International Journal of Innovative Research and Scientific Studies, 8(3) 2025, pages: 3373-3379

IJIRSS
International Journal of Innovative Research & Scientific Studies

ISSN: 2617-6548

URL: www.ijirss.com

Understanding the financial behavior of finance students: An analysis of demographic, financial literacy, and experiential

Deni Danial Kesa[1*], Debrina Vita Ferezagia[2], Ari Nurfikri[3], Andi Estetiono[4], Lee Cheng Wen[5]

[1,2,3]*University of Indonesia, Indonesia.*
[4]*Airlangga University, Indonesia.*
[5]*Chung Yuan Christian University, Taiwan.*

Corresponding author: Deni Danial Kesa (*Email: d.danial@ui.ac.id*)

Abstract

While studies on financial behavior are relatively common, limited research has examined the link between financial education and its practical application among university students. This study focuses on finance majors, who are assumed to possess sufficient theoretical knowledge and internship experience. The objective is to examine students' levels of financial literacy and behavior, as well as the factors that influence them. Offering a novel perspective, this study integrates demographic characteristics, academic performance, and internship experience, with financial literacy acting as a moderating variable in a unified model of student financial behavior. A sample of 75 finance students from Indonesian universities was analyzed using path analysis. The findings reveal that students' financial behavior falls within a high category, with an average score of 68.45. Similarly, their financial literacy level is also high, averaging 72.34. Moreover, both internship experience and financial literacy significantly influence financial behavior, as indicated by a p-value of 0.000. Notably, financial literacy serves as a key mediating factor that strengthens the relationship between internship experience and financial behavior. Enhanced internship experience directly contributes to improved financial literacy, which in turn fosters better financial behavior among students.

Keywords: Academic ability, Demographic factors, Financial literacy, Internship experience, Student financial management.

DOI: 10.53894/ijirss.v8i3.7245
Funding: This work was funded by Vocational Program Universitas Indonesia.
History: Received: 25 March 2025 / Revised: 29 April 2025 / **Accepted:** 1 May 2025 / **Published:** 21 May 2025

Competing Interests: The authors declare that they have no competing interests.
Authors' Contributions: All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript.
Transparency: The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.
Acknowledgement: We also convey sincere appreciation to all over respondents who have participate in study This with take time out time and provide very good data valuable. We extend our gratitude to our colleagues from the Vocational Higher Education Program at Universitas Indonesia and CYCU Taiwan for their invaluable insights and expertise that contributed significantly to the research.
Publisher: Innovative Research Publishing

1. Introduction

Over the past decade, there has been a growing body of research focusing on the financial well-being of students, largely triggered by the widespread issue of student debt. This concern is further intensified by the increasing availability of financial and banking products tailored to students, such as credit cards, loans, and "pay later" services, which, despite their convenience, have contributed to rising debt levels among students [1]. The accessibility of financial services for both individuals and communities has become a central policy focus in numerous countries [2]. Studies have also emphasized the importance of financial literacy, highlighting the anticipated benefits it offers to individuals. In fact, financial literacy has emerged as a significant policy priority across various European nations. Findings suggest that to safeguard financial knowledge and promote economic resilience in the face of future crises, there is a need for coordinated supranational efforts across Europe.

In recent years, Indonesia's economic performance has shown consistent, albeit modest, growth. The economy expanded by 5.11% year-on-year (YoY) in the first quarter of 2024, slightly higher than the 5.04% recorded in the final quarter of 2023. However, growth moderated to 5.05% in the second quarter, 4.95% in the third quarter, and slightly rebounded to 5.02% in the fourth quarter. Overall, Indonesia's economic growth for 2024 stood at 5.03% YoY, reflecting a slight slowdown compared to 2023. This trend suggests that public welfare remains relatively stable despite signs of stagnation.

Financial literacy plays a critical role in individual financial management and overall well-being [3]. It encompasses not only knowledge but also the skills and attitudes required to make informed financial decisions [4]. Policymakers, educators, and the general public must understand the importance of financial literacy and its implications [5]. According to [6], financial literacy involves the ability to interpret economic data and make sound decisions related to financial planning, asset accumulation, and retirement. Empirical studies indicate a strong link between financial literacy and responsible financial behaviors, such as saving and investing [7], while insufficient financial knowledge often leads to negative outcomes like excessive debt and inadequate retirement preparation [8].

The Theory of Planned Behavior (TPB) is often used to explain how intentions influence individual financial behavior. This theory outlines three key elements: attitudes toward the behavior, perceived social pressure, and beliefs regarding one's ability to perform the behavior. Among university students, low levels of financial literacy have been linked to a lack of personal finance education and instruction within academic institutions [9] with several studies confirming that student financial literacy remains inadequate [10].

Some research has not found a direct relationship between financial literacy and financial behavior, despite the assumption that literacy influences decision-making. Further investigation is needed, particularly among students in business and management programs, and to explore the financial knowledge gap between male and female students [9]. The Theory of Planned Behavior (TPB) has proven to be a useful framework for understanding individual behavior, asserting that decision-making is shaped by attitudes, social norms, and perceived control. Individual perspectives on the consequences of their behavior, social expectations, and perceived barriers can all influence financial actions [11]. Moreover, demographic variables such as gender, age, experience, and knowledge help shape personal beliefs and behaviors.

Gender, in particular, has been identified as a significant factor in students' financial behavior. Many studies suggest that men tend to outperform women in financial decision-making [12] often due to greater confidence and lower risk aversion. In contrast, women's lower self-confidence, often stemming from their dual roles in domestic and professional spheres, can hinder their ability to save [13]. Generally, women are perceived to have less financial management capability than men, highlighting the gender-based differences in financial motivations.

Students who possess financial competence are more likely to make sound financial decisions regarding investments, savings, and credit card use. Empirical evidence suggests a strong correlation between inadequate financial literacy and increased debt [6]. This implies that a lack of understanding of financial concepts and poor money management skills can lead to financial distress among students. Business and economics majors typically exhibit higher levels of financial literacy compared to students in other fields [12]. A study of 6,520 students at a Midwestern university found a notable correlation between financial literacy and credit card usage, although the connection was not directly anticipated [14]. These findings underscore the complexity of the relationship between financial knowledge and behavior.

This research contributes to the development of a comprehensive model for analyzing financial behavior and offers practical insights for educational institutions and policymakers aiming to design more effective financial literacy programs. Financial literacy is influenced by various demographic factors, including age, gender, and education [7] with younger and more educated individuals generally demonstrating higher literacy levels. Cultural norms, social influences, and family backgrounds also significantly shape financial education and literacy [15].

Financial management behavior entails a range of actions and skills related to budgeting, saving, investing, and managing debt [16] and plays a vital role in maintaining financial security and economic resilience [3]. Psychological components—such as attitudes toward money, discipline, and risk tolerance—are critical to financial behavior [17]. These psychological tendencies, including a person's orientation toward saving and planning for the future, heavily influence financial decision-making [18]. Additionally, socioeconomic characteristics such as income, education, and cultural background further affect financial behaviors [15].

Gender differences are also apparent in financial decision-making behavior. While many studies suggest that men have higher financial literacy levels than women [19], it indicates that women tend to engage in more prudent financial behaviors, such as budgeting and saving. However, women often exhibit less confidence in investment-related decisions [20], whereas men show greater participation in financial markets [21]. These differences in investment behavior have significant long-term implications for financial reserves and retirement savings [7].

Among university students, higher levels of financial literacy are associated with better financial management, reduced debt accumulation, and increased savings [22]. Several key factors bridge the gap between financial knowledge and behavior, including demographics, financial education, age, and personal experience [23]. Financial behavior is shaped by a complex interplay of social, educational, and psychological influences [20]. Internships, in particular, offer both academic and practical value in shaping students' financial behaviors. Many higher education internship programs now incorporate components aimed at enhancing informed financial decision-making and investment strategies [5].

Financial literacy and financial management among college students are influenced by various complex and interrelated factors. One of the main factors is the level of financial education that students have, both from formal education such as economics and finance courses and from non-formal education such as financial seminars or training. Students who gain a basic understanding of financial planning, investment, and debt management tend to be better able to manage their finances wisely. In addition, practical experience, such as working part-time or doing an internship, also plays an important role in improving financial literacy. These experiences provide direct insight into managing income and expenses, so that students are better prepared to face financial challenges in everyday life.

2. Method

This study uses multiple regression analysis to test the independent variables against the dependent variable. The independent variables in this study are gender, age, academic talent, internship experience, and financial literacy. The dependent variable is the financial behavior of students. Gender is measured using a nominal scale, with 1 for males and 0 for females. Age is a ratio scale that indicates a person's chronological age. Academic proficiency is assessed using the student achievement index score. Financial literacy is described as the competence or ability of individuals to manage their finances. This variable is assessed by 13 statement items derived from a study conducted [9]. The statement items reflect the respondents' perspectives on cash flow management, investment, savings, and credit management. The measurement scale used is a Likert scale ranging from 1 to 4, namely (1) strongly agree, (2) agree, (3) somewhat agree, and (4) disagree, while financial behavior refers to an individual's attitude or approach to managing personal resources. This variable is assessed using a Likert scale of 10 statement items ranging from agree to disagree.

In this study, quantitative research techniques were employed, and a cross-sectional survey design was utilized for this research. A standardized questionnaire was administered to collect data, with a primary focus on financial literacy, demographic factors, and financial management behavior. The sample consisted of 75 Indonesian banking students from various universities. Participants were selected using purposive sampling to ensure representation across gender, age demographics, and socioeconomic status, as well as finance majors. The questionnaire was distributed through both online and offline means to optimize the response rate.

Table 1.
Questionnaire Design.

No	Variables	Question
1	Age	Age Respondents in year
2	Gender	Type sex respondents (female / male)
3	Internship Experience	or not there is experience internship? (Yes/No)
		How many months do you follow apprenticeship?
4	Academic Ability	How is your cumulative index performance?
5	Financial Literacy (adapted from Lusardi and Mitchell [3])	1. What is the impact of inflation on purchasing power?
		2. How does compound interest work in savings?
		3. What is the difference between stocks and bonds?
6	Financial Management Behavior (adapted from Dew and Xiao [24])	1. How often do you create and follow a budget?
		2. How regularly do you save a portion of your income?
		3. How confident are you in managing debt?

The relationship between variables can be explained as follows in Figure 1.

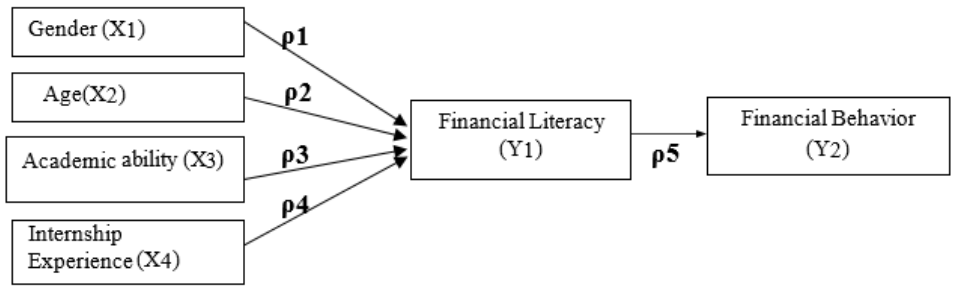

Figure 1.
Theoretical Framework.

Based on the study paradigm, the equation formed is as follows.

$$Y_1 = \rho Y_1 X_1 + \rho Y_1 X_2 + \rho Y_1 X_3 + \rho Y_1 \quad (1)$$

$$Y_2 = \rho Y_2 Y_1 + \varepsilon_2 \quad (2)$$

Whereas:

X_1 = Gender.
X_2 = Age.
X_3 = Academic Ability (GPA).
X_4 = Internship Experience (IE).
Y_1 = Financial literacy.
Y_2 = Financial behavior.

3. Results and Discussion

Respondents consisted of 60% female and 40% male respondents, with an age range of 17 to 31 years. The average age of respondents was 21 years. The average GPA for students was 3.3, with a minimum GPA recorded at 3 and a maximum GPA reaching 3.87. This indicates that the typical academic ability of students is in the good range. A total of 65.3% of respondents reported having internship experience, while 34.7% stated that they did not have such experience. The average duration of internship experience reported by participants was 4 months, with the longest being 8 months.

The level of financial literacy and behavior can be divided into four levels on a scale of 0-100: namely (1) Very Low: 0 - 25, (2) Low: 26 - 50, (3) Medium: 51 - 75, and (4) High: 76 - 100. The level of financial literacy of students majoring in finance is 72.34, which is higher than the financial management behavior of 68.45. Finance students have high financial knowledge, but their behavior is slightly lower in managing finances. The level of financial literacy and behavior of students majoring in finance in Table 2.

Table 2.
Level of student financial literacy and behavior.

Variables	Mean	Standard Deviation	Category
Financial Literacy (X1)	72.34	8.12	High
Financial Management Behavior (Y)	68.45	7.85	High

The results of the path analysis for the direct influence of gender, age, academic ability, internship, and financial literacy on financial behavior are in Table 3. Gender (X1), Age (X2), and Academic Ability (X3) do not give influence significant towards Financial Literacy (Y1). However, Internship Experience (X4) which has influence direct significant towards Financial Literacy with coefficient 0.400 and p-value 0.000. Financial Literacy (Y1) give influence significant towards Financial Behavior (Y2) with coefficient 0.580 and p-value 0.000.

Table 3.
Direct influence of each variable.

Path	Coefficient	t-value	p-value	Information
Gender → Financial Literacy (X1 → Y1)	0.050	1.025	0.306	No Significant
Age → Financial Literacy (X2 → Y1)	0.030	0.780	0.436	No Significant
Academic Ability → Financial Literacy (X3 → Y1)	0.060	1,510	0.132	No Significant
Internship → Financial Literacy (X4 → Y1)	0.400	6,520	0.000	Significant
Financial Literacy → Financial Behavior (Y1 → Y2)	0.580	7,810	0.000	Significant
Gender → Financial Behavior (X1 → Y2)	0.070	1,420	0.165	No Significant
Age → Financial Behavior (X2 → Y2)	0.045	0.920	0.359	No Significant
Academic Ability → Financial Behavior (X3 → Y2)	0.100	1,950	0.055	No Significant
Internship → Financial Behavior (X4 → Y2)	0.150	2,760	0.007	Significant

The initial hypothesis proposed in this study is that gender, age, academic ability, and internship have a direct influence on financial literacy. Based on the table, the influence of gender on financial literacy has a t value of 1.025 with a p value of 0.4306 above the p value of 0.05; thus, H_0 is accepted, indicating that the path coefficient is not significant. The second hypothesis states that age affects financial literacy. The t value is 0.780 with a significance level of 0.436 above the p value of 0.05, so H_0 cannot be rejected, indicating that the path coefficient is not significant. A person's age does not affect their financial behavior. The results of the third hypothesis test do not show a significant impact of the achievement index on financial literacy, with a significance value of 0.132 exceeding 0.05, indicating that the path coefficient is not significant. The fourth hypothesis proposed is that internship experience has an effect on financial literacy, with a t value of 6.520 and a significance of $0.00 < 0.05$, thus indicating a direct effect between internship experience and financial literacy.

Furthermore, the direct influence of financial literacy, gender, age, academic ability, and internship has a direct impact on financial behavior. The influence of financial literacy on students' financial behavior has a t value of 7.810 and a p value of 0.000, indicating a direct influence between financial literacy and financial behavior. In contrast, gender, age, and academic ability do not affect financial behavior. Another variable, namely internship, has an effect on financial behavior with a t value of 2.760 and a p value of 0.007.

The next test is the indirect influence shown in Table 4. Of all variable exogenous, only Internship Experience provides a significant influence on Financial Behavior through Financial Literacy. Meanwhile, Gender, Age, and Academic Ability do not contribute significantly.

Table 4.
Indirect Influence Between Variables.

Path	Indirect Coefficient	Information
Gender → Financial Literacy → Financial Behavior	0.050 × 0.580 = 0.029	Not Significant
Age → Financial Literacy → Financial Behavior	0.030 × 0.580 = 0.017	Not Significant
Academic Ability → Financial Literacy → Financial Behavior	0.060 × 0.580 = 0.035	Not Significant
Internship → Financial Literacy → Financial Behavior	0.400 × 0.580 = 0.232	**Significant**

The indirect effect of gender on financial behavior through financial literacy is 0.029 (not significant). The age variable does not have a direct effect on financial behavior through financial literacy, with a value of 0.017, and is not significant. The academic ability variable has an indirect effect on financial behavior through financial literacy, with a value of 0.035, and is not significant. Meanwhile, the internship variable has a direct and significant effect on financial behavior through financial literacy, with a value of 0.232. The results of the path analysis also analyze the total effect shown in Table 5.

Table 5.
Total Influence.

Path	Total Coefficient
Gender → Financial Behavior	0.070 + 0.029 = 0.099
Age → Financial Behavior	0.045 + 0.017 = 0.062
Academic Ability → Financial Behavior	0.100 + 0.035 = 0.135
Internship → Financial Behavior	0.150 + 0.232 = 0.382

The influence of gender on financial behavior in total is 0.099 and is not significant. The age variable has a total influence of 0.062 on financial behavior and is not significant. The academic ability variable on financial behavior has a total influence of 0.135 and is not significant, while the internship variable has a total influence coefficient of 0.382 and is significant.

4. Conclusion

In this study, gender variables do not have a direct effect on students' financial literacy. This shows that the ability and intelligence of individuals in managing their personal finances are not influenced by gender. Furthermore, the indirect relationship between gender and students' financial behavior, mediated by financial literacy, also has no significant effect. Although financial literacy plays an important role in shaping financial behavior, the analysis revealed that the path coefficient connecting gender and literacy was not significant, indicating that gender also has no significant effect on students' financial behavior. This shows that individuals of all genders have the same concerns about personal financial management among finance students.

The results of this study indicate that the age of students does not have a significant effect on financial literacy or directly on financial behavior. This indicates that increasing age is not always followed by an increase in understanding or literacy in managing personal finances. This phenomenon can occur because financial literacy is more influenced by financial education, practical experience, and exposure to financial knowledge than age alone. Research also supports this finding, where it was found that age does not directly affect financial behavior, but rather financial education and practical experience play a greater role [25]. The findings of this study also do not provide sufficient evidence that students' financial literacy is influenced by academic talent, as measured by the average value of the Academic Achievement Index. This is different from the study [26] which stated that students' high academic ability, as indicated by the Grade Point Average (GPA), is an indication of their capacity to learn and apply the information they have obtained, which is not supported by this study.

Internship experience significantly affects the financial literacy and financial behavior of students. While the indirect effect of internship experience on financial needs is through financial literacy, the findings of this study align with the conclusions drawn by those who proposed a correlation between internship experience and financial literacy [23]. In addition, this study shows that understanding financial principles has a significant impact on the financial behavior demonstrated by students. This is consistent with research that shows a correlation between low financial literacy and problems related to debt [3]. This indicates that a lack of adequate understanding of financial principles and effective personal financial management can lead students to incur debt. Students who possess a strong understanding of financial concepts will develop a wiser perspective. However, the results of this study do not align with the conclusions drawn by Brown and Taylor [27] as referred to Robb and Woodyard [28], which show that the relationship between financial literacy and the financial behavior of students remains ambiguous.

Financial literacy includes an understanding of financial principles and the capacity to use this understanding to make sound financial choices. Individuals with high financial literacy tend to engage in retirement planning, avoid debt, and uphold superior financial practices. In academic settings, financial literacy is associated with prudent spending, saving practices, and investment strategies. Many studies have corroborated the positive correlation between financial literacy and behaviors related to financial management. Individuals who receive financial education demonstrate better financial management practices [29].

Financial literacy is proven to be an important mediator that strengthens the connection between internship experience and financial behavior. Improvement in apprenticeship experiences directly contributes to the enhancement of financial literacy, which ultimately increases students' financial behavior. Efforts to increase financial literacy should focus on strengthening internship experiences and practicing finance in real-life situations. This study supports the theory that hands-on practical experience, such as internships, provides deeper insight into financial management, thereby improving students' financial understanding and literacy. Financial literacy plays an important role in making wiser financial decisions. In addition, financial literacy, as an important skill in everyday life, is influenced by direct experiences such as internships.

The practical implication of this study is the need for integration between formal education and real-world practical experience, especially in the financial education curriculum in universities. Increasing financial literacy through internship experiences can improve students' financial behavior, such as the ability to manage budgets, manage expenses, and make smarter investment decisions. Therefore, educational institutions should expand internship opportunities and involve students in practice-based financial education programs.

References

[1] S. Bartholomae and J. J. Fox, "A decade review of research on college student financial behavior and well-being," *Journal of Family and Economic Issues*, vol. 42, no. Suppl 1, pp. 154-177, 2021. https://doi.org/10.1007/s10834-021-09756-6

[2] M. Cannistrà *et al.*, "A comparative analysis of financial literacy levels and initiatives among students in five European countries," *Research in Comparative and International Education*, vol. 17, no. 2, pp. 246-280, 2022. https://doi.org/10.1177/17454999211066183

[3] A. Lusardi and O. S. Mitchell, "The economic importance of financial literacy: Theory and evidence," *American Economic Journal: Journal of Economic Literature*, vol. 52, no. 1, pp. 5-44, 2014.

[4] S. J. Huston, "Measuring financial literacy," *Journal of Consumer Affairs*, vol. 44, no. 2, pp. 296-316, 2010. https://doi.org/10.1111/j.1745-6606.2010.01170.x

[5] A. Atkinson and F. Messy, *Measuring financial literacy: Results of an OECD/INFE pilot study*. France: OECD, 2012.

[6] A. Lusardi and O. S. Mitchell, "Financial literacy and retirement planning in the United States," *Journal of Pension Economics & Finance*, vol. 10, no. 4, pp. 509-525, 2011. https://doi.org/10.1017/S147474721100045X

[7] A. Lusardi and P. Tufano, "Debt literacy, financial experiences, and overindebtedness," *Journal of Pension Economics & Finance*, vol. 14, no. 4, pp. 332-368, 2015.

[8] M. C. Van Rooij, A. Lusardi, and R. J. Alessie, "Financial literacy and retirement planning in the Netherlands," *Journal of Economic Psychology*, vol. 32, no. 4, pp. 593-608, 2011.

[9] H. Chen and R. P. Volpe, "Gender differences in personal financial literacy among college students," *Financial Services Review*, vol. 11, no. 3, pp. 289-307, 2002. https://doi.org/10.1016/S1057-0810(02)00046-2

[10] S. R. Nidar and S. Bestari, "Personal financial literacy among university students (case study at Padjadjaran University students, Bandung, Indonesia)," *World Journal of Social Sciences*, vol. 2, no. 4, pp. 162-171, 2012.

[11] L. Sommer, "The theory of planned behaviour and the impact of past behaviour," *International Business & Economics Research Journal*, vol. 10, no. 1, pp. 91–100, 2011.

[12] A. Ansong and M. Gyensare, "Factors determining financial literacy of university students at the university of Cape Coast, Ghana," *International Journal of Business and Management*, vol. 7, no. 9, pp. 126–133, 2012. https://doi.org/10.5539/ijbm.v7n9p126

[13] S. P. Wagland and S. Taylor, "When it comes to financial literacy, does gender really matter?," *The Australasian Accounting, Business & Finance Journal*, vol. 3, no. 1, pp. 57–72, 2009.

[14] C. A. Robb and D. L. Sharpe, "Effect of personal financial knowledge on college students' credit card behavior," *Journal of Financial Counseling and Planning*, vol. 20, no. 1, pp. 25-43, 2009.

[15] J. J. Xiao and N. Porto, "Financial education and financial satisfaction: The mediating role of financial capability," *Journal of Financial Counseling and Planning*, vol. 28, no. 2, pp. 165-176, 2017.

[16] J. J. Xiao, *Applying behavioral theory to financial behavior. In J.J. Xiao (Ed.), Handbook of Consumer Finance Research*. United States: Springer, 2008.

[17] V. G. Perry and M. D. Morris, "Who is in control? The role of self-perception, knowledge, and income in explaining consumer financial behavior," *Journal of Consumer Affairs*, vol. 39, no. 2, pp. 299-313, 2005. https://doi.org/10.1111/j.1745-6606.2005.00016.x

[18] M. Gutter and Z. Copur, "Financial behaviors and financial well-being of college students: Evidence from a national survey," *Journal of Family and Economic Issues*, vol. 32, pp. 699-714, 2011. https://doi.org/10.1007/s10834-011-9273-8

[19] A. Lusardi and O. S. Mitchell, "Financial planning and literacy: How are women faring?," *American Economic Review*, vol. 98, no. 2, pp. 413-417, 2008. https://doi.org/10.1257/aer.98.2.413

[20] T. Bucher-Koenen, A. Lusardi, R. Alessie, and M. Van Rooij, "How financially literate are women? An overview and new insights," *Journal of Consumer Affairs*, vol. 51, no. 2, pp. 255-283, 2017.

[21] G. Charness and U. Gneezy, "Strong evidence for gender differences in risk taking," *Journal of Economic Behavior & Organization*, vol. 83, no. 1, pp. 50-58, 2012. https://doi.org/10.1016/j.jebo.2011.06.007

[22] M. A. Hilgert, J. M. Hogarth, and S. G. Beverly, "Household financial management: The connection between knowledge and behavior," *Federal Reserve Bulletin*, vol. 89, pp. 309–322, 2003.

[23] E. Hogan, S. Bryant, and L. Overymyer-Day, "Relationships between college students' credit card debt, undesirable academic behaviors and cognitions, and academic performance," *College Student Journal*, vol. 47, no. 1, pp. 102-112, 2013.

[24] J. Dew and J. Xiao, "The financial behavior scale: Development and validation," *Journal of Financial Counseling and Planning*, vol. 22, no. 1, pp. 43–59, 2011. https://doi.org/10.1891/1052-3073.22.1.43

[25] J. Yoong, "Financial illiteracy and stock market participation: Evidence from the RAND American life panel," RAND Working Paper Series on Labor and Population, No. WR-846, 2011.

[26] M. Fazli Sabri, C. C. Cook, and C. G. Gudmunson, "Financial well-being of Malaysian college students," *Asian education and development studies*, vol. 1, no. 2, pp. 153-170, 2012.

[27] S. Brown and K. Taylor, "Household finances and the ‘Big Five’personality traits," *Journal of Economic Psychology*, vol. 45, pp. 197-212, 2014. https://doi.org/10.1111/joca.12127

[28] C. A. Robb and A. Woodyard, "Financial knowledge and best practice behavior," *Journal of Financial Counseling and Planning*, vol. 22, no. 1, pp. 60–70, 2011.

[29] L. Mandell and L. S. Klein, "The impact of financial literacy education on subsequent financial behavior," *Journal of Financial Counseling and Planning*, vol. 20, no. 1, pp. 15-24, 2009.