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Supporting information

Despite high objective numeracy, lower numeric confidence relates to worse financial and medical outcomes

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This PDF file includes:

Supplementary text
Figs. S1 and S2
Tables S1 to S12
References for SI reference citations

Supplementary Information Text

Materials and Methods

Study 1

The primary aim of Study 1 was to examine the explanatory power of the interaction of objective numeracy and numeric confidence on financial outcomes. However, in secondary analyses, we also examined two additional dependent measures, financial wellbeing and financial decision maker.

To begin, the financial well-being scale reflects an individual's satisfaction with his/her financial situation. It assesses their perceptions that they can fully meet current and ongoing financial obligations, can feel secure in their financial future, and can make choices that allow enjoyment of life (1). Financial well-being is viewed on a continuum ranging from feeling severe financial stress to being highly satisfied with one's financial situation. It is related to better financial outcomes (e.g., higher self-reported credit scores, fewer experiences with debt collections and other economic hardships; 1). Because financial well-being is a more subjective variable than financial outcomes and it captures individuals' feelings about their finances, we expected higher compared to lower numeric confidence to be associated with greater perceived financial well-being. In particular, those with greater numeric confidence may still feel satisfied with their financial situation (even if they are objectively worse off financially) because they believe they did a good job working with the financial numbers (even if they did not) and they feel positively towards numbers. No known research has examined associations between financial well-being and cognitive traits (e.g., numeric competencies, financial knowledge).

Second, we explored the importance of objective numeracy and numeric confidence to individuals' financial decision-making role in the household. We are aware of one study that examined objective numeracy's relation to individuals' decision-making role in the household (2). In this study, researchers examined the association between spouses' objective numeracy and who makes family financial decisions. Results indicated that the chief financial decision maker in the family tended to be the partner with the higher objective numeracy score. This study only assessed objective numeracy. Because taking the lead on making financial decisions for the household requires motivation and persistence (e.g., for keeping track of one's finances), we hypothesized that numeric confidence would be a key determinant of one's decision-making role. Additionally, as exploratory analyses, we were interested in whether the interaction of objective and numeric confidence may also matter to individuals' decision-making role.

Measures

In Study 1, we also assessed financial knowledge as a covariate.

Financial knowledge. Participants responded to 20 questions (3, 4). Questions were a mix of true-false (e.g., "Bonds are normally riskier than stocks") and multiple choice (e.g., "Assume a friend inherits $10,000 today and his sibling inherits $10,000 but 3 years from now. Who is richer today because of the inheritance?"). Each item was scored as correct or incorrect, summed, and converted to an estimated item response theory (IRT) score using an expected a posteriori (EAP) conversion table (range = -2.43 to 1.73). The EAP table is available in the published manuscript (3) or from the third author, MAZK. Higher scores indicated greater financial knowledge (see Table S11 for all scale items).

Financial well-being. Participants answered a series of ten questions (4) about their perceived financial well-being (e.g., "I can enjoy life because of the way I'm managing my money" and "My finances control my life" on a 5-point response scale either from "not at all" to "completely" or from "never" to "always," depending on the item; 1). Items were summed and scored using the CFPB's financial well-being scale scoring worksheet (available online, 5), which converts respondents' summed totals into IRT-based expected *a posteriori* (EAP) scores. It adjusts for participant age and whether the questionnaire was self-administered or administered by someone else. Higher scores indicated superior financial well-being (see Table S12 for all scale items; possible (actual) range = 0-100 (19-95).

Financial decision maker. Participants responded to, "Who makes the major financial decisions in the household?" Responses, "Me jointly with someone else" and "mostly someone else" responses were coded as 0. "Mostly me" responses were coded as 1.

Results

Financial well-being. The interaction of objective numeracy and numeric confidence was significant, *b(SE)* = 0.31 (0.06), $p < .001$ (Table S3 and Figure S1). Among individuals lower in numeric confidence (−1SD), greater objective numeracy was associated, on average, with lower perceptions of financial well-being (*b(SE)* = −0.68(0.15), $p < .001$). Among individuals higher in numeric confidence (+1SD), objective numeracy did not relate significantly to perceived financial well-being (*b(SE)* = 0.18(0.13), $p = .16$). The effect of numeric confidence was significant at the highest numeracy scores, (*b(SE)* = 2.56(0.31), $p < .001$), but not at the lowest numeracy scores (*b(SE)* = 0.06(0.24), $p = .80$). Thus, being more numerically confident was associated with similarly high perceived financial wellbeing at all levels of objective numeracy. For the less objectively numerate, it may be that having high confidence harmed their financial outcomes (see Figure 1) while buttressing their satisfaction with how well they had managed their finances.

Financial decision maker. The interaction of objective numeracy and numeric confidence was significant, *b(SE)* = 0.06 (0.01), $p < .001$ (see Table S3). Figure S2 indicates that individuals higher in objective numeracy and lower in numeric confidence were the least likely to report being the financial decision maker in the family. In particular, among individuals with higher numeric confidence, participants were about equally likely to be or not be the financial decision maker, and objective numeracy scores had no significant impact (*b(SE)* = 0.01(0.03), $p = .68$). However, among individuals with lower numeric confidence (-1SD), greater objective numeracy was associated with lower likelihood of being the financial decision maker (*b(SE)* = −0.15(0.03), $p < .001$). Individuals with perfect numeracy scores were significantly less likely to be the financial decision maker if they had lower vs. higher numeric confidence, (*b(SE)* = 0.43(0.07), $p < .001$).

We speculate that individuals who can recognize the mistakes they make (they are higher in objective numeracy) and have lower confidence (that perhaps makes those mistakes more salient to them) both perceive themselves as having lower financial well-being and self-select away from being their family's financial decision maker.

Study 2

Health care providers computed the Systemic Lupus Erythematosus Disease Activity Index (SLEDAI) score for each patient using the information provided in Table S12.

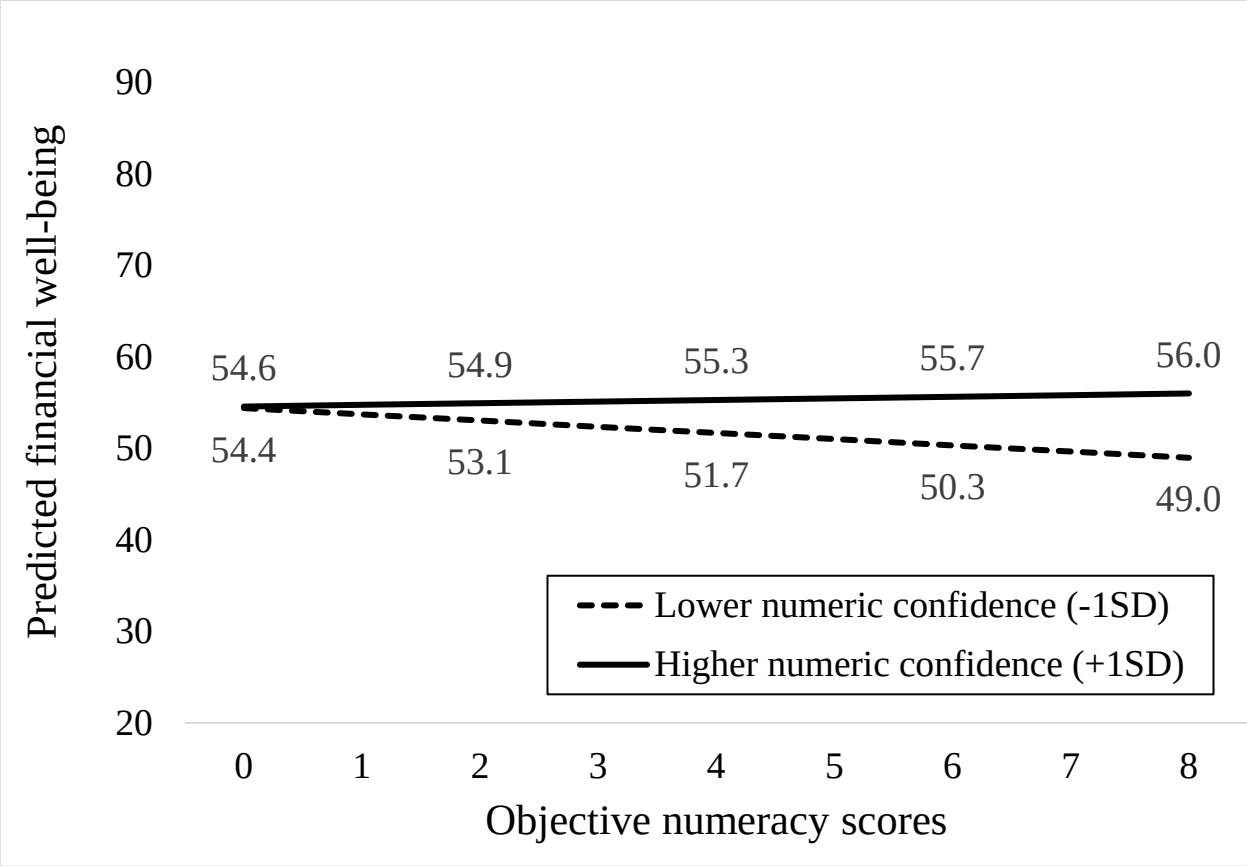

Figure S1. Predicted financial well-being scores for individuals varying in objective numeracy and +/-1 standard deviation (SD) from the numeric confidence mean. Higher numbers are better as they reflect higher financial well-being. Estimates are based on setting covariates to sample means.

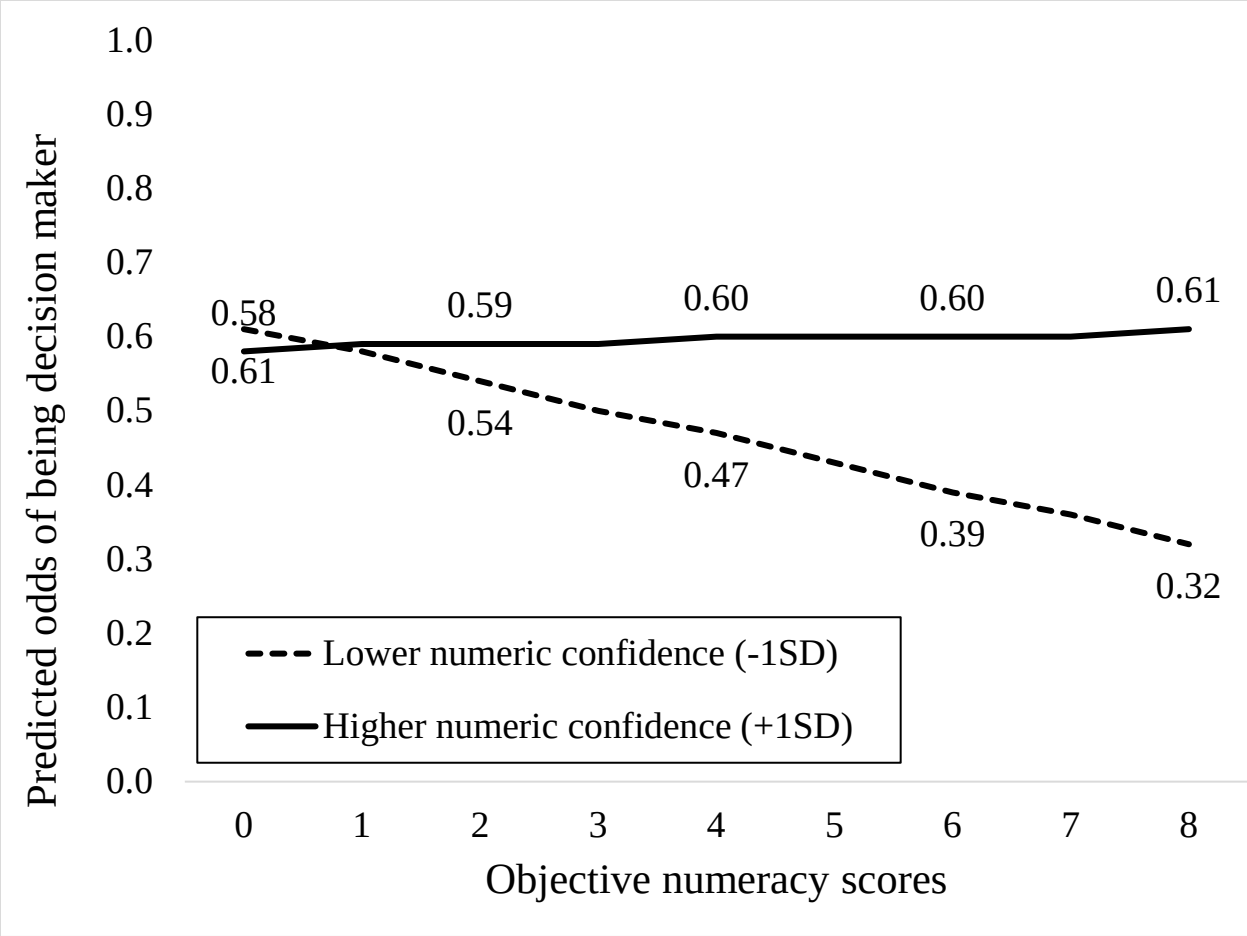

Figure S2. Predicted odds of being the financial decision maker for individuals varying in objective numeracy and +/-1 standard deviation (SD) from the numeric confidence mean. Higher numbers indicate greater predicted likelihood of being financial decision maker. Estimates are based on setting covariates to sample means.

Table S1. Financial outcomes Study 1 - Descriptive statistics for study variables (N=4,572).

Variables	Percent	Mean	Std Dev	Min	Max	Cronbach's α
Independent measures						
Objective numeracy		3.59	1.92	0	8	.72
Numeric confidence		3.78	1.37	1	6	.92
Financial knowledge		−0.02	0.70	−2.04	1.73	.74
Gender						
Male	42.9%					
Female	57.1%					
Age		48.5	15.3	18	96	
Race						
−non-Hispanic White	74.1%					
−Black	8.2%					
−Hispanic	7.8%					
−Asian	2.0%					
−Pacific Islander	0.2%					
−Native American	1.7%					
−Multiple	6.0%					
−Not reported	0.1%					
Education						
High School or less	24.4%					
Some college or Associates	39.0%					
Bachelors or more	36.6%					
Household income		63,690	45,265	3,750	162,500	
Marital Status,						
- not married	41.6%					
- married	58.4%					
Employment Status						
- Currently working	59.7%					
- On sick or other leave	0.5%					
- Unemployed – on layoff	0.7%					
- Unemployed – looking	5.4%					
- Retired	15.5%					
- Disabled	6.8%					
- Other labor force status	5.8%					
- Mixed (2 or more of above)	5.7%					
Dependent measures						
Financial outcomes		79.70	13.86	18.18	100	.71
Financial well-being		54.02	12.56	19	95	.89
Financial decision maker						
Mostly someone else	7.3%					

Me jointly with someone else	45.1%
Mostly me	47.6%

Table S2. Financial outcomes Study 1 - Simple correlations for study measures and demographic controls.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Independent measures														
1. Objective numeracy	1													
2. Numeric confidence	.52**	1												
3. Financial knowledge	.57**	.44**	1											
4. Gender	−.28**	−.23**	−.26**	1										
5. Age	.03	.10**	.27**	−.16**	1									
6. Race: non-Hispanic white vs. Non-White	.25**	.14**	.31**	−.10**	.22**	1								
7. Education1: bachelors or more	.40**	.36**	.38**	−.08**	.04**	.09**	1							
8. Education2: some college	−.14**	−.09**	−.09**	.07**	−.02	−.04**	−.61**	1						
9. Household income	.39**	.35**	.41**	−.17**	.06**	.17**	.43**	−.17**	1					
10. Emplyment1:working	.13**	.10**	.06**	−.04**	−.36**	−.02	.11**	.00	.29**	1				
11. Emplyment2:retired	.03	.07**	.14**	−.09**	.58**	.14**	.03*	−.02	−.02	−.52**	1			
12. Marital Status	.18**	.13**	.21**	−.18**	.09**	.18**	.14**	−.08**	.39**	.08**	.06**	1		
Dependent measures														
13. Financial outcomes	.23**	.19**	.27**	−.14**	.20**	.20**	.24**	−.16**	.29**	−.03*	.20**	.19**	1	
14. Financial well−being	.25**	.31**	.32**	−.17**	.27**	.12**	.30**	−.13**	.45**	.01	.31**	.22**	.53**	1
15. Financial decision maker	−.04*	.05**	.00	.02	.09**	−.06**	.01	.05**	−.16**	.00	.04**	−.43**	−.05**	−.09**

Note. For gender: 0 = male, 1 = female. For race: 1= non-Hispanic white, 0=non-white (i.e., all other categories). For education1: bachelors or more, 1 = bachelors or more, 0 = high school or less/some college or associates. For education2: some college, 1= some college or associates, 0 = high school or less/bachelors or more. For employment1:working: 1=working, 0=any other employment status. For employment2:retired, 1=retired, 0=any other employment status. For marital status: 0 = not married, 1 = married. For financial decision maker: 0 = mostly someone else/jointly with someone else, 1 = mostly me.
*p<.05 **p<.01

Table S3. Financial outcomes Study 1 - Linear/Logistic regression results (unstandardized coefficients with standard errors in parentheses), full models predicting financial outcomes, financial well-being, and financial decision maker (N=4,572).

	Financial outcomes (linear regression)	Financial wellbeing (linear regression)	Financial decision maker (logistic regression)
Intercept	75.20*** (1.47)	43.10*** (1.19)	0.61* (0.27)
Objective numeracy	−1.07** (0.33)	−1.43*** (0.27)	−0.29*** (0.06)
Numeric confidence	−0.87** (0.30)	0.06 (0.24)	−0.05 (0.0)
Interaction (Objective numeracy × Numeric confidence)	0.32*** (0.07)	0.31*** (0.06)	0.06*** (0.01)
Covariates			
Financial Knowledge	1.29*** (0.36)	0.54 (0.29)	0.16* (0.07)
Gender	−0.88* (0.41)	−0.84** (0.33)	−0.11 (0.08)
Age	0.08*** (0.02)	0.08*** (0.01)	0.02*** (0.00)
Race			
−Black	−3.89*** (0.72)	1.30* (0.58)	0.05 (0.13)
−Hispanic	−2.86*** (0.74)	0.49 (0.59)	0.11 (0.13)
−Asian	1.98 (1.35)	0.45 (1.09)	0.28 (0.24)
−Pacific Islander	−9.02* (4.45)	−0.34 (3.60)	−0.71 (0.98)
−Native American	−5.03** (1.46)	−0.47 (1.18)	0.16 (0.27)
−Multiple	−1.97* (0.80)	0.77 (0.65)	0.11 (0.15)
−White	0.00 (.)	0.00 (.)	0.00 (.)
Education			
− Bachelors or more	1.44* (0.59)	1.99*** (0.48)	0.52*** (0.11)
− Some college or Associates	−1.81*** (0.50)	−0.01 (0.41)	0.37*** (0.09)
− High school or less	0.00 (.)	0.00 (.)	0.00 (.)
Household Income	0.00005*** (0.00)	0.0001*** (0.00)	−0.00001*** (0.00)
Marital Status	1.38** (0.42)	0.49 (0.34)	−2.06*** (0.08)
Employment Status			
− On sick or other leave	−0.74 (2.64)	−5.87** (2.13)	0.09 (0.50)
− Unemployed – on layoff	3.80 (2.18)	−4.10* (1.76)	−0.51 (0.40)
− Unemployed – looking	1.47 (0.87)	−2.91*** (0.70)	−0.96*** (0.16)
− Retired	4.88*** (0.67)	8.08*** (0.54)	−0.36** (0.12)
− Disabled	−2.07* (0.81)	−3.47*** (0.66)	−0.49** (0.15)
− Other labor force status	2.18** (0.83)	0.61 (0.67)	−0.66*** (0.16)
− Mixed (2 or more of above)	−0.82 (0.84)	−0.82 (0.68)	−0.36* (0.16)
− Currently working	0.00 (.)	0.00 (.)	0.00 (.)
F/ Wald χ^2 (23, 4548)	44.05***	106.65***	1,158.11***
R^2	0.18	0.35	0.30

Note. For financial decision maker, 0 = mostly someone else/jointly with someone else, 1 = mostly me. For gender, 0 = male, 1 = female. For marital status, 0 = not married, 1 = married. Objective numeracy, subjective numeracy, financial knowledge, age, and household income were continuous measures in their original form. For financial outcomes and financial well-being, Ordinary Least Squares regressions were conducted and b coefficients are presented. For

financial decision maker, logistic regression was used; R^2 is Nagelkerke and the omnibus test is Wald χ^2. As in standard logistic regression, the b-values indicate the change in log odds of being the primary financial decision maker for each 1-unit increase in the predictor. Standard errors are in parentheses. *p<.05 **p<.01 ***p<.001

Table S4. SLE patients Study 2 - Descriptive statistics for study variables (N=91)

Variables	Percent (n)	Mean	StDev	Min	Max	Cronbach's alpha
Independent measures						
Age		42.3	12.1	22	72	
Gender, female % (n)	90.1 (82)					
Race						
White, % (n)	62.6 (57)					
Nonwhite, % (n)	37.4 (34)					
Educational level, % (n)						
High school education and less	37.4 (34)					
More than high school education	62.6 (57)					
Household Income, % (n)						
$50,000 and less	60.4 (55)					
More than $50,000	39.6 (36)					
Numeric confidence		3.65	1.47	1	6	.93
Objective numeracy		3.33	1.99	0	7	.74
Health literacy		34.42	2.50	24	36	.80
Patient activation		66.78	14.24	39	100	.81
Dependent measure						
SLEDAI (disease activity)		3.09	3.44	0	16	

Table S5. SLE patients Study 2 - Simple correlations for study measures and demographics

	1	2	3	4	5	6	7	8	9
Independent measures									
1. Age	1.00								
2. Gender	−.08	1.00							
3. Race	.16	.18	1.00						
4. Education	.07	.12	−.25*	1.00					
5. Income	.11	.04	−.21*	.30**	1.00				
6. Numeric confidence	.13	.03	−.19	.40**	.23*	1.00			
7. Objective numeracy	−.06	.20	−.26*	.34**	.38**	.51**	1.00		
8. Health literacy	−.05	.17	−.11	.13	.24*	.37**	.46**	1.00	
9. Patient activation	−.01	.22*	−.10	.05	−.06	.13	.14	.14	1.00
Dependent measure									
10. SLEDAI (disease activity)	−.24*	−.06	.05	−.23*	−.14	−.14	−.14	−.02	.10

Note. For gender, 0 = male, 1 = female. For race, 0=non-Hispanic white, 1= non-white (i.e., all other categories). For education, 1 = more than high school, 0 = high school or less. For income, 0=$50,000 and less, 1=more than $50,000. *p<.05 **p<.01

Table S6. SLE patients Study 2 - Full and final linear regression models (unstandardized coefficients with standard errors in parentheses) predicting SLEDAI (disease activity) scores (N=91).

	Full model	Final model
Intercept	3.07 (5.58)	4.87** (1.82)
Objective numeracy	0.75 (0.53)	0.74 (0.50)
Numeric confidence	0.84 (0.53)	0.78 (0.50)
Interaction (Objective numeracy × Numeric confidence)	−0.27† (0.14)	−0.27* (0.13)
Covariates		
Health literacy	0.02 (0.17)	
Patient activation	0.03 (0.03)	
Age	−0.08* (0.03)	−0.08** (0.03)
Gender	−0.70 (1.30)	
Race	0.08 (0.82)	
Income	0.15 (0.82)	
Education	−1.24 (0.84)	
F(df)	F(10,80)=1.64	F(4,86)=3.15*
R^2	.17	.13

Note. For gender, 0 = male, 1 = female. For race, 0=non-Hispanic white, 1= non-white (i.e., all other categories). For income, 0=$50,000 and less, 1=more than $50,000. For education, 1 = more than high school, 0 = high school or less. †p<.10 *p<.05 **p<.01 ***p<.001

Table S7. Financial outcomes Study 1 - Understanding America Study: Survey modules and select variables

Survey	Variables	Field Date	Observations	Response rate*
UAS 1	Objective numeracy scale	05/31/2014	6,639	96.1%
UAS 6	Financial knowledge scale	08/27/2014	5,603	88.2%
UAS 18	Financial outcome items, Primary financial decision maker	04/20/2015	5,226	85.4%
UAS 38	Demographics, Subjective numeracy scale, Financial well-being scale	02/12/2015	4,715	85.7%

Note. Survey data were downloaded 01/17/2017. Data analyzed for Study 1 are available in the Open Science Framework, https://osf.io/72feh/. To download data directly instead from the Understanding America Study, please go to https://uasdata.usc.edu/index.php to register. Each survey can be downloaded separately. Codebooks, scoring information, response information, and data for each survey can be accessed at https://uasdata.usc.edu/survey/UAS+1, https://uasdata.usc.edu/survey/UAS+6, https://uasdata.usc.edu/survey/UAS+18, and https://uasdata.usc.edu/survey/UAS+38, respectively, or by navigating to the surveys from https://uasdata.usc.edu/index.php. Each survey page has data files provided under the data heading on the survey page. To replicate this data set, responses after 01/17/2017 should be discarded, as should participants who do not provide responses to all four surveys.

*Some surveys were still in the field at the time of download. Response rates are based on the final responses after surveys were closed. This research used the observations available at download date.

Table S8. Financial outcomes Study 1 - Household income coding

Item	Coded
Which category represents the total combined income of all members of your family (living in your house) during the past 12 months? This includes money from jobs, net income from business, farm or rent, pensions, dividends, interest, Social Security payments and any other monetary income received by members of your family who are 15 years of age or older.	
Less than $5,000	$3,750
5,000 to 7,499	$6,250
7,500 to 9,999	$8,750
10,000 to 12,499	$11,250
12,500 to 14,999	$14,000
15,000 to 19,999	$17,500
20,000 to 24,999	$22,500
25,000 to 29,999	$27,500
30,000 to 34,999	$32,500
35,000 to 39,999	$37,500
40,000 to 49,999	$45,000
50,000 to 59,999	$55,000
60,000 to 74,999	$67,500
75,000 to 99,999	$87,500
100,000 to 149,999	$125,000
150,000 or more	$162,500

Table S9. Financial outcomes Study 1 - Financial Outcome Items

Item	Question 1=good outcome/avoided bad outcome	Freq.	Percent
	Credit Card		
	In the last 3 years, did you use any credit cards?		
	Yes (continue to questions 1-3)	3543	77.58
	No	1024	22.42
1	How do you typically pay your credit card bills?		
	I pay off my balance in full each month (1)	1588	45.20
	I pay less than the full balance, but more than the minimum payment (0)	1423	40.51
	I make the minimum monthly payment (0)	420	11.96
	I'm typically behind on my payments (0)	82	2.33
2	In the last 3 years, have you taken a cash advance on one of your credit cards?		
	No (1)	3106	87.74
	Yes, 1 time (0)	209	5.90
	Yes, 2 or 3 times (0)	162	4.58
	Yes, 4 or more times (0)	63	1.78
3	Is the total amount of credit card debt that you have today less than, about the same, or more than the total amount of credit card debt that you had 3 years ago?		
	Less (0)	1106	31.72
	About the same (0)	805	23.09
	More (0)	715	20.50
	I don't have credit card debt now and I didn't 3 years ago. (1)	861	24.69
	Payday Loans		
4	Payday loans are small, short-term loans that must be paid in full when the borrowers receive their next pay check or other regular deposit (such as a Social Security payment). These loans are often paid with a post-dated check. Please select the following statement that best describes your situation regarding these products.		
	I have never considered getting a payday loan from a payday lender (1)	3904	85.52
	I currently have a payday loan (0)	76	1.66
	I have had a payday loan in the past year (0)	170	3.72
	I currently have a payday loan and I have had one in the past year (0)	46	1.01
	I considered getting a payday loan but was rejected (0)	36	0.79
	I have considered getting a payday loan but decided not to get it (1)	333	7.29
	Money Management and Affording Bills		

5	For the next 3 questions, we would like to know who, if anyone, may have helped your household in the last year with money management. If your household has received help with your everyday money management, please tell us who assisted. By money management we mean things like depositing and transferring money, sending payments, writing checks, and balancing accounts. Please choose all that apply.		
	No one, I didn't need help (1)	3736	83.19
	No one, I couldn't find help/ Friend(s)/family member(s)/ Professional(s) (such as a financial advisor or attorney)/ Caregiver who is not a family member (0)	755	16.81
6	If your household needed help covering the costs of your bills and expenses in the last year, please tell us who, if anyone, gave or loaned your household money. Please choose all that apply.		
	No one, I didn't need help (1)	3297	76.23
	No one, I couldn't find help/ Parent/ Child, Other family member/ Friends/ Caregiver who is not a family member (0)	1028	23.77
	Investments and Retirement		
7	If you have any investments, please tell us who managed your investments in the last year. Please choose all that apply.		
	I don't have any investments (0)	2324	53.52
	I managed my investments myself/ Friend(s)/family member(s)/ Professional(s) (such as a financial advisor or attorney)/ Caregiver who is not a family member (1)	2018	46.48
	In the last 3 years, did you retire or do planning for your retirement?		
	Yes (continue to question 8)	894	19.55
	No	3670	80.27
8	Did you determine if you have/had enough money to retire?		
	I did not determine whether I have/had enough money to retire (0)	216	24.19
	I determined that I have/had enough money to retire (1)	388	43.45
	I determined that I do/did NOT have enough money to retire (0)	289	32.36
	Avoided Major Financial Stressors		
	In the last 3 years, if your household experienced major financial stress for any reason, what was the cause? Please choose all that apply		
9	Filing for bankruptcy		
	Yes (0)	106	2.33
	No (1)	4440	97.67
10	Receiving a foreclosure notice		

	Yes (0)	69	1.52
	No (1)	4477	98.48
11	Having unpaid taxes		
	Yes (0)	202	4.44
	No (1)	4344	95.56
12	Had mortgage balance higher than property value		
	Yes (0)	90	1.98
	No (1)	4456	98.02
13	Had mortgage payment higher than expected		
	Yes (0)	71	1.56
	No (1)	4475	98.44

Note: To compute an overall financial outcome score, positive financial outcomes were coded as 1, summed, divided by the total number of outcomes the participant had the opportunity to experience, and multiplied by 100 (possible range = 0 to 100). The absolute number of positive financial outcomes was not used because not all questions applied to all participants. For example, if a participant indicated that he/she did not own a credit card, then an item regarding credit card payment was not relevant to the participant and did not count towards his/her financial outcome score. This scoring approach to handle variable experiences across participants is consistent with prior research (e.g., Decision Outcomes Inventory; 6). Thus, the financial outcome score is equal to the proportion of positive outcomes experienced out of those outcomes participants had the opportunity to experience. Higher scores indicated better financial outcomes.

Table S10. Systemic Lupus Erythematosus Disease Activity Index, Selena Modification - SLEDAI Score (7)

Check box: If descriptor is present at the time of visit or in the proceeding 10 days (laboratory data must be within 30 days of scoring)

Wt	Present	Descriptor	Definition
8	□	Seizure	Recent onset. Exclude metabolic, infectious or drug cause
8	□	Psychosis	Altered ability to function in normal activity due to severe disturbance in the perception of reality. Include hallucinations, incoherence, marked loose associations, impoverished thought content, marked illogical thinking, bizarre, disorganized, or catatonic behavior. Excluded uremia and drug causes.
8	□	Organic Brain Syndrome	Altered mental function with impaired orientation, memory or other intelligent function, with rapid onset fluctuating clinical features. Include clouding of consciousness with reduced capacity to focus, and inability to sustain attention to environment, plus at least two of the following: perceptual disturbance, incoherent speech, insomnia or daytime drowsiness, or increased or decreased psychomotor activity. Exclude metabolic, infectious or drug causes.
8	□	Visual Disturbance	Retinal changes of SLE. Include cytoid bodies, retinal hemorrhages, serious exodate or hemorrhages in the choroids, or optic neuritis. Exclude hypertension, infection, or drug causes.
8	□	Cranial Nerve Disorder	New onset of sensory or motor neuropathy involving cranial nerves.
8	□	Lupus Headache	Severe persistent headache: may be migrainous, but must be non-responsive to narcotic analgesia.
8	□	CVA	New onset of cerebrovascular accident(s). Exclude arteriosclerosis
8	□	Vasculitis	Ulceration, gangrene, tender finger nodules, periungual, infarction, splinter hemorrhages, or biopsy or angiogram proof of vasculitis
4	□	Arthritis	More than 2 joints with pain and signs of inflammation (i.e. tenderness, swelling, or effusion).
4	□	Myositis	Proximal muscle aching/weakness, associated with elevated creatine phosphokinase/adolase or electromyogram changes or a biopsy showing myositis.
4	□	Urinary Casts	Heme-granular or red blood cell casts
4	□	Hematuria	>5 red blood cells/high power field. Exclude stone, infection or other cause.
4	□	Proteinuria	>0.5 gm/24 hours. New onset or recent increase of more than 0.5 gm/24 hours.
4	□	Pyuria	>5 white blood cells/high power field. Exclude infection.
2	□	New Rash	New onset or recurrence of inflammatory type rash.
2	□	Alopecia	New onset or recurrence of abnormal, patchy or diffuse loss of hair.
2	□	Mucosal Ulcers	New onset or recurrence of oral or nasal ulcerations
2	□	Pleurisy	Pleuritic chest pain with pleural rub or effusion, or pleural thickening.

2	□	Pericarditis	Pericardial pain with at least 1 of the following: rub, effusion, or electrocardiogram confirmation.
2	□	Low Complement	Decrease in CH50, C3, or C4 below the lower limit of normal for testing laboratory.
2	□	Increased DNA binding	>25% binding by Farr assay or above normal range for testing laboratory.
1	□	Fever	>38˚C. Exclude infectious cause
1	□	Thrombocytopenia	<100,000 platelets/mm3
1	□	Leukopenia	<3,000 White blood cell/mm3. Exclude drug causes.

_____ TOTAL SCORE (Sum of weights next to descriptors marked present)

Table S11. Financial outcomes Study 1 - Financial Knowledge Items (1,3). * indicates a correct answer

Item	Question
1	Suppose you had $100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow: more than $102, exactly $102, less than $102?
*	1 More than $102
	2 Exactly $102
	3 Less than $102
	4 I don't know
2	Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, would you be able to buy more than, exactly the same as, or less than today with the money in this account?
	1 More than today
	2 Exactly the same as today
*	3 Less than today
	4 I don't know
3	Assume a friend inherits $10,000 today and his sibling inherits $10,000 but 3 years from now. Who is richer today because of the inheritance?
*	1 My friend
	2 His sibling
	3 They are equally rich
	4 I don't know
4	If the interest rates rise, what should happen to bond prices?
	1 They should rise
*	2 They should fall
	3 They should stay the same
	4 I don't know
5	Buying a company stock usually provides a safer return than a stock mutual fund.
	1 True
*	2 False
	3 I don't know
6	Bonds are normally riskier than stocks.
	1 True
*	2 False
	3 I don't know
7	Considering a long time period (for example 10 or 20 years), which asset described below normally gives the highest return: Savings accounts, Bonds or Stocks?
	1 Savings accounts
	2 Bonds
*	3 Stocks
	4 I don't know

8 Normally, which asset described below displays the highest fluctuations over time: Savings accounts, Bonds or Stocks?

1 Savings accounts
2 Bonds
* 3 Stocks
4 I don’t know

9 When an investor spreads his money among different assets, does the risk of losing a lot of money increase, decrease or stay the same?

1 Increase
* 2 Decrease
3 Stay the same
4 I don’t know

10 If you were to invest $1000 in a stock mutual fund, it would be possible to have less than $1000 when you withdraw your money.

* 1 True
2 False
3 I don’t know

11 A stock mutual fund combines the money of many investors to buy a variety of stocks.

* 1 True
2 False
3 I don’t know

12 If you buy a company's stock...

* 1 You own a part of the company
2 You have lent money to the company
3 You are liable for the company's debts
4 The company will return your original investment to you with interest
5 I don’t know

13 "Whole life" insurance has a savings feature while "term" insurance does not.

* 1 True
2 False
3 I don’t know

14 The cash value of a life insurance policy is the amount available if you surrender your life insurance policy while you're still alive.

* 1 True
2 False
3 I don’t know

15 An annuity is a financial product that pays a lump sum when you die.

1 True
* 2 False
3 I don’t know

16 There are annual contribution limits on the amount you can save in a 401(k) plan or IRA that depend on your income.

* 1 True

2 False
3 It depends on the type of IRA and/or 401(k) plan
4 I don't know

17 After age 70 1/2, you have to withdraw at least some money from your 401(k) plan or IRA.

* 1 True
2 False
3 It depends on the type of IRA and/or 401(k) plan
4 I don't know

18 A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage, but the total interest paid over the life of the loan will be less.

* 1 True
2 False
3 I don't know

19 Housing prices in the US can never go down

1 True
* 2 False
3 I don't know

20 Suppose you owe $3,000 on your credit card. You pay a minimum payment of $30 each month. At an Annual Percentage Rate of 12% (or 1% per month), how many years would it take to eliminate your credit card debt if you made no additional new charges?

1 Less than 5 years
2 Between 5 and 10 years
3 Between 10 and 15 years
* 4 Never, you will continue to be in debt
5 I don't know

Table S12. Financial outcomes Study 1 - Financial well-being scale (4)

Item	Question
	This statement describes me...
1	I could handle a major unexpected expense (4) Completely, (3) Very well, (2) Somewhat, (1) Very little, (0) Not at all
2	I am securing my financial future (4) Completely, (3) Very well, (2) Somewhat, (1) Very little, (0) Not at all
3	Because of my money situation, I feel like I will never have the things I want in life (0) Completely, (1) Very well, (2) Somewhat, (3) Very little, (4) Not at all
4	I can enjoy life because of the way I'm managing my money (4) Completely, (3) Very well, (2) Somewhat, (1) Very little, (0) Not at all
5	I am just getting by financially (0) Completely, (1) Very well, (2) Somewhat, (3) Very little, (4) Not at all
6	I am concerned that the money I have or will save won't last (0) Completely, (1) Very well, (2) Somewhat, (3) Very little, (4) Not at all
	This statement applies to me...
7	Giving a gift for a wedding, birthday or other occasion would put a strain on my finances for the month (0) Always, (1) Often, (2) Sometimes, (3) Rarely, (4) Never
8	I have money left over at the end of the month (4) Always, (3) Often, (2) Sometimes, (1) Rarely, (0) Never
9	I am behind with my finances (0) Always, (1) Often, (2) Sometimes, (3) Rarely, (4) Never
10	My finances control my life (0) Always, (1) Often, (2) Sometimes, (3) Rarely, (4) Never

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