

Appendix

Figure A1. Study Selection

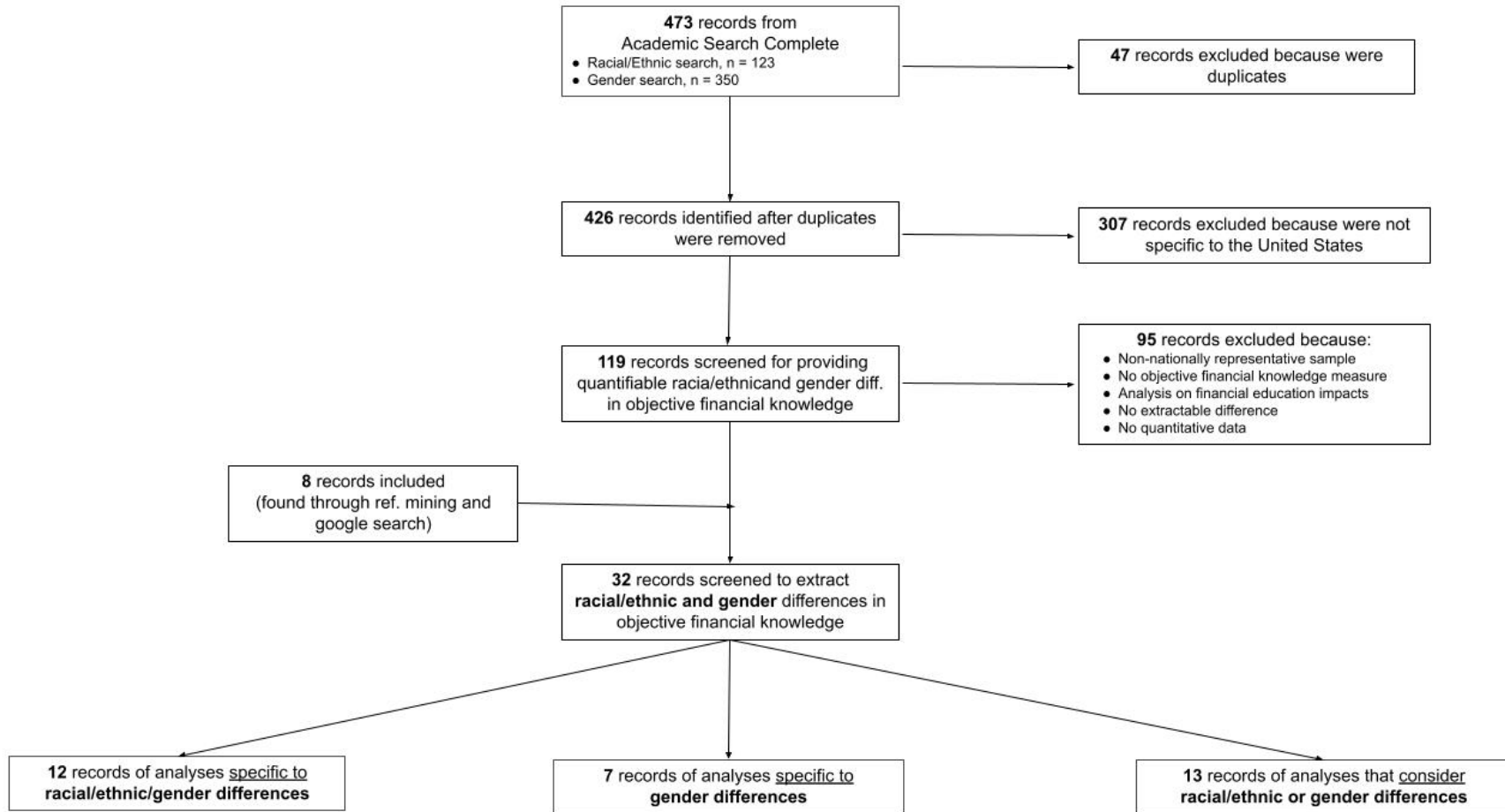


Figure A2. Year of Publication Frequency

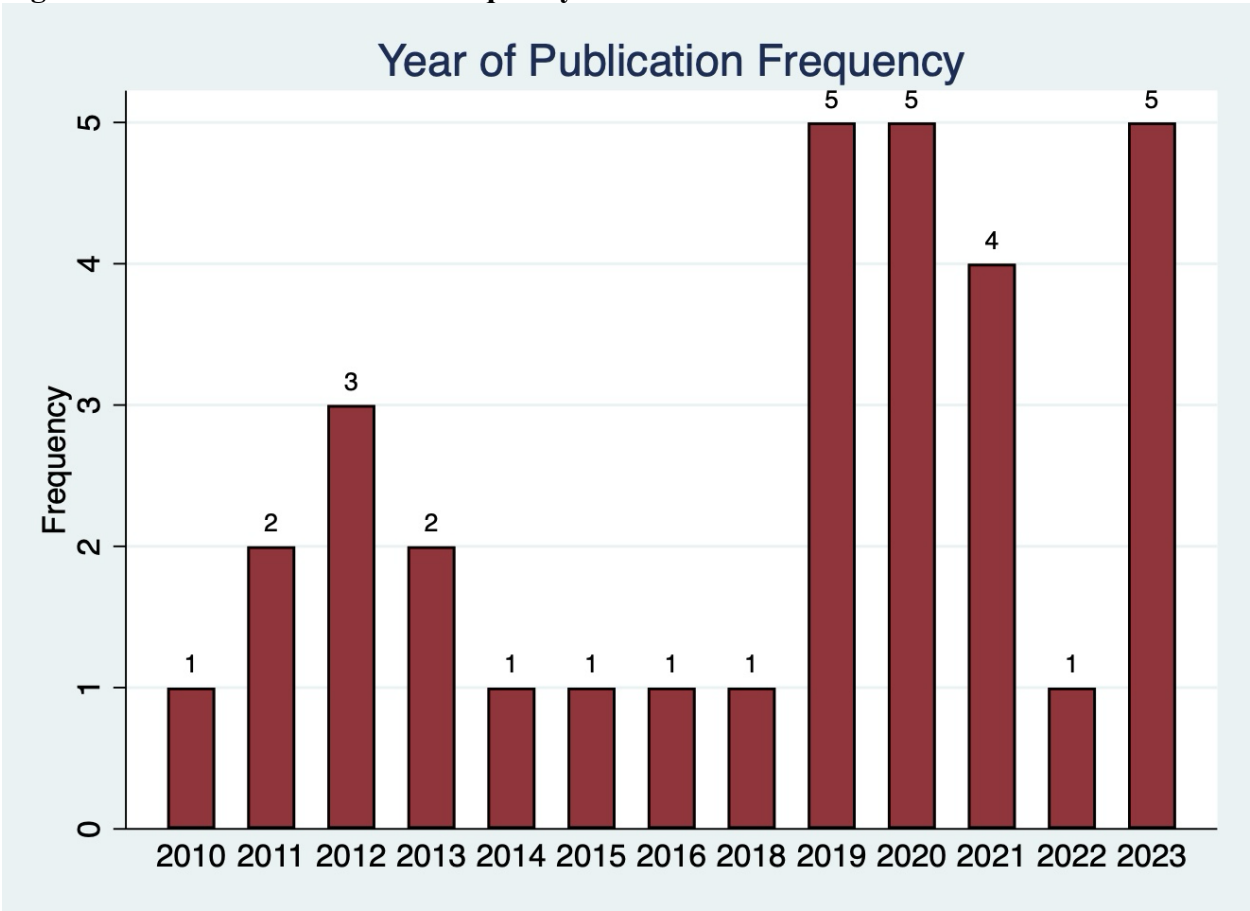


Table A1. Final Search Terms

Search Term Title (OR)	AND	Search Term Abstract (OR)	
"financial literacy"		Race/Ethnicity terms	Gender terms
"financial knowledge"		race	women
"financial skill"		racial	gender
		ethnicity	sex
		ethnic	female
		minority	lesbian
		Black	gay
		"African American"	bisexual
		Hispanic	transgender
		Latino	binary
		Latina	LGBT
		Latinx	
		Asian	
		Native	
		Indian	
		"Asian American"	
		"Native American"	
		"Indian American"	
		"Pacific Islander American"	
		"Islander American"	

Table A2. Study Classification

Category 1: Studies Focused on Racial/Ethnic Differences in Financial
1. Al-Bahrani et al. (2019)
2. Angrisani et al. (2021)
3. Clark et al. (2021)*
4. Harris et al. (2023)
5. Kim & Xiao (2020)
6. Kim et al. (2019)
7. Lee & Kim (2022)
8. Lusardi and Streeter (2023)
9. Nejad & O'Connor (2016)*
10. O'Connor (2019)*
11. White et al. (2021)
12. Yakoboski et al. (2020)
Category 2: Studies Focused on Gender Differences in Financial Knowledge
1. Chen & Garand (2018)
2. Fonseca et al. (2012)
3. Kim et al. (2021)
4. Mottola (2013)
5. Nitani et al. (2020)
6. Tang et al. (2015)
7. Yao et al. (2023)
Category 3: Studies Consider Racial/Ethnic/Gender Differences in Financial Knowledge
1. Balasubramnian & Sargent (2020)
2. De Bassa (2013)
3. Haser et al. (2023)
4. Kim & Mountain (2019)
5. Knoll & Houts (2012)
6. Li et al. (2019)
7. Liao & Chen (2020)
8. Lusardi (2012)
9. Lusardi & Mitchell (2011)
10. Lusardi & Mitchell (2023)
11. Lusardi et al. (2010)
12. Lusardi et al. (2014)
13. Rob & Woodyard (2011)
*Study includes an analysis of differences in financial knowledge taking the intersection of race/ethnicity and gender or provides also analysis on gender differences

Table A3. Findings from Studies Included in Systematic Review

Findings from Studies Focused on Racial/Ethnic Differences in Financial Knowledge (Table 1)	
Author	Findings
1. Al-Bahrani et al. (2019)	White respondents score higher than racial/ethnic minority groups on financial knowledge by 12 percentage points. Men score higher on financial knowledge than women by 8 percentage points. Racial/ethnic minority groups are being offered to participate in more financial education programs in comparison to White respondents. Financial education increases financial knowledge, but Whites benefit more from participating in financial education, scoring higher than minorities who participated by 2 percentage points. BOD analysis shows that observable SES characteristics explain around 40% of the gap between White and non-White respondents.
2. Angrisani et al. (2021)	White respondents score higher than Black and Hispanic respondents on financial knowledge by 25 and 20 percentage points, respectively. BOD analysis shows that observable SES and neighborhood characteristics explain around 50-60% of the gap between White and minorities (48% White-Black gap and 57% of White-Hispanic gap is explained when considering SES and neighborhood characteristics). The White-Minority gap diminishes monotonically as income increases. ^Gap calculated by standardizing scores of OFK to 0-100 scale.
3. Clark et al. (2021)*	Among White women, 21% answered all questions of OFK correctly, while only 9% and 13% of Black and Hispanic women did (difference significant at the 5% level). Black and Hispanic women are less likely to own assets, homes, and retirement accounts, in comparison to White women. FWB scores are similar for Black, Hispanic, and White women. ^Gap denotes differences across groups for getting all answers correct.
4. Harris et al. (2023)	T-test results found little financial literacy score gaps between White respondents and all other races and ethnicities. The gap between White and Black and White and Hispanic respondents were similar, at 8 percentage points and 7 percentage points respectively. ^Gap calculated by standardizing scores of OFK to 0-100 scale.
5. Kim & Xiao (2020)	The OFK gap between White and Black respondents is negative 16 percentage points. Age, income, banking status, unexpected income drop, and financial education contributed to this gap. Financial education is the only important contributor to the negative value, suggesting financial education may narrow the financial capability gap. The OFK gap for White and Hispanic respondents 11 percentage points with same contributing factors as Black respondents. In addition, having a dependent child and gender may also explain financial capability gap. The subjective financial knowledge gap between White and Black and White and Hispanic respondents are 0 and -3 percentage points respectfully, based on 1-7 score. Financial education is positively associated with financial capability level.
6. Kim et al. (2019)	White respondents score higher than Black, Hispanic, and Asian or other respondents on financial knowledge by 15, 11 and 3 percentage points, respectively. Regression analysis shows that minorities were more likely to use AFS and that higher financial knowledge is linked to lower usage of AFS. The effect of financial knowledge in the usage of AFS differed by race and ethnicity, where the effect was greater for Black and Hispanic respondents, with respect to White respondents (no moderating effect of financial knowledge for Asian or other respondents). ^Gap calculated by standardizing scores of OFK to 0-100 scale.
7. Lee & Kim (2022)	White respondents score higher than Black, Hispanic, and Asian or other respondents on financial knowledge by 16, 10, and 0 percentage points, respectively. BOD analysis shows that observable SES characteristics explain 44% and 68% of the gap on financial knowledge between

	White and Black respondents and White and Hispanic respondents respectively. Financial overconfidence was the highest among Black respondents and was significantly higher than the one shown for White, Hispanic, and Asian or other respondents. ^Gap calculated by standardizing scores of OFK to 0-100 scale.
8. Lusardi & Streeter (2023)	Study shows that women and minorities underperform in relation to objective measures of financial knowledge when compared with White and male respondents in the latest NFCS wave for which data is publicly available. The study emphasizes the lack of knowledge on inflation, which is a relevant in the context of the high levels of inflation experienced in the United States. Study also shows how financial knowledge is associated with positive financial outcomes related to planning for retirement, financial resilience, and not carrying too much debt.
9. Nejad & O'Connor (2016)*	The racial difference between White and Black respondents and White and Hispanic respondents are 22 and 18 percentage points respectively. On average White respondents answered significantly more questions correct than Black and Hispanic respondents. The gender gap difference between men and women is 12 percentage points. On average men answered the 3 financial literacy questions significantly more correctly than women. ^Gap Calculated among average score difference in percentage points
10. O'Connor (2019)*	White respondents score higher than Black, Hispanic, Asian, and other respondents on financial knowledge by 24, 20, 8, and 13 percentage points, respectively. Financial subjective knowledge is influenced by cognitive styles for different race and ethnic groups, but OFK is not dependent on this interplay. In relation to cognitive styles, while “intuitive” White respondents have highest scores of subjective financial knowledge, “intuitive” minorities show the lowest.
11. White et al. (2021)	Non-Black respondents show higher levels of financial knowledge than Black respondents (paper provides percentages for each question answered correctly). For Black respondents, only FM is associated with FSE, and there is no relationship between OFK with FM and FSE (experiential learning is important for racial/gender minority groups). ^Gap calculated by getting the average of differences for each question.
12. Yakoboski et al. (2020)	Using P-Fin Index as a measure of objective financial knowledge, while Black respondents answered correctly 38% of all questions, White respondents answered correctly 55% of all questions. Women answered correctly 35% of all questions, while men answered correctly 42% of all questions. Study shows that there is a link between financial knowledge and financial wellness for Black respondents.

Findings from Studies Focused on Gender Differences in Financial Knowledge (Table 2)

Author	Findings
1. Chen & Garand (2018)	The mean score of OFK for women is 13 percentage points below the mean score for men. They find that while men are more likely to offer correct answers and women are slightly more likely to offer incorrect answers, women are more likely to provide Don't Know (DK) responses. Women are more likely to provide DK answers because they are less willing to take risk and are less confident about their financial knowledge. ^Gap calculated by standardizing scores of OFK to 0-100 scale. For SFK it is the gap among those who answered the highest score, 7.
2. Fonseca et al. (2012)	Women score 0.7 SD away from the mean for correct questions based on the weighted scores of the OFK measured compared to men. The difference is found to be statistically significant. Controlling for socioeconomic differences has little effect on gap. Yet, the estimated coefficient of the correlation with control factors, show that men and woman have different approaches and processes to financial literacy. One thought is men make more household financial decisions compared to woman, and learn more financial skills. Little evidence supports financial decision

	specialization by gender for couples. Only men have a positive correlation between decision making and financial literacy. Results show with approximately equal education by gender, financial decisions should also be approximately equal.
3. Kim et al. (2021)	Study measures OFK using the Big 3 plus a question on annuity and constructs a measure of overconfidence using OFK and SFK scores. They find that there is a difference in the mean average on the OFK indicator in the HRS between men and women of 20 percentage points (significant difference). They also look at SFK and find a difference of 1 percentage point (not significant), but that women are more likely to be overconfident than men. In a BOD analysis they find that gender differences are explained by “crystalized intelligence” and lower likelihood to have a college education and being in a relationship, but not by differences in other measures of cognitive ability (fluid intelligence and memory disease). For robustness they look at gender differences on overconfidence using a Propensity Score matching (PSM) method and use data from SCF-2016. ^Gap calculated by standardizing scores of OFK to 0-100 scale.
4. Mottola (2013)	Women scored lower than men on the OFK by 13 percentage points. Women also scored lower in their self-assessment of financial knowledge and mathematical ability in comparison to men. Women also showed more costly credit card behavior in comparison to men, where this difference can be accounted for by demographic characteristics, economic circumstances (i.e., income shocks), and financial literacy levels. ^Gap calculated by standardizing scores of OFK to 0-100 scale.
5. Nitani et al. (2020)	Men scored higher in OFK than women among employed and self-employed and differences were statistically significant. The proportion of women who scored very high on the SFK score (6 and 7 answers, in a scale 1-7) was lower than the proportion of men. The difference between employed and self-employed in OFK do not hold in a regression analysis. Women are less likely to use short-term high-cost borrowing through the use of AFS than men after controlling for low levels of OFK and SFK. ^Gap calculated by standardizing scores of OFK to 0-100 scale. Also note that average difference for OFK in percentage points for all estimated as the average of the difference between men and women among self-employed and employed.
6. Tang et al. (2015)	Women scored lower than men in OFK and RFB (study does not mention if difference is statistically significant). They find in a regression analysis that there is a positive relationship between OFK and RFB, but this relationship is only significant for women. Parental influence is also positively related with RFB, and this relationship is stronger for women than men. Self-discipline has a positive relationship with RFB for men and women. ^Gap calculated by standardizing scores of OFK and RFB to 0-100 scale.
7. Yao et al. (2023)	The gender gap between men and women among college students is 14pp. Experiences outside of family, like financial education at school and hands-on financial behaviors the students exhibit play a larger role in the gender gap.

Findings from Studies Consider Racial/Ethnic and Gender Differences in Financial Knowledge (Table 3)

Author	Findings
1. Balasubramnia n & Sargent (2020)	Women perform worse than men, where there is a gap of 19 percentage points among those who score high on the OFK measure (51% of men score in this group versus 32% of women). There is also a difference in the percentage of Whites respondents that score high on OFK versus non-Whites (45% vs 29%). Gender differences show that 12% of males and 13% of females are very overconfident in relation to financial knowledge (overconfidence refers to whether perceived

	<p>score is higher than objective score). Non-Whites are more likely to be overconfident in comparison to Whites (19% versus 10%).</p> <p>^Gap expressed as percentage points for those who answered correctly 4 or 5 questions (high score).</p>
2. De Bassa (2013)	<p>Women are less likely to answer the OFK questions correctly and more likely to answer "do not know", in comparison to men. The financial literacy gap between White and Black respondents is 17 percentage points; White and Hispanic respondents is 8 percentage points. Many respondents' subjective financial knowledge confidence scores do not align with their objective financial literacy knowledge. The SFK difference between White and Black respondents were -3 percentage points. The gap for White and Hispanic respondents is 0 percentage points. Older respondents performed better, men more likely to provide the correct answer than woman. Differences for race/ethnicity are found compared to white respondents, as Black, Hispanic, and Asian American respondents are 3 to 11 percentage points less likely to answer correct financial literacy questions. Not statistically significant results found for race/ethnicity gap for "do not know".</p> <p>^OFK gap denotes differences across groups for getting all answers correct. SFK difference expressed as percentage points, calculated using the SFK scores 1-7.</p>
3. Hasler et al. (2023)	<p>Respondents who are White men with higher incomes answer OFK questions at a higher rate than their peers. Knowledge is found to be higher among younger cohorts Gen Z and Gen Y compared to older population, with approximately 1 in 3 answering correctly. The differences between White and Black respondents is 8 percentage points and for White and Hispanic respondents 7 percentage points. The gender gap between men and women is 9 percentage points.</p> <p>^OFK based on P-Fin Index and reported as percent correct, average difference across groups expressed as percentage points.</p>
4. Kim & Mountain (2019)	<p>The average number of correct answers to OFK questions shows White and non-White respondent gap of 7 percentage points and Men and Women 5 percentage points. Women are more likely to answer questions incorrectly compared to men. Women chose DK/RF responses more than men. Authors conclude that men are less willing to choose DK/RF option. No significant difference between average number of correct answers for those who received any financial education and those who rejected it.</p> <p>^Gap calculated by standardizing scores of OFK to 0-100 scale.</p>
5. Knoll & Houts (2012)	<p>OFK is associated with having saved enough money to cover 3 months of expenses, consultation with a financial planner and having some sort of savings- associated account at a bank. OFK scores were higher in males and increased with age and income. Being unbanked and failing to plan for retirement or to accumulate savings have all been associated with low levels of OFK.</p>
6. Li et al. (2019)	<p>Women and ethnic minority groups are likely to score lower than men and White respondents in OFK (significance at the 5% level). Men with both Defined Contribution (DC) and Defined Benefit (DB) plans scored higher on OFK than men with DB plans only, but this difference was not significant for women. Women with no pension plan coverage scored significantly lower on OFK than women with DB plans only. This difference was positive but not significant among men. Differences in OFK between men and women were found in relation to age, education and race and ethnicity (different coefficients).</p>
7. Liao & Chen (2020)	<p>OFK is negatively related to mobile payments, where mobile payments are considered as a type of high-cost borrowing in this study. Men are more likely to use mobile payments compared to</p>

	women. Being non-white is associated with higher probability of mobile payment use. Higher education and income also increase the likelihood of using mobile payments.
8. Lusardi (2012)	<p>For each question of the OFK-Big3, the proportion of correct answers is lower among women in comparison to men. Women are also more likely to answer “do not know” in comparison to men (women are more likely to answer “do not know” in comparison to men by 21 percentage points for risk diversification, 8 percentage points for inflation and 4 percentage points for compound interest questions.</p> <p>^Gap calculated as the average for the difference between men and women on answering correctly each question of OFK from Big 3 (author provides percentages for each question, and we calculated the average using those percentages)</p>
9. Lusardi & Mitchell (2011)	<p>Study focused on explaining in a descriptive who are financial illiterate and how financial literacy relates to planning for retirement. Study finds that financial literacy is positively associated with financial planning for retirement. Study also provides differences in SFK across racial/ethnic and gender groups.</p> <p>^Gap calculated difference between groups answering correctly all questions of OFK. Differences in SFK expressed as percentage points calculated using the average score.</p>
10. Lusardi & Mitchell (2023)	<p>There are large racial/ethnic and gender differences in OFK. We include here the gaps calculated using the percent of those who answered the Big three questions correctly. We also observe large racial/ethnic gaps when answering the inflation question correctly. Women are more likely to respond don't know or refuse to at least one question by 14 percentage points compared to men. They also show how financial literacy is positively associated with wealth measures using a regression analysis.</p> <p>^Gap calculated as the difference between groups answering correctly all questions of OFK.</p>
11. Lusardi et al. (2010)	<p>Study focuses on young adults and show that there is a large difference in financial literacy between men and women: 11-12 percentage point gap for correct response rates to the inflation and risk diversification questions, and 5 percentage points for correct response rates to the interest rate question. White respondents were more likely than Blacks and Hispanic respondents to answer all three financial literacy questions correctly. Authors provide the difference in means across groups for each question, and show that differences are statistically significant.</p> <p>^Gap calculated as the average difference between groups from the differences provided by the authors for each question (authors provide only percentages per question, where we calculate averages using those percentages).</p>
12. Lusardi et al. (2014)	<p>Study uses data from an experimental module from the HRS, and they show that there are racial/ethnic and gender difference in financial knowledge, specifically in financial sophistication. Many older respondents are not financially sophisticated. Using the PRIDT financial sophistication index, for both Black and Women respondents they have a negative significant coefficient in understanding financial literacy</p>
13. Rob & Woodyard (2011)	<p>Black and Hispanic respondents' coefficients are negative and statistically significant when regressed on a FM indicator of best financial practices. Personal financial knowledge has a significant impact on financial behaviors. Income has the most significant impact on financial behavior, followed by financial satisfaction, financial confidence, and education. Overall, OFK may not be the most important factor in determining whether individuals make good financial decisions or not.</p>

^Denotes that gap was calculated either by standardizing the answer to a 0-100 scale (for example OFK score divided by the total of questions) or by a different method if the difference in percentage points is not provided by the authors.

Table A4. Set of Dependent and Independent Variables Used in the Studies that Focus on Racial/Ethnic and Gender Differences in Financial Knowledge

Studies Focused on Racial/Ethnic differences in Financial Knowledge	
Author(s)	List of Independent Variables
1. Al-Bahrani et al. (2019)	Actual literacy %, fin edu offer, fin edu participate, fin edu exposure, Male, child, income drop, age 18–24, age 25–34, age 35–44, age 45–54, age 55–64 , age 65+ , < highschool, = highschool, highschoolalt, somecollege, associates, bachelors, postgrad, married, single, div/separated, widowed/er, selfemp, fulltime, parttime,homemaker, student, disabled, unemp, retired, live alone, live sigother, live parents, live other, less\$15 k, \$15_25k, \$25_35k, \$35_50k, \$50_75k, \$75_100k, \$100_150k, 150 k+
2. Angrisani et al. (2021)	Financial literacy score, White, Black, Hispanic, Male, Household head, Household couple, Household children, Working, Age 54, Household income, low (<\$40,000), Household income, middle (\$40,000–\$100,000), Household income, high (>\$100,000), Educ. attain. (high school or less), Educ. attain. (some college or associate degree), Educ. attain. (college degree), Educ. attain. (masters or higher), Gov. assistance, Social security, Supp. security, Educ. attain. mother (high school or less), Educ. attain. mother (college or associate degree), Educ. attain. mother (masters or higher), Financial strain during childhood, NSES indicator, Ln(number of banks)
3. Clark et al. (2021)*	Race: White, Black, Hispanic, Education: High school or lower, Some college, Bachelor’s degree or higher, Income: <\$25K, \$25–49K, \$50–99K, ≥\$100K, Marital Status: Married, Single, Divorced or single, Widow/widower, Financially Dependent Children: No children, 1 or 2 children, 3 or more children
4. Harris et al. (2023)	Race/Ethnicity: White, Hispanic/Latino(a), Blac, Asian and Other, Age:18-23, 24+, Gender: Female, Male, Other, Prefer Not to say, Years enrolled: 1-5, Enrollment status: Full-time, Part-time, Non-degree seeking, Current living situation: On-campus, Off-campus within walking distance, Off-campus outside of walking distance, Employment status: Full-time, Part-time, Not employed, First generation status: Not first generation, First generation, Don’t know, Pell grant status: Yes, No, Don’t know, Type of institution attended: 2-year public, 4-year public, 4-year private, FAFSA completion status: Yes, No, Don’t know
5. Kim & Xiao (2020)	Race/Ethnicity (ref: White) Black, Hispanic, Received financial education (ref: No) Education(ref: less than high school): High school Diploma, Some college, Bachelor degree, Associate degree, Post-bachelor degree, Marital Status (ref: married): Single, separated/divorced/widow, Presence of dependent child, Employment Status: (ref: full-time employment): Self-employed, Part-time, Homemaker, Student, Disabled, Unemployed, Retired, Income(ref: less than \$15,000) \$15,000-\$24,999, \$25,000–\$34,999, \$35,000–\$49,999, \$50,000-\$74,999, \$75,000-\$99,999, \$100,000-\$149,999, \$150,000 or more, Had unexpected large drop in income in the past 12 months(ref: No), Banking status(ref:No), State of Residence
6. Kim et al. (2019)	Racial/ethnic groups as whites, blacks, Hispanics, and Asians/others, Financial Knowledge Variables: Objective financial knowledge, mean (median), ranged 0-5, Subjective financial knowledge, mean (median), ranged 1-7, AFS use: Title loan, Payday loan, Panwshop, Rent-to-Own Age; gender (male, female); marital status (married, single, separated/divorced/widowed); presence of a dependent child (yes/no); employment status (self-employed, salaried worker, part-time worker, homemaker, student, disabled, unemployed, retired); education (less than high school, high school diploma, some college, associate degree, bachelor’s degree, post-

	bachelor's degree); household income; homeownership (yes/no); health insurance ownership (yes/no); negative transitory income shock (yes/no); risk tolerance (ranged from 0 to 10); have an emergency fund (yes/no); bank account ownership (yes/no); and current credit record (very good, good, about average, bad, very bad). State residence.
7. Lee & Kim (2022)	Race: White, Black, Hispanic, Asian/other, Financial knowledge variables: Subjective knowledge (scale of 1–7), Objective knowledge (scale of 0–6), Overconfidence (Residual), Age of respondent, Gender (%): Male, Female, Marital status (%): Married, Living with partner, Single, Education (%): Less than high school, High school diploma, Some college, Associate degree, Bachelor's degree, Post-bachelor's degree, Education of guardian (%): Less than high school, High school diploma, Some college, Associate degree, Bachelor's degree, Post-bachelor's degree, Employment status (%): Self-employed, Salaried worker, Part-time worker, Homemaker, Student, Disabled, Unemployed, Retired, Household income (%): Less than 15 k, 15k to 25k, 25k to 35k, 35k to 50k, 50k to 75k , 75k to 100k, 100k to 150k, 150k or more, Homeownership (%): Yes, No, Financial Hardship (%): Not at all difficult, Somewhat difficult, Very difficult, Financial education (%): Yes, No, Medicaid/Food stamp (%): Yes, No, Risk tolerance (Scale of 10), Math ability (Scale of 7)
8. Lusardi & Streeter (2023)	Age (baseline under 35): 36-50, 51-65, > 65, Sex (baseline Male): Female, Education (baseline less than high school education): High school grad, Some college, College grad, Postgraduate, Employment (baseline employed): Self-employed, Not employed, Retired, Race/Ethnicity: NH White, NH Black, Hispanic, NH Asian, NH Other
9. Nejad & O'Connor (2016)*	Gender: Male, Female, Ethnicity: Caucasian, African American, Hispanic, Other, Generational cohort: Baby boomers, Generation X, Generation Y, Annual household income: <\$25,000, \$25 K–\$49,999, \$50 K–\$74,999, \$75 K–\$99,999, \$100 K–\$149,999, >\$150,000, Education: Less than high school diploma, High school diploma, Some college, Bachelor's degree, Graduate degree
10. O'Connor (2019)*	Cognitive Style : Intuitive, Quasi-Intuitive, Adaptive, Quasi-Analytical, Analytical, Gender: Female, Male, Age:18–25, 26–33, 34–41, 42–49, 50–57, 58–64, 65 and older, Education: High school or less , Some college, College graduate, Graduate school, Income: Less than \$25,000, \$25,000 to \$49,999, \$50,000 to \$74,999, \$75,000 to \$99,999, \$100,000 to \$149,999, \$150,000 to \$199,999, \$200,000 and more, Race/Ethnicity: Caucasian, African American, Hispanic, Asian, Other
11. White et al. (2021)	Race: African American, Non-African American, Age, Gender: Male, Female, Employment status: Employed, Not employed, Annual income: Median or less, Above median, Marital status: Having spouse/partner, No spouse/partner, Having child(ren): Yes, No, First generation: Yes, No, Financial education: Yes, No, Objective financial knowledge: Financial knowledge1 (correct), Financial knowledge2 (correct), Financial knowledge3 (correct), Financial management: Budgeting, Tracking spending, Tracking transactions, Financial self-efficacy: Confidence in finances, Confidence in money management
12. Yakoboski et al. (2020)	Race: African-Americans, Whites, Gender: Male, Female, Age: 18–29, 30–44, 45–59, 60 and Older, Household Income: Under \$25,000, \$25,000–\$49,999, \$50,000–\$99,999, \$100,000 or More, Work Status: Employed, Retired, Unemployed/Disabled, Education Level: Less than HS Degree, High School Degree, Some College, College Degree, Financial Education: Received, Have not Received

Studies Focused on Gender Differences in Financial Knowledge

Author(s)	List of Independent Variables
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1. Chen & Garand (2018)	Age: 18–24, 25–34, 35–44, 45–54, 55–64, 65 or older, Ethnicity: White, Nonwhite, Education: Didn't complete high school, Regular high school diploma, GED or alternative credential, Some college, College graduate, Postgraduate education, Marital status: Married, Living with partner, Single, Number of Children: No child/financially dependent children, Income: <\$15K, \$15–25K, \$25–35K, \$35–50K, \$50–75K, \$75–100K, Employment self-employed, Full-time worker, Part-time worker, Homemaker, Full-time student, Disabled, Unemployed, Retired, Confidence: 1-7, Don't know, Prefer not to say, Risk acceptance: 1-10, Don't know, Prefer not to say
2. Fonseca et al. (2012)	Age: 18–35, 36–50, 51–65, 66+, Race: White, Black, Other, Education: High school dropout, High school graduate, Some college, College graduate, Income : <\$35K, \$35K–\$60K, \$60K–\$90K, >\$90K In a couple, Marital status, Married, Cohabiting, Separated, Divorced, Widowed, Never married, Years in current relationship, Years in last relationship, Years since last relationship, No dependents, Number of dependents (if >0), Working for pay, Education relative to partner: Partner has more, Both same, Partner has less
3. Kim et al. (2021)	Financial assets, Income, Crystallized intelligence, Fluid intelligence, Memory disease, Age, Couple, Retired, High school degree, College degree, Health status: Excellent, Very good, Good, Fair, Poor
4. Mottola (2013)	Female, Low Financial Literacy, Good Math Skills (self-reported), Income, Age Less Than 45, Income \$50,000 or Less, Presence of Dependents in Household, Minority, College Educated
5. Nitani et al. (2020)	Education (Base = less than high school): High school graduate, College or alternative, Bachelor's degree, Postgraduate degree, Age of respondent (base = 18 to 25): 25 to 34, 35 to 44, 45 to 54, 55 to 64, Older than 65, Self-identifies as nonwhite, Employed men (Base case is self-employed men, not shown): Self-employed women, Employed women
6. Tang et al. (2015)	Total financial knowledge score, Parental monitoring index, Self-discipline, Thoroughness, Covariates- Gender (1= Male, 0=Female), Age in 2007, Race: White, Black or African American, American Indian, Eskimo, or Aleut, Asian or Pacific Islander, Other, Education: Non-high school High school, Some college, College, Graduate, Income from wage and salary in 2006, Internal locus of control index, Parents have investment experience in stocks, bonds, or pension funds, Parents' income, Parents' education: Non-high school, High school, Some college, College, Graduate school
7. Yao et al. (2023)	Gender (%) Man, Woman, Race (%) Non-white, White, Age, School year (%) First-year undergraduate Second-year undergraduate, Third-year undergraduate, Fourth-year undergraduate, Fifth-year or beyond, GPA, Parents with college degree and higher (%) Yes, No, Financial self-efficacy. Family Financial Socialization Variables: Parents provide financial advice (%) Yes, No, Parents have conversations about money (%) Yes, No, Parents talk about money management (%) Yes, No, Parents model sound financial management (%), Yes, No Financial Education Variables: College major (%)Arts & Humanities, Business, Education, Health, Social Sciences, STEM, Vocational, Other, Financial education class in high school (%) Yes, No Financial Behaviors Variables: Student loan experience (%) Yes, No, Credit card experience (%) Yes, No, Positive money management behaviors, Negative money management behaviors

Table A5. Acronyms

Datasets
American Life Panel (ALP)
Consumer Credit Panel (CCP)
Health and Retirement Study (HRS)
National Financial Capability Study (NFCS)
National Longitudinal Survey of Youth (NLSY)
National Student Financial Wellness Study (NSFWS)
Study on Collegiate Financial Wellness (SCFW)
Survey of Consumer Finances (SCF)
Survey of Household Economics and Decisionmaking (SHED)
Understanding America Panel (UAS)
Financial Knowledge Measures
Financial Knowledge Overconfidence (FKO)
Objective Financial Knowledge (OFK)
Personal Finance Index (P-Fin Index)
Subjective Financial Knowledge (SFK)
Financial Behavior Measures
Alternative Financial Services (AFS)
Financial Capability (FC)
Financial Literacy Relevance Scale (FLRS)
Financial Management (FM)
Financial Optimism (FO)
Financial Satisfaction (FSAT)
Financial Self-Efficacy (FSE)
Financial Strain (FS)
Financial Stress (FS)
Financial Well-being (FWB)
Perceived Financial Capability (PFC)
Propensity Score Matching (PSM)
Responsible Financial Behavior (RFB)
Self-Assessed Financial Confidence (SAFC)
Analysis Methods
Blinder-Oaxaca Decomposition (BOD)
Descriptive (Desc.)
Propensity Score Matching (PMS)
Regression analysis (Reg.)
Racial, ethnic and gender differences (gaps)
Difference between Whites and Blacks (W-B)
Difference between Whites and Hispanics (W-H)

Difference between Whites and Asians (W-A)

Difference between Whites and Others (W-O)

Difference between Whites and Asians/Others (W-A/O)

Difference between Men and Women (M-W)

Difference between White Women and Black Women (WW-BW)

Difference between White Women and Hispanic Women (WW-HW)

Difference between Cisgender and Transgender (Cis-Trans)

Table A6. Data Extracted using Artificial Intelligence for Three Manuscripts (ChatGPT 4)*

Author	Albahrani et al. (2019)
Year Publication	2019
Dataset	National Financial Capability Study (NFCS)
Dataset Year	2015
Observations	500 observations from each state and the District of Columbia
Measures of Finc. Knowledge	Five questions focusing on bonds and interest rates, compound interest, diversification, real rates of returns, and loan maturity
Methodology	Ordinary Least Squares (OLS) estimation
Diff. in Finc. Know. Whites & Blacks	6.9% to 11.3% higher for Whites
Diff. in Finc. Know. Whites & Hisp.	Not directly provided, grouped under minorities
Diff. in Finc. Know. Men & Women	7.8% to 8% more for males
Main Findings from Study	Financial literacy education increases financial literacy scores more for whites than for minorities. The financial knowledge gap increases with the provision of financial literacy education in its current form. Higher measures of financial literacy are associated with better financial behaviors and outcomes.
Author	Angrisani et al. (2021)
Year Publication	2021
Dataset	Survey of Household and Economic Decision-making (SHED)
Dataset Year	2017
Observations	Not explicitly stated
Measures of Finc. Knowledge	Five questions regarding risk, interest, inflation, housing prices, and long-term investment
Methodology	Ordinary Least Squares (OLS) regression, including a BO decomposition analysis
Diff. in Finc. Know. Whites & Blacks	Blacks score 1.2 points lower
Diff. in Finc. Know. Whites & Hisp.	Hispanics score 1.0 points lower
Diff. in Finc. Know. Men & Women	Not quantified in the text
Main Findings from Study	The study investigates the drivers of the racial/ethnic gap in financial literacy, focusing on family circumstances and neighborhood characteristics. Individual characteristics, socioeconomic status, and family background are significant determinants of financial literacy, with notable differences across racial groups. The gap in financial literacy between Whites and minorities varies by income class, narrowing from low to high income but with persistent discrepancies.

Author	Balasubramnian & Sargent (2020)
Year Publication	2020
Dataset	National Financial Capability Study (NFCS)
Dataset Year	2015
Observations	27,564 American adults
Measures of Finc. Knowledge	Measured perceived financial literacy using a 1-7 Likert scale, and objective financial literacy through five survey questions on basic financial concepts
Methodology	Regression analysis of perceived vs. objective financial literacy on financial behaviors
Diff. in Finc. Know. Whites & Blacks	Not specified
Diff. in Finc. Know. Whites & Hisp.	Not specified
Diff. in Finc. Know. Men & Women	Men more overconfident, no specific percentage provided
Main Findings from Study	Individuals with inflated perceptions of their financial literacy ('blind spots') engage in riskier financial behaviors and make poorer financial decisions despite financial education.

*Data extracted using ChatGPT on April of 2024

Table A7. Summary Statistics for Differences in Financial Knowledge Measures among Racial/Ethnic and Gender Groups restricting sample to differences in average scores only

	Mean	SD	Min	Max	N
All adults sample					
OFK White-Black	16.33	5.35	8	25	12
OFK White-Hispanic	14.30	5.27	7	22	10
OFK White-Asian	6.00	2.83	4	8	2
OFK Men-Women	10.50	4.11	5	20	14
SFK White-Black	0.40	2.19	-2	4	5
SFK White-Hispanic	2.60	2.30	0	6	5
SFK White-Asian	0.00	.	0	0	1
SFK Men-Women	5.14	3.98	0	11	7
Young adults/college sample					
OFK White-Black	9.67	1.53	8	11	3
OFK White-Hispanic	8.50	2.12	7	10	2
OFK White-Asian	4.00	.	4	4	1
OFK Men-Women	7.33	2.08	5	9	3
SFK White-Black	.	.	.	.	.
SFK White-Hispanic	.	.	.	.	.
SFK White-Asian	.	.	.	.	.
SFK Men-Women	.	.	.	.	.
Other adult sample					
OFK White-Black	18.56	4.07	14	25	9
OFK White-Hispanic	15.75	4.80	10	22	8
OFK White-Asian	8.00	.	8	8	1
OFK Men-Women	11.36	4.15	6	20	11
SFK White-Black	0.40	2.19	-2	4	5
SFK White-Hispanic	2.60	2.30	0	6	5
SFK White-Asian	0.00	.	0	0	1
SFK Men-Women	5.14	3.98	0	11	7

Differences expressed in percentage points. Estimates of average differences across groups here consider only studies that use average scores to the questions on financial knowledge.

Table A8. List of Authors

1st=first author (number of times author is first author), F.=frequency of publications, Article # = number of article in references

Author	1st	F.	Article #	Author	1st	F.	Article #
1. Al-Bahrani, A.	1	1	1	32. McCoy, M.	0	2	8, 30
2. Angrisani, A.	1	1	2	33. Miller, E.A	0	1	16
3. Baker, A.W.	0	1	29	34. Mitchell, O.S.	0	5	5, 19, 20, 21, 22
4. Balasubramnian, B.	1	1	3	35. Mountain, T. P.	0	1	10
5. Barrera, S.,	0	1	2	36. Mottola, G.R.	1	1	24
6. Blanco, L. R.	0	1	2	37. Mullen, K. J.	0	1	7
7. Burr, J.A.	0	1	16	38. Nejad, M. G.	1	1	25
8. Chen, C.D.	0	1	17	39. Nitani, M.	1	1	26
9. Chen, Z.	1	1	4	40. O'Connor, G.E.	1	2	25, 27
10. Clark, R.	1	1	5	41. Orser, B.	0	1	26
11. Contreras, S.	0	1	2	42. Patel, D.	0	1	1
12. Curto, V.	0	2	21, 22	43. Park, P.	0	1	30
13. Davis, H.	0	1	5	44. Peter, P.C.	0	1	29
14. de Bassa Scheresberg, C.	1	1	6	45. Regan, E.P.	0	2	32
15. Fonseca, R	1	1	7	46. Rehr, T.I	0	1	32
16. Garand, J.C.	0	1	4	47. Riding, A.	0	1	26
17. Harris, J.	1	1	8	48. Robb, C.A.	1	1	28
18. Hasler, A.	1	2	9, 31	49. Sargent, C. S.	0	1	3
19. Horton, N.J.	0	1	25	50. Streeter, J. L.	0	1	23
20. Houts, C.	0	1	14	51. Tang, N	1	1	29
21. Kim, H.	0	1	13	52. Thomas, M.G.	0	1	30
22. Kim, N.	1	1	10	53. Watkins, K.	0	1	30
23. Kim, K.T.	3	4	11, 12, 13,15	54. Weathers, J.	0	1	1
24. Knoll, M.Z.	1	1	14	55. White, K.J.	1	2	8, 30
25. Lee, J.	0	1	12	56. Woodyard, A.S	0	1	28
26. Lee, J.M.	0	1	12	57. Xiao, J.J.	0	1	11
27. Lee, S.	1	2	13, 15	58. Yagnik, N.	0	1	9
28. Li, Y.	1	1	16	59. Yakoboski, P. J	1	2	9, 31
29. Liao, C.F.	1	1	17	60. Yao, M.	1	1	32
30. Liu, Y.	0	1	8	61. Zamarro, G.	0	1	7
31. Lusardi, A.	6	9	5, 9, 18, 19, 20, 21, 22, 23, 31	62. Zissimopoulos, J.	0	1	7