



Positive and Negative Financial Behavior: Differential Responses to Education

Jack Marley-Payne, Andrew Davidson, Philip Dituri

Educational interventions have been shown to improve financial wellness on average, but the benefits are highly variable. The variability stems from both what kind of educational intervention is being employed and what financial outcomes are being measured. In this paper, we use recent data from the 2018 National Financial Capability Survey (NFCS) to address this question. We divide educational approaches into two categories, personal finance and mathematics; while we group outcomes according to whether they are positive or negative behaviors. We find that while both personal finance education and mathematics are associated with an increased likelihood of engaging in positive behaviors, only mathematics is associated with a decreased likelihood of engaging in negative financial behaviors. In addition, we find some interaction between the two variables: among people with low math levels, financial education is associated with increased negative behavior, while among people with high math levels, no such association is found.



Introduction

The research consensus on educational interventions to improve financial wellness is that such measures are overall beneficial, but the benefits are highly variable. The variability stems from both what kind of educational intervention is being employed and what financial outcomes are being measured. Though it is well established that such variability exists, its exact nature is not yet fully understood. Two crucial ongoing research projects are, first, investigating what features of an education intervention make it more or less effective and, second, investigating which financial outcomes are more susceptible to influence through education programs. One may also want to study the interaction between these two topics, looking at whether some forms of education are more effective at influencing some outcomes, while others are more effective at influencing others.

In this paper, we use recent data from the 2018 National Financial Capability Survey (NFCS) to address this question. We divide educational approaches into two categories, personal finance and mathematics; while we group outcomes according to whether they are positive or negative behaviors. We find that while both personal finance education and mathematics are associated with an increased likelihood of engaging in positive behaviors, only mathematics is associated with a decreased likelihood of engaging in negative financial behaviors. In addition, we find some interaction between the two variables: among people with low math levels, financial education is associated with increased negative behavior, while among people with high math levels, no such association is found.

Background

Education interventions are an important component of improving financial outcomes in the US. A significant body of research looks at how various forms of education affect various financial outcomes. When it comes to the type of education employed, two key areas are personal finance education and mathematics education: both have been shown to have positive effects upon financial outcomes. Comprehensive meta-studies by Kaiser and Menkhoff (2017, 2018) and Kaiser et. al (2020) find that, on the whole, financial education courses have a significant impact on financial literacy and financial outcomes. In addition, as Hastings et al. (2013) note, there is a well-documented relationship between numeracy and financial outcomes, and additional mathematics education has been shown to improve such outcomes.

Many of the different types of behavior that come under the heading of “financial wellness” have been measured in relation to these two kinds of education. Berheim et. al (2001) find that financial education “mandates have raised both exposure to financial curricula and subsequent asset accumulation once exposed students reached adulthood.” Further research has found that



financial education improves credit score and reduces delinquency rates (Brown et. al 2014; Urban et. al 2015), and that it can improve student borrowing behavior (Stoddard et. al 2018).

Similarly, for mathematics, Banks and Oldfield (2007) write that “numeracy levels are strongly correlated with measures of retirement saving and investment portfolios, even when controlling for other dimensions of cognitive ability as well as educational attainment. Numeracy is also related to knowledge and understanding of pension arrangements, and with perceived financial security.” Additional research finds mathematical ability to be correlated with avoiding delinquency and default on one’s debts (Gerardi 2010, 2013). Further, research has shown a direct association between increased mathematics education and beneficial financial outcomes (Cole et. al 2016, Goodman 2019).

A key component of financial education research is the extent to which it has more influence over some outcomes than others. For example, Bruhn et. al (2016) found that a financial education course in Brazil led to “significant improvements in students’ savings and budgeting as well as positive spillovers to parents, but also an increase in students’ use of expensive credit to make consumer purchases.”

Systematic data on these differential outcomes is found in the aforementioned meta-studies on financial education. Kaiser et. al (2020) write: “results on saving behavior and budgeting behavior are the most robust, while the effects on other categories of financial behaviors are less certain due to either fewer studies including these outcomes (insurance and remittances) or high heterogeneity in the estimated treatment effects (credit behaviors).”

Kaiser and Menkoff (2017) provide a useful graph to illustrate in *figure 1*.

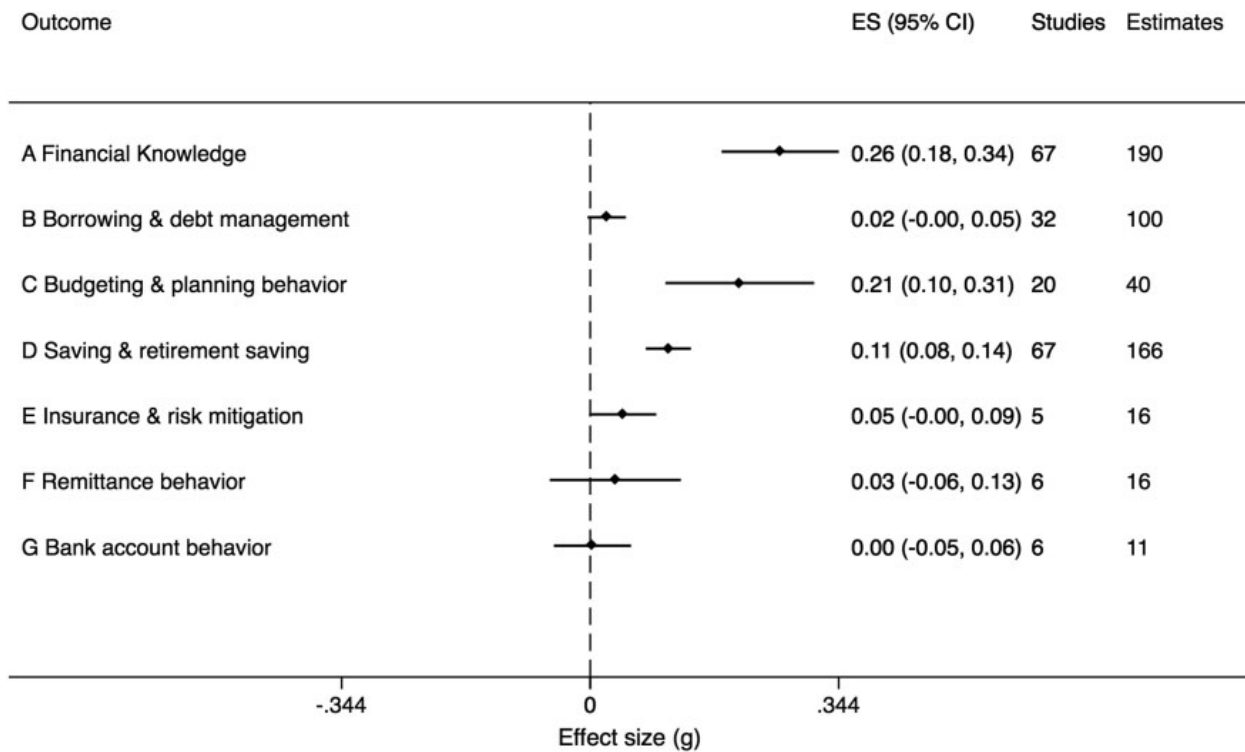


Figure 1

Less work has been done on the differential financial effects of mathematics education. Gaining further evidence on this question is imperative for understanding how best to use education to improve financial outcomes.

Study Design and Hypotheses

We will be using the 2018 National Financial Capability Survey (NFCS) to investigate these questions. This dataset is unique in the depth and breadth of information it provides on the current financial situation of adults in the US. Respondents answer a large range of questions on their financial outcomes and behaviors. In addition, they provide information on the financial education they received and their subjective mathematical capability (or mathematical confidence), so we can check the association between these two explanatory variables and the various financial outcomes.

A key issue when constructing this study was identifying which financial outcomes to investigate, and how to group them when looking into differential effects. An important clarification is that we are aiming to look at how education may affect financial behavior *directly*, hopefully through improved decision making, rather than via increasing income. For example, buying a house is a positive financial behavior but not one that depends solely on good



decision making – it also requires the resources necessary to make such a purchase. Ruling out these kinds of areas allows us to narrow our focus.

Looking through the survey questions, we find that those relevant to our study are naturally divided into two categories: positive and negative behaviors. In other words, beneficial actions that one should perform to promote wellness, such as planning for retirement, and harmful actions that one should avoid in order to promote wellness, such as taking out a payday loan. We identified four key variables in each category to use in our model.

The positive variables are: (i) creating an emergency fund; (ii) opening a savings account; (iii) opening an investment account; (iv) planning for retirement.

The negative variables are: (i) overdrawing an account; (ii) being charged interest on a credit card balance; (iii) taking out a payday loan; (iv) using a pawn shop.

The positive variables have been used in previous research relating to financial education on this dataset by Walstad and Wagner (ms). Additional research has also looked at these variables in relation to math and finance together (Marley-Payne, Davidson & Dituri ms). To the best of our knowledge, previous research has not yet compared the impact of education on these positive variables with the relevant negative variables. However, previous work by Angrisani et. al (2020) investigates the relationship between financial *knowledge* and a similar grouping of positive and negative outcomes, using NFCS data.¹

There is plausible theoretical reason to group the variables in this way, as in general there are different cognitive processes underlying actions that involve carrying out positive (but potentially arduous) behaviors and those that involve refraining from carrying out negative (but potentially pleasurable) behaviors. By analogy, consider, in the context of physical health, the process of making oneself complete a workout compared to that of resisting the temptation to eat a cookie. In the terminology of Kahneman (2011), we may think of performing a positive action as the result of a conscious effort by “system 2”, while avoiding a negative action requires ongoing unconscious monitoring by “system 1”.

This grouping is also similar to the categories that revealed different effects in previous research: namely, budgeting and savings as compared to borrowing and debt. They are not exactly the same, however, since overdrawing a checking account or pawning a valuable item are negative behaviors but do not involve borrowing or debt. Similarly, taking out a mortgage involves debt but is often a positive financial action.

¹ This paper finds that financial knowledge has a significant sustained association with increased positive behavior, but no significant association with negative behavior.



Our goal is to measure the associations between finance and mathematics education and these financial outcomes. On the finance side, since the dataset asks respondents whether they took a course in financial education, so we can do this directly. On the mathematics side, the only information available is a question that asks respondent to self-assess their mathematical ability (we'll refer to this as *mathematical confidence*). Though this is not a direct measure of mathematical education received, the two are closely connected, so we will use it as a component in our student.²

Based on these considerations, we construct models to test the following hypotheses:

H1: Financial education improves positive and negative behaviors.

H2: Mathematical confidence improves positive and negative behaviors.

H3: The effects of finance education and mathematical confidence on both positive and negative behaviors are independent.

Below we discuss the model we use to test these hypotheses.

Data and Model

This investigation will be based on data contained in the 2018 National Financial Capability Survey (FINRA 2019). The survey provides a comprehensive set of data on the financial situation of adults in the US. Approximately 27,000 adults completed the survey online in 2018. Survey quotas were employed to ensure the survey is demographically representative of the US population.

The survey contains approximately 130 questions – with the precise number depending on answers given by the respondent. It has ten sections: (1) basic demographics; (2) financial attitudes and behaviors; (3) banking and money management; (4) retirement accounts; (5) government benefits; (6) home and mortgages; (7) credit cards; (8) other debt and loans; (9) insurance; and (10) a financial self-assessment with questions about financial literacy and financial education. The national data is weighted to be representative of the national population in terms of age, gender, ethnicity, education, and census division. Previous research on the relationship between education and financial outcomes within this dataset has been performed by Walstad and Wagner (ms) and Marley-Payne et al (ms), and we build our models based on this work.

As discussed in our study goals, our model requires explanatory variables related to both finance and math education. Following previous models by Walstad and Wagner (ms) we'll use a

² We discuss this issue further later in the paper.



measure of whether a respondent took a financial education course as an explanatory variable in our model: this will be a dummy variable with a value of 0 or 1.

The survey provides a question on mathematical confidence which allows us to measure mathematical capacity. The question asks respondents to rate their mathematical ability on a scale of 1-7. As mentioned above, this is the only variable related directly to mathematics, included in the survey. Following Marley-Payne et. al (ms), we will use the response to this question as an additional explanatory variable, taking an integer value between 1 and 7.

We introduce a number of controls to our model – these cover demographic factors such as gender, race, age group, income, education and census region. We treat each response option as a dummy variable. In addition, our preliminary analysis revealed that military status had a significant effect on outcomes, so we control for this also. A full list of the variables in our model is provided in appendix 1. We include all variables used in the survey weighting as controls, so we don't have to weight the regression analysis – reducing the standard errors in our results.

For outcome variables, we use the four positive and four negative measures discussed above:

The positive variables are: (i) creating an emergency fund; (ii) opening a savings account; (iii) opening an investment account; (iv) planning for retirement.

The negative variables are: (i) overdrawing an account; (ii) being charged interest on a credit card balance; (iii) taking out a payday loan; (iv) using a pawn shop.

These outcome variables are all binary, taking value 1 if the relevant action is performed and value 0 otherwise. Therefore, we follow Walstad and Wagner (ms) in using probit regression to produce predicted results between 0 and 1. This gives a model of the form: $p = \Phi(\beta_i x_i)$, where p represents the probability that the dependent variable has value 1; Φ is the standard normal distribution function; x_i is a vector of the independent variables; and β_i is the vector of coefficients. In addition, we run OLS linear regression with total of positive actions taken by a subject and total negative actions taken by a subject as outcome variables.

In addition to running these regression models on the entire data set, we do some additional tests. One relates to the influence of military members in the dataset. Previous research suggests that military members are both disproportionately likely to receive financial education and to experience certain negative outcomes (Graves et. al 2005; Skimmyhorn 2016); therefore, we also run our regression models after removing military members from the dataset.

Finally, in order to investigate H3, whether the two explanatory variables are independent, we first partitioned the dataset into high math confidence and low math confidence respondents and ran regression models (without the math confidence variable) on each dataset separately. Second,

we partitioned the dataset into respondents who had and had not received financial education and ran regression models (without the financial education variable) on each dataset separately.

Further details on all regression models are provided in appendix 1.

Results

A comprehensive summary of the descriptive data is provided in appendix 2 – note that these figures use the survey weighting. Some particular items are worth noting, especially with regard to our key explanatory variables. First, with financial education courses, around 80% of respondents had taken no courses in financial education, with the rest taking between one and three courses. This should not come as a great surprise, given that finance education has not in general been a part of compulsory education; however, the nature of the distribution should be kept in mind when interpreting the results.

It is also notable that the math confidence responses are higher than might be expected, given the phenomena of ‘math anxiety’ that is often thought to be prevalent in the US – the mean score is 5.5 out of 7. In particular, very few respondents picked between one and three. To understand this, note that the precise question asks respondents whether they agree that they are “pretty good at math”, which implies they are not asking about an advanced level of mathematical skill. We believe the goal here was to assess respondents’ confidence in everyday mathematics, and so the question was phrased this way to make sure responses weren’t skewed low based on advanced math respondents may have encountered at school.

Moving on to the regression analysis, the results on the entire dataset, and the dataset without military members, are presented in table 1.

	With Military		Without Military	
	Math	Finance	Math	Finance
Emergency	0.07086***	0.1638** *	0.06397***	0.1247***
Savings	0.0492***	0.1449** *	0.04365***	0.1484***
Investment	0.03788***	0.2512** *	0.02875***	0.2162***
Retirement	0.07329***	0.3168** *	0.06977***	0.2936***
Positive Score	0.07523***	0.2751** *	0.0649***	0.2442***
Overdraw	-0.05009***	0.1153** *	-0.06307** *	0.06555*



Credit Card	-0.02725***	-0.02305	-0.03061** *	-0.02715
Payday	-0.026***	0.188*** 0.1822**	-0.03369** *	0.1311***
Pawn	-0.02229***	*	-0.0285***	0.1311***
Negative Score	-0.02667***	0.1067** *	-0.03802** *	0.05453** *

We see that for positive behaviors, in line with previous research, both Math Confidence and Financial Education are associated with an increased likelihood of engaging in all the positive behaviors, and the association is statistically significant. The results for negative behaviors, though, are more surprising. There are statistically significant negative coefficients for math confidence associated with all the negative variables – showing that increasing math confidence decreases the likelihood of engaging in negative behavior. However, with the exception of credit card interest, there is a *positive* statistically significant association between financial education and the negative behaviors. In other words, taking financial education makes someone more likely to engage in these behaviors.

When we compare results with and without military members in the data set, we see that removing military members reduces the size of this effect, but it remains statistically significant. In the no-military analysis, taking financial education increases predicted negative actions taken by approximately 0.054, while increasing mathematical confidence by one-point decreases predicted actions taken by 0.038.

We can visualize the results with the charts in *figure 1*.

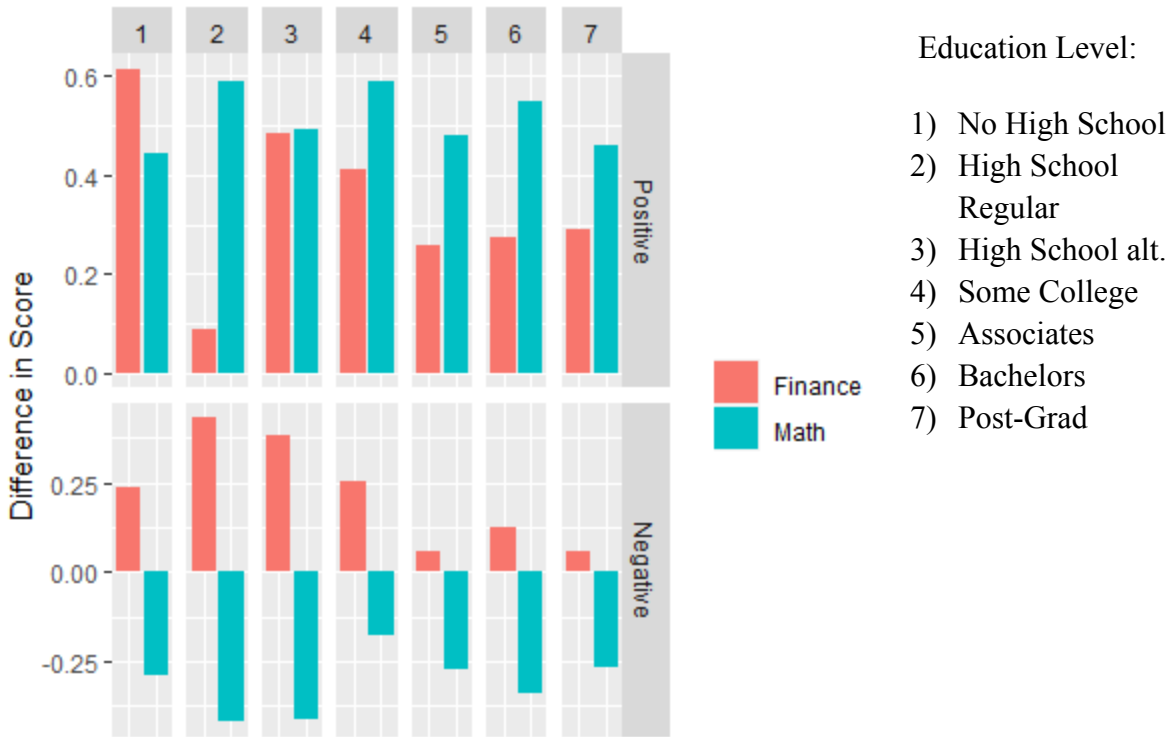


Figure 1

Here, results are broken down by level of education, but otherwise uncontrolled. They show the difference in mean actions taken between those with and without financial education and high math score, respectively. We see that both finance and math increase positive actions across all education levels, while finance increases negative actions and math decreases them. It's interesting to note, though, that the negative effects associated with finance are much lower for higher education levels.

To look at whether the patterns are uniform, we look at the effect of financial education with high math and low math groups separately, and the effect of math confidence on those with and without finance education. We present the results in table 2.

	Finance (Low Math)	Finance (High Math)	Math (No Fin Ed)	Math (With Fin Ed)
Emergency	0.1254**	0.1283***	0.06335***	0.06599***
Savings	0.1359**	0.1562***	0.04036***	0.06075***
Investment	0.2007***	0.2206***	0.02478***	0.0489***
Retirement	0.2858***	0.3006***	0.06933***	0.07613***
Positive Score	0.2346***	0.2501***	0.06187***	0.08035***



				-0.07834**
Overdraw	0.09996*	0.04066	-0.05966***	*
Credit Card	-0.01772	-0.03307	-0.03155***	-0.02664*
				-0.06607**
Payday	0.2282***	0.06149	-0.02467**	*
				-0.06068**
Pawn	0.2402***	0.05686	-0.02041**	*
Negative				-0.05543**
Score	0.123***	0.0214	-0.03435***	*

These results shed further light on the relationship between financial education and negative financial behavior. For low math respondents there is a statistically significant positive association between taking financial education and engaging in all negative behaviors, except credit card interest. On the other hand, in the high math group, there is no statistically significant association between financial education and any of the negative behavior. It's also important to note that the directions of association do not vary from the high math to low math groups, for any of the positive behaviors. Similarly, the effects of math confidence do not change for any variables between the groups with and without financial education.

Discussion

These results provide some crucial further insight into the benefits and limitations of various forms of education intervention aiming to improve financial outcomes. The key result is the pattern of association between financial education and financial outcomes, depending on whether it is positive or negative behavior. From this we see that H1 is only partially confirmed: financial education is associated with an increase in positive behaviors, but also with an increase in negative behaviors. On the other hand, H2 is fully confirmed since math confidence is associated with both an increase in positive behaviors and a decrease in negative behaviors. Finally, H3 must be rejected, since the differential effects of financial education found in the high and low math groups shows that the two variables are not independent.

One key consequence of this is methodological: the sharp division in results suggests that dividing financial outcomes into positive and negative effects is a useful grouping when understanding the differential effects of financial education – alongside the more commonly used grouping by the type of financial transaction involved. As noted above, both the positive and negative behavior groups span multiple categories employed by, e.g. Kaiser & Menkhoff (2017); however they seem to capture a significant pattern in outcomes.

More practically, these results identify an area of need in financial education: work needs to be done to see how such programs can do a better job of addressing negative behaviors. Given that



the increased likelihood of negative behaviors is much reduced, if not eliminated, by increased mathematical confidence, one possibility is that pairing finance education with additional, or improved, mathematics education may be part of the solution.

One key question that remains is understanding *why* this pattern of associations occurs. A plausible hypothesis is that financial education tends to increase a participant's propensity to engage with all kinds of financial products; however, mathematical knowledge is required in order to have the understanding necessary to discriminate between positive and negative uses of such products. Whether this is the case or not, though, cannot be assessed using the observational data found in the NFCS dataset.

This brings us to one of the limitations of the present study, which is that it is merely observational and so does not permit us to make causal inferences. Still the pattern of observations is striking enough to merit discussion, and further investigation.

A further limitation is the lack of information available in the dataset on the mathematical component. We used mathematical confidence as an approximation for mathematical capacity as that was the information available. Confirming the results using a direct measure of mathematical capacity would be valuable knowledge. In addition, also having information on mathematical education of the respondents that could be compared with their financial education would shed further light on this pressing issue.



References

- Angrisani, M., Burke, J., Lusardi, A., & Mottola, G. (2020). *The Stability and Predictive Power of Financial Literacy: Evidence from Longitudinal Data* (No. w28125). National Bureau of Economic Research.
- Banks, J., & Oldfield, Z. (2007). Understanding pensions: Cognitive function, numerical ability and retirement saving. *Fiscal Studies*, 28(2), 143-170. doi:10.1111/j.1475-5890.2007.00052.x
- Bernheim, B. D., Garrett, D. M., & Maki, D. M. (2001). Education and saving: The long-term effects of high school financial curriculum mandates. *Journal of public Economics*, 80(3), 435-465.
- Brown, A., Collins, J. M., Schmeiser, M. D., & Urban, C. (2014). State mandated financial education and the credit behavior of young adults. *Divisions of Research & Statistics and Monetary Affairs Federal Reserve Board, Washington, DC, Finance and Economics Discussion Series*, (2014-68).
- Bruhn, M., Leão, L. D. S., Legovini, A., Marchetti, R., & Zia, B. (2016). The impact of high school financial education: Evidence from a large-scale evaluation in Brazil. *American Economic Journal: Applied Economics*, 8(4), 256-95.
- Cole, S., Paulson, A., & Shastry, G. K. (2016). High school curriculum and financial outcomes: The impact of mandated personal finance and mathematics courses. *Journal of Human Resources*, 51(3), 656-698. doi:10.3368/jhr.51.3.0113-5410r1
- FINRA (2019). *The State of U.S. Financial Capability: The 2018 National Financial Capability Study*. FINRA Investor Foundation. Retrieved from https://www.usfinancialcapability.org/downloads/NFCS_2018_Report_Natl_Findings.pdf
- Gerardi, K., Goette, L. & Meier, S. (2010). *Financial literacy and subprime mortgage delinquency: Evidence from a survey matched to administrative data*. Atlanta, GA: Federal Reserve Bank of Atlanta
- Gerardi, K., Goette, L., & Meier, S. (2013). Numerical ability predicts mortgage default. *Proceedings of the National Academy of Sciences*, 110(28), 11267-11271.
- Goodman, J. (2019). The labor of division: Returns to compulsory high school math coursework. *Journal of Labor Economics*, 37(4), 1141-1182.
- Graves, S. M., & Peterson, C. L. (2005). Predatory lending and the military: The law and geography of payday loans in military towns. *Ohio St. LJ*, 66, 653.



Hastings, J., Madrian, B., & Skimmyhorn, W. (2012). *Financial literacy, financial education and economic outcomes* (18412). Cambridge, MA: National Bureau of Economic Research.

Kahneman, D. (2011). *Thinking, fast and slow*. Macmillan.

Kaiser, T., & Menkhoff, L. (2017). *Does financial education impact financial literacy and financial behavior, and if so, when?* The World Bank.

Kaiser, T., & Menkhoff, L. (2018). Financial Education in Schools: A Meta-Analysis of Experimental Studies.

Kaiser, T., Lusardi, A., Menkhoff, L., & Urban, C. J. (2020). *Financial education affects financial knowledge and downstream behaviors* (No. w27057). National Bureau of Economic Research.

Marley-Payne J., Davidson A. and Dituri P. (ms) The Combined Effects of Financial Education and Mathematical Confidence: Findings from the 2018 National Financial Capability Survey.

Skimmyhorn, W. L. (2016). Comparing military and civilian household finances: Descriptive evidence from recent surveys. *Journal of Consumer Affairs*, 50(2), 471-483.

Stoddard, C., Urban, C., & Schmeiser, M. D. (2018). College financing choices and academic performance. *Journal of Consumer Affairs*, 52(3), 540-561.

Urban, C., Schmeiser, M., & Collins, J. M. (2015). State-Mandated Financial Education: A National Database of Graduation Requirements, 1970–2014. *FINRA Investor Education Foundation Insights: Financial Capability*, October.

Walstad & Wagner (ms) The Effects of Financial Education on the Financial Behaviors of Gen Z, Gen Y, and All Generations.

Positive Negative Appendix

Appendix 1: Variable Specification

Our regression models use the following variables, all taken from the 2018 NFCS survey data:

Name	Description	Value	Survey Source
Explanatory Variables			
<i>Math Con</i>	Measure of subjective mathematical confidence	Integer between 0 and 7	M1_2
<i>Finance</i>	Total number of finance education course taken	Integer between 0 and 3	M21_1, M21_2_2015, and M21_
Outcome Variables			
<i>Emergency</i>	Assesses whether subject has every set aside an emergency fund	Dummy variable	J5
<i>Savings</i>	Assesses whether subject has a savings account	Dummy variable	B2
<i>Investment</i>	Assesses whether subject has non-retirement investments	Dummy variable	B14
<i>Retirement</i>	Assesses whether subject has calculated retirement needs	Dummy variable	J8/J9
<i>Positive Score</i>	Assesses total positive actions taken	Integer between 0 and 4	Sum of Emergency, Savings, Investment and Retirement values
<i>Overdraw</i>	Assesses whether subject occasionally overdraws checking account	Dummy Variable	B4
<i>Credit Card Interest</i>	Assesses whether subject has been charged credit card interest in past 12 months	Dummy Variable	F2_2
<i>Payday</i>	Assesses whether subject has taken out payday loan in past 5 years	Dummy Variable	G25_2
<i>Pawn</i>	Assesses whether subject has used pawn shop in past 5 years	Dummy Variable	G25_4
<i>Negative Score</i>	Assesses total negative actions taken	Integer between 0 and 4	Sum of Overdraw, Credit Card Interest, Payday and Pawn
Control Variables			
<i>Female</i>	Subject is female	Dummy (reference male)	A3
<i>Minority</i>	Subject belongs to a minority group	Dummy (reference non-minority)	A4A_new_w
<i>Married</i>	Subject is married	Dummy (reference not married)	A6
<i>No HS</i>	Subject did not complete high school	Dummy (reference graduate degree)	A5_2015
<i>High School</i>	Subject completed high school	Dummy (reference graduate degree)	A5_2015



<i>Some College</i>	Subject attended some college	Dummy (reference graduate degree)	A5_2015
<i>Associate's</i>	Subject has associate degree	Dummy (reference graduate degree)	A5_2015
<i>Bachelor's</i>	Subject has bachelor's degree	Dummy (reference graduate degree)	A5_2015
<i>Children</i>	Subject has children	Dummy (reference no children)	A11
<i>Military < \$25k</i>	Subject's family is or was in military Income is below \$25k	Dummy	AM21
<i>\$25-50k</i>	Income is \$25-50k	Dummy (reference income 150k+)	A8
<i>\$50-75k</i>	Income is \$50-75k	Dummy (reference income 150k+)	A8
<i>\$75-150</i>	Income is \$75-150	Dummy (reference income 150k+)	A8
<i>New England</i>	Subject lives in census region	Dummy (reference Pacific)	CENSUSDIV
<i>Mid Atlantic</i>	Subject lives in census region	Dummy (reference Pacific)	CENSUSDIV
<i>East North Central</i>	Subject lives in census region	Dummy (reference Pacific)	CENSUSDIV
<i>West North Central</i>	Subject lives in census region	Dummy (reference Pacific)	CENSUSDIV
<i>South Atlantic</i>	Subject lives in census region	Dummy (reference Pacific)	CENSUSDIV
<i>East South Central</i>	Subject lives in census region	Dummy (reference Pacific)	CENSUSDIV
<i>West South Central</i>	Subject lives in census region	Dummy (reference Pacific)	CENSUSDIV
<i>Mountain</i>	Subject lives in census region	Dummy (reference Pacific)	CENSUSDIV

Appendix 2: Descriptive Data

	Mean	Standard Deviation
Female	0.51	0.5
Minority	0.36	0.48
Age		
18-24	0.12	0.32
25-34	0.18	0.39
35-44	0.16	0.37
45-54	0.17	0.37
55-64	0.18	0.38
65+	0.19	0.39
Married	0.51	0.5
Education		
No high school	0.03	0.17
High school	0.28	0.45
Some College	0.28	0.45
Associates Degree	0.11	0.31
Bachelor's Degree	0.18	0.39
Graduate Degree	0.11	0.31
Have children	0.36	0.48
Military	0.14	0.35
Income		
<\$25%	0.23	0.42
\$25-50k	0.26	0.44
\$50-75k	0.19	0.39
\$75-150k	0.26	0.44
\$150k+	0.06	0.24
Census Region		
New England	0.05	0.21
Mid Atlantic	0.13	0.34
East North Central	0.14	0.35
West North Central	0.06	0.25
South Atlantic	0.2	0.4
East South Central	0.06	0.23
West South Central	0.12	0.32
Mountain	0.07	0.26
Pacific	0.16	0.37
Financial Actions		
Emergency	0.49	0.5
Savings	0.71	0.45

New York, NY



Research And Curriculum

Investment	0.32	0.47
Retirement Plan	0.32	0.46
Positive Score	1.4	1.41
Overdraw	0.29	0.46
Credit Card Interest	0.60	0.49
Payday	0.16	0.37
Pawn	0.20	0.40
Negative Score	1.25	1.18
Financial Education	0.20	0.40
Mathematical		
Confidence	5.48	1.76

Appendix 3: Regression Tables

A: Positive Results; Whole dataset

	Emergency	Savings	Investment	Retirement	Positive Score
(Intercept)	1.11 *** (0.06)	1.62 *** (0.07)	0.93 *** (0.06)	0.47 *** (0.06)	3.29 *** (0.05)
Math Con	0.07 *** (0.01)	0.05 *** (0.01)	0.04 *** (0.01)	0.07 *** (0.01)	0.08 *** (0.00)
Finance	0.16 *** (0.02)	0.14 *** (0.02)	0.25 *** (0.02)	0.32 *** (0.02)	0.28 *** (0.02)
Female	-0.12 *** (0.02)	0.05 * (0.02)	-0.20 *** (0.02)	-0.09 *** (0.02)	-0.13 *** (0.02)
Minority	0.03 (0.02)	-0.05 * (0.02)	-0.05 * (0.02)	0.00 (0.02)	-0.03 (0.02)
18-24	-0.48 *** (0.04)	-0.20 *** (0.04)	-0.36 *** (0.04)	-0.45 *** (0.04)	-0.46 *** (0.03)
25-34	-0.57 *** (0.03)	-0.33 *** (0.03)	-0.37 *** (0.03)	-0.34 *** (0.03)	-0.46 *** (0.03)
35-44	-0.70 *** (0.03)	-0.41 *** (0.03)	-0.52 *** (0.03)	-0.34 *** (0.03)	-0.57 *** (0.03)
45-54	-0.71 *** (0.03)	-0.46 *** (0.03)	-0.52 *** (0.03)	-0.28 *** (0.03)	-0.58 *** (0.02)
55-64	-0.36 *** (0.03)	-0.20 *** (0.03)	-0.25 *** (0.03)	-0.01 (0.03)	-0.22 *** (0.02)
Married	0.09 *** (0.02)	0.11 *** (0.02)	-0.04 (0.02)	0.10 *** (0.02)	0.05 ** (0.02)
No HS	-0.53 *** (0.07)	-0.82 *** (0.06)	-0.68 *** (0.09)	-0.69 *** (0.07)	-0.75 *** (0.06)
High School	-0.23 *** (0.03)	-0.31 *** (0.04)	-0.39 *** (0.03)	-0.35 *** (0.03)	-0.37 *** (0.03)
Some College	-0.28 *** (0.03)	-0.18 *** (0.04)	-0.33 *** (0.03)	-0.23 *** (0.03)	-0.32 *** (0.02)
Associate's	-0.18 *** (0.04)	-0.11 ** (0.04)	-0.34 *** (0.04)	-0.19 *** (0.04)	-0.26 *** (0.03)
Bachelor's	0.00 (0.03)	0.02 (0.04)	-0.09 ** (0.03)	-0.09 ** (0.03)	-0.04 (0.02)
Children	-0.23 *** (0.02)	-0.16 *** (0.02)	-0.05 * (0.02)	-0.01 (0.02)	-0.13 *** (0.02)
Military	0.20 *** (0.03)	0.08 ** (0.03)	0.24 *** (0.03)	0.22 *** (0.03)	0.24 *** (0.02)
Income < \$25k	-1.40 *** (0.04)	-1.28 *** (0.05)	-1.48 *** (0.04)	-1.18 *** (0.04)	-1.69 *** (0.04)
\$25-50k	-0.95 ***	-0.77 ***	-1.08 ***	-0.77 ***	-1.15 ***

	(0.04)	(0.05)	(0.04)	(0.04)	(0.03)
\$50-75k	-0.65 ***	-0.45 ***	-0.80 ***	-0.53 ***	-0.75 ***
	(0.04)	(0.05)	(0.04)	(0.04)	(0.03)
\$75-150	-0.35 ***	-0.15 **	-0.42 ***	-0.23 ***	-0.34 ***
	(0.04)	(0.05)	(0.04)	(0.04)	(0.03)
New England	-0.08 *	-0.04	-0.07	-0.09 **	-0.09 **
	(0.03)	(0.04)	(0.03)	(0.03)	(0.03)
Mid Atlantic	-0.01	-0.21 ***	-0.02	-0.03	-0.08 *
	(0.04)	(0.05)	(0.04)	(0.04)	(0.04)
East North Central	-0.02	-0.18 ***	-0.11 **	-0.08 *	-0.14 ***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.03)
West North Central	-0.07 *	-0.05	-0.04	0.01	-0.06 *
	(0.03)	(0.04)	(0.03)	(0.03)	(0.03)
South Atlantic	-0.07 *	-0.14 ***	-0.08 *	-0.02	-0.09 ***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
East South Central	-0.04	-0.26 ***	-0.13 **	-0.05	-0.12 ***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.03)
West South Central	-0.08 *	-0.32 ***	-0.09 *	-0.03	-0.13 ***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.03)
Mountain	-0.03	-0.05	-0.05	0.02	-0.04
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
N	25858	26334	24213	25765	22815
AIC	29959.86	24517.40	27054.62	30565.85	68383.88
BIC	30204.67	24762.76	27297.46	30810.55	68632.97
Pseudo R2	0.27	0.24	0.25	0.24	
R2					0.33

*** p < 0.001; ** p < 0.01; * p < 0.05.

B: Negative Results; Whole dataset

	Overdraw	Credit Card	Payday	Pawn	Negative Score
(Intercept)	-1.81 *** (0.07)	-1.15 *** (0.06)	-2.60 *** (0.09)	-2.67 *** (0.09)	-0.04 (0.04)
Math Con	-0.05 *** (0.01)	-0.03 *** (0.01)	-0.03 *** (0.01)	-0.02 *** (0.01)	-0.03 *** (0.00)
Finance	0.12 *** (0.02)	-0.02 (0.02)	0.19 *** (0.03)	0.18 *** (0.02)	0.11 *** (0.02)
Female	0.08 *** (0.02)	0.15 *** (0.02)	-0.14 *** (0.02)	-0.16 *** (0.02)	0.03 * (0.01)
Minority	0.15 *** (0.02)	0.06 ** (0.02)	0.28 *** (0.02)	0.18 *** (0.02)	0.19 *** (0.01)
18-24	0.62 *** (0.04)	0.28 *** (0.03)	0.86 *** (0.05)	1.11 *** (0.05)	0.48 *** (0.03)
25-34	0.76 *** (0.04)	0.58 *** (0.03)	1.06 *** (0.05)	1.28 *** (0.04)	0.75 *** (0.02)
35-44	0.62 *** (0.04)	0.67 *** (0.03)	0.85 *** (0.05)	1.02 *** (0.05)	0.58 *** (0.02)
45-54	0.43 *** (0.04)	0.70 *** (0.03)	0.63 *** (0.05)	0.80 *** (0.04)	0.43 *** (0.02)
55-64	0.24 *** (0.04)	0.39 *** (0.03)	0.38 *** (0.05)	0.53 *** (0.05)	0.25 *** (0.02)
Married	-0.04 (0.02)	-0.13 *** (0.02)	-0.17 *** (0.03)	-0.13 *** (0.02)	-0.11 *** (0.01)
No HS	0.03 (0.08)	0.60 *** (0.06)	0.30 *** (0.07)	0.58 *** (0.07)	0.46 *** (0.05)
High School	-0.02 (0.04)	0.41 *** (0.03)	0.27 *** (0.04)	0.43 *** (0.04)	0.27 *** (0.02)
Some College	0.09 ** (0.03)	0.53 *** (0.03)	0.25 *** (0.04)	0.33 *** (0.04)	0.33 *** (0.02)
Associate's	-0.01 (0.04)	0.41 *** (0.03)	0.14 ** (0.05)	0.16 *** (0.05)	0.18 *** (0.03)
Bachelor's	-0.13 *** (0.04)	0.16 *** (0.03)	-0.05 (0.04)	0.02 (0.04)	0.00 (0.02)
Children	0.40 *** (0.02)	0.22 *** (0.02)	0.44 *** (0.02)	0.36 *** (0.02)	0.37 *** (0.01)
Military	0.40 *** (0.03)	0.09 *** (0.03)	0.65 *** (0.03)	0.59 *** (0.03)	0.40 *** (0.02)
Income < \$25k	0.63 *** (0.05)	0.94 *** (0.04)	0.51 *** (0.07)	0.78 *** (0.06)	0.63 *** (0.03)
\$25-50k	0.51 *** (0.05)	0.62 *** (0.04)	0.58 *** (0.06)	0.63 *** (0.06)	0.46 *** (0.03)
\$50-75k	0.40 ***	0.46 ***	0.37 ***	0.37 ***	0.31 ***



	(0.05)	(0.04)	(0.06)	(0.06)	(0.03)
\$75-150	0.34 ***	0.32 ***	0.35 ***	0.29 ***	0.25 ***
	(0.05)	(0.04)	(0.06)	(0.06)	(0.03)
New England	0.07	0.10 **	-0.15 **	-0.08	0.04
	(0.04)	(0.03)	(0.05)	(0.04)	(0.02)
Mid Atlantic	0.07	0.04	-0.09	-0.16 **	0.00
	(0.05)	(0.04)	(0.06)	(0.05)	(0.03)
East North Central	-0.08	0.02	0.09 *	-0.04	-0.00
	(0.04)	(0.03)	(0.04)	(0.04)	(0.03)
West North Central	-0.03	0.03	0.01	0.05	0.02
	(0.04)	(0.03)	(0.04)	(0.04)	(0.02)
South Atlantic	0.07 *	0.14 ***	0.02	0.09 **	0.09 ***
	(0.03)	(0.03)	(0.04)	(0.04)	(0.02)
East South Central	0.06	0.17 ***	0.25 ***	0.16 ***	0.16 ***
	(0.04)	(0.04)	(0.05)	(0.04)	(0.03)
West South Central	0.01	0.17 ***	0.12 *	0.20 ***	0.14 ***
	(0.04)	(0.04)	(0.05)	(0.04)	(0.03)
Mountain	-0.03	0.06	0.01	0.06	0.02
	(0.04)	(0.03)	(0.04)	(0.04)	(0.02)
N	24133	26077	26588	26599	23354
AIC	20870.10	31646.43	16728.48	19957.15	62366.51
BIC	21112.84	31891.50	16974.12	20202.81	62616.33
Pseudo R2	0.15	0.19	0.23	0.26	
R2					0.23

*** p < 0.001; ** p < 0.01; * p < 0.05.

C: Positive Results; No Military

	Emergency	Savings	Investment	Retirement	Positive Score
(Intercept)	1.25 *** (0.07)	1.78 *** (0.08)	1.15 *** (0.07)	0.60 *** (0.06)	3.50 *** (0.05)
Math Con	0.06 *** (0.01)	0.04 *** (0.01)	0.03 *** (0.01)	0.07 *** (0.01)	0.06 *** (0.00)
Finance	0.12 *** (0.02)	0.15 *** (0.03)	0.22 *** (0.02)	0.29 *** (0.02)	0.24 *** (0.02)
Female	-0.14 *** (0.02)	0.05 * (0.02)	-0.24 *** (0.02)	-0.11 *** (0.02)	-0.16 *** (0.02)
Minority	0.03 (0.02)	-0.06 ** (0.02)	-0.08 *** (0.02)	-0.01 (0.02)	-0.04 * (0.02)
18-24	-0.55 *** (0.04)	-0.20 *** (0.04)	-0.46 *** (0.04)	-0.54 *** (0.04)	-0.55 *** (0.03)
25-34	-0.68 *** (0.03)	-0.37 *** (0.04)	-0.56 *** (0.03)	-0.48 *** (0.03)	-0.62 *** (0.03)
35-44	-0.75 *** (0.03)	-0.43 *** (0.04)	-0.63 *** (0.04)	-0.41 *** (0.03)	-0.66 *** (0.03)
45-54	-0.71 *** (0.03)	-0.49 *** (0.04)	-0.57 *** (0.03)	-0.33 *** (0.03)	-0.63 *** (0.03)
55-64	-0.38 *** (0.03)	-0.22 *** (0.04)	-0.31 *** (0.03)	-0.06 (0.03)	-0.27 *** (0.02)
Married	0.13 *** (0.02)	0.13 *** (0.02)	-0.01 (0.02)	0.13 *** (0.02)	0.10 *** (0.02)
No HS	-0.58 *** (0.07)	-0.89 *** (0.07)	-0.80 *** (0.10)	-0.74 *** (0.08)	-0.83 *** (0.06)
High School	-0.26 *** (0.03)	-0.36 *** (0.04)	-0.43 *** (0.03)	-0.40 *** (0.03)	-0.43 *** (0.03)
Some College	-0.33 *** (0.03)	-0.24 *** (0.04)	-0.36 *** (0.03)	-0.26 *** (0.03)	-0.37 *** (0.03)
Associate's	-0.19 *** (0.04)	-0.14 ** (0.05)	-0.31 *** (0.04)	-0.20 *** (0.04)	-0.27 *** (0.03)
Bachelor's	0.00 (0.03)	0.01 (0.04)	-0.06 * (0.03)	-0.10 ** (0.03)	-0.04 (0.03)
Children	-0.27 *** (0.02)	-0.18 *** (0.02)	-0.11 *** (0.02)	-0.06 ** (0.02)	-0.18 *** (0.02)
Income < \$25k	-1.38 *** (0.05)	-1.33 *** (0.06)	-1.51 *** (0.05)	-1.19 *** (0.05)	-1.68 *** (0.04)
\$25-50k	-0.93 *** (0.04)	-0.81 *** (0.06)	-1.09 *** (0.04)	-0.76 *** (0.04)	-1.14 *** (0.03)
\$50-75k	-0.67 *** (0.04)	-0.50 *** (0.06)	-0.82 *** (0.04)	-0.52 *** (0.04)	-0.77 *** (0.03)
\$75-150	-0.40 ***	-0.23 ***	-0.50 ***	-0.26 ***	-0.41 ***

	(0.04)	(0.06)	(0.04)	(0.04)	(0.03)
New England	-0.12 **	-0.05	-0.11 **	-0.11 **	-0.13 ***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.03)
Mid Atlantic	-0.03	-0.24 ***	-0.04	-0.01	-0.10 *
	(0.04)	(0.05)	(0.05)	(0.04)	(0.04)
East North Central	-0.05	-0.20 ***	-0.15 ***	-0.09 *	-0.17 ***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.03)
West North Central	-0.09 **	-0.09 *	-0.04	0.02	-0.07 *
	(0.03)	(0.04)	(0.04)	(0.03)	(0.03)
South Atlantic	-0.08 *	-0.16 ***	-0.08 *	-0.02	-0.11 ***
	(0.03)	(0.04)	(0.03)	(0.03)	(0.03)
East South Central	-0.07	-0.33 ***	-0.19 ***	-0.06	-0.17 ***
	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)
West South Central	-0.11 **	-0.36 ***	-0.11 *	-0.02	-0.16 ***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Mountain	-0.03	-0.07	-0.04	0.04	-0.02
	(0.03)	(0.04)	(0.04)	(0.03)	(0.03)
N	22179	22636	20658	22098	19431
AIC	25805.28	21483.87	22439.51	26001.06	57754.95
BIC	26037.48	21716.66	22669.65	26233.16	57991.19
Pseudo R2	0.27	0.25	0.25	0.24	
R2					0.33

*** p < 0.001; ** p < 0.01; * p < 0.05.

D: Negative Results; No Military

	Overdraw	Credit Card	Payday	Pawn	Negative Score
(Intercept)	-1.63 *** (0.08)	-1.16 *** (0.06)	-2.35 *** (0.10)	-2.49 *** (0.10)	0.11 * (0.04)
Math Con	-0.06 *** (0.01)	-0.03 *** (0.01)	-0.03 *** (0.01)	-0.03 *** (0.01)	-0.04 *** (0.00)
Finance	0.07 * (0.03)	-0.03 (0.02)	0.13 *** (0.03)	0.13 *** (0.03)	0.05 *** (0.02)
Female	0.08 ** (0.02)	0.16 *** (0.02)	-0.17 *** (0.03)	-0.18 *** (0.02)	0.02 (0.01)
Minority	0.13 *** (0.02)	0.03 (0.02)	0.27 *** (0.03)	0.19 *** (0.02)	0.15 *** (0.02)
18-24	0.53 *** (0.05)	0.30 *** (0.04)	0.62 *** (0.06)	0.90 *** (0.05)	0.39 *** (0.03)
25-34	0.56 *** (0.04)	0.57 *** (0.03)	0.74 *** (0.05)	1.00 *** (0.05)	0.55 *** (0.02)
35-44	0.51 *** (0.04)	0.68 *** (0.03)	0.64 *** (0.05)	0.83 *** (0.05)	0.49 *** (0.02)
45-54	0.39 *** (0.04)	0.71 *** (0.03)	0.51 *** (0.05)	0.69 *** (0.05)	0.41 *** (0.02)
55-64	0.20 *** (0.04)	0.38 *** (0.03)	0.28 *** (0.05)	0.42 *** (0.05)	0.20 *** (0.02)
Married	0.03 (0.03)	-0.13 *** (0.02)	-0.10 *** (0.03)	-0.08 ** (0.03)	-0.05 ** (0.01)
No HS	-0.11 (0.08)	0.62 *** (0.07)	0.24 ** (0.08)	0.57 *** (0.07)	0.39 *** (0.05)
High School	-0.12 ** (0.04)	0.41 *** (0.03)	0.24 *** (0.05)	0.45 *** (0.05)	0.22 *** (0.02)
Some College	-0.01 (0.04)	0.53 *** (0.03)	0.21 *** (0.05)	0.34 *** (0.05)	0.26 *** (0.02)
Associate's	-0.02 (0.05)	0.42 *** (0.04)	0.17 ** (0.06)	0.23 *** (0.05)	0.20 *** (0.03)
Bachelor's	-0.15 *** (0.04)	0.17 *** (0.03)	-0.03 (0.05)	0.04 (0.05)	0.01 (0.02)
Children	0.35 *** (0.03)	0.23 *** (0.02)	0.39 *** (0.03)	0.32 *** (0.03)	0.32 *** (0.02)
Income < \$25k	0.70 *** (0.06)	0.96 *** (0.04)	0.58 *** (0.08)	0.84 *** (0.07)	0.68 *** (0.03)
\$25-50k	0.59 *** (0.06)	0.64 *** (0.04)	0.66 *** (0.07)	0.71 *** (0.07)	0.52 *** (0.03)
\$50-75k	0.45 *** (0.06)	0.49 *** (0.04)	0.44 *** (0.07)	0.44 *** (0.07)	0.35 *** (0.03)
\$75-150	0.27 ***	0.33 ***	0.26 ***	0.24 ***	0.20 ***



	(0.05)	(0.04)	(0.07)	(0.07)	(0.03)
New England	0.06	0.10 **	-0.22 ***	-0.15 **	0.02
	(0.04)	(0.04)	(0.05)	(0.05)	(0.02)
Mid Atlantic	0.05	0.06	-0.15 *	-0.24 ***	-0.02
	(0.05)	(0.04)	(0.06)	(0.06)	(0.03)
East North Central	-0.12 **	0.05	0.09	-0.08	-0.02
	(0.05)	(0.04)	(0.05)	(0.05)	(0.03)
West North Central	-0.01	0.03	0.02	0.04	0.02
	(0.04)	(0.03)	(0.05)	(0.04)	(0.02)
South Atlantic	0.07	0.16 ***	0.01	0.07	0.09 ***
	(0.04)	(0.03)	(0.04)	(0.04)	(0.02)
East South Central	0.02	0.18 ***	0.22 ***	0.14 **	0.13 ***
	(0.05)	(0.04)	(0.05)	(0.05)	(0.03)
West South Central	0.01	0.18 ***	0.14 **	0.22 ***	0.15 ***
	(0.05)	(0.04)	(0.05)	(0.05)	(0.03)
Mountain	0.02	0.07 *	0.06	0.09 *	0.05 *
	(0.04)	(0.03)	(0.04)	(0.04)	(0.02)
N	20673	22416	22864	22883	20016
AIC	17760.14	27113.67	13768.78	16863.95	51937.92
BIC	17990.30	27346.18	14001.86	17097.06	52175.05
Pseudo R2	0.11	0.19	0.15	0.21	
R2					0.19

*** p < 0.001; ** p < 0.01; * p < 0.05.

E: Positive Results; High Math Group

	Emergency	Savings	Investment	Retirement	Positive Score
(Intercept)	1.63 *** (0.07)	1.94 *** (0.09)	1.29 *** (0.07)	1.07 *** (0.07)	3.84 *** (0.05)
Finance	0.13 *** (0.03)	0.16 *** (0.03)	0.22 *** (0.03)	0.30 *** (0.03)	0.25 *** (0.02)
Female	-0.18 *** (0.02)	0.06 * (0.03)	-0.24 *** (0.02)	-0.12 *** (0.02)	-0.18 *** (0.02)
Minority	0.02 (0.03)	-0.09 ** (0.03)	-0.07 * (0.03)	-0.04 (0.03)	-0.05 * (0.02)
18-24	-0.60 *** (0.05)	-0.12 * (0.05)	-0.40 *** (0.05)	-0.53 *** (0.05)	-0.53 *** (0.04)
25-34	-0.68 *** (0.04)	-0.26 *** (0.05)	-0.45 *** (0.04)	-0.44 *** (0.04)	-0.56 *** (0.04)
35-44	-0.75 *** (0.04)	-0.35 *** (0.05)	-0.54 *** (0.04)	-0.35 *** (0.04)	-0.58 *** (0.04)
45-54	-0.70 *** (0.04)	-0.43 *** (0.04)	-0.53 *** (0.04)	-0.31 *** (0.04)	-0.59 *** (0.03)
55-64	-0.37 *** (0.04)	-0.17 *** (0.04)	-0.26 *** (0.04)	-0.03 (0.04)	-0.23 *** (0.03)
Married	0.14 *** (0.03)	0.15 *** (0.03)	0.01 (0.03)	0.12 *** (0.03)	0.11 *** (0.02)
No HS	-0.48 *** (0.10)	-0.90 *** (0.10)	-0.65 *** (0.13)	-0.71 *** (0.11)	-0.79 *** (0.09)
High School	-0.20 *** (0.04)	-0.32 *** (0.05)	-0.44 *** (0.04)	-0.38 *** (0.04)	-0.40 *** (0.03)
Some College	-0.30 *** (0.04)	-0.23 *** (0.05)	-0.37 *** (0.04)	-0.25 *** (0.04)	-0.35 *** (0.03)
Associate's	-0.11 * (0.05)	-0.15 ** (0.06)	-0.34 *** (0.05)	-0.23 *** (0.05)	-0.26 *** (0.04)
Bachelor's	0.02 (0.04)	-0.02 (0.05)	-0.07 (0.04)	-0.10 ** (0.04)	-0.04 (0.03)
Children	-0.30 *** (0.03)	-0.19 *** (0.03)	-0.14 *** (0.03)	-0.08 ** (0.03)	-0.21 *** (0.02)
Income < \$25k	-1.43 *** (0.06)	-1.34 *** (0.07)	-1.52 *** (0.06)	-1.28 *** (0.06)	-1.74 *** (0.05)
\$25-50k	-0.92 *** (0.05)	-0.80 *** (0.07)	-1.08 *** (0.05)	-0.84 *** (0.05)	-1.13 *** (0.04)
\$50-75k	-0.66 *** (0.05)	-0.49 *** (0.07)	-0.82 *** (0.05)	-0.58 *** (0.05)	-0.75 *** (0.04)
\$75-150	-0.40 *** (0.05)	-0.21 ** (0.07)	-0.49 *** (0.05)	-0.29 *** (0.05)	-0.39 *** (0.04)
New England	-0.04	-0.02	-0.08	-0.06	-0.07



	(0.05)	(0.05)	(0.05)	(0.05)	(0.04)
Mid Atlantic	0.02	-0.18 **	-0.01	0.04	-0.02
	(0.06)	(0.06)	(0.06)	(0.06)	(0.05)
East North Central	0.00	-0.15 **	-0.11 *	0.00	-0.09 *
	(0.05)	(0.05)	(0.05)	(0.05)	(0.04)
West North Central	-0.04	-0.06	-0.03	0.07	-0.02
	(0.04)	(0.05)	(0.05)	(0.04)	(0.04)
South Atlantic	-0.03	-0.09	-0.06	0.02	-0.04
	(0.04)	(0.05)	(0.04)	(0.04)	(0.03)
East South Central	-0.01	-0.29 ***	-0.19 ***	-0.03	-0.13 **
	(0.05)	(0.06)	(0.06)	(0.05)	(0.04)
West South Central	-0.05	-0.30 ***	-0.09	0.04	-0.08
	(0.05)	(0.06)	(0.06)	(0.05)	(0.04)
Mountain	0.04	-0.00	-0.04	0.10 *	0.03
	(0.04)	(0.05)	(0.04)	(0.04)	(0.04)
N	13722	13932	13034	13643	12437
AIC	16042.88	12144.72	14955.17	16432.38	37060.12
BIC	16253.63	12355.90	15164.48	16642.96	37275.54
Pseudo R2	0.25	0.22	0.24	0.23	
R2					0.31

*** p < 0.001; ** p < 0.01; * p < 0.05.

F: Negative Results; High Math Group

	Overdraw	Credit Card	Payday	Pawn	Negative Score
(Intercept)	-2.06 *** (0.09)	-1.43 *** (0.06)	-2.69 *** (0.12)	-2.81 *** (0.11)	-0.13 ** (0.04)
Finance	0.04 (0.03)	-0.03 (0.03)	0.06 (0.04)	0.06 (0.04)	0.02 (0.02)
Female	0.09 ** (0.03)	0.17 *** (0.02)	-0.14 *** (0.03)	-0.19 *** (0.03)	0.03 * (0.02)
Minority	0.17 *** (0.03)	0.05 (0.03)	0.28 *** (0.04)	0.25 *** (0.03)	0.17 *** (0.02)
18-24	0.58 *** (0.06)	0.33 *** (0.05)	0.53 *** (0.07)	0.92 *** (0.07)	0.39 *** (0.03)
25-34	0.70 *** (0.05)	0.59 *** (0.04)	0.84 *** (0.07)	1.08 *** (0.06)	0.60 *** (0.03)
35-44	0.59 *** (0.05)	0.67 *** (0.04)	0.65 *** (0.07)	0.82 *** (0.06)	0.49 *** (0.03)
45-54	0.40 *** (0.05)	0.69 *** (0.04)	0.48 *** (0.07)	0.68 *** (0.06)	0.38 *** (0.03)
55-64	0.22 *** (0.05)	0.35 *** (0.04)	0.23 *** (0.07)	0.38 *** (0.06)	0.18 *** (0.02)
Married	0.03 (0.03)	-0.14 *** (0.03)	-0.11 ** (0.04)	-0.09 ** (0.03)	-0.06 ** (0.02)
No HS	-0.13 (0.13)	0.57 *** (0.10)	0.35 ** (0.12)	0.48 *** (0.11)	0.34 *** (0.08)
High School	-0.13 ** (0.05)	0.38 *** (0.04)	0.32 *** (0.06)	0.44 *** (0.06)	0.20 *** (0.03)
Some College	-0.03 (0.05)	0.52 *** (0.04)	0.32 *** (0.06)	0.36 *** (0.06)	0.27 *** (0.03)
Associate's	-0.02 (0.06)	0.45 *** (0.05)	0.23 ** (0.07)	0.27 *** (0.07)	0.23 *** (0.03)
Bachelor's	-0.17 *** (0.05)	0.16 *** (0.04)	0.05 (0.06)	0.06 (0.06)	0.02 (0.02)
Children	0.34 *** (0.03)	0.26 *** (0.03)	0.39 *** (0.04)	0.34 *** (0.03)	0.30 *** (0.02)
Income < \$25k	0.69 *** (0.07)	1.06 *** (0.06)	0.73 *** (0.10)	1.01 *** (0.09)	0.71 *** (0.04)
\$25-50k	0.53 *** (0.07)	0.73 *** (0.05)	0.74 *** (0.09)	0.85 *** (0.09)	0.52 *** (0.03)
\$50-75k	0.40 *** (0.07)	0.55 *** (0.05)	0.50 *** (0.10)	0.59 *** (0.09)	0.36 *** (0.03)
\$75-150	0.22 *** (0.06)	0.38 *** (0.05)	0.33 *** (0.09)	0.35 *** (0.09)	0.21 *** (0.03)
New England	0.05	0.12 **	-0.35 ***	-0.18 **	0.01

	(0.06)	(0.04)	(0.07)	(0.06)	(0.03)
Mid Atlantic	0.02	0.07	-0.19 *	-0.29 ***	-0.04
	(0.07)	(0.06)	(0.08)	(0.08)	(0.04)
East North Central	-0.10	0.01	0.01	-0.09	-0.04
	(0.06)	(0.05)	(0.07)	(0.06)	(0.03)
West North Central	-0.02	0.04	-0.05	0.03	-0.00
	(0.06)	(0.04)	(0.06)	(0.06)	(0.03)
South Atlantic	0.09	0.14 ***	-0.06	0.03	0.06 *
	(0.05)	(0.04)	(0.06)	(0.05)	(0.03)
East South Central	-0.00	0.14 **	0.15 *	0.09	0.08 *
	(0.07)	(0.05)	(0.07)	(0.06)	(0.04)
West South Central	0.05	0.22 ***	0.14 *	0.25 ***	0.17 ***
	(0.06)	(0.05)	(0.07)	(0.06)	(0.04)
Mountain	0.03	0.04	0.03	0.07	0.04
	(0.05)	(0.04)	(0.06)	(0.05)	(0.03)
N	13095	13811	14045	14053	12795
AIC	10082.63	16887.28	7482.33	9111.68	32436.11
BIC	10292.07	17098.21	7693.73	9323.10	32652.36
Pseudo R2	0.12	0.20	0.17	0.23	
R2					0.20

*** p < 0.001; ** p < 0.01; * p < 0.05.

G: Positive Results; Low Math Group

	Emergency	Savings	Investment	Retirement	Positive Score
(Intercept)	1.60 *** (0.10)	2.17 *** (0.13)	1.37 *** (0.10)	0.81 *** (0.10)	3.93 *** (0.08)
Finance	0.13 ** (0.04)	0.14 ** (0.04)	0.20 *** (0.05)	0.29 *** (0.04)	0.23 *** (0.04)
Female	-0.08 * (0.03)	0.03 (0.03)	-0.23 *** (0.04)	-0.09 ** (0.03)	-0.14 *** (0.03)
Minority	0.03 (0.03)	-0.03 (0.03)	-0.10 * (0.04)	0.04 (0.03)	-0.04 (0.03)
18-24	-0.49 *** (0.06)	-0.34 *** (0.06)	-0.59 *** (0.07)	-0.59 *** (0.06)	-0.61 *** (0.05)
25-34	-0.67 *** (0.05)	-0.55 *** (0.06)	-0.77 *** (0.06)	-0.56 *** (0.05)	-0.75 *** (0.05)
35-44	-0.74 *** (0.06)	-0.57 *** (0.06)	-0.82 *** (0.06)	-0.50 *** (0.06)	-0.79 *** (0.05)
45-54	-0.74 *** (0.06)	-0.60 *** (0.06)	-0.67 *** (0.06)	-0.38 *** (0.05)	-0.72 *** (0.05)
55-64	-0.40 *** (0.05)	-0.31 *** (0.06)	-0.43 *** (0.06)	-0.12 * (0.05)	-0.36 *** (0.05)
Married	0.13 *** (0.03)	0.12 ** (0.04)	-0.02 (0.04)	0.14 *** (0.03)	0.09 ** (0.03)
No HS	-0.76 *** (0.10)	-0.92 *** (0.09)	-0.94 *** (0.15)	-0.82 *** (0.11)	-0.94 *** (0.09)
High School	-0.39 *** (0.06)	-0.43 *** (0.07)	-0.40 *** (0.06)	-0.44 *** (0.06)	-0.51 *** (0.05)
Some College	-0.41 *** (0.06)	-0.26 *** (0.07)	-0.32 *** (0.06)	-0.28 *** (0.06)	-0.42 *** (0.05)
Associate's	-0.36 *** (0.07)	-0.15 (0.08)	-0.26 *** (0.07)	-0.18 ** (0.07)	-0.31 *** (0.06)
Bachelor's	-0.05 (0.06)	0.04 (0.07)	-0.05 (0.06)	-0.09 (0.06)	-0.06 (0.05)
Children	-0.22 *** (0.03)	-0.18 *** (0.03)	-0.05 (0.04)	-0.04 (0.04)	-0.14 *** (0.03)
Income < \$25k	-1.34 *** (0.09)	-1.34 *** (0.11)	-1.49 *** (0.09)	-1.01 *** (0.08)	-1.63 *** (0.07)
\$25-50k	-0.93 *** (0.08)	-0.84 *** (0.11)	-1.11 *** (0.08)	-0.58 *** (0.08)	-1.16 *** (0.07)
\$50-75k	-0.68 *** (0.08)	-0.53 *** (0.11)	-0.82 *** (0.08)	-0.38 *** (0.08)	-0.81 *** (0.07)
\$75-150	-0.40 *** (0.08)	-0.28 * (0.11)	-0.49 *** (0.08)	-0.18 * (0.08)	-0.45 *** (0.07)
New England	-0.25 ***	-0.09	-0.17 *	-0.18 **	-0.23 ***



	(0.06)	(0.06)	(0.07)	(0.06)	(0.05)
Mid Atlantic	-0.12	-0.33 ***	-0.10	-0.09	-0.23 ***
	(0.07)	(0.07)	(0.08)	(0.07)	(0.06)
East North Central	-0.12 *	-0.27 ***	-0.22 **	-0.23 ***	-0.30 ***
	(0.06)	(0.06)	(0.07)	(0.06)	(0.05)
West North Central	-0.16 **	-0.12 *	-0.06	-0.07	-0.14 **
	(0.05)	(0.06)	(0.06)	(0.06)	(0.05)
South Atlantic	-0.16 **	-0.26 ***	-0.13 *	-0.07	-0.21 ***
	(0.05)	(0.05)	(0.06)	(0.05)	(0.05)
East South Central	-0.15 *	-0.37 ***	-0.19 *	-0.11	-0.23 ***
	(0.07)	(0.07)	(0.08)	(0.07)	(0.06)
West South Central	-0.22 ***	-0.44 ***	-0.14	-0.11	-0.29 ***
	(0.07)	(0.07)	(0.08)	(0.07)	(0.06)
Mountain	-0.13 *	-0.15 **	-0.04	-0.06	-0.12 **
	(0.05)	(0.06)	(0.06)	(0.05)	(0.05)
N	8457	8704	7624	8455	6994
AIC	9803.99	9365.34	7498.79	9614.28	20720.96
BIC	10001.19	9563.34	7693.08	9811.47	20919.69
Pseudo R2	0.23	0.25	0.23	0.20	
R2					0.30

*** p < 0.001; ** p < 0.01; * p < 0.05.

F: Negative Results; Low Math Group

	Overdraw	Credit Card	Payday	Pawn	Negative Score
(Intercept)	-1.92 *** (0.13)	-1.09 *** (0.10)	-2.24 *** (0.15)	-2.34 *** (0.14)	-0.06 (0.07)
Finance	0.10 * (0.05)	-0.02 (0.04)	0.23 *** (0.05)	0.24 *** (0.04)	0.12 *** (0.03)
Female	0.06 (0.04)	0.13 *** (0.03)	-0.20 *** (0.04)	-0.16 *** (0.04)	0.01 (0.02)
Minority	0.08 * (0.04)	-0.00 (0.03)	0.26 *** (0.04)	0.13 *** (0.04)	0.14 *** (0.03)
18-24	0.44 *** (0.07)	0.26 *** (0.06)	0.71 *** (0.09)	0.86 *** (0.08)	0.41 *** (0.04)
25-34	0.38 *** (0.06)	0.55 *** (0.05)	0.65 *** (0.08)	0.92 *** (0.08)	0.50 *** (0.04)
35-44	0.38 *** (0.06)	0.69 *** (0.05)	0.65 *** (0.09)	0.82 *** (0.08)	0.50 *** (0.04)
45-54	0.38 *** (0.06)	0.74 *** (0.05)	0.57 *** (0.09)	0.71 *** (0.08)	0.49 *** (0.04)
55-64	0.17 * (0.07)	0.43 *** (0.05)	0.37 *** (0.09)	0.47 *** (0.08)	0.27 *** (0.04)
Married	0.03 (0.04)	-0.11 ** (0.03)	-0.09 * (0.04)	-0.05 (0.04)	-0.03 (0.03)
No HS	-0.02 (0.11)	0.69 *** (0.09)	0.13 (0.11)	0.63 *** (0.10)	0.45 *** (0.07)
High School	-0.05 (0.07)	0.47 *** (0.06)	0.12 (0.08)	0.45 *** (0.08)	0.25 *** (0.04)
Some College	0.06 (0.07)	0.55 *** (0.06)	0.04 (0.08)	0.31 *** (0.08)	0.26 *** (0.04)
Associate's	0.00 (0.08)	0.37 *** (0.07)	0.07 (0.09)	0.18 * (0.09)	0.15 ** (0.05)
Bachelor's	-0.09 (0.07)	0.19 ** (0.06)	-0.17 * (0.08)	-0.01 (0.08)	-0.01 (0.04)
Children	0.37 *** (0.04)	0.19 *** (0.03)	0.39 *** (0.04)	0.30 *** (0.04)	0.34 *** (0.03)
Income < \$25k	0.80 *** (0.11)	0.74 *** (0.08)	0.35 ** (0.12)	0.57 *** (0.11)	0.64 *** (0.06)
\$25-50k	0.72 *** (0.11)	0.43 *** (0.08)	0.48 *** (0.12)	0.45 *** (0.11)	0.50 *** (0.06)
\$50-75k	0.56 *** (0.11)	0.30 *** (0.08)	0.27 * (0.12)	0.15 (0.11)	0.30 *** (0.06)
\$75-150	0.41 *** (0.10)	0.17 * (0.08)	0.09 (0.12)	0.04 (0.11)	0.16 ** (0.06)
New England	0.08	0.07	-0.07	-0.11	0.03

	(0.06)	(0.06)	(0.08)	(0.07)	(0.04)
Mid Atlantic	0.08	0.05	-0.09	-0.18 *	0.02
	(0.08)	(0.07)	(0.09)	(0.09)	(0.05)
East North Central	-0.15 *	0.12	0.20 **	-0.06	0.02
	(0.07)	(0.06)	(0.07)	(0.07)	(0.05)
West North Central	-0.00	0.02	0.10	0.07	0.04
	(0.06)	(0.05)	(0.07)	(0.06)	(0.04)
South Atlantic	0.05	0.18 ***	0.09	0.12 *	0.13 ***
	(0.06)	(0.05)	(0.06)	(0.06)	(0.04)
East South Central	0.04	0.24 ***	0.30 ***	0.19 **	0.21 ***
	(0.08)	(0.07)	(0.08)	(0.07)	(0.05)
West South Central	-0.06	0.13 *	0.14	0.20 **	0.11 *
	(0.07)	(0.06)	(0.08)	(0.07)	(0.05)
Mountain	-0.01	0.11 *	0.11	0.11	0.08 *
	(0.06)	(0.05)	(0.07)	(0.06)	(0.04)
N	7578	8605	8819	8830	7221
AIC	7712.55	10229.30	6280.55	7756.14	19459.87
BIC	7906.67	10426.98	6478.92	7954.55	19659.53
Pseudo R2	0.08	0.15	0.12	0.17	
R2					0.16

*** p < 0.001; ** p < 0.01; * p < 0.05.

I: Positive Results; Finance Education Group

	Emergency	Savings	Investment	Retirement	Positive Score
(Intercept)	1.04 *** (0.15)	1.60 *** (0.18)	1.09 *** (0.15)	1.04 *** (0.15)	3.50 *** (0.12)
Math Con	0.07 *** (0.01)	0.06 *** (0.01)	0.05 *** (0.01)	0.08 *** (0.01)	0.08 *** (0.01)
Female	-0.21 *** (0.04)	0.04 (0.05)	-0.38 *** (0.04)	-0.22 *** (0.04)	-0.27 *** (0.04)
Minority	0.08 (0.05)	-0.11 * (0.05)	0.00 (0.05)	0.04 (0.05)	0.01 (0.04)
18-24	-0.40 *** (0.08)	-0.08 (0.10)	-0.35 *** (0.08)	-0.69 *** (0.08)	-0.48 *** (0.07)
25-34	-0.48 *** (0.08)	-0.23 * (0.10)	-0.36 *** (0.08)	-0.50 *** (0.08)	-0.46 *** (0.06)
35-44	-0.57 *** (0.08)	-0.30 ** (0.10)	-0.43 *** (0.08)	-0.41 *** (0.08)	-0.49 *** (0.07)
45-54	-0.55 *** (0.08)	-0.50 *** (0.09)	-0.41 *** (0.08)	-0.38 *** (0.08)	-0.51 *** (0.06)
55-64	-0.18 * (0.08)	-0.24 * (0.10)	-0.20 * (0.08)	-0.00 (0.08)	-0.12 (0.06)
Married	0.16 ** (0.05)	0.05 (0.06)	0.01 (0.05)	0.04 (0.05)	0.06 (0.04)
No HS	-0.26 (0.21)	-0.61 ** (0.21)	-0.50 * (0.25)	-0.64 ** (0.23)	-0.62 ** (0.20)
High School	-0.15 (0.08)	-0.38 *** (0.09)	-0.27 *** (0.08)	-0.42 *** (0.08)	-0.31 *** (0.07)
Some College	-0.24 *** (0.07)	-0.24 ** (0.09)	-0.33 *** (0.07)	-0.39 *** (0.07)	-0.36 *** (0.06)
Associate's	-0.14 (0.08)	-0.20 * (0.10)	-0.27 *** (0.08)	-0.43 *** (0.08)	-0.32 *** (0.07)
Bachelor's	0.03 (0.07)	-0.06 (0.08)	-0.09 (0.06)	-0.14 * (0.07)	-0.06 (0.05)
Children	-0.33 *** (0.05)	-0.12 * (0.05)	-0.08 (0.05)	-0.01 (0.05)	-0.16 *** (0.04)
Income < \$25k	-1.25 *** (0.10)	-1.20 *** (0.12)	-1.40 *** (0.10)	-1.08 *** (0.10)	-1.58 *** (0.08)
\$25-50k	-0.81 *** (0.09)	-0.73 *** (0.12)	-1.09 *** (0.09)	-0.69 *** (0.09)	-1.06 *** (0.07)
\$50-75k	-0.57 *** (0.09)	-0.39 ** (0.12)	-0.79 *** (0.09)	-0.46 *** (0.09)	-0.68 *** (0.07)
\$75-150	-0.35 *** (0.09)	-0.12 (0.12)	-0.53 *** (0.08)	-0.26 ** (0.09)	-0.39 *** (0.06)
New England	-0.07	0.03	-0.11	-0.17 *	-0.13



	(0.08)	(0.10)	(0.08)	(0.08)	(0.07)
Mid Atlantic	0.05	-0.03	0.01	0.06	0.00
	(0.10)	(0.12)	(0.10)	(0.10)	(0.09)
East North Central	-0.04	-0.08	-0.18 *	-0.19 *	-0.17 *
	(0.09)	(0.10)	(0.09)	(0.09)	(0.07)
West North Central	-0.03	-0.07	-0.07	0.00	-0.07
	(0.07)	(0.08)	(0.08)	(0.08)	(0.06)
South Atlantic	-0.02	-0.03	0.02	-0.14	-0.06
	(0.07)	(0.08)	(0.07)	(0.07)	(0.06)
East South Central	-0.03	-0.10	-0.09	-0.16	-0.11
	(0.10)	(0.11)	(0.10)	(0.10)	(0.08)
West South Central	-0.01	-0.17	-0.08	-0.13	-0.10
	(0.09)	(0.10)	(0.09)	(0.09)	(0.08)
Mountain	-0.01	0.09	-0.07	0.01	-0.00
	(0.07)	(0.08)	(0.07)	(0.07)	(0.06)
N	4387	4442	4164	4362	3967
AIC	5293.15	3867.84	4935.37	5145.66	11768.54
BIC	5471.97	4047.01	5112.72	5324.32	11950.82
Pseudo R2	0.22	0.19	0.23	0.25	
R2					0.31

*** p < 0.001; ** p < 0.01; * p < 0.05.

J: Negative Results; Finance Education Group

	Overdraw	Credit Card	Payday	Pawn	Negative Score
(Intercept)	-1.56 *** (0.18)	-1.20 *** (0.15)	-1.89 *** (0.21)	-2.01 *** (0.20)	0.24 * (0.11)
Math con	-0.08 *** (0.01)	-0.03 * (0.01)	-0.07 *** (0.02)	-0.06 *** (0.01)	-0.06 *** (0.01)
Female	0.13 ** (0.05)	0.26 *** (0.04)	-0.25 *** (0.05)	-0.25 *** (0.05)	0.02 (0.03)
Minority	0.15 ** (0.05)	0.07 (0.05)	0.29 *** (0.06)	0.18 *** (0.05)	0.18 *** (0.03)
18-24	0.47 *** (0.10)	0.21 ** (0.08)	0.43 *** (0.12)	0.78 *** (0.12)	0.32 *** (0.06)
25-34	0.61 *** (0.10)	0.49 *** (0.08)	0.70 *** (0.12)	0.91 *** (0.11)	0.56 *** (0.05)
35-44	0.57 *** (0.10)	0.63 *** (0.08)	0.54 *** (0.12)	0.73 *** (0.12)	0.48 *** (0.06)
45-54	0.38 *** (0.10)	0.67 *** (0.08)	0.29 * (0.13)	0.63 *** (0.12)	0.37 *** (0.05)
55-64	0.04 (0.11)	0.29 *** (0.08)	0.00 (0.14)	0.24 (0.13)	0.10 (0.05)
Married	0.13 * (0.06)	-0.07 (0.05)	-0.12 (0.06)	-0.08 (0.06)	0.00 (0.04)
No HS	-0.08 (0.29)	0.46 * (0.21)	0.86 *** (0.21)	0.91 *** (0.21)	0.64 *** (0.19)
High School	0.10 (0.09)	0.56 *** (0.08)	0.56 *** (0.11)	0.60 *** (0.10)	0.43 *** (0.06)
Some College	0.03 (0.08)	0.53 *** (0.07)	0.23 * (0.10)	0.36 *** (0.09)	0.27 *** (0.05)
Associate's	0.09 (0.09)	0.37 *** (0.08)	0.25 * (0.11)	0.35 *** (0.10)	0.24 *** (0.06)
Bachelor's	-0.02 (0.08)	0.27 *** (0.06)	0.13 (0.10)	0.16 (0.09)	0.11 * (0.04)
Children	0.34 *** (0.05)	0.18 *** (0.05)	0.47 *** (0.06)	0.29 *** (0.06)	0.31 *** (0.03)
Income < \$25k	0.76 *** (0.12)	0.95 *** (0.09)	0.46 ** (0.14)	0.68 *** (0.13)	0.73 *** (0.07)
\$25-50k	0.47 *** (0.11)	0.58 *** (0.09)	0.58 *** (0.13)	0.62 *** (0.12)	0.50 *** (0.06)
\$50-75k	0.35 ** (0.11)	0.43 *** (0.09)	0.29 * (0.14)	0.35 ** (0.13)	0.31 *** (0.06)
\$75-150	0.25 * (0.10)	0.26 *** (0.08)	0.24 (0.13)	0.24 * (0.12)	0.20 *** (0.06)
New England	0.07	0.21 **	-0.26 *	-0.04	0.08

	(0.09)	(0.08)	(0.12)	(0.10)	(0.06)
Mid Atlantic	-0.09	-0.05	0.11	-0.16	-0.04
	(0.12)	(0.10)	(0.12)	(0.13)	(0.07)
East North Central	-0.26 *	0.07	0.03	-0.03	-0.06
	(0.11)	(0.08)	(0.11)	(0.10)	(0.06)
West North Central	-0.09	0.02	-0.26 **	-0.10	-0.07
	(0.09)	(0.07)	(0.10)	(0.09)	(0.05)
South Atlantic	0.08	0.11	0.03	0.04	0.07
	(0.08)	(0.07)	(0.09)	(0.08)	(0.05)
East South Central	0.06	0.03	0.14	0.11	0.09
	(0.11)	(0.09)	(0.11)	(0.11)	(0.07)
West South Central	-0.14	0.14	0.12	0.25 *	0.09
	(0.11)	(0.09)	(0.11)	(0.10)	(0.07)
Mountain	-0.01	-0.02	-0.07	0.04	-0.03
	(0.08)	(0.07)	(0.09)	(0.08)	(0.05)
N	4129	4415	4482	4477	4029
AIC	3728.00	5483.49	2977.92	3670.02	10792.71
BIC	3905.12	5662.49	3157.34	3849.41	10975.45
Pseudo R2	0.14	0.18	0.19	0.19	
R2					0.20

*** p < 0.001; ** p < 0.01; * p < 0.05.

K: Positive Results; No Finance Education

	Emergency	Savings	Investment	Retirement	Positive Score
(Intercept)	1.33 *** (0.08)	1.86 *** (0.09)	1.20 *** (0.08)	0.54 *** (0.07)	3.53 *** (0.06)
Math Con	0.06 *** (0.01)	0.04 *** (0.01)	0.02 *** (0.01)	0.07 *** (0.01)	0.06 *** (0.01)
Female	-0.13 *** (0.02)	0.06 * (0.02)	-0.20 *** (0.02)	-0.08 *** (0.02)	-0.13 *** (0.02)
Minority	0.01 (0.02)	-0.05 * (0.03)	-0.10 *** (0.03)	-0.02 (0.02)	-0.06 ** (0.02)
18-24	-0.58 *** (0.04)	-0.23 *** (0.05)	-0.48 *** (0.05)	-0.49 *** (0.04)	-0.55 *** (0.04)
25-34	-0.72 *** (0.04)	-0.40 *** (0.04)	-0.61 *** (0.04)	-0.48 *** (0.04)	-0.66 *** (0.03)
35-44	-0.78 *** (0.04)	-0.45 *** (0.04)	-0.67 *** (0.04)	-0.41 *** (0.04)	-0.68 *** (0.03)
45-54	-0.74 *** (0.04)	-0.48 *** (0.04)	-0.59 *** (0.04)	-0.32 *** (0.03)	-0.64 *** (0.03)
55-64	-0.41 *** (0.03)	-0.21 *** (0.04)	-0.32 *** (0.03)	-0.06 * (0.03)	-0.29 *** (0.03)
Married	0.13 *** (0.02)	0.15 *** (0.03)	-0.01 (0.03)	0.15 *** (0.02)	0.10 *** (0.02)
No HS	-0.62 *** (0.08)	-0.90 *** (0.07)	-0.84 *** (0.11)	-0.74 *** (0.08)	-0.85 *** (0.07)
High School	-0.29 *** (0.04)	-0.36 *** (0.04)	-0.46 *** (0.04)	-0.38 *** (0.04)	-0.45 *** (0.03)
Some College	-0.36 *** (0.04)	-0.24 *** (0.04)	-0.37 *** (0.04)	-0.23 *** (0.04)	-0.37 *** (0.03)
Associate's	-0.21 *** (0.04)	-0.12 * (0.05)	-0.33 *** (0.05)	-0.14 ** (0.04)	-0.25 *** (0.04)
Bachelor's	-0.01 (0.04)	0.03 (0.05)	-0.06 (0.04)	-0.08 * (0.04)	-0.04 (0.03)
Children	-0.25 *** (0.02)	-0.20 *** (0.03)	-0.12 *** (0.03)	-0.07 ** (0.02)	-0.19 *** (0.02)
Income < \$25k	-1.42 *** (0.06)	-1.37 *** (0.07)	-1.54 *** (0.06)	-1.21 *** (0.05)	-1.70 *** (0.04)
\$25-50k	-0.96 *** (0.05)	-0.85 *** (0.07)	-1.09 *** (0.05)	-0.78 *** (0.05)	-1.16 *** (0.04)
\$50-75k	-0.70 *** (0.05)	-0.54 *** (0.07)	-0.82 *** (0.05)	-0.54 *** (0.05)	-0.80 *** (0.04)
\$75-150	-0.42 *** (0.05)	-0.27 *** (0.07)	-0.48 *** (0.05)	-0.26 *** (0.05)	-0.41 *** (0.04)
New England	-0.13 **	-0.07	-0.11 *	-0.09 *	-0.13 ***



	(0.04)	(0.05)	(0.04)	(0.04)	(0.03)
Mid Atlantic	-0.05	-0.29 ***	-0.05	-0.02	-0.12 **
	(0.05)	(0.05)	(0.05)	(0.05)	(0.04)
East North Central	-0.05	-0.24 ***	-0.13 **	-0.06	-0.17 ***
	(0.04)	(0.05)	(0.05)	(0.04)	(0.04)
West North Central	-0.10 **	-0.09 *	-0.02	0.03	-0.06
	(0.04)	(0.04)	(0.04)	(0.04)	(0.03)
South Atlantic	-0.10 **	-0.20 ***	-0.11 **	0.01	-0.11 ***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.03)
East South Central	-0.07	-0.38 ***	-0.21 ***	-0.04	-0.18 ***
	(0.05)	(0.05)	(0.05)	(0.05)	(0.04)
West South Central	-0.14 **	-0.41 ***	-0.12 *	0.01	-0.17 ***
	(0.05)	(0.05)	(0.05)	(0.05)	(0.04)
Mountain	-0.03	-0.11 **	-0.03	0.05	-0.03
	(0.04)	(0.04)	(0.04)	(0.04)	(0.03)
N	17792	18194	16494	17736	15464
AIC	20534.25	17628.33	17497.11	20862.12	45988.34
BIC	20752.27	17846.97	17713.01	21080.05	46210.09
Pseudo R2	0.28	0.26	0.25	0.23	
R2					0.33

*** p < 0.001; ** p < 0.01; * p < 0.05.

L: Negative Results; No Finance Education

	Overdraw	Credit Card	Payday	Pawn	Negative Score
(Intercept)	-1.63 *** (0.09)	-1.15 *** (0.07)	-2.46 *** (0.12)	-2.60 *** (0.11)	0.09 * (0.05)
Math Con	-0.06 *** (0.01)	-0.03 *** (0.01)	-0.02 ** (0.01)	-0.02 ** (0.01)	-0.03 *** (0.00)
Female	0.06 * (0.03)	0.13 *** (0.02)	-0.14 *** (0.03)	-0.15 *** (0.03)	0.03 (0.01)
Minority	0.13 *** (0.03)	0.02 (0.02)	0.27 *** (0.03)	0.20 *** (0.03)	0.15 *** (0.02)
18-24	0.56 *** (0.05)	0.31 *** (0.04)	0.67 *** (0.06)	0.93 *** (0.06)	0.41 *** (0.03)
25-34	0.54 *** (0.05)	0.58 *** (0.04)	0.75 *** (0.06)	1.03 *** (0.05)	0.54 *** (0.02)
35-44	0.49 *** (0.05)	0.69 *** (0.04)	0.67 *** (0.06)	0.85 *** (0.05)	0.49 *** (0.02)
45-54	0.40 *** (0.04)	0.71 *** (0.03)	0.57 *** (0.06)	0.71 *** (0.05)	0.42 *** (0.02)
55-64	0.23 *** (0.04)	0.39 *** (0.03)	0.34 *** (0.06)	0.46 *** (0.05)	0.23 *** (0.02)
Married	0.01 (0.03)	-0.14 *** (0.02)	-0.10 ** (0.03)	-0.07 * (0.03)	-0.06 *** (0.02)
No HS	-0.13 (0.09)	0.62 *** (0.07)	0.14 (0.08)	0.52 *** (0.08)	0.36 *** (0.05)
High School	-0.16 *** (0.04)	0.38 *** (0.04)	0.16 ** (0.06)	0.41 *** (0.05)	0.18 *** (0.03)
Some College	-0.03 (0.04)	0.52 *** (0.04)	0.19 *** (0.06)	0.33 *** (0.05)	0.26 *** (0.02)
Associate's	-0.05 (0.05)	0.43 *** (0.04)	0.15 * (0.06)	0.20 ** (0.06)	0.18 *** (0.03)
Bachelor's	-0.19 *** (0.04)	0.13 *** (0.04)	-0.10 (0.06)	-0.01 (0.06)	-0.02 (0.02)
Children	0.36 *** (0.03)	0.24 *** (0.02)	0.37 *** (0.03)	0.32 *** (0.03)	0.32 *** (0.02)
Income < \$25k	0.70 *** (0.07)	0.97 *** (0.05)	0.64 *** (0.09)	0.91 *** (0.08)	0.67 *** (0.03)
\$25-50k	0.62 *** (0.07)	0.66 *** (0.05)	0.71 *** (0.09)	0.76 *** (0.08)	0.53 *** (0.03)
\$50-75k	0.48 *** (0.07)	0.51 *** (0.05)	0.50 *** (0.09)	0.48 *** (0.08)	0.36 *** (0.03)
\$75-150	0.29 *** (0.06)	0.35 *** (0.05)	0.28 ** (0.09)	0.26 ** (0.08)	0.20 *** (0.03)
New England	0.06	0.08 *	-0.20 ***	-0.17 **	0.01



	(0.05)	(0.04)	(0.06)	(0.05)	(0.03)
Mid Atlantic	0.08	0.09	-0.24 **	-0.26 ***	-0.01
	(0.06)	(0.05)	(0.07)	(0.07)	(0.03)
East North Central	-0.08	0.04	0.12 *	-0.08	-0.00
	(0.05)	(0.04)	(0.05)	(0.05)	(0.03)
West North Central	0.01	0.03	0.10	0.09	0.04
	(0.05)	(0.04)	(0.05)	(0.05)	(0.03)
South Atlantic	0.07	0.17 ***	0.00	0.08	0.09 ***
	(0.04)	(0.04)	(0.05)	(0.04)	(0.02)
East South Central	0.02	0.22 ***	0.25 ***	0.14 **	0.14 ***
	(0.06)	(0.05)	(0.06)	(0.05)	(0.03)
West South Central	0.05	0.19 ***	0.14 *	0.22 ***	0.17 ***
	(0.06)	(0.05)	(0.06)	(0.05)	(0.03)
Mountain	0.03	0.09 *	0.11 *	0.10 *	0.08 **
	(0.04)	(0.04)	(0.05)	(0.05)	(0.03)
N	16544	18001	18382	18406	15987
AIC	14043.64	21641.09	10755.17	13207.92	41118.19
BIC	14259.63	21859.44	10974.11	13426.89	41340.90
Pseudo R2	0.11	0.20	0.15	0.22	
R2					0.20

*** p < 0.001; ** p < 0.01; * p < 0.05.