

Enhancing financial literacy among Pantawid Pamilyang Pilipino Program beneficiaries

Merlynda Munar

Abstract

This study aimed to evaluate the effectiveness of financial literacy education among the Pantawid Pamilyang Pilipino Program (4Ps) household grantees in Baguio City in the Philippines. The focus was on enhancing financial knowledge and skills, particularly in financial planning, budgeting, and savings. Using a descriptive quantitative methodology, a questionnaire was administered to 297 respondents selected through stratified random sampling. The study assessed the financial literacy improvement relative to demographic factors such as gender and educational attainment. Results indicated that financial literacy sessions had a significant positive impact, with respondents demonstrating a "great extent" of improvement in financial planning, budgeting, and savings. Statistical analysis revealed no significant differences based on gender, while educational attainment showed significant differences, with higher education levels correlating with better financial literacy. The findings suggest that while financial literacy programs are broadly effective, tailoring these sessions to accommodate varying educational backgrounds could enhance outcomes further. Future recommendations include developing targeted financial education strategies to address the needs of those with lower educational attainment and expanding the program to reach a larger demographic. This approach could foster greater financial stability and empowerment among low-income families, ultimately contributing to poverty reduction efforts.

Keywords: *financial literacy, 4Ps household grantees, financial planning, budgeting, savings*

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About the author:

Doctor in Business Administration. Administrative Officer IV at Department of Social Welfare & Development - Cordillera Administrative Region and Postgraduate Researcher at University of Baguio, Graduate School. Email: mvimunar@gmail.com



1. Introduction

Poverty is a multifaceted global issue, significantly influenced by inadequate income, education, and resources. Research indicates that education is a critical pathway out of poverty, as it enhances labor force efficiency and economic growth, which in turn can lower poverty levels (Julius et al., 2011). The relationship between education and poverty is further emphasized by studies showing that regions with higher literacy rates and educational attainment experience lower poverty headcounts (Julius et al., 2011). Additionally, the role of financial inclusion is highlighted, where access to formal financial systems, combined with educational advancements, accelerates poverty reduction in lower-income countries (Shi et al., 2022). However, traditional definitions of poverty often focus narrowly on income, neglecting broader dimensions such as education and social justice, which are essential for understanding and addressing the root causes of poverty (Aleksiak, 2020). Thus, a comprehensive approach that integrates education, financial inclusion, and social equity is vital for effective poverty alleviation strategies.

The United Nations (2015) defines poverty as a lack of income, often manifesting in hunger, malnutrition, and limited access to essential services such as health and education. Poverty also includes social exclusion and lack of participation in decision-making processes. In 2015, extreme poverty affected an estimated 734 million people, or 10% of the global population. The UN describes extreme poverty as living on less than US\$1.90 per day, according to the international poverty line used in the world's poorest countries. This characterization applies globally, meaning anyone living on less than \$1.90 per day is considered extremely poor, regardless of location.

Seth and Tutor (2019) note that poverty is the top agenda in the Sustainable Development Goals (SDGs), with the aim of eradicating extreme poverty by 2030. Poverty alleviation strategies and anti-poverty programs are essential components of welfare policies in both developed and developing countries. These efforts range from various welfare programs in the United States (CEA, 2018) to strategies addressing poverty, social exclusion, and social immobility in European countries (OECD, 2018). In developing nations, these programs include social security measures that enhance food and livelihood security, as well as a variety of social safety nets like cash transfers, in-kind transfers, social pensions, and school-feeding programs targeting the poorest segments of the population.

The SDGs aim to establish sound policy frameworks at national and regional levels, focusing on pro-poor and gender-sensitive development strategies. By 2030, these strategies aim to ensure that all men and women have equal rights to economic resources, access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology, and financial services, including microfinance. Breaking the cycle of poverty requires the creation of decent, productive jobs, sustainable enterprises, and economic transformation, as regular employment is a key factor in escaping poverty (United Nations Global Issues, 2022).

The Philippines launched *AmBisyon 2040*, a long-term vision aimed at reducing poverty and improving the lives of the poorest segments of the population. The Department of Social Welfare and Development (DSWD) leads the implementation of the *Pantawid Pamilyang Pilipino Program (4Ps)*, a Conditional Cash Transfer (CCT) initiative that serves as the cornerstone of the government's social protection framework. The CCT program is recognized as a social safety net, encompassing social insurance, labor market interventions, social welfare programs, and other support measures (The World Bank, 2018).

The 4Ps is a human development initiative that provides cash assistance to meet families' short-term needs while investing in human capital, particularly in education, health, and nutrition. It includes Family Development Sessions (FDS) to help break the intergenerational cycle of poverty. According to DSWD Memorandum Circular 22, series of 2018, the FDS is a key intervention aimed at strengthening families' and children' human capital. These sessions play a crucial role in fostering family transformation and development. Specifically, they aim to enhance basic knowledge, attitudes, and skills of parents or household grantees regarding familial and parental responsibilities, such as managing family and community resources, engaging in livelihood activities, and promoting peer support and monitoring to improve overall well-being.

Research on 4Ps beneficiaries in the Philippines reveals a mixed picture of financial literacy. While the program has successfully met its objectives in poverty alleviation and improving access to education and healthcare (Once et al., 2019; De Los Reyes et al., 2022), beneficiaries struggle with financial literacy, particularly in budget allocation for essential needs and savings (Once et al., 2019). A study in Surigao City found no significant differences in financial literacy based on age, sex, civil status, or educational attainment, but noted variations in financial behavior and awareness related to employment status (Plaza, 2023). The

program's potential to enhance financial capability through conditional cash transfers is being explored (Eleoran et al., 2023). Despite these challenges, 4Ps has positively impacted beneficiaries' lives, providing for basic needs, promoting well-being, and offering capital for livelihood opportunities (De Los Reyes et al., 2022). However, the need for additional support in financial management and literacy remains evident.

Financial literacy plays a vital role in poverty alleviation by equipping individuals with the knowledge and skills needed to manage their resources effectively, influencing their financial behavior and decision-making. This study explores the impact of financial literacy education among 4Ps household grantees in Baguio City, Philippines, with a particular focus on financial planning, budgeting, and savings. Given the importance of demographics in shaping financial behavior, it is essential to recognize that the beneficiaries of financial literacy programs may differ significantly based on demographic factors such as gender and educational attainment.

2. Literature Review

2.1. Financial Literacy and Gender

Research consistently shows gender differences in financial literacy, with males generally demonstrating higher levels than females (Sahabuddin et al., 2023; Tinghög et al., 2021). The gender disparity extends to financial behavior, with males exhibiting better money management practices when financially knowledgeable (Sahabuddin et al., 2023). Interestingly, the gender gap persists in non-numerical financial contexts and cannot be attributed solely to differences in displayed confidence (Tinghög et al., 2021). Stereotype threat may contribute to this gap, as financial anxiety mediates the relationship between gender and financial literacy (Tinghög et al., 2021). These findings highlight the need for targeted financial education, particularly for female students and those with lower academic performance (Sahabuddin et al., 2023).

Studies by Kadoya et al. (2018), Kadova et al. (2020), and Watanapongvanich et al. (2021) suggest gender inequality in economic status significantly contributes to differences in financial literacy. Socio-economic factors, education, and occupation also play a role (Okamoto, 2021). Lusardi et al. (2017) found that the root of these differences is related to the benefits of financial literacy, with data from the S&P Global FinLit Survey showing that financial literacy levels are generally low worldwide, and women consistently score lower than

men. On the other hand, Gudjonsson et al. (2022) explored whether gender differences in financial literacy could be attributed to differing interests between men and women. The findings indicated that women have lower financial literacy than men, but this gap is not due to varying interests in people and things. Ndou (2023) found that in rural South Africa, men used budgets slightly more than women, though the overall relationship between demographic factors and financial literacy was negative. Radianto et al. (2020) concluded that while financial literacy significantly influences investment decisions, gender does not play a significant role in these decisions.

2.2. Financial Literacy and Educational Attainment

Research consistently highlights a positive relationship between educational attainment and financial literacy. Studies conducted in China by Zhou et al. (2022) and Gan et al. (2019) reveal that increased education, particularly through compulsory schooling, significantly enhances financial literacy, with the effect being more pronounced among males, urban residents, and those lacking economics training. This relationship is partly explained by improved math skills and increased sociability.

Further research underscores the link between education and financial literacy across different contexts. Kadoya and Khan (2020) found that higher education levels correlate with increased financial literacy, while Wagner (2019) noted that individuals with lower education and income levels tend to have lower financial literacy. This is consistent with findings by Ahmad et al. (2016), who emphasized that insufficient financial knowledge complicates personal financial management. Grohman et al. (2015) also associated better financial decisions with higher financial proficiency. In South Africa, Ndou (2023) observed that individuals with higher education, particularly those with a matric qualification, were better at saving for retirement, though a paradoxical negative correlation between education level and retirement savings was also noted. Dewi (2022) confirmed that demographic factors, including education, significantly impact financial skills and awareness, a finding echoed by Bangco et al. (2022) in the MIMAROPA region of the Philippines. Interestingly, Radianto et al. (2020) reported that while financial literacy significantly influences investment decisions, education alone does not.

2.3. The Role of Financial Literacy Programs in Economic Empowerment and Poverty Alleviation

Financial literacy programs, such as those implemented by World Vision and USAID, are increasingly recognized for their holistic approaches to economic empowerment. These initiatives not only enhance financial management skills but also promote gender equality by empowering women to participate fully in economic activities. For instance, World Vision's Gender Inclusive Financial Literacy Training (GIFT) supports couples in managing finances effectively, contributing to household stability and children's well-being (Manuere et al., 2018; Lopus et al., 2019). In countries like Papua New Guinea and Ghana, financial literacy initiatives are crucial for poverty alleviation. The Microfinance Expansion Project (MEP) in Papua New Guinea and governmental efforts in rural Ghana have shown that improving financial literacy enables individuals to manage resources better, make informed financial decisions, and generate income. These programs emphasize savings, responsible budgeting, and entrepreneurial skills, leading to improved economic stability and reduced poverty rates (Askar et al., 2020; Twumasi et al., 2020; Sehwat et al., 2021).

National governments, such as the Philippines, are also integrating financial literacy into social welfare programs like the 4Ps. The Department of Social Welfare and Development (DSWD), in collaboration with USAID, launched the Financial Literacy Manual for the Family Development Sessions (FDS) to enhance financial knowledge and skills among 4Ps beneficiaries. This initiative prepares households for their eventual exit from the program and aims to help them achieve sustainable financial independence (DSWD, 2021). The targeted education provided through FDS on financial planning, budgeting, and savings has significantly benefited low-income families, while institutional support ensures the sustainability and long-term impact on the financial well-being of program beneficiaries (officialgazette.gov.ph; Dizon et al., 2017).

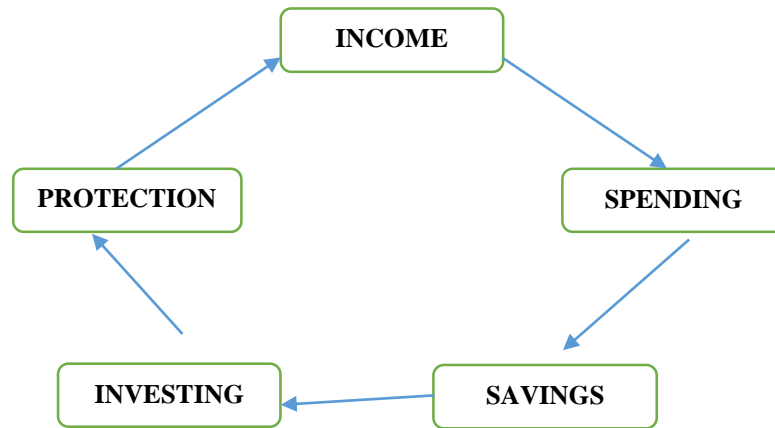
Empirical evidence highlights the critical role of financial literacy in addressing poverty, particularly among vulnerable populations such as those participating in social welfare programs like the Philippines' 4Ps. While existing studies provide insights into the impact of financial education on various demographic factors like gender and educational attainment, gaps remain in understanding the specific effectiveness of financial literacy interventions within the context of 4Ps households in Baguio City. Hence, this study aims to

fill this gap by examining how financial literacy education delivered through the FDS influences the financial planning, budgeting, and savings behaviors of 4Ps beneficiaries.

2.4. Theoretical Framework

Cognizant of the goal of this research, this study is anchored in the 4Ps Financial Literacy program. Financial Literacy has a significant role in reducing poverty in low-income families to improve their financial well-being. In some developing countries, they implement financial literacy through education. It can help create pathways to improve poverty; improving low-income individuals' financial standing and economic stability (Simpson, 2021). Firli (2017) asserts that financial literacy combines awareness, knowledge, skill, attitude, and behavior in making sound financial decisions and to achieve financing well-being. According to Paillella (2016), financial literacy is the ability to use the knowledge and skills in managing financial resources effectively for a lifetime. At the same time, Jumpstart Coalition (2018) describes financial literacy as the ability to use the knowledge and skills in managing financial resources effectively for lifetime financial security. Financial literacy is evident from financial knowledge and understanding of financial issues. The United States Treasury's Financial Literacy and Education Commission (2018) defined financial literacy as the ability to use knowledge and skills to improve their financial resources effectively for a lifetime of financial well-being.

Financial literacy has five key components: income, spending, savings, investing, and protection. The first component is income, which is the foundation of personal finances because this includes all parts of cash flow, like salaries, pensions, property income, and investments. Second is the spending, which includes the money for any expenses incurred. Personal budgeting is a plan for spending money, but it is the most useful tool for achieving financial goals. The third component is Savings, which includes any money from income that is not spent but was set aside for the future. Saving for the future or saving for an emergency fund will give you peace of mind and also prevent a financial setback in your life. The fourth component is Investing; this includes purchases intended for the business to earn future income or savings. The fifth component is protection from financial risks, handled through various financial products, including annuities, property/casualty insurance, and life and health insurance (CFI Education Inc., 2023).

Figure 1*The five key components of financial literacy*

The financial literacy lectures are conducted in all the barangays in Baguio City that are covered by the 4Ps program during the monthly FDS. Financial literacy is one of the topics discussed during these sessions. It helped the 4Ps grantees improve their financial knowledge by understanding the basic financial concepts, including the five key components of financial literacy, to make them aware and responsible in financial decision-making. Having skills in financial literacy empowers them to set financial goals, create effective budget plans, manage debt, and save money for emergency funds to address medical emergencies, job loss, and natural disasters. At the same time, the remaining savings can be used for investment.

According to Askar et al. (2020), financial literacy is important in the three core concepts: how to spend, save, and borrow, and how to invest and accumulate wealth. Financial literacy can impact poverty by affecting an individual's ability to manage financial resources and by influencing financial behaviour and decision-making in areas particularly crucial for the poor to improve their economic well-being.

3. Methodology

3.1. Research Design

This study employed a descriptive research method to examine the financial literacy levels among beneficiaries of the 4Ps. A quantitative approach using questionnaires was utilized to assess demographic characteristics such as gender and educational attainment, as well as to evaluate the knowledge and skills acquired from financial literacy lectures.

3.2. Population and locale of the Study

The study was conducted in ten (10) barangays in Baguio City, Philippines with the highest number of 4Ps household beneficiaries based on the Pantawid Pamilya Information System (PPIS) as of February 28, 2022, of which total active grantees is 2,737. These grantees were selected through the National Household Targeting System, also known as Listahanan.

The RAOSOFT calculator was used to calculate the sample size or margin of error, complete statistical interpretations and algorithm. The sample size is computed using the RAOSOFT sample size calculator with 95 percent confidence level and a 5 percent margin of error. As a result, the minimum recommended sample size is 297 active grantees to be allocated in the top 10 barangays in Baguio City.

The identification of the 297 households (HHs) respondents was through stratified random sampling using the generated list of active household beneficiaries from the DSWD PPIS. The respondents were the grantees who actively participate in the monthly Family Development sessions. The top ten barangays with total active household beneficiaries are as follows:

Table 1

Active household beneficiaries of the top ten barangays

Barangays	Frequency	Percent	Valid Percent	Cumulative Percent
Irisan	102	34.3	34.3	34.3
Asin Road	31	10.4	10.4	44.8
Bakakeng	28	9.4	9.4	54.2
Pinget	26	8.8	8.8	63.0
San Luis Village	21	7.1	7.1	70.0
Santo Tomas	19	6.4	6.4	76.4
Kias	19	6.4	6.4	82.8
Loakan Proper	18	6.1	6.1	88.9
Fairview	18	6.1	6.1	94.9
Camp 7	15	5.1	5.1	100.0
Total	297	100.0	100.0	

Table 1 shows the total sample size of respondents based on the identified barangays. Irisan has the highest number and percentage of respondents with 102 (34.3%), followed by Asin Road 31 (10.4%), Bakakeng 28 (9.4%), Pinget 26 (8.8%), San Luis Village 21 (7.1%),

Santo Tomas and Kias 19 (6.4%) respectively, Loakan Proper and Fairview 18 (6.1%) respectively, and Camp7 15 (5.1%). The allocated number of respondents per barangay were given questionnaires and submitted them personally to the researcher after completion.

The following shows the demographic characteristics of the 297 4Ps grantees/respondents according to Gender and Educational Attainment.

Table 2

Gender of the respondents

Gender	Frequency	Percent
Male	28	9.4
Female	269	90.6
Total	297	100.0

Table 2 indicates that almost all of the respondents are females (91%), and only a few are males (9%). In comparison with the list of active grantees in the PPIS System for Baguio City, 88.91% are females, and the majority of them are housekeepers. They are the ones who are actively participating in the monthly family development sessions and training for skills development like financial literacy. On the other hand, 11.09% are male grantees whose wives are working both locally and abroad. They represent their family during the monthly FDS. In addition, the Expanded Social Assistance Project (2019) of the Asian Development Bank stated that, in 2008, the total number of active grantees for the 4Ps in the seventeen (17) regions was 4,124,088. The majority are female grantees, 3,561,882 (86.4%), and 562,206 (13.6%) are male grantees. Most of these active grantees come from Luzon 1,682,133 (40.8%), followed by those in Mindanao 1,605,016 (38.9%) and Visayas 836,939 (20.3%). Women grantees have been targeted as the main beneficiaries. It was also mentioned in the study that many of the women grantees engage in informal work such as household help, laundry work, and vendors, among others, as cited in a key informant interview.

The Department of Human and Family Development Studies, University of the Philippines Los Banos (2018), conducted research on the assessment of the FDS of the 4Ps. The result of the study showed that there are 1,112 respondents, majority of them are females 802 (70.22%), high school level/graduate 597 (56.71%). The same trend with the result of the study of Gealon (2016) is that the majority of the respondents in the FDS in the coastal areas in Negros Occidental are high school level/graduates.

Table 3

Educational attainment of the respondent

Educational Attainment	Frequency	Percent
Elementary	100	33.7
High School	159	53.5
Vocational	17	5.7
College	21	7.1
Total	297	100.0

3.3. Research Instrumentation

The questionnaire was divided into two parts. Part I dealt with the demographic characteristics of the 4Ps grantees/respondents, such as gender and educational attainment. The validated questionnaires were given to the 297 respondents of the ten (10) identified barangays in Baguio City during the schedule of FDS. Part II looked into the extent of improvement in the knowledge and skills of the 4Ps grantees through the financial literacy lectures. Prior to the actual data gathering, the questionnaire was submitted to three experts for validity testing. The questionnaire was tried out in one barangay in Baguio City for the reliability test.

3.4. Data Gathering Procedures

Before distributing the questionnaire, the researcher sought approval from the DSWD-CAR's Plans and Policy Division (PPD). The Chief of PPD endorsed the request to the Regional Director (RD) for approval. Once approved by the RD, the researcher prepared letters to the barangay captains, requesting permission to distribute the questionnaire to the 4Ps household beneficiaries in their respective barangays. These letters, along with the approved request from the DSWD-CAR Regional Director, were presented during a courtesy call to the barangay captains.

In coordination with the Parent Leaders (PLs), the researcher gathered the necessary data during the scheduled Family Development Sessions (FDS) held in each cluster or barangay. The researcher explained the questionnaire instructions in both English and the Ilocano dialect to ensure clarity for the respondents. Ample time was provided for them to complete the questionnaire, and the researcher verified that all items were properly filled out before collecting the completed questionnaires.

3.5. Treatment of Data

The responses were tallied and tabulated using the Statistical Package for Social Sciences (SPSS). Data were subjected to computations using frequency counts, percentages, and computation of mean scores. Mean values were computed to describe the impact of financial literacy education among 4Ps household grantees in Baguio City. The values were interpreted based on 4 Likert scale ranging from no effect (1) to very great extent (4).

Analysis of Variance and T-test were also used to determine if there were significant differences according to educational attainment and gender, respectively. Post Hoc Test and Levene's test were used to look into the differences within the groups.

3.6. Ethical Consideration

The researcher administered the data gathering using the validated questionnaire during the schedule of FDS. The researcher also informed the respondents that they have the right to participate or withdraw in answering the questionnaire by signing the consent form. It was stated in the consent form that any information that the researcher obtained would be protected against misuse, loss, and other unauthorized changes. The data gathered were utilized for research purposes only, and the responses were treated with utmost confidentiality. The researcher maintained the anonymity of the respondents. The identity of the participants is not required in the research; they must not reveal the participant's data in public.

4. Findings and Discussion

The extent of improvement of the knowledge and skills of the 4Ps grantees in the financial literacy lectures was rated in the following topics: (a) financial planning, (b) budgeting, and (c) savings.

Table 4

Extent of improvement on the knowledge and skills of the 4Ps grantees through the financial literacy lecture (n=297)

	Mean	Std. Dev.	DI
Financial Planning	3.11	0.67	Great Extent
Budgeting	3.11	0.67	Great Extent
Savings	3.09	0.67	Great Extent
Over-all Mean	3.10	0.62	Great Extent

Legend: 1.00 – 1.74 No Effect at all (NE); 1.75 – 2.50 Little Extent (LE); 2.51 – 3.25 Great Extent (GE); 3.26 – 4.00 Very Great Extent (VGE)

Table 4 presents the findings regarding the effectiveness of financial literacy lectures on the knowledge and skills of 4Ps grantees, focusing on topics such as financial planning, budgeting, and savings. The overall mean score of 3.10 with a standard deviation of 0.62 suggests a substantial improvement in the participants' financial literacy levels. Specifically, participants demonstrated a commendable improvement in financial planning skills. This proficiency indicates that financial literacy interventions, such as those integrated into the FDS, are making a meaningful impact. Beneficiaries are not only receiving financial assistance but are also acquiring essential skills to manage these resources wisely, which could lead to long-term financial stability and independence. The ability to effectively manage family income and utilize cash grants underscores the importance of continuing and expanding financial education within social welfare programs. This is crucial, as financial planning not only involves setting financial goals but also strategizing to achieve them through informed decision-making (Xu et al., 2021). Research supports the effectiveness of cash grants in helping low-income families manage their finances and improve their quality of life. Studies show that beneficiaries of programs like the 4Ps and South Africa's disability grants use the funds responsibly, investing in education, health, and basic needs rather than vices (Orbeta et al., 2016; Kelly, 2019). These grants enable recipients to contribute to household income, enhancing their agency and securing support from family members (Kelly, 2019).

Regarding budgeting, which is essential for managing day-to-day expenses, participants achieved an average score of 3.11. This score suggests that while participants have a foundational understanding of budgeting, there is still room for improvement. The ability to budget effectively is crucial for making informed financial decisions and avoiding debt, particularly in low-income households where resources are limited. The average score indicates that the financial literacy efforts have had a positive impact, but further emphasis on budgeting skills could enhance the participants' ability to manage their finances more effectively. Strengthening these skills could lead to better financial planning, reduced financial stress, and ultimately, a more stable economic future for these households. Budgeting is considered a foundational financial behavior in the behavioral hierarchy, suggesting its importance for developing financial capability (Xiao et al., 2018). While adept at listing and planning expenses, challenges in adhering strictly to budgets were evident, which underscores the ongoing need for reinforcing budgeting practices to foster greater financial discipline (Kadoya et al., 2020).

In terms of savings practices, participants scored an average of 3.09, indicating significant improvement. The prioritization of saving for children's education and emergency funds underscores their commitment to long-term financial security. This focus on future-oriented financial goals reflects an encouraging shift in behavior, as participants recognize the importance of preparing for unforeseen circumstances and investing in their children's future. These savings practices suggest that the financial literacy programs have been successful in fostering a savings culture among beneficiaries, which is crucial for building financial resilience. However, the overall score also highlights the need for continued support and education to further strengthen these practices. By enhancing their ability to save consistently, participants can better navigate financial challenges and contribute to a more secure and stable financial future for their families. The importance of emergency savings is highlighted in a review of evidence-based strategies to build such funds (Ratcliffe et al., 2020). Furthermore, family savings for children's education is positively correlated with children's self-control scores, suggesting that asset building for children could be a potential policy tool to promote child development (Zhi et al., 2020). These findings underscore the importance of prioritizing savings for education and emergency funds in improving overall financial well-being and long-term security.

The findings reveal that participants demonstrate significant proficiency in key areas of financial management, reflecting the effectiveness of financial literacy initiatives integrated into the 4Ps program. Notably, participants excel in prioritizing their children's education. This competence underscores the participants' recognition of the critical role that education plays in securing future stability and career prospects for their children. This focus aligns with the overarching objective of the 4Ps program, as outlined in RA 11310, which aims to break the cycle of poverty by improving educational outcomes among beneficiaries. The high emphasis on education indicates that the program is successfully instilling the importance of investing in children's futures as a pathway out of poverty. Moreover, participants exhibit strong adeptness in spending wisely on essential family needs, which highlights their ability to allocate resources effectively toward necessities such as food, clothing, and healthcare, which are fundamental to maintaining family well-being. This financial discipline is crucial for ensuring that limited resources are utilized efficiently, thereby enhancing the overall quality of life for their families. Families facing financial constraints often adapt their spending habits,

focusing on essential needs and in-home recreation when external activities are unaffordable (Hill et al., 2016).

Additionally, the ability to save for emergency purposes further underscores participants' proactive approach to financial resilience. This preparedness for unforeseen financial shocks indicates that participants are internalizing the importance of building a financial safety net. By prioritizing savings, they are better equipped to handle emergencies without resorting to debt or compromising essential needs. This behavior not only strengthens their financial stability but also reduces their vulnerability to economic disruptions, contributing to long-term financial security. However, challenges arise in managing daily expenditures and adhering to financial plans. While beneficiaries exhibit knowledge in financial planning and budgeting, they struggle with consistent implementation, occasionally overspending relative to their income or budget targets. This gap highlights the need for ongoing support in reinforcing financial discipline among program participants (Simpson, 2021).

Financial literacy proves instrumental in equipping 4Ps beneficiaries with essential skills to achieve economic stability and self-sufficiency. By prioritizing education and savings, participants align with the program's broader objective of poverty alleviation through improved financial management. Literature supports these findings, indicating that enhanced financial literacy positively correlates with reduced poverty levels, particularly in rural settings where financial knowledge empowers households to manage income and assets more effectively (Xu et al., 2021). Defined as the ability to effectively manage financial resources for long-term well-being, financial literacy enhances decision-making capabilities crucial for achieving economic security and life goals (US Financial Literacy and Education Commission, 2016; Jumpstart Coalition, 2019).

Table 5 provides insights into the effectiveness of financial literacy lectures on 4Ps grantees' knowledge and skills, categorized by gender. The findings reveal notable differences and similarities in financial management proficiency between males and females. Overall, females achieved a higher mean score of 3.12 compared to males' 2.91, indicating that both genders significantly improved their financial literacy to a great extent (GE).

Table 5*According to gender*

	Gender	N	Mean	DI
Financial Planning	Male	28	2.85	GE
	Female	269	3.14	GE
Budgeting	Male	28	2.96	GE
	Female	269	3.13	GE
Average (Savings)	Male	28	2.91	GE
	Female	269	3.10	GE
Over-all Mean	Male	28	2.91	GE
	Female	269	3.12	GE

Legend: 1.00 – 1.74 No Effect at all (NE); 1.75 – 2.50 Little Extent (LE); 2.51 – 3.25 Great Extent (GE); 3.26 – 4.00 Very Great Extent (VGE)

The study demonstrated that females are more confident in managing their family resources through financial planning and savings, manifested by their higher prioritization of children's education and health, emergency funds, and basic family needs. Females' higher scores in financial planning and savings suggest a stronger commitment to long-term financial security. They prioritize essential needs like children's education and emergency funds more effectively than males. This is consistent with Dewi (2022), who found that females are more skilled in evaluating debts, saving money, and managing bills and receipts than males. Dewi's study also indicated that while males may be more knowledgeable, females are more skillful in financial management. This skillfulness in practical financial management makes females more reliable in managing family finances, aligning with the findings of this study. These findings imply that financial education programs should continue to emphasize practical financial management skills, particularly targeting males to improve their proficiency in areas where females excel. Policymakers should design interventions that promote practical financial skills and confidence among both genders, addressing specific areas, where males lag behind.

Both genders exhibited strong budgeting skills, with females scoring slightly higher (3.13) than males (2.96). This indicates a general competence in listing monthly expenses and preparing budget plans, though females again demonstrated a slight edge. Literature supports these findings, indicating that females often manage family finances effectively, with broader perspectives on family well-being (Savard & Cavalcante, 2021). Financial literacy programs

should reinforce budgeting skills for all participants, while also highlighting the differences in how males and females approach budgeting.

Gender differences in savings practices were evident, with females showing a higher inclination towards saving for educational purposes and emergency needs. These findings resonate with Ndou (2023), who noted that while men used budgets slightly more than women, females tend to save more effectively for future needs. Financial education should emphasize the importance of savings for long-term security, particularly targeting males to enhance their savings practices. Programs could include modules on setting up emergency funds, saving for education, and other future needs to ensure a balanced approach to financial planning for both genders.

Although the study found no significant overall difference in financial literacy between males and females ($p = 0.08$), significant differences emerged in specific areas like financial planning ($p = 0.03$), as shown in table 6. Females showed greater competency in managing family resources by prioritizing education, monthly dues, and essential needs, corroborating Okamoto (2021) and Savard et al. (2021) who highlighted that females often have more positive financial behaviors and attitudes despite lower overall financial literacy. Furthermore, Kadoya et al. (2020) observed that males are more knowledgeable but females are more skillful in financial management, particularly in household contexts. To address these disparities, educational programs should focus on boosting financial literacy among females from a young age. Tailored financial education that counters stereotypes and encourages active financial management from an early age can help bridge the gender gap. Additionally, promoting inclusive financial education that highlights practical management skills could empower both genders to achieve better financial outcomes. Okamoto's findings also suggest that gender differences in financial literacy could be mitigated through enhanced educational opportunities for females, challenging stereotypes about their financial capabilities. Recent literature has also explored gender differences in financial socialization within the home environment, suggesting that differences in parental financial behaviors and attitudes towards money can significantly influence children's financial attitudes later in life (Agnew et al., 2018). Such findings underscore the importance of designing school-based financial literacy programs that challenge gender-based financial stereotypes and encourage open discussions about financial roles and responsibilities within families.

Overall, the study highlights the importance of tailored educational programs that address gender-specific challenges in financial literacy. Policymakers should focus on enhancing financial education initiatives that cater to the unique needs of males and females, particularly in marginalized communities and rural areas (Ansari et al., 2023; Radianto et al., 2020).

Table 6

Independent samples test according to gender

Topics	Levene's Test for Equality of Variances			t-test for Equality of Means					
	F	Sig.	t	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
Ave_ Financial Planning	Equal variances assumed	1.49	0.22	-2.20	0.03	-0.29	0.13	-0.55	-0.03
	Equal variances not assumed			-1.87	0.07	-0.29	0.16	-0.61	0.03
Ave_ Budgeting	Equal variances assumed	4.89	0.03	-1.29	0.20	-0.17	0.13	-0.43	0.09
	Equal variances not assumed			-1.01	0.32	-0.17	0.17	-0.52	0.18
Ave- Savings	Equal variances assumed	1.75	0.19	-1.44	0.15	-0.19	0.13	-0.45	0.07
	Equal variances not assumed			-1.20	0.24	-0.19	0.16	-0.52	0.13
GV	Equal variances assumed	3.60	0.06	-1.78	0.08	-0.22	0.12	-0.46	0.02
	Equal variances not assumed			-1.41	0.17	-0.22	0.15	-0.53	0.10

Table 7 presents the differences in financial literacy improvements among 4Ps grantees based on their educational attainment, specifically looking at financial planning, budgeting, and savings. The findings revealed that elementary graduates scored an average of 2.99 in financial planning, high school graduates 3.14, vocational graduates 3.08, and college graduates 3.49. This indicates a substantial improvement across all educational levels, with college graduates exhibiting a significantly higher capability in financial planning compared to those with lower educational attainment. Financial planning, essential for resource management and future preparedness, is evidently better understood and applied by those with higher education, aligning with Lusardi's (2019) assertion that more educated individuals possess greater financial literacy.

Table 7

According to educational attainment

	Educational Attainment	N	Mean	DI	p-value	Decision
Average (Financial Planning)	Elementary	100	2.99	GE	0.013	Sig. diff
	High School	159	3.14	GE		
	Vocational	17	3.08	GE		
	College	21	3.49	VGE		
Average (Budgeting)	Elementary	100	3.09	GE	0.366	No sig. diff
	High School	159	3.12	GE		
	Vocational	17	3.05	GE		
	College	21	3.26	VGE		
Average (Savings)	Elementary	100	3	GE	0.364	No sig. diff
	High School	159	3.13	GE		
	Vocational	17	3.01	GE		
	College	21	3.2	GE		
Over-all Mean	Elementary	100	3.02	GE	0.205	No sig. diff
	High School	159	3.13	GE		
	Vocational	17	3.04	GE		
	College	21	3.32	VGE		

Legend: 1.00 – 1.74 No Effect at all (NE); 1.75 – 2.50 Little Extent (LE); 2.51 – 3.25 Great Extent (GE); 3.26 – 4.00 Very Great Extent (VGE)

In budgeting, elementary graduates scored an average of 3.09, high school graduates 3.12, and vocational graduates 3.05, all reflecting a considerable extent of improvement.

College graduates, with a mean score of 3.26, demonstrated an even greater extent of improvement. Effective budgeting is crucial for financial stability, and the data suggests that higher educational attainment enhances budgeting skills. This supports Wagner's (2019) observation that individuals with higher education levels tend to have better financial literacy and budgeting abilities, leading to more effective financial management.

Regarding savings, the average scores were 3.00 for elementary graduates, 3.13 for high school graduates, 3.01 for vocational graduates, and 3.20 for college graduates, all indicating significant improvement. College graduates, in particular, showed notable improvement in saving for children's education, future investments, and transforming small amounts into savings. This aligns with Dulin's (2016) findings that higher educational attainment leads to greater awareness and knowledge about savings and investment strategies, highlighting the impact of education on financial literacy.

Overall, the mean scores for financial literacy topics were 3.02 for elementary graduates, 3.13 for high school graduates, and 3.04 for vocational graduates, indicating substantial improvement. College graduates, with an overall mean of 3.32, exhibited a very great extent of improvement. This demonstrates a clear correlation between higher educational attainment and better financial literacy. Elementary graduates showed considerable improvement in all financial literacy areas, while high school graduates demonstrated notable improvement in specific areas like sending children to school, spending wisely, and saving for education and emergencies. Vocational graduates also showed significant improvement in paying bills on time and spending wisely on necessities.

College graduates exhibited notable improvement in all areas except for certain aspects such as understanding different modes of savings, decreasing expenses based on a budget plan, and comparing actual expenses to budgeted costs. These findings suggest that 4Ps grantees possess the necessary knowledge and skills to manage their financial resources effectively, with higher educational attainment correlating with better financial literacy outcomes. This supports Wagner's (2019) and Lusardi's (2019) conclusions that education plays a critical role in enhancing financial literacy. Wagner (2019) emphasized the generally low levels of financial literacy in the United States, particularly among those with lower education and income, further highlighting the importance of education in financial literacy. People with higher education are generally more financially literate, as also supported by Lusardi (2019) and Dulin (2016), who found that higher education levels correlate with greater financial

knowledge. This underscores the need for educational interventions to improve financial literacy. Education enhances cognitive ability, increasing financial literacy, as argued by Kadoya et al. (2020). Ahmad et al. (2016) noted that individuals with lower education and income have lower financial literacy levels, leading to financial management difficulties. Grohman et al. (2015) emphasized the link between financial proficiency and better financial decisions.

Table 8

Post Hoc Tests

Dependent Variable	(I) Educ. Att.	(J) Educ Att	Sig.	Decision
Setting aside family funds for emergency purposes, by knowing the formula of savings; "net income - savings equals expenses"	Elementary	College	0.012	Sig. diff
Managing daily expenditure, economic transactions, and financial resources	Elementary	College	0.004	Sig. diff
	High School	College	0.028	Sig. diff
Ave_Financial Planning	Elementary	College	0.008	Sig. diff

The Post Hoc Tests in table 8 revealed significant differences in financial planning, particularly in setting aside family funds for emergency purposes. Significant differences were noted between elementary and college graduates, and between high school and college graduates in managing daily expenditures, economic transactions, and financial resources. These findings assert the significant difference in financial planning improvement based on educational attainment. The ability of college graduates to manage family resources efficiently aligns with Lusardi et al. (2018), who noted that higher educational attainment correlates with better personal financial planning, investing, and spending behavior. Sinaga (2020) further supports this, indicating that individuals with higher education levels tend to have higher financial literacy. This suggests that educational interventions could be crucial in enhancing financial literacy among lower-educated populations, potentially leading to better financial decision-making and resource management.

5. Conclusion

Based on the analysis of the effectiveness of financial literacy lectures for 4Ps grantees, it is evident that these programs have significantly enhanced participants' knowledge and skills in financial planning, budgeting, and savings. Participants demonstrated commendable progress in understanding financial planning strategies, effectively managing budgets and prioritizing savings. Despite these strengths, challenges persist in consistently adhering to financial plans and budgets, particularly in managing daily expenditures. This highlights the ongoing need for reinforcement and support in fostering sustained financial discipline among program beneficiaries. Furthermore, the study reveals notable gender differences in financial management proficiency, with females generally scoring higher across various aspects of financial literacy compared to males. Females exhibited stronger capabilities in financial planning and savings practices, emphasizing education and emergency preparedness to a greater extent than their male counterparts. Educational attainment also emerged as a significant factor influencing financial literacy outcomes, with higher levels of education correlating positively with improved financial planning, budgeting, and savings skills. College graduates, in particular, demonstrated the highest proficiency in these areas, indicating the critical role of education in enhancing financial literacy.

This study suggests that the financial literacy modules be tailored to the educational levels of 4Ps household beneficiaries, most of whom are high school graduates, followed by elementary graduates. These modules should be simple, concise, and accessible to both the participants and their family members. Additionally, the modules should be translated into the Ilocano dialect or the local vernacular to ensure better understanding and engagement.

While the research provides valuable insights, several limitations should be noted. The sample size, though substantial with the 297 respondents, is geographically restricted to only 10 barangays in a single city. This limited geographic scope and sample size may not fully represent the broader population of 4Ps grantees across different regions. Consequently, the findings may not be generalizable to other areas or to the entire population covered by the 4Ps program. Hence, further studies with wider scope and sample size as well as comparative studies of different cities in the Philippines are highly encouraged.

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ORCID

Merlynda Munar - <https://orcid.org/0009-0008-7139-2781>

References

- Agnew, S., Maras, P., & Moon, A. (2018). Gender differences in financial socialization in the home—An exploratory study. *International Journal of Consumer Studies*, 42, 275-282. <https://doi.org/10.1111/IJCS.12415>
- Aleksiak, D. (2020). The presentations of poverty in global education. *21st Century Pedagogy*, 4(1), 14–22. <https://doi.org/10.2478/ped21-2020-0003>
- Ansari, Y., Albarrak, M. S., Sherfudeen, N., & Aman, A. (2023). Examining the relationship between financial literacy and demographic factors and the overconfidence of Saudi investors. *Finance Research Letters*, 52, 103582. <https://doi.org/10.1016/j.frl.2022.103582>
- Askar, M.W., Ouattara, B., & Zhang, Y.F. (2020). Financial literacy and poverty reduction: The case of Indonesia. *Asian Development Bank Institute*, 1097. <https://www.adb.org/sites/default/files/publication/574816/adbi-wp1097.pdf>
- Bangco, R. A., Dimatulac, P. A., Sanchez, J. F., & Cabauatan, R. (2022). Determinants of financial literacy in the MIMAROPA region. *Journal of Economics, Finance and Accounting Studies*, 4(1), 232–243. <https://doi.org/10.32996/jefas.2022.4.1.15>
- CFI Education Inc. (2023). Personal finance. <https://corporatefinanceinstitute.com/resources/wealth-management/personal-finance/>
- Council of Economic Advisers. (2018). The economic impact of welfare programs in the United States. *U.S. Government Publishing Office*. <https://www.whitehouse.gov/cea/2018-welfare-programs>
- De Los Reyes, B. X. E., Azarias, R., Mamaclay, K. E., Carranza, C. A., Rayray, A., Directo, F. A., Jr, & Orpilla, J. G. (2022). Rang-Ay babaen ti 4Ps: Its impact to selected Ilokano beneficiaries in Santiago, Ilocos Sur, Philippines. *American Journal of*

- Interdisciplinary Research and Innovation*, 1(1), 44–49.
<https://doi.org/10.54536/ajiri.v1i1.451>
- Department of Social Welfare and Development (2021). *DSWD, USAID launch 4Ps financial literacy manual*. <https://www.dswd.gov.ph/dswd-usaid-launch-4ps-financial-literacy-manual/>
- Department of Social Welfare and Development (2019). Republic Act 11310: Implementing rules and regulations of Pantawid Pamilyang Pilipino Program (4Ps). https://pantawid.dswd.gov.ph/wp-content/uploads/2021/02/12092020_4Ps_IRR.pdf
- Department of Social Welfare and Development (2019). DSWD, USAID E-PESO seal partnership towards financial inclusion of 4Ps beneficiaries. <https://pantawid.dswd.gov.ph/2019/11/dswd-usaid-e-peso-seals-partnership-towards-financial-inclusion-of-4Ps-beneficiaries/>
- Department of Social Welfare and Development (2018). Memorandum Circular 22: Enhanced guidelines on the implementation of the family development sessions of the Pantawid Pamilyang Pilipino Program. https://www.dswd.gov.ph/issuances/MCs/MC_2018-022.pdf
- Dewi, V. I. (2022). How do demographic and socioeconomic factors affect financial literacy and its variables? *Cogent Business & Management*, 9(1). <https://doi.org/10.1080/23311975.2022.2077640>
- Dizon, J.T., Albor, R.G., Serrano, E.P., & Reyes, K.M. (2017). Assessment of family development sessions of the Pantawid Pamilyang Pilipino Program: Assessment of FDS Modules. <https://pantawid.dswd.gov.ph/wp-content/uploads/2018/08/FDS-Component-1.pdf>
- Eleoran, A. T., Castillon, M. C., Manlosa, R. M. D., Bahala, D. T. M. C., & Abiol, M. J. D. (2023). The relationship and influence between 4P's subsidy and financial literacy through universal basic income among the beneficiaries of selected barangays in Iligan City. *International Journal of Multidisciplinary Applied Business and Education Research*, 4(10), 3647–3652. <https://doi.org/10.11594/ijmaber.04.10.19>
- Firli, A. (2017). Factors that influence financial literacy: A conceptual framework. *IOP Conf. Ser.: Mater. Sci. Eng.*, 180 012254. <https://doi.org/10.1088/1757-899X/180/1/012254>
- Gan, X., Zhou, Y., & Zhou, Z. (2019). More education, less financial illiteracy: evidence from China. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3490372>

- Gudjonsson, S., Minelgaite, I., Kristinsson, K., & Pálsdóttir, S. (2022). Financial literacy and gender differences: women choose people while men choose things? *Administrative Sciences*, 12(4), 179. <https://doi.org/10.3390/admsci12040179>
- Julius, M. K., & Bawane, J. (2011). Education and poverty; chicken egg relationship and concerns. *Learning Community-An International Journal of Educational and Social Development*, 2(2), 291–306.
- Kadoya, Y. & Khan, M.S.R (2020). Financial literacy in Japan: New evidence using financial knowledge, behavior, and attitude. *Sustainability*, 12(9),363. <https://doi.org/10.3390/su12093683>
- Kelly, G. (2019). Disability, cash transfers and family practices in South Africa. *Critical Social Policy*, 39(4), 541–559. <https://doi.org/10.1177/0261018319867593>
- Lopus, J.S., Amidjono, D.S., & Grimes. P.W. (2019). Improving financial literacy of the poor and vulnerable in Indonesia: An empirical analysis. *International Review of Economics Education*, 32. <https://doi.org/10.1016/j.iree.2019.100168>
- Lusardi, A. (2019). Financial literacy and the need for financial education: evidence and implications. *Swiss Journal of Economics and Statistics*, 155, 1. 155, 1 (2019). <https://doi.org/10.1186/s41937-019-0027-5>
- Manuere, F. & Phiri, N. (2018). A literature review of women empowerment and development in Zimbabwe: A look at new insights and perspectives. *Macrothink Institute*, 8, 4. <https://doi.org/10.5296/jpag.v8i4.13818>
- Ndou, A. (2023). The relationship between demographic factors and financial literacy. *International Journal of Research in Business and Social Science*, 12(1), 155–164. <https://doi.org/10.20525/ijrbs.v12i1.2298>
- Ratcliffe, C., Burke, J., Gardner, J. & Knoll, M. (2020). *Evidence-based strategies to build emergency savings*. Consumer Financial Protection Bureau.
- Okamoto, S. & Komamura, K. (2021). Age, gender, and financial literacy in Japan. *Plos One*, 16, 11. <https://doi.org/10.1371/journal.pone.0259393>
- Once, F.P., Gabon, V.A., Cruz, J.P., Gabon, R.D., & Mustacisa-Lacaba, M. (2019). Financial literacy and satisfaction of beneficiaries to Pantawid Pamilyang Pilipino Program (4Ps): Evidence from the poorest countryside areas of the Philippines. *The Countryside Development Research Journal*, 7(1), 11-16.

- Orbeta, A.J., & Paqueo, V.B. (2016). *Pantawid Pamilya Pilipino Program: Boon or bane?* PIDS Discussion Paper Series.
- Organization for Economic Co-operation and Development. (2018). *Social safety nets and social security programs in developing countries: Enhancing food and livelihood security*. OECD Publishing. <https://www.oecd.org/social-safety-nets-2018>
- Plaza, N. a. E. C. (2023). Exploring the financial literacy of 4Ps beneficiaries. *International Journal of Advanced Research in Science Communication and Technology*, 663–671. <https://doi.org/10.48175/ijarsct-12192>
- Radianto, W. E., Lianoto, Y., Efrata, T. C., & Dewi, L. (2020). The role of financial literacy, gender, education, and ethnicity towards investment decisions. *KnE Social Sciences*. <https://doi.org/10.18502/kss.v4i3.6401>
- Rahman, M., Isa, C.R, Masud, M.M, Sarker, M. & Chodhury, N. (2021). The role of financial behaviour, financial literacy, and financial stress in explaining the financial well-being of B40 group in Malaysia. *Future Business Journal*, 52. <https://doi.org/10.1186/s43093-021-00099-0>
- Sahabuddin, Z. A., & Hadianto, B. (2023). Gender, financial literacy, and financial behavior among students. *Humanities and Social Sciences Letters*, 11(2), 203–212. <https://doi.org/10.18488/73.v11i2.3367>
- Sehrawat, K., Vij, M. & Talan, G. (2021). Understanding the path toward financial well-being: Evidence from India. *Frontiers in Psychology*. <https://doi.org/10.3389/fpsyg.2021.638408>
- Seth, S., & Tutor, M.V. (2019). *Evaluation of anti-poverty programs' impact on joint disadvantages: Insights from the Philippine experience*. Oxford Poverty & Human Development Initiative (OPHI).
- Shi, Z., & Qamruzzaman, M. (2022). Re-visiting the role of education on poverty through the channel of financial Inclusion: Evidence from lower-income and lower-middle-income countries. *Frontiers in Environmental Science*, 10. <https://doi.org/10.3389/fenvs.2022.873652>
- Simpson, R. (24 November 2021). *How improving financial literacy helps reduce poverty*. The Borgen Project. <https://borgenproject.org/improving-financial-literacy/>
- The World Bank (2018). *Making growth work for the poor: A poverty assessment for the Philippines*. <https://documents1.worldbank.org/>

- Tinghög, G., Ahmed, A., Barrafreem, K., Lind, T., Skagerlund, K., & Västfjäll, D. (2021). Gender differences in financial literacy: The role of stereotype threat. *Journal of Economic Behavior & Organization*, 192, 405–416. <https://doi.org/10.1016/j.jebo.2021.10.015>
- Twumasi, M.A., Jiang, Y., Ding, Z., Wang, P. & Abgenyo, W. (2022). The mediating role of access to financial services in the effect of financial literacy on household income: The case of rural Ghana. *SAGE Open*, 12(1). <https://doi.org/10.1177/21582440221079921>
- United Nations Development Programme (2022). *What are the sustainable goals?* <https://www.undp.org/sustainable-development-goals?>
- Watanapongvanich, S., Khan, M. S. R., Putthinun, P., Ono, S., & Kadoya, Y. (2021). Financial literacy, financial education, and smoking behavior: evidence from Japan. *Frontiers in Public Health*, 8. <https://doi.org/10.3389/fpubh.2020.612976>
- Xiao, J. J., & O'Neill, B. (2018). Mental accounting and behavioural hierarchy: Understanding consumer budgeting behaviour. *International Journal of Consumer Studies*, 42(4), 448–459. <https://doi.org/10.1111/ijcs.12445>
- Zhi, K., Chen, Y., & Huang, J. (2020). Children's self-control and family savings for education: An empirical examination from China. *Children and Youth Services Review*, 119, 105575. <https://doi.org/10.1016/j.childyouth.2020.105575>
- Zhou, Y., Yang, M., & Gan, X. (2023). Education and financial literacy: Evidence from compulsory schooling law in China. *The Quarterly Review of Economics and Finance*, 89, 335–346. <https://doi.org/10.1016/j.qref.2022.09.006>