—82% are very or somewhat confident compared with 69% of their peers with weak longevity literacy.

---

18   See Davis, et al. (2022) for a discussion of the barriers to annuity ownership.

Figure 12. Longevity literacy and retirement readiness

Comparing retirement readiness between retirees with strong longevity literacy and those with weak longevity literacy

	Determined how much they need to save for retirement	Saved for retirement on regular basis	Thought about how they would withdraw money from savings	Annuitized some savings or likely to do so	Lifestyle meets or exceeds preretirement expectations	Confident they will have enough money to live comfortably throughout retirement
			(among those who saved)			
Retirees with strong longevity literacy	48%	69%	49%	34%	77%	82%
Retirees with weak longevity literacy	31%	57%	44%	30%	62%	69%
Retirees who responded "don't know" to each question	27%	50%	42%	26%	57%	66%

Source: *TIAA Institute-GFLEC Personal Finance Index* (2023).

As discussed above, financial literacy and longevity literacy are strongly related. Thus, it is not surprising that there is also a strong relationship between financial literacy and retirement readiness, highlighting the importance of both longevity literacy and financial literacy for retirement income security. (Appendix Figures A4 and A5 show the relationship between financial literacy and retirement readiness.)

Discussion

Planning, saving, and preparing for retirement is complex and a key factor in that complexity is the inherent uncertainty regarding how long one's retirement will last. Making appropriate decisions, both before and during retirement, thus requires a degree of longevity literacy, i.e., a basic understanding of how long people tend to live in retirement.

The 2023 *P-Fin Index* survey gauged longevity literacy with a set of three questions each related to an aspect of life expectancy among 65-year-olds in the U.S.—specifically, the average number of years individuals live upon reaching age 65, the likelihood of living to an advanced age, and the likelihood of dying relatively early. These questions evaluate an implicit understanding of the distribution of life expectancy at age 65.

The unfortunate reality is that longevity literacy, like financial literacy, tends to be low among U.S. adults. In fact, only 12% of U.S. adults have strong longevity literacy, meaning they could correctly answer all three longevity literacy questions. On the other end of the spectrum, three

times as many people (31%) have weak longevity literacy, meaning they demonstrate a complete lack of understanding of the retirement planning horizon for 65-year-olds. This matters because individuals with strong longevity literacy are more likely than those with weak literacy to plan and save for retirement while working and they tend to experience better financial outcomes in retirement.

Far too many people do not have a strong understanding of longevity, but the problem is more pronounced among men. In fact, that's one of the most striking findings when looking at demographic subgroups. An equally low share of men and women (only around 10%) show strong longevity literacy. However, significantly more men demonstrate weak longevity literacy compared to women. What makes this finding particularly salient is that longevity literacy is strongly correlated with financial literacy and women tend to have much lower financial literacy than men. Part of the reason women might score better on longevity could be because they tend to spearhead healthcare decisions for their families and be caregivers for elderly parents. Moreover, the phrase "women live longer than men" is constantly used in the press and policy discussions which could too lead to a greater awareness among women.

Unfortunately, poor longevity literacy cannot be improved by simply providing individuals with information. The data show that terminology is an obstacle; only one-third of U.S. adults understand the practical implications of the term "life expectancy." So simply telling someone the life expectancy at age 60 or 65 or 70 will likely not help them. In fact, the statement could even be misinterpreted in a way that is counterproductive. Additional information on appropriate interpretation and practical implications are needed.

This report provides evidence that it is important to focus on longevity literacy and how it can be improved because just like financial literacy it matters for retirement outcomes. These findings are significant given that many Americans face the prospect of financial insecurity in retirement. Initiatives to improve longevity literacy alongside financial literacy can promote retirement security. Improved longevity literacy provides the most foundational component of any plan—an appropriate time horizon.

References

Center on Budget and Policy Priorities. "Top Ten Facts About Social Security." Updated April 17, 2023.

Davidoff, Thomas, Jeffrey R. Brown, and Peter A. Diamond. 2005. "Annuities and Individual Welfare." *American Economic Review*, 95(5): 1573–90.

Davis, Hallie, Andrea Hasler, and Annamaria Lusardi. 2022. "Debt, Illiquidity, and Financial Illiteracy as Barriers to Annuity Ownership." *Journal of Retirement*, 10(2): 33-53.

Employee Benefits Security Administration, U.S. Department of Labor. 2022. *Private Pension Plan Bulletin, Abstract of 2020 Form 5500 Annual Reports*.

The 2023 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds. March 31, 2023.

VanDerhei, Jack. 2019. "Retirement Savings Shortfalls: Evidence From EBRI's 2019 Retirement Security Projection Model." *Issue Brief* No. 475. Employee Benefit Research Institute.

Yaari, Menahem E. 1965. "Uncertain Lifetime, Life Insurance, and the Theory of the Consumer." *Review of Economic Studies*, 32(2): 137–50.

Yakoboski, Paul, Annamaria Lusardi, and Andrea Hasler. 2023a. "Financial Well-Being and Literacy in a High-Inflation Environment: The 2023 TIAA Institute-GFLEC Personal Finance Index."

Yakoboski, Paul, Annamaria Lusardi, and Andrea Hasler. 2023b. "Financial Literacy, Longevity Literacy, and Retirement Readiness: The 2022 TIAA Institute-GFLEC Personal Finance Index."

Yin, Yimeng, Anqi Chen, and Alicia H. Munnell. 2023. "The National Retirement Risk Index: Version 2.0." *Issue in Brief* 23-10. Center for Retirement Research at Boston College.

Appendix A

Figure A1. Longevity literacy by race and ethnicity

On average in the U.S., how long will a 65-year-old man/woman live?
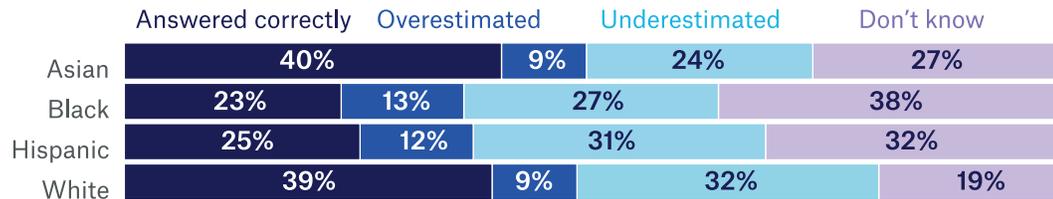
|	Answered correctly	Overestimated	Underestimated	Don't know
Asian	40%	9%	24%	27%
Black	23%	13%	27%	38%
Hispanic	25%	12%	31%	32%
White	39%	9%	32%	19%

In the U.S., what is the likelihood that a 65-year-old man/woman will live at least until age 90?

	Answered correctly	Overestimated	Underestimated	Don't know
Asian	31%	10%	30%	29%
Black	26%	11%	28%	35%
Hispanic	28%	12%	29%	31%
White	34%	12%	30%	24%

In the U.S., what is the likelihood that a 65-year-old man/woman will not live beyond age 70?

	Answered correctly	Overestimated	Don't know
Asian	45%	20%	35%
Black	42%	15%	43%
Hispanic	43%	18%	39%
White	48%	21%	31%
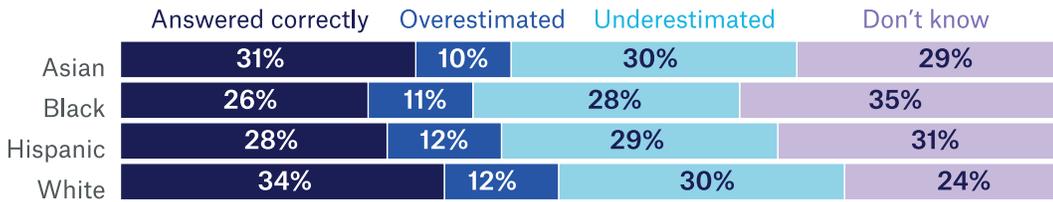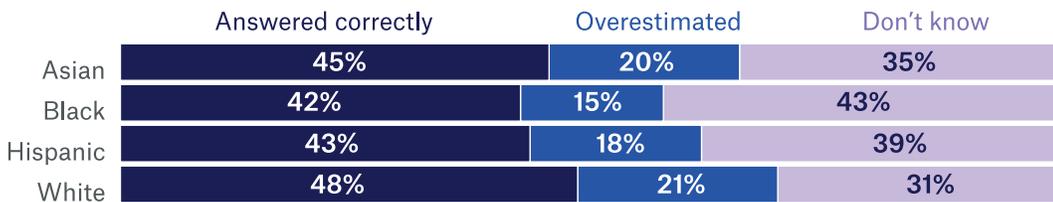
Source: *TIAA Institute-GFLEC Personal Finance Index* (2023).

Figure A2. Longevity literacy by generation

On average in the U.S., how long will a 65-year-old man/woman live?
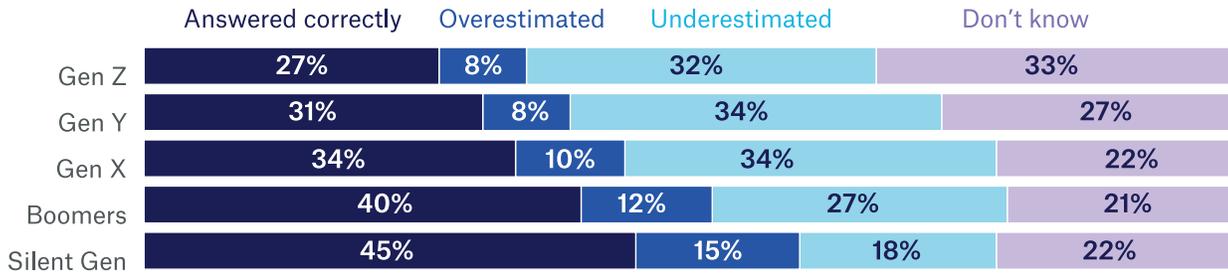
	Answered correctly	Overestimated	Underestimated	Don't know
Gen Z	27%	8%	32%	33%
Gen Y	31%	8%	34%	27%
Gen X	34%	10%	34%	22%
Boomers	40%	12%	27%	21%
Silent Gen	45%	15%	18%	22%

In the U.S., what is the likelihood that a 65-year-old man/woman will live at least until age 90?

	Answered correctly	Overestimated	Underestimated	Don't know
Gen Z	32%	9%	27%	32%
Gen Y	34%	10%	27%	29%
Gen X	29%	13%	34%	24%
Boomers	33%	13%	29%	25%
Silent Gen	33%	13%	27%	27%

In the U.S., what is the likelihood that a 65-year-old man/woman will not live beyond age 70?

	Answered correctly	Overestimated	Don't know
Gen Z	44%	20%	37%
Gen Y	43%	21%	36%
Gen X	50%	18%	32%
Boomers	46%	21%	32%
Silent Gen	45%	20%	35%
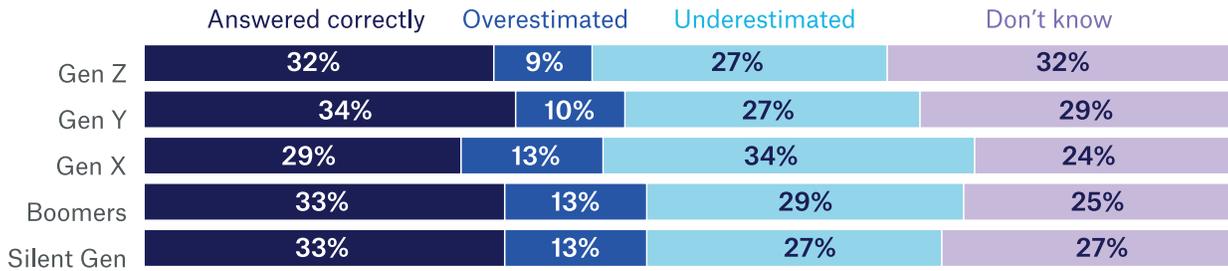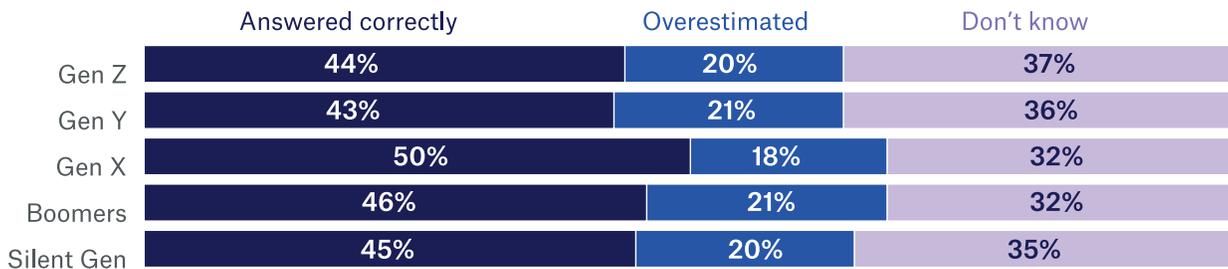
Source: *TIAA Institute-GFLEC Personal Finance Index* (2023).

Figure A3. Understanding terminology

If life expectancy among 65-year-old individuals is 20 years, which of the following statements is true?

	All	Men	Women	Asian	Black	Hispanic	White
About one-half of 65-year-olds will live past age 85 [correct]	35%	37%	32%	36%	26%	28%	38%
The vast majority of 65-year-olds will not live past age 85	25%	27%	23%	24%	21%	28%	25%
About one-half of 65-year-olds will die between age 84 and 86	12%	12%	13%	9%	12%	20%	10%
Don't know	28%	25%	31%	31%	40%	24%	26%
	100%	100%	100%	100%	100%	100%	100%

If life expectancy among 65-year-old individuals is 20 years, which of the following statements is true?

	All	Gen Z	Gen Y	Gen X	Boomers	Silent Gen
About one-half of 65-year-olds will live past age 85 [correct]	35%	27%	32%	36%	38%	40%
The vast majority of 65-year-olds will not live past age 85	25%	23%	26%	27%	24%	21%
About one-half of 65-year-olds will die between age 84 and 86	12%	12%	13%	12%	12%	12%
Don't know	28%	37%	29%	25%	26%	28%
	100%	100%	100%	100%	100%	100%

Source: *TIAA Institute-GFLEC Personal Finance Index* (2023).

Figure A4. Financial literacy and retirement readiness

Comparing retirement readiness among workers with differing levels of financial literacy

	Determined how much they need to save for retirement	Saving for retirement on regular basis	Confident they are saving an adequate amount	Have thought about how they will withdraw money from savings	Likely to annuitize some retirement savings	Confident they will have enough money to live comfortably throughout retirement
			(among workers saving for retirement)			
All workers	41%	65%	71%	31%	14%	58%
% of *P-Fin Index* questions answered correctly						
25% or less	25%	47%	71%	27%	8%	49%
26% to 50%	32%	53%	65%	34%	18%	51%
51% to 75%	46%	75%	70%	29%	17%	60%
76% to 100%	63%	84%	75%	36%	10%	72%

Source: *TIAA Institute-GFLEC Personal Finance Index* (2023).

Figure A5. Financial literacy and retirement readiness

Comparing retirement readiness among retirees with differing levels of financial literacy

	Determined how much they need to save for retirement	Saved for retirement on regular basis	Thought about how they would withdraw money from savings	Annuitized some savings or likely to do so	Lifestyle meets or exceeds preretirement expectations	Confident they will have enough money to live comfortably throughout retirement
			(among those who saved)			
All retirees	42%	68%	47%	28%	71%	78%
% of *P-Fin Index* questions answered correctly						
25% or less	25%	44%	30%	36%	57%	65%
26% to 50%	37%	59%	43%	33%	66%	71%
51% to 75%	47%	78%	48%	30%	77%	83%
76% to 100%	61%	86%	58%	15%	83%	91%

Source: *TIAA Institute-GFLEC Personal Finance Index* (2023).

Appendix B

Figure B1. Regression analysis

	Number correct (0–3)	Number wrong direction/DNK (0–3)
Financial literacy (# of *P-Fin Index* questions answered correctly)	0.032***	-0.033***
	(0.003)	(0.003)
GENDER (REF.: MALE)		
Female	0.153***	-0.192***
	(0.037)	(0.041)
AGE (REF.: GEN Z)		
Gen Y	-0.103	0.085
	(0.065)	(0.073)
Gen X	-0.130*	0.056
	(0.066)	(0.075)
Baby boomers	-0.102	0.035
	(0.078)	(0.086)
Silent Generation	-0.077	-0.018
	(0.108)	(0.120)
RACE/ETHNICITY (REF.: WHITE)		
Black	-0.092*	0.052
	(0.052)	(0.060)
Hispanic	-0.099*	0.046
	(0.052)	(0.058)
Asian	-0.104	0.117*
	(0.066)	(0.070)
Other	-0.118	0.038
	(0.101)	(0.120)
EDUCATION (REF.: LESS THAN HS)		
High school	0.016	-0.075
	(0.075)	(0.085)
Some college	0.034	-0.086
	(0.080)	(0.089)
Bachelor's degree or higher	0.097	-0.144
	(0.085)	(0.095)
INCOME (REF.: <$25K)		
$25–50K	0.003	-0.049
	(0.068)	(0.076)
$51–100K	0.113*	-0.127*
	(0.064)	(0.072)
>$100K	0.112*	-0.164**
	(0.068)	(0.076)
WORK STATUS (REF.: EMPLOYED)		
Unemployed/disabled	-0.101*	0.041
	(0.055)	(0.063)
Retired	0.002	-0.050
	(0.058)	(0.064)

Figure B1. Regression analysis (continued)

	Number correct (0–3)	Number wrong direction/DNK (0–3)
MARITAL STATUS (REF.: MARRIED)		
Single	-0.077	0.063
	(0.053)	(0.061)
Widowed/divorced/separated	-0.026	0.041
	(0.056)	(0.061)
CHILDREN UNDER AGE 18		
Yes	0.009	0.015
	(0.044)	(0.049)
Constant	0.656***	2.316***
	(0.109)	(0.120)
Observations	3,459	3,459
R-squared	0.090	0.080

Notes: Estimated regression coefficients are compared to the following reference values (Ref.): White for the Race/Ethnicity variable, Gen Z for the age variable, household income of less than $25,000 for the income variable, having less than a high school degree for the educational attainment variable, employed for the work status variable, and being married for the marital status variable. Robust standard errors in parentheses: *<0.10, **p<0.05, ***p<0.01.

Source: *TIAA Institute-GFLEC Personal Finance Index* (2023).

Methodology

The 2023 *P-Fin Index* survey gauged longevity literacy with three questions; there were analogous versions for men and women.[19] Each question relates to an aspect of life expectancy among 65-year-olds in general, not the respondent's own life expectancy. Question structure provides four response options—the correct answer, an overestimate response, an underestimate response, and a "don't know" option. The one exception was one question asked of women.

The first question assesses knowledge regarding how long people tend to live in retirement.

On average in the U.S., how long will a 65-year-old man live?

1. About 14 more years (age 79)
2. About 19 more years (age 84) [correct answer] [20]
3. About 24 more years (age 89)
4. Don't know

On average in the U.S., how long will a 65-year-old woman live?

1. About 17 more years (age 82)
2. About 22 more years (age 87) [correct answer] [21]
3. About 27 more years (age 92)
4. Don't know

The second question assesses knowledge regarding the likelihood among 65-year-olds of living to an advanced age.

In the U.S., what is the likelihood that a 65-year-old man will live at least until age 90?

1. About 10% (1 in 10)
2. About 30% (3 in 10) [correct answer] [22]
3. About 50% (5 in 10)
4. Don't know

In the U.S., what is the likelihood that a 65-year-old woman will live at least until age 90?

1. About 20% (2 in 10)
2. About 40% (4 in 10) [correct answer] [23]
3. About 60% (6 in 10)
4. Don't know

The third question assesses knowledge regarding the likelihood among 65-year-olds of dying at a relatively early age.

In the U.S., what is the likelihood that a 65-year-old man will not live beyond age 70?

1. Under 5%
2. Between 5% and 10% [correct answer] [24]
3. Over 10 %
4. Don't know

---

19 Question wording was randomly assigned if gender for a survey respondent was not identified as male or female.
20 Based on Social Security Administration 2019 cohort life expectancies published in 2022.
21 Based on Social Security Administration 2019 cohort life expectancies published in 2022.
22 Based on the "Actuaries Longevity Illustrator," American Academy of Actuaries and Society of Actuaries, longevityillustrator.org/.
23 Based on the "Actuaries Longevity Illustrator," American Academy of Actuaries and Society of Actuaries, longevityillustrator.org/.

In the U.S., what is the likelihood that a 65-year-old woman will not live beyond age 70?

1. Under 5% [correct answer] [25]

2. Between 5% and 10%

3. Over 10 %

4. Don't know

The 2023 *P-Fin Index* survey was completed online in January by a sample of 3,503 U.S. adults, ages 18 and older.[26] Asian, Black, and Hispanic Americans were quota sampled for at least 500 respondents each.[27] Gen Z was also quota sampled for at least 500 respondents, enabling cross-generational comparisons across the Silent Generation, Baby Boomers, Gen X, Gen Y, and Gen Z.[28] The survey data were weighted to be nationally representative.

24 Based on the "Actuaries Longevity Illustrator," American Academy of Actuaries and Society of Actuaries, longevityillustrator.org/.

25 Based on the "Actuaries Longevity Illustrator," American Academy of Actuaries and Society of Actuaries, longevityillustrator.org/.

26 The survey was fielded from January 6 to January 18, 2023, with a sample drawn from Ipsos's KnowledgePanel, a large-scale probability-based online panel.

27 The 3,503 respondents included 502 Asian Americans, 532 Black Americans, 589 Hispanic Americans, and 1,782 White Americans.

28 The 3,503 respondents consisted of 547 Gen Z (born 1997–2002), 772 Gen Y (1981–1996), 878 Gen X (1965–1980), 1,108 Baby Boomers (1946–1964), and 198 members of the Silent Generation (1929–1945).

About the authors

Paul Yakoboski is a senior economist with the TIAA Institute, where his research focus is lifetime financial security, including issues related to financial literacy and financial wellness, retirement saving and investing, and asset management during retirement. In addition, he researches workforce issues in the higher education and nonprofit sectors. He manages the Institute's survey research program and is director of the Institute's Fellows Program. Prior to joining the TIAA Institute, Yakoboski held positions with the American Council of Life Insurers, the Employee Benefit Research Institute, and the U.S. Government Accountability Office. Yakoboski earned his PhD and MA in economics from the University of Rochester and his BS in economics from Virginia Tech.

Annamaria Lusardi is a University Professor of Economics and Accountancy at the George Washington University, and the founder and academic director of GFLEC. She has published extensively and in many leading economics journals, and is the recipient of several prestigious awards. In addition, she chairs the OECD's International Network for Financial Education Research Committee. She previously taught at Dartmouth College, Princeton University, the University of Chicago Harris School of Public Policy and Booth School of Business, and Columbia Business School. She also was a visiting scholar at Harvard Business School. She earned her BA from Bocconi University in Milan and PhD from Princeton University. Lusardi is a TIAA Institute Fellow.

Andrea Sticha is an Assistant Research Professor in Financial Literacy at GFLEC. She leads the team of researchers working on financial literacy and capability, and develops analyses for educational and policy initiatives. Sticha has recently worked on projects focused on financial literacy levels of the young, women, entrepreneurs, investors, and historically underrepresented communities in the United States and around the world. She holds a PhD in finance as well as an MSc and BA in business and economics from the University of Basel. While earning her doctorate, she spent two years at the New York University Stern School of Business conducting research on household saving and financial decision making. She also has been a lecturer at the University of Basel for the past seven years. Her professional experience includes the development of an online advanced studies course in financial market theory and work as an analyst conducting global equity market research.

TIAA Institute

GFLEC
GLOBAL FINANCIAL LITERACY
EXCELLENCE CENTER

(08/23)