

EMPIRICAL ARTICLE

Exploring the distribution and correlates of future self-continuity in a large, nationally representative sample

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Abstract

Many people struggle to make tradeoffs between present wants and future wishes, resulting in the tendency to overly discount the value of future rewards. To explain such behavior, past work has pointed to *future self-continuity* or the perceived connection between a person's current and future selves. Yet, most of this past work has been conducted on small-to-medium size convenience samples, and as such, little is known regarding the population-level statistics of future self-continuity or how its link to important financial health variables like saving behavior and financial well-being play out in a nationally representative sample. Here, we use a nationally representative sample of over 6,000 Americans to investigate the generalizability of future self-continuity and its connection to financial outcomes such as savings behavior and global financial well-being. We also examine the strength of these associations in the face of a host of other relevant constructs. Overall, this research replicates and extends existing work on the relationship between future self-continuity and financial decision-making among a representative population, and sheds further insight on its potential implications for interventions aimed at enhancing long-term financial well-being.

1. Introduction

In trying to understand why consumers often have difficulty making optimal long-term decisions, researchers have focused on several different factors. First, individual differences exist in both willpower and upbringing, making it easier for some people to exhibit self-control in the face of temptations relative to others (Katzir et al., 2021). Second, it may simply be difficult to reason and think about the future. A large body of research on affective forecasting, for example, has found that people have difficulty accurately forecasting the emotions they will feel in the future about decisions that are made in the present (Wilson & Gilbert, 2005). A third, and growing body of research, has taken a different approach and focused on how people think about and relate to their distant future selves (Hershfield, 2019; Urminsky, 2017). Such work has found that the sense of *future self-continuity*, or the perceived connection that people hold between current and future selves is related to, for example, how much they have saved over time (Ersner-Hershfield, Garton, et al. 2009), how much they discount the value of future rewards (Bartels & Urminsky, 2011), how they fare academically (Adelman et al., 2017), how satisfied they are with their lives (Reiff et al., 2020), and how much

meaning they perceive in their lives (Chu & Lowery, 2024). These findings have led to interventions that have successfully increased the willingness to save (Hershfield et al. 2011; John & Orkin, 2022; Robalino et al., 2023), engage in ethical behaviors (van Gelder et al., 2013; van Gelder et al., 2015; van Gelder et al., 2022), exercise (Rutchick et al., 2018), and avoid procrastination (Blouin-Hudon & Pychyl, 2017).

It has been 15 years since the first journal article (Ersner-Hershfield, Garton, et al., 2009) investigated the links between future self-continuity and decision-making.¹ Since then, dozens of papers investigating the ways people relate to their future selves have been published in the fields of marketing, psychology, and other relevant social sciences (see Hershfield, 2023 and Hershfield & Bartels, 2018 for comprehensive reviews). Yet, much of this research has been conducted on convenience samples of small-to-medium size, and as such, little is known regarding the population-level statistics of future self-continuity or how its link to outcome variables plays out in a nationally representative sample. In this paper, we investigate the relationships between future self-continuity and a variety of future-oriented outcomes with a large sample representative of the U.S. population. In what follows, we first review the theoretical underpinnings of future self-continuity and then discuss the aims of the present study.

1.1. Theoretical underpinnings of future self-continuity

Starting with ancient thinkers such as Plato (207D-208D, cited in Borowski, 1976) and extending to more modern theorists such as Strotz (1956), Schelling (1984), and Parfit (1984), philosophers have suggested that distant future selves may seem as if they are distant other people altogether. Parfit (1984), for example, astutely observes that a boy who starts to smoke, realizing that this could cause harm to his distant future self, does not really identify with his future self, and in some ways treats that future self as if he is another person entirely.

Recent psychological research has provided some empirical evidence for these conjectures: when imagining distant birthdays, people are more likely to adopt a third-person rather than a first-person perspective (i.e., they see the future self as if it is another person in the imagined scene; Pronin & Ross, 2006), a finding conceptually replicated by Macrae et al. (2015). Further, when people make judgments about their future selves, they show similar neural patterns of activity to that which is evoked when making judgments about other people (Ersner-Hershfield, Wimmer, et al., 2009; Mitchell et al., 2011). And, when transcranial magnetic stimulation is used to briefly disable the temporal parietal junction (i.e., the part of the brain that is used to step outside of oneself and take other people's perspectives), research participants not only had difficulty empathizing with others, but they also had difficulty empathizing with their future selves (in that they were more likely to choose smaller financial rewards that could be obtained immediately over larger financial rewards that would be delivered at a delay; Soutschek et al., 2016). Taken together, there is coalescing evidence that with temporal distance, one's future self may seem as if it is another person altogether (see Molouki & Bartels, 2020, for a nuanced perspective on this conjecture). The tendency to see the distant self in this way may shed light on why it is often difficult to make optimal long-term decisions.

If the future self is seen as if it is another person, then making sacrifices for it can be akin to making sacrifices for others. If, as Parfit (1984) notes, there is a lack of identification or connection with that future self, then making a sacrifice today for some future self's benefit can feel analogous to making a sacrifice right now for the benefit of a complete stranger. It may thus be irrational in such a case to engage in behaviors that have long-term benefits (e.g., saving for a distant future self with whom one shares little emotional connection could be just as foolish as giving a large sum of money to a random stranger on the street). Yet, people do make sacrifices for others with some regularity: self-interests are put aside so that loved ones may experience some benefit. Indeed, to the extent that a future self

¹Frederick investigated a similar question in his dissertation, which was later discussed in a book chapter (Frederick, 2003).

resembles another person with whom a close connection is shared (e.g., a best friend), then it can in fact seem logical to make present-day sacrifices for this distant other (Whiting, 1986).

Both correlational and experimental work have shown that the degree to which a person's identity overlaps with a future self (i.e., the level of future self-continuity), the higher the probability that a person will make present-day sacrifices. Using a small sample of Americans ($N = 153$), Ersner-Hershfield, Garton, et al. (2009) found a positive correlation between future self-continuity and assets that had been accrued over time. Other work has found that future self-continuity correlates positively with academic achievement (Adelman et al., 2017), exercise behavior (Ruchick et al., 2018), the tendency to engage in ethical behavior (Hershfield et al., 2012), and the tendency to avoid procrastination (Blouin-Hudon & Pychyl, 2015).

Despite these initial promising findings, basic questions remain about the replicability and generalizability of future self-continuity and its relationship to financial outcomes. First, given that much prior research on future self-continuity has been conducted on younger samples, undergraduates, or smaller convenience samples, researchers do not yet know how future self-continuity replicates on a large scale. Second, although the relationship between future self-continuity and saving behavior is well documented, it is unknown whether and how future self-continuity generalizes to broader measures of global financial well-being (FWB). Third, although other research has ruled out the role of basic demographic factors in explaining the link between future self-continuity and saving behavior, we do not yet know how future self-continuity relates to financial outcomes in the face of many related psychographic constructs (such as objective numeracy). Here, we explicitly explore the extent to which future self-continuity relates to financial outcomes in the face of other constructs that are related to perceptions of the future, and other constructs that may be related to financial outcomes. This paper uses a unique dataset to address these questions.

1.2. Overview of the present research

The present paper replicates and extends existing work on future self-continuity with a nationally representative sample, using a dataset generated by the Consumer Financial Protection Bureau (CFPB) in which a nationally representative sample of approximately 6,000 Americans were asked a battery of questions about their financial behaviors, demographics, and psychographics (one of which concerned their level of future self-continuity). Consequently, the paper aims to make four important contributions: First, to the extent that replicability is a crucial piece of modern science, we show that the initial findings in Ersner-Hershfield, Garton, et al., (2009) replicate in a nationally representative sample over a decade later. Second, we are the first to document the population-level descriptive statistics of future self-continuity. Third, we examine how the relationship between future self-continuity and aspects of financial decision-making generalizes when adjusting for many previously unexamined variables both demographic and psychographic in nature (e.g., objective numeracy). Demonstrating that future self-continuity is related to financial decision-making even when adjusting for many demographic and psychographic variables further establishes the robustness of future self-continuity as a useful construct in understanding people's financial decision-making. Finally, we move beyond financial decision-making behaviors to analyze the relationship between future self-continuity and global FWB. Though related, FWB and financial decision-making behaviors are not the same concepts, and showing that future self-continuity maps onto more than saving behavior represents a step beyond what prior work has shown.

As such, this paper is fundamentally a descriptive one. Yet, understanding the answers to the questions we have posed is important for both basic and applied reasons. From a basic science perspective, knowing the population-level statistics and correlates of future self-continuity can provide more clarity regarding the generalizability of this construct. From an applied perspective, to the extent that previous interventions have been moderately successful at increasing future self-continuity, having a better sense of where groups of people differ on future self-continuity may help inform future interventions.

2. Method

Data was collected as a part of the CFPB's National Financial Well-Being Survey. Although a detailed explanation of the survey is contained in the National Financial well-being Survey's Public Use Guide (CFPB, 2017), we briefly review the methodology and relevant variables here. The survey was conducted to broadly assess the state of Financial well-being from a sample of U.S. adults and was conducted in both English and Spanish via the Internet between October 27, 2016, and December 5, 2016.

2.1. Transparency and openness

Because this project was nested within a larger data collection effort meant to examine a variety of aspects of FWB, we did not create the survey, *a priori*, to only investigate our target questions. Nor did we preregister the data collection or analysis plan, as we became familiar with the dataset after the data had been collected. All the data, analysis code and research materials are available at: <https://researchbox.org/2025>.

2.2. Methodology

The sample was drawn from the GfK KnowledgePanel, which is a recruited panel meant to be representative of the U.S. population. The survey took place in two stages.

In the first stage, participants were recruited into the overall Knowledge Panel survey. At the time of the FWB survey, there were approximately 55,000 panel members from the GfK panel. GfK uses address-based sampling to generate a sample of noninstitutionalized adults in the 50 U.S. states and Washington, D.C.

In the second stage, a sample was drawn from the overall KnowledgePanel for the completion of the CFPB FWB survey. The survey design called for 5,000 adults to complete surveys in proportion to the U.S. population regarding age, race/ethnicity, and household income below 200 percent of the federal poverty level, as well as an additional over-sampling of adults over age 62. An initial 14,402 panelists were selected (11,513 from the general population, 1,647 for the over-62 oversample, and 1,242 representing those below 200 percent of the federal poverty level, African American non-Hispanic, and Hispanic adults). A total of 6,394 surveys were completed. Table 1 contains demographic information for the full sample. Participants earned points from GfK for participating in the survey that could be redeemed for cash, gift cards, merchandise, or game entries. The FWB survey took approximately 15 to 25 minutes to complete.

2.3. Sample weighting

Although a detailed description of the sample weighting procedure is described in CFPB (2017), we provide a broad overview of the procedure here. First, a probability-proportional-to-size procedure was used to select specific samples, and geodemographic benchmarks were employed to weight active panel members on sex, age, race/ethnicity, education, census region, household income, home ownership status, and metropolitan area. Next, GfK raked the sample of completed interviews to be benchmarked against the 2016 Current Population Survey, in terms of age, race/ethnicity, sex, education, household income, and poverty status (less than 100% of the federal poverty level, 100% to 199% of the federal poverty level, and 200% or more of the federal poverty level). Finally, a survey administration partner conducted a final set of raking adjustments.

2.4. Central variables

The main purpose of this survey was to broadly assess FWB, its correlates, and possible antecedents. As a result, the survey included 217 variables comprising demographic items, psychographic variables

Table 1. Demographics.

Characteristic	Weighted		Unweighted	
	N	%	N	%
Age				
18–24	625	9.78%	414	6.47%
25–34	1,357	21.22%	1,116	17.45%
35–44	904	14.13%	828	12.95%
45–54	1,215	19.00%	1,075	16.81%
55–61	763	11.93%	708	11.07%
62–69	682	10.67%	1,021	15.97%
70–74	336	5.26%	496	7.76%
75+	512	8.00%	736	11.51%
Household income				
\$0–\$19,999	853	13.34%	719	11.24%
\$20,000–\$29,999	563	8.80%	506	7.91%
\$30,000–\$39,999	638	9.98%	614	9.60%
\$40,000–\$49,999	430	6.72%	467	7.30%
\$50,000–\$59,999	481	7.52%	505	7.90%
\$60,000–\$74,999	594	9.29%	651	10.18%
\$75,000–\$99,999	850	13.29%	955	14.94%
\$100,000–\$149,999	1,017	15.91%	1,115	17.44%
\$150,000 or more	967	15.12%	862	13.48%
Gender				
Female	3,299	51.59%	3,042	47.58%
Male	3,095	48.41%	3,352	52.42%
Education				
Less than high school	750	11.73%	429	6.71%
High school degree/GED	1,852	28.97%	1,622	25.37%
Some college/associate	1,832	28.65%	1,933	30.23%
Bachelor's degree	1,245	19.47%	1,312	20.52%
Graduate/professional degree	715	11.18%	1,098	17.17%
Race/Ethnicity				
White, non-Hispanic	4,114	64.34%	4,498	70.35%
Black, non-Hispanic	758	11.86%	685	10.71%
Other, non-Hispanic	514	8.04%	336	5.25%
Hispanic	1,008	15.77%	875	13.68%

(e.g., propensity to plan, future self-continuity), and a host of scales aimed at assessing FWB and financial knowledge. Our scope with the present paper is necessarily more limited, as we aim to investigate the links between future self-continuity and key outcome variables (namely, FWB and saving behavior), as well as links to other theoretically relevant constructs. As such, the demographic variables that we include are age, income, education, ethnicity, and gender.

Furthermore, as discussed above, although previous work has identified robust links between future self-continuity and positive financial outcomes (such as asset accumulation), these relationships have not necessarily been examined in the face of other constructs related to the ways that people think about the future and/or the ways that people grapple with financial decision-making. After reviewing the constructs that were measured in the CFPB Well-Being survey, we identified six as

related to perceptions of the future and/or propensity to make sound financial decisions. Namely, the psychographic variables we include are future self-continuity, objective numeracy, financial knowledge, financial confidence, the extent to which saving money is a habit, positive day-to-day management of money, and the propensity to plan. Below, we review each of these key variables.

Demographic variables. All demographic variables were assessed categorically using the following categories: Age (18–24, 25–34, 35–44, 45–54, 55–61, 62–69, 70–74, 75-plus), income (<\$20,000, \$20,000–\$29,999, \$30,000–\$39,999, \$40,000–\$49,000, \$50,000–\$59,999, \$60,000–\$74,999, \$75,000–\$99,999, \$100,000–\$149,999, and \$150,000-plus), education (less than high school, high school degree or GED, some college or associate degree, bachelor’s degree, and graduate or professional degree), ethnicity (White, Non-Hispanic; Black, Non-Hispanic; Other, Non-Hispanic, Hispanic), and gender (Male, Female).

Psychographic variables. Below, we review the psychographic variables that were employed in the survey. We note when such variables are based on prior research.

Future self-continuity. Future self-continuity (FSC) was measured using a one-item question developed by Bartels and Rips (2010): “Please think about the important characteristics that make you the person you are now—your personality, temperament, major likes and dislikes, beliefs, values, ambitions, life goals, and ideals—and please rate the degree of connectedness between the person you expect to be in 5 years compared to the person you are now, where 0 means “I will be completely different in the future” and 100 means “I will be exactly the same in the future.”

Objective numeracy. Respondents were asked two questions to assess their level of objective numeracy (i.e., ability to work with numbers; Lipkus et al. 2001): “In the Bingo Lottery, the chance of winning a \$10 prize is 1%. What is your best guess about how many people will win a \$10 prize if 1,000 people each buy a single ticket for the Bingo Lottery?” and “Which of the following represents the biggest risk of getting a disease?: 1%, 10%, 5%.”

Financial knowledge. Financial knowledge was assessed with Knoll and Houts (2012) 10-item scale. Sample items were “Considering a long time period (for example 10 or 20 years), which asset described below normally gives the highest return? (savings accounts, bonds, stocks)” and “Normally, which asset described below displays the highest fluctuations over time? (savings accounts, bonds, stocks).”

Financial confidence. Confidence in one’s financial goals was assessed with a single-item measure: “If you were to set a financial goal for yourself today, how confident are you in your ability to achieve it?” The item was measured on a 4-point scale (1 = Not at all confident, 4 = Very confident).

Savings habits. Savings habits were measured with two items: “Putting money into savings is a habit for me” and “If I can re-use an item I already have, there’s no sense in buying something new.” Each item was measured on a 6-point scale (1 = Strongly disagree, 6 = Strongly agree).

Money management. To assess how people managed their money, respondents answered how often they engaged in the following four items: “Paid all your bills on time,” “Stayed within your budget of spending plan,” “Paid off the credit card balance in full each month,” and “Checked your statements, bills, and receipts to make sure there were no errors.” All items were measured on a 5-point scale (1 = Never, 5 = Always).

Propensity to plan. The propensity to plan was assessed with a four-item questionnaire (Lynch et al., 2010): “I consult my budget to see how much money I have left,” “I actively consider the steps I need to take to stick to my budget,” “I set financial goals for what I want to achieve with my money,” and “I prepare a clear plan of action with detailed steps to achieve my financial goals.” All questions were answered on a 5-point scale (1 = Strongly disagree, 5 = Strongly agree).

Outcome variables. The two outcome variables that we investigate are financial well-being and savings.

Financial Well-Being. Financial well-being was measured with a 10-item scale developed by the Consumer Financial Protection Bureau (CFPB, 2017). Sample items were “I could handle a major unexpected expense,” “I am concerned that the money I have or will save won’t last,” “I have money

left over at the end of the month,” and “I am just getting by financially.” All items were measured on 5-point scales.

Savings. This was a single question: “How much money do you have in savings today...?” The response options were \$0, \$1–\$99, \$100–\$999, \$1,000–\$4,999, \$5,000–\$19,999, \$20,000–\$74,999, and \$75,000 or more.

3. Results

3.1. Descriptive statistics of future self-continuity

As depicted in Figure 1, FSC, which was measured on a 0–100 scale, has a mean of 68.05 ($SD = 32.70$), with a median of 80 and a mode of 100.² FSC appears positively and monotonically related to age³ ($F(8, 6385) = 85.97, p < .001$, see Table 2 for details), a finding that has been corroborated by others (Rutt & Löeckenhoff, 2016). FSC appears positively and monotonically related with income ($F(9, 6384) = 21.95, p < .001$, see Table 3 for details), and with education ($F(5, 6388) = 32.44, p < .001$; see Table 4 for details). FSC did reliably differ by race and ethnicity ($F(4, 6389) = 112.50, p < .001$; see Table 5 for details) but showed no gender differences ($t(6392) = -0.87, p = .383$).

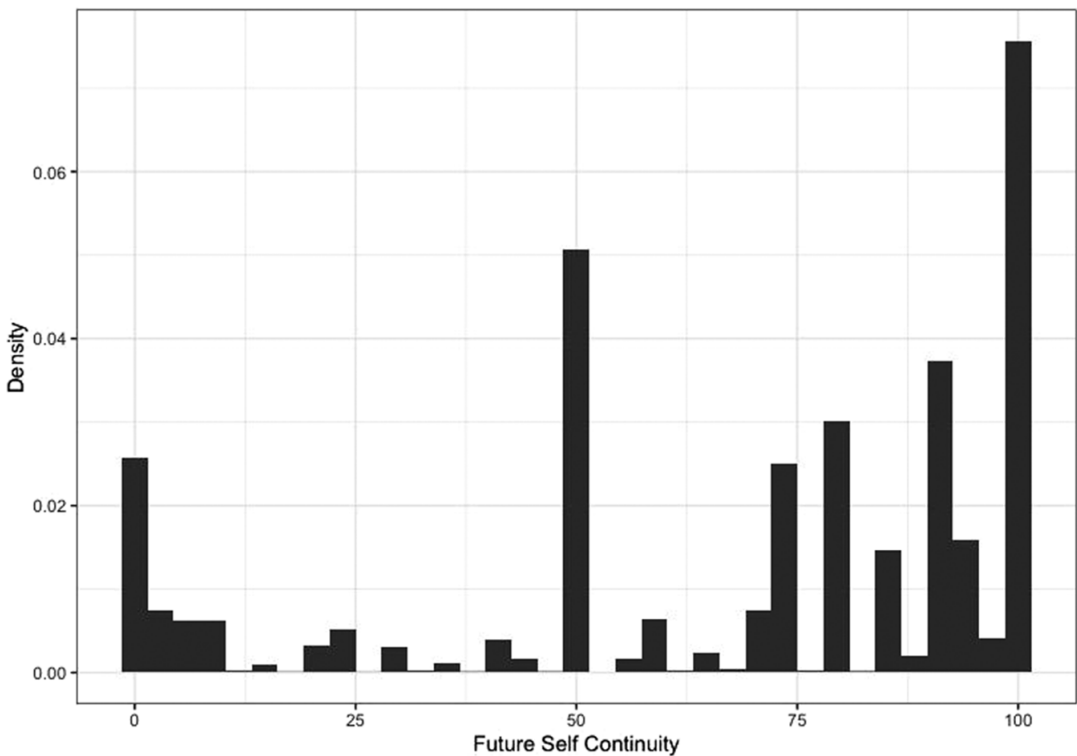


Figure 1. Histogram of FSC scores.

²We used multivariate imputation by chained equation to handle missing data in the survey (Plumpton et al., 2016; Van Buuren & Groothuis-Oudshoorn, 2011). We were particularly concerned about the missingness of the future self-continuity measure ($n = 304$) and the savings measure ($n = 1184$). The missingness in the other variables was relatively small (n 's < 30). The findings in the main text are all robust to complete-case analysis (see Sections 1–3 of the Supplemental Materials for these results).

³To analyze the relationship between FSC and demographics, we ran an OLS regression with FSC as the dependent variable and the demographic of interest as the independent variable. Each model used inverse-probability weighting and included design-based standard errors.

Table 2. *Relationship between age and FSC.*

	FSC	
18–24	54.718***	(2.721)
25–34	56.528***	(1.758)
35–44	62.669***	(2.115)
45–54	72.164***	(1.153)
55–61	75.212***	(1.657)
62–69	76.778***	(1.264)
70–74	82.655***	(1.409)
75+	82.707***	(1.663)
Observations	6,394	

Note: Design-based standard errors in parentheses. Significance levels: * $p < .05$; ** $p < .01$; *** $p < .001$.

Table 3. *Relationship between income and FSC.*

	FSC	
less than 20k	56.343***	(2.844)
20k–29,999	64.138***	(2.404)
30k–39,999	65.161***	(1.953)
40k–49,999	66.228***	(2.490)
50k–59,999	67.780***	(2.022)
60k–74,999	71.615***	(1.458)
75k–99,999	71.434***	(1.530)
100k–149,999	70.855***	(1.252)
150k+	75.381***	(1.358)
Observations	6,394	

Table 4. *Relationship between education and FSC.*

	FSC	
Less than high school	58.807***	(3.197)
High school diploma	66.468***	(1.579)
Some college	66.250***	(1.182)
Bachelor's degree	74.044***	(1.048)
Graduate degree	75.989***	(1.028)
Observations	6,394	

Table 5. *Relationship between race and FSC.*

	FSC	
White, non-Hispanic	73.586***	(0.846)
Black, non-Hispanic	51.833***	(2.946)
Other, non-Hispanic	69.099***	(2.658)
Hispanic	57.108***	(2.098)
Observations	6,394	

Table 6. Descriptive statistics and correlations of psychographic variables.

	<i>M</i>	<i>SD</i>	FSC	Objective numeracy	Propensity to plan	Financial knowledge	Financial confidence	Saving habit
FSC	68.05	32.70						
Objective numeracy	0.70	0.36	.154***					
Propensity to plan	3.55	0.82	.013	−.058***				
Financial knowledge	−0.18	0.81	.296***	.411***	−.029*			
Financial confidence	3.17	0.75	.113***	.098***	.378***	.208***		
Saving habit	4.30	1.49	.090***	.042**	.408***	.164***	.488***	
Money management	3.92	0.90	.224***	.065***	.431***	.254***	.498***	.547***

Note: Reported are the Pearson's correlations between the psychographic variables.

3.2. Relationship with psychographic variables

As can be seen in Table 6, FSC is positively correlated with objective numeracy, financial knowledge, financial confidence, the extent to which saving money is a habit, and positive day-to-day management of money (all p 's < .001).⁴ It was not, however, significantly related to the propensity to plan ($p = .351$).

3.3. Relationship with financial outcome variables

FSC was positively related to FWB ($b = 0.103$, $t(6392) = 15.81$, $p < .001$; see Table 7). This relationship remains significant and positive when adjusting for demographic and psychographic variables ($b = 0.033$, $t(6363) = 5.67$, $p < .001$). As noted above, the demographic variables included were age, income, education, ethnicity, and gender and the psychographic variables were objective numeracy, propensity to plan, financial knowledge, financial goal confidence, saving habits, and self-described abilities to manage money.⁵

As shown in Table 8, FSC was also a positive predictor of the amount of money people had saved ($b = 0.016$, $t(6392) = 12.66$, $p < .001$), and remained so when adjusting for demographic and psychographic variables ($b = 0.004$, $t(6363) = 3.35$, $p < .001$). Looking at the model that includes the demographic and psychographic covariates, for each one-unit increase in FSC the probability of having savings that are \$1,000 or more compared to having savings less than \$1,000 increases by 0.20 percentage points.⁶ This means that respondents who reported FSC one standard deviation above the mean were 3.4 percentage points more likely to report having savings greater than \$1,000.

⁴In Sections 4–5 of the Supplemental Material, we include in the analysis additional psychographic variables that are not as closely linked to perceptions of the future and/or propensity to make sound financial decisions. The relationships we document in the main analysis are robust to including these additional variables.

⁵We also examined whether future self-continuity interacted with any of the demographic and psychographic variables when predicting financial outcomes. We do not find any significant interactions between the demographic and psychographic variables and FSC when predicting savings. We do however find significant interactions between FSC and some demographic variables when predicting financial well-being. See Section 6 of the Supplemental Materials.

⁶We forced the change in the odds ratios used to calculate the probabilities to be the same between each savings threshold. This means a one standard deviation increase in FSC is associated with a 3.4 percentage point increase in the likelihood of having \$20,000 or more in savings relative to those with less than \$20,000 in savings or for any other cut-point on the savings measure.

Table 7. Relationship between FSC, demographics, psychographics and FWB.

	FWB	
	(1)	(2)
FSC	0.103*** (0.007)	0.033*** (0.006)
HH Inc: <20k		-4.567*** (0.699)
HH Inc: 20–29k		-3.584*** (0.727)
HH Inc: 30–39k		-2.501*** (0.695)
HH Inc: 40–49k		-0.618 (0.741)
HH Inc: 60–74k		0.301 (0.614)
HH Inc: 75–99k		0.837 (0.589)
HH Inc: 100–149k		2.459*** (0.585)
HH Inc: 150k+		4.090*** (0.624)
18–24		-0.307 (0.664)
25–34		-0.064 (0.489)
35–44		-0.100 (0.492)
55–61		0.693 (0.496)
62–69		4.762*** (0.502)
70–74		5.708*** (0.555)
75+		5.983*** (0.586)
Less than High school		1.438* (0.677)
High school diploma		1.104** (0.392)
Bachelor's degree		0.183 (0.381)
Graduate degree		1.000* (0.422)
African American		1.756*** (0.503)
Other Race		-0.894 (0.673)
Hispanic		0.848 (0.494)
Female		-0.340 (0.291)
Objective numeracy		-0.867 (0.476)
Propensity to plan		-1.920*** (0.226)
Financial knowledge		0.695** (0.240)
Financial goal confidence		5.632*** (0.273)
Savings habit		1.953*** (0.142)
Money management		3.228*** (0.263)
Constant	54.618*** (0.218)	52.391*** (0.612)
Observations	6,394	6,394

Note: Column 1 displays the results of an OLS model where FWB is regressed onto FSC. The model includes inverse-probability weighting to account for the unequal probabilities being sampled and design-based standard errors (shown in parentheses). Column 2 displays the results when demographic and psychographic covariates are added to the model. HH Inc = Household income.

4. General discussion

To better understand how individuals make tradeoffs between the present and the future, philosophers, economists, and psychologists have proposed so-called multiple-self models, in which present and future selves are treated as two separate parties at the metaphorical negotiation table. Over the last 15-plus years, more and more empirical researchers have been attempting to characterize the relationship that a given person feels with his or her future self (i.e., FSC), and how this relationship may be related to (and impact) consequential intertemporal outcomes. Yet, little work has been conducted

Table 8. Relationship of FSC, demographics, and psychographics with reported savings.

	Savings	
	(1)	(2)
FSC	0.016*** (0.001)	0.004*** (0.001)
HH Inc: <20k		-1.324*** (0.143)
HH Inc: 20–29k		-0.513** (0.167)
HH Inc: 30–39k		-0.303 (0.155)
HH Inc: 40–49k		-0.159 (0.140)
HH Inc: 60–74k		0.331* (0.136)
HH Inc: 75–99k		0.475*** (0.116)
HH Inc: 100–149k		0.688*** (0.117)
HH Inc: 150k+		1.055*** (0.123)
18–24		-0.470*** (0.127)
25–34		-0.282** (0.097)
35–44		-0.204* (0.098)
55–61		0.297** (0.107)
62–69		0.591*** (0.106)
70–74		0.905*** (0.126)
75+		1.108*** (0.125)
Less than High school		-0.512*** (0.124)
High school diploma		-0.004 (0.086)
Bachelor’s degree		0.291*** (0.078)
Graduate degree		0.290** (0.089)
African American		-0.535*** (0.116)
Other Race		0.251 (0.177)
Hispanic		-0.007 (0.104)
Female		-0.072 (0.062)
Objective numeracy		-0.050 (0.101)
Propensity to plan		-0.319*** (0.046)
Financial knowledge		0.350*** (0.048)
Financial goal confidence		0.251*** (0.055)
Savings habit		0.429*** (0.026)
Money management		0.770*** (0.048)
Observations	6,394	6,394

Note: Column 1 displays the results of an OLS model where saving category is regressed onto FSC. The model includes inverse-probability weighting to account for the unequal probabilities being sampled and design-based standard errors (shown in parentheses). Column 2 displays the results when demographic and psychographic covariates are added to the model.

to assess the nature of FSC on a large scale with a representative sample. Here, we examined the distribution of FSC across thousands of representative Americans and its link to global FWB.

Overall, our findings make four main contributions. First, we replicate in a nationally representative sample the key finding of a positive relationship between FSC and savings behavior established in Ersner-Hershfield, Garton, et al. (2009). Second, we document the population-level descriptive statistics of FSC. We find that FSC has reasonable variability and that people use the full range of the scale. Notably, the distribution could plausibly be called tri-modal, with modes at the scale endpoints and at the scale mid-point. Future research that compares the characteristics of this nationally representative

distribution with that of distributions from other studies using the FSC measure will help further our understanding of this point. Third, we find the relationship between FSC and financial decision-making holds when adjusting for relevant demographic and psychographic variables. Interestingly, we find significant positive associations between FSC and all of the psychographic variables except propensity to plan. The lack of relationship between FSC and propensity to plan is curious, given the ostensible conceptual link between the two constructs. Nonetheless, FSC speaks to the nature of the relationship one has with one's future self while the propensity to plan scale measures the extent to which an individual plans for the near and medium-term future, a set of behaviors that could be learned independently of how connected or similar one feels to one's future self. Future research should examine whether a lack of relationship between FSC and the propensity to plan replicates and if so, why.

Finally, although past work has found that FSC is positively associated with (and can lead to) saving behaviors, we find that the relationship of FSC to financial outcomes generalizes further to global measures of FWB. Importantly, we not only find that this relationship is present in a large-scale, representative sample, but we also find that the positive relationship between FSC and FWB holds in the face of a host of relevant demographics (age, education, income, gender, and ethnicity) and psychographic variables (objective numeracy, propensity to plan, financial knowledge, financial confidence, day-to-day management of money, and saving habits). Admittedly, the relationship we document is correlational. To further understand how FSC might causally impact FWB, future research should experimentally manipulate FSC, using established methods, to determine the extent to which it might lead to changes in FWB.

It is worth noting that although the results are from a nationally representative sample of people living in the United States, the results do not speak to the generalizability of FSC across cultures. It is possible that future self-continuity is influenced by the culture in which one is embedded and consequently influences the relationship between FSC and financial outcomes. Future research is needed to determine how FSC manifests in non-WEIRD cultures, though early work suggests interventions that impact future self-perceptions can effectively change motivation and behavior in other cultures. For instance, one study found that visualizing alternative paths for the future self led to increases in preventive health actions and saving behavior among women in rural Kenya (John & Orkin, 2022).

The current study also points to some potential applications of the results. For instance, deriving scaled or weighted means for demographic groups (where there is sufficient sample size) would provide a set of benchmarks against which studies of FSC with smaller or convenience samples could compare. Moreover, establishing that FSC and FWB are empirically linked underscores the possibility of financial education interventions that leverage the relationship to one's future self to improve FWB. For example, the CFPB's (2022) Future Self Tool engages individual consumers in a set of interactive exercises wherein the person experiences a connection to oneself 10 years in the future, and then, immediately afterward, takes action on longer-term goals, such as savings or debt reduction. The findings of this study suggest that future self-based interventions may potentially contribute to the improvement of FWB, bolstering the value of these educational interventions and adding to the available toolkit to improve the financial decisions people make.

Although the stated contributions add to the collective understanding of FSC, there are a few limitations that should be noted. First, the operationalization of FSC took the form of a 0–100 scale that asked participants to rate the extent to which they felt connected to their future selves in 5 years, similar to the method employed by Bartels and Urminsky (2015). We note that this is just one way to assess FSC. Other research has asked a similar question, but employed a series of overlapping Euler circles (Ersner-Hershfield, Garton, et al., 2009) when asking about perceived similarity to one's future self. More recent work has conceptualized FSC in terms of "Future Self Identification" with a tri-partite model that examines similarity, vividness, and positivity (Bixter et al., 2020). As a result, it is important to acknowledge that our particular examination was focused solely on perceptions of similarity over time.

Due to this project arising out of a larger data collection effort to investigate FWB, we did not create the survey. We also did not preregister the analysis plan, because we became familiar with the dataset after the data had been collected. Although many of these findings conceptually replicate earlier reported ones, future research should, if possible, attempt to replicate with a preregistered design. Also, because we report the results of a survey, the data is inherently correlational. In this study, we cannot rule out that FWB might induce people to feel more FSC.

The study of how we relate to our future selves is a topic that is gaining momentum across disciplines including psychology, consumer behavior, economics, and criminology. Although there have been dozens of papers investigating the link between FSC and a variety of outcomes, none have been done at scale or with a representative sample of individuals. Here, we address both issues by demonstrating that FSC is associated with savings behavior and global FWB in a representative sample of thousands of Americans.

Supplementary material. The supplementary material for this article can be found at <http://doi.org/10.1017/jdm.2024.23>.

Data availability statement. All the data, analysis code and research materials are available at: <https://researchbox.org/2025>.

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