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EMPOWERING FINANCIAL WELL-BEING THROUGH FINANCIAL LITERACY: A COMPARATIVE ANALYSIS OF WELFARE RECIPIENTS AND NON-RECIPIENTS IN GAYA DISTRICT, BIHAR

WZMACNIANIE DOBROBYTU FINANSOWEGO POPRZEZ UMIEJĘTNOŚCI FINANSOWE: ANALIZA PORÓWNAWCZA OSÓB KORZYSTAJĄCYCH I NIEKORZYSTAJĄCYCH Z POMOCY SPOŁECZNEJ W DYSTRYKCIE GAYA W STANIE BIHAR

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Abstract

Subject and purpose of work: This study seeks to enhance financial well-being by offering valuable insights into the financial literacy of both welfare recipients and non-recipients in Gaya, Bihar.

Material and Methods: The study was based on primary data and data was collected by structured interviews from 128 households, including 65 welfare recipients and 63 non-recipients to assess their level of financial literacy. Pearson's χ2 test and logistic regressions were used for data analysis.

Results: The results state that years of schooling significantly affect the different dimensions of financial literacy whereas age, monthly income and homeownership have also shown marginal significance. Furthermore, the financial literacy of welfare recipients is significantly lower compared to non-recipients.

Conclusions: The study suggests the need for financial literacy initiatives for welfare recipients. Such measures can contribute to the economic upliftment and better socio-economic conditions in Gaya.

Keywords: Socio-Economic Upliftment, Financial literacy, welfare recipients, Gaya district

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Streszczenie

Przedmiot i cel pracy: Niniejsze badanie ma na celu poprawę dobrobytu finansowego poprzez zaoferowanie cennych spostrzeżeń na temat umiejętności finansowych zarówno osób korzystających z pomocy społecznej, jak i osób nie korzystających z niej w Gaya w stanie Bihar.

Materiał i metody: Badanie opierało się na danych pierwotnych, a dane zostały zebrane za pomocą ustrukturyzowanych wywiadów od 128 gospodarstw domowych, w tym 65 odbiorców pomocy społecznej i 63 osób niebędących odbiorcami, w celu oceny ich poziomu wiedzy finansowej. Do analizy danych wykorzystano test $\chi 2$ Pearsona i regresję logistyczną.

Wyniki: Wyniki wskazują, że lata nauki znacząco wpływają na różne wymiary umiejętności finansowych, podczas gdy wiek, miesięczny dochód i posiadanie domu również wykazały marginalne znaczenie. Co więcej, umiejętności finansowe osób korzystających z pomocy społecznej są znacznie niższe w porównaniu do osób nie korzystających z pomocy.

Wnioski: Badanie sugeruje potrzebę inicjatyw w zakresie wiedzy finansowej dla osób korzystających z pomocy społecznej. Takie środki mogą przyczynić się do poprawy sytuacji gospodarczej i lepszych warunków społeczno-ekonomicznych w Gaya.

Słowa kluczowe: Rozwój społeczno-ekonomiczny, umiejętności finansowe, odbiorcy pomocy społecznej, dystrykt Gaya

Introduction

Financial literacy has gained significant attention from academicians, policymakers, financial professionals and consumer advocates as an important skill set required to effectively manage money and make apt financial decisions (Remund, 2010). Financial literacy comprises a range of skills, attitudes, knowledge, awareness and behaviours that are essential for achieving individual financial well-being (OECD, 2011).

Primary aim of financial literacy is to empower individuals to attain financial well-being, leading to better socio-economic conditions compared to those with limited financial knowledge. The study has been carried out in one of the backward states of India and one of the aspirational districts as per NITI Aayog - that is Gaya district of Bihar. According to NITI Aayog (2023), a considerable percentage (35.43per cent) of households in Gaya live below the poverty line. It necessitates a comprehensive understanding of financial literacy and its potential impact on socio-economic well-being of household.

The research aims to assess the financial literacy of individuals in Gaya district by comparing two distinct categories of beneficiaries: welfare recipients and non-recipients. Welfare recipients receive benefits through various public provisioning schemes, while non-recipients do not have access to such welfare support. Investigating the financial literacy of these two groups can offer important insights into the impact of financial literacy on vulnerable populations.

Studies in this area examines important variables influencing financial literacy, including education, income, gender, age, marital status, work status, home ownership, and household size. Understanding the role of these factors in financial literacy will help in identifying potential disparities and areas that needs intervention to enhance financial literacy in the region.

Education is a very important factor affecting financial literacy. The level of financial literacy increases with increased level of education (Markow & Bagnaschi, 2005). Lusardi et al. (2010) studied that individual with higher income and wealth are likely to have high scores in financial literacy. It is likely to have lower financial literacy in women compared to men (Dvorak & Hanley, 2010). The Social Research Centre (2008) found an inverse U-shaped relationship, indicating that individuals in the middle-aged group exhibit higher financial literacy compared to both the younger and older age groups. Pg Md Salleh (2015) observed that married employees possess higher levels of financial literacy than their unmarried counterparts. Monticone (2010) found that employed respondents have higher financial literacy than unemployed ones. Families who owned homes or had checking accounts were more likely to be financial literate (Lusardi et al., 2001). Sekar and Gowri (2014) found that respondents with a minimum of three dependents demonstrated higher levels of financial literacy.

Through a multidimensional approach, the study examines financial literacy in Gaya district from three distinct financial literacy perspectives: money management, emergency preparedness, and goal-oriented investment. This provides valuable insights into the financial decision-making capabilities of individuals and offer a comprehensive view of their financial well-being. Lusardi and Mitchell (2014) have shown a positive association between financial literacy and financial well-being. Welfare recipients are a vulnerable population who are more likely to experience financial insecurity and financial literacy programs can improve the financial well-being of welfare recipients (Engelbrecht, 2014). By analysing financial literacy in the context of welfare recipients and non-recipients, the study aims to explore how financial knowledge can potentially uplift households from poverty margins.

By addressing the financial literacy in Bihar specifically in the Gaya district, this study aims to contribute valuable insights into the existing academic debates. The findings are expected to provide tailored strategies and interventions to increase financial literacy which will promote financial inclusion and uplift the socio-economic condition of households in the region. The results could be vital in formulating targeted policies and programs that acknowledge the different needs of individuals and lead to a more inclusive and sustainable financial ecosystem in Gaya district, Bihar. The paper is divided into four sections. Section I deals with the introduction; Section II deals with methodology; Section III presents the result and discussion and Section IV presents the conclusion of the paper.

Metodology

Primary data was collected from different localities of Gaya district. This study adopted stratified random sampling and the population was divided into two strata-welfare recipients and non-recipients. Within each stratum respondents were randomly selected to ensure unbiased sample. The data was collected from head of 128 households keeping in mind the socio-economic diversity of Gaya. The survey comprised of questions on financial literacy, welfare policy benefits, and socio-economic information. We used descriptive statistics to analyse and compare financial literacy amongst two groups namely welfare recipients and non-recipients from three facets of financial literacy namely- money management, emergency preparedness and retirement planning. Furthermore, we used Chi Square test to check whether there exists any significant difference in financial literacy among welfare recipients and non-recipients and logistic regression to identify the socio-economic variables influencing different facets of financial literacy of respondents. These three classifications are based on Chieffe and Rakes' integrated model (1999).

- Money Management – The scenario involving money management includes the idea of inflation since knowing about inflation ensures that the purchase power of savings/funds is not diminished.

Question: If the profit rate on savings account is 1per cent per year and inflation is 2per cent per year, how will the purchasing power of money change after one year?

Answer:
a. One year from now, I will be able to purchase a greater quantity of goods than I can at present.
b. One year later, I will be able to buy the same amount of goods as I can currently.
c. In one year's time, I will be able to purchase lesser quantity of goods compared to what I can buy today. [Correct answer]
d. I don't know

- Emergency Preparedness – The second scenario has to do with emergency preparedness, more precisely the idea of liquidity.

Question: If Puja had money set aside for emergencies and needed it immediately, which of the following options would be the LEAST helpful for her needs? Answer: a. Funds allocated towards the down payment of a house. [Correct] b. Stocks c. Mutual funds. d. Savings account. e. I do not know

- Investing for objectives – In the final scenario, investing is done to achieve certain goals, particularly retirement.

Question: Puja, a 25-year-old woman, has completed her retirement planning and decided to retire at the age of 60. Which statement(s) most accurately represent Puja's retirement strategy? (You may answer more than one) Answer: a. She aims to save money on a regular basis for her retirement. [Correct] b. She has decided to keep all her savings in her savings account until she turns 60. c. At this point, she must be aware of the total amount she needs to have when she turns 60. [Correct] d. It is recommended to start investing for her retirement at the age of 55 because she has sufficient time ahead. e. I don't know

Binomial logistic regression

We applied binomial logistic (logit) regression using STATA 14 software package to predict the probability of providing correct response to the proxy question for three facets of financial literacy. The logistics regression models are:

- Money Management = β_0 + β_1 (age) + β_2 (gender) + β_3 (years in formal education) + β_4 (marital status) + β_5 (household size) + β_6 (employment status) + β_7 (monthly income) + β_8 (home ownership)
- Emergency Preparedness = β_0 + β_1 (age) + β_2 (gender) + β_3 (years in formal education) + β_4 (marital status) + β_5 (household size) + β_6 (employment status) + β_7 (monthly income) + β_8 (home ownership)
- Retirement Planning = β_0 + β_1 (age) + β_2 (gender) + β_3 (years in formal education) + β_4 (marital status) + β_5 (household size) + β_6 (employment status) + β_7 (monthly income) + β_8 (home ownership)

Money Management, Emergency Preparedness and Retirement Planning are the dependent variables whose value is either 1 or 0. If the respondent provides correct answer, then the value is 1 if the answer is incorrect the value is 0.

The independent variables were selected based on their significance in studies related to financial literacy and personal finance. The independent variables are:

Age (continuous)
Gender (Male = 1, Female = 0)
Years in formal education (continuous)
Marital status (Married = 1, Single = 0)
Household size (continuous)
Employment status (Employed = 1, Unemployed = 0)
Monthly Income (continuous)
Home Ownership (Yes = 1, No = 0)

These three-logistics regressions are carried out separately. So, we quantify how much socio- economics factors affect different dimensions of financial literacy. Moreover, we used chi-square test to check if significant difference in financial literacy amongst welfare recipients and non-recipients exists.

Results and discussion

Socio-economic attributes of respondents

Table 1, presents the socio-economic attributes of the respondents.

Table 1. Socio-economic attributes of respondents

Variable		n	Mean	Median
(i) Age	Welfare-recipient	65	38.03	36
	Non-recipient	63	31.57	28
(ii) Year in formal education	welfare-recipient	65	7.09	8
	Non-recipient	63	14.63	17
(iii) Household size	welfare-recipient	65	6.03	6
	non-recipient	63	5.57	5
(iv) Monthly Income	welfare-recipient	65	10784.61	9000
	Non-recipient	63	33142.85	25000
(v) Gender		**Male**	**Female**	**Total**
	Welfare-recipient	37(56.9%)	28(43.1%)	65(100%)
	Non-recipient	38(60.3%)	25(39.7%)	63(100%)
(vi) Marital status		**Married**	**Unmarried**	**Total**
	Welfare-recipient	57(87.7%)	8(12.3%)	65(100%)
	Non-recipient	33(52.4%)	30(47.6%)	63(100%)
(vii) Employment Status		**Employed**	**Unemployed**	**Total**
	Welfare-recipient	35(53.8%)	30(46.2%)	65(100%)
	Non-recipient	22(34.9%)	41(65.1%)	63(100%)
(viii) Home Ownership		**Yes**	**No**	**Total**
	Welfare-recipient	61(93.8%)	4(6.2%)	65(100%)
	Non-recipient	47(74.6%)	16(25.4%)	63(100%)

Source: Estimated using survey data.

The comparison between welfare recipients and non-recipients reveals intriguing insights into their demographics and socioeconomic characteristics. The data showcases both striking similarities and notable differences between the groups. In terms of age, welfare recipients have a slightly higher mean age of 38.03 years (median 36) compared to non-recipients, who have a lower mean age of 31.57 years (median 28). This suggests a potential age disparity, with welfare recipients tending to be slightly older on average. A significant difference emerges in their years of formal education, with welfare recipients reporting a mean of 7.09 years (median 8), while non-recipients have a considerably higher mean of 14.63 years (median 17). This indicates that non-recipients have better educational attainment on average than welfare recipients. Regarding household size, welfare recipients have a slightly larger mean household size of 6.03 (median 6) compared to non-recipients, who have a mean household size of 5.57 (median 5). While the difference is slight, it suggests that welfare recipients tend to have slightly larger families.

The most striking disparity lies in monthly income, where welfare recipients report a mean income of ₹10,784.61 (median ₹9,000), significantly lower than non-recipients, who have a mean income of ₹33,142.85 (median ₹25,000). This substantial income gap highlights the financial challenges faced by welfare recipients compared to non-recipients. Moreover, the gender distribution shows a similar pattern between the two groups, with a higher percentage of males in both welfare recipients (56.9per cent) and non-recipients (60.3per cent). Marital status displays a notable difference, as a significant majority of welfare recipients (87.7per cent) are married, while non-recipients have a more balanced distribution with 52.4per cent married and 47.6per cent unmarried. Employment status further diverges, with 53.8per cent of welfare recipients being employed compared to 34.9per cent of non-recipients. Lastly, a higher percentage of welfare recipients (93.8per cent) own homes compared to non-recipients (74.6per cent). These findings underscore the multifaceted nature of welfare recipients and non-recipients, highlighting areas of potential concern, such as educational attainment and income disparities.

Financial literacy of the respondents in Gaya

This section examines the financial literacy among the respondents from three facets of financial literacy namely: money management, emergency preparedness and retirement planning.

Money management

Out of 128 respondents, 44 respondents gave incorrect response to money management question whereas 84 respondents gave correct response. Hence 65.6per cent of total respondents were aware of the money management aspect.

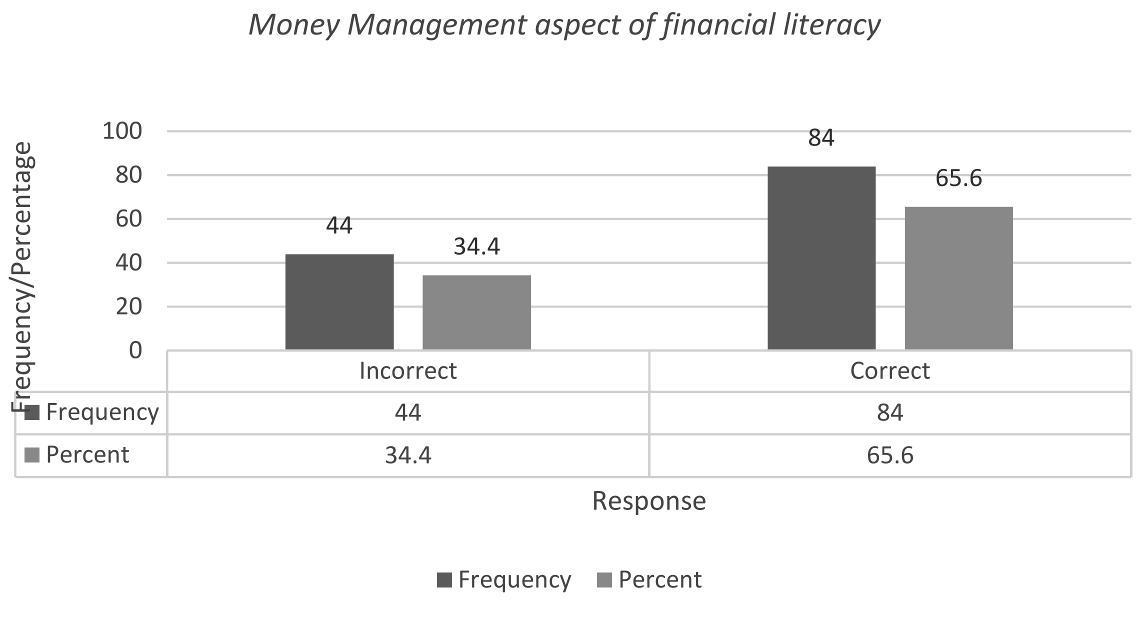
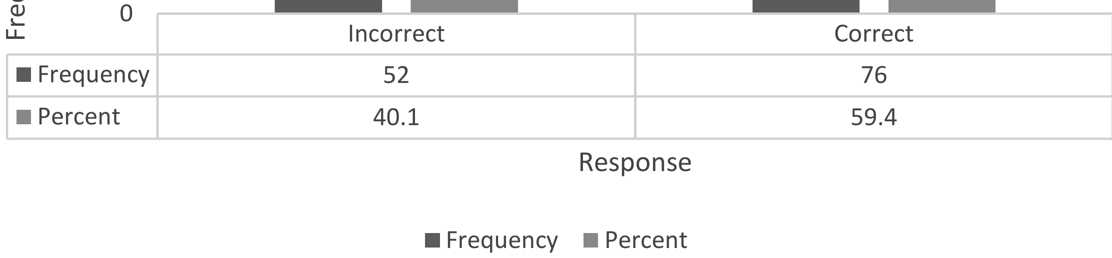


Figure 1. Money management aspect
Source: Estimated using survey data.

Emergency Preparedness

If we analyse the emergency preparedness responses, the results shows – 52 respondents gave incorrect response to this question whereas 76 respondents gave correct response. Hence 59.4per cent of total respondents were aware of the emergency preparedness aspect.

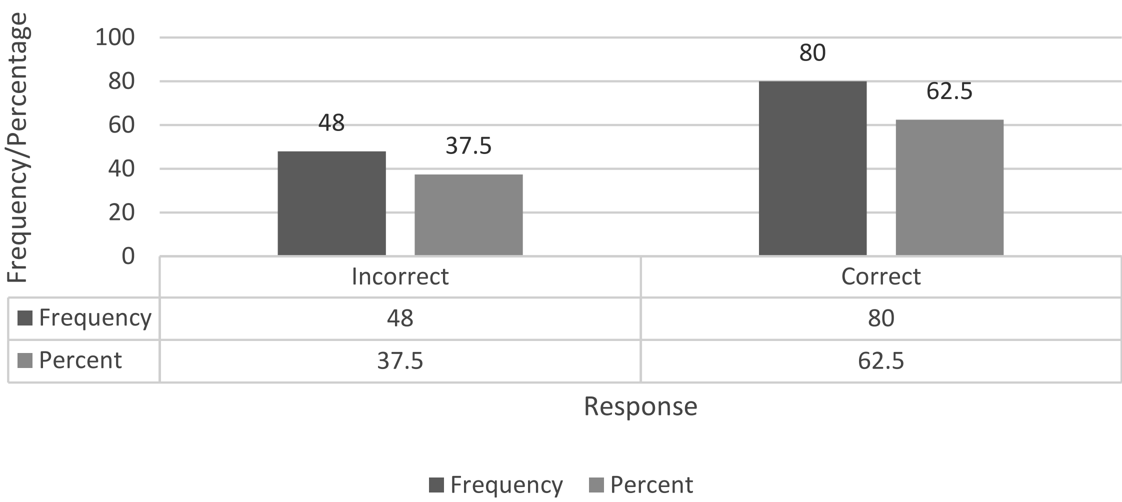


	Incorrect	Correct
Frequency	52	76
Percent	40.1	59.4

Figure 2. Emergency preparedness aspect
Source: Estimated using survey data.

Retirement planning

For retirement planning, 48 respondents gave incorrect responses, whereas 80 respondents gave correct responses. Hence, 62.5per cent of total respondents were aware of the retirement planning aspect.



	Incorrect	Correct
Frequency	48	80
Percent	37.5	62.5

Figure 3. Retirement planning aspect
Source: Estimated using survey data.

This was the level of financial literacy in Gaya district of Bihar as measured by all the three aspects. This shows that more than half of the population is aware of the basic facets of financial literacy. Now we compare the level of financial literacy between welfare recipients and non-recipients to get a more targeted approach.

Comparison of financial literacy between the welfare recipients and non-recipients

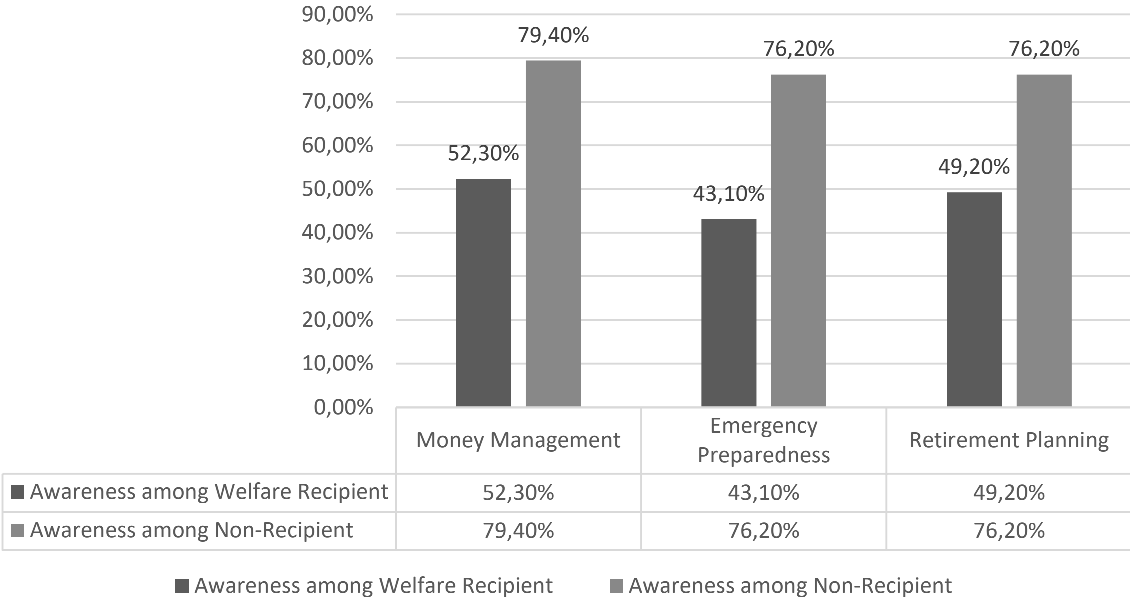


Figure 4. Comparing the level of financial literacy between the welfare recipients and non-recipients
Source: Estimated using survey data.

Both welfare recipients and non-recipients show some level of awareness in money management, with 52.3per cent of welfare recipients and 79.4per cent of non-recipients being aware. However, there is still room for improvement for both groups. The awareness of emergency preparedness is relatively lower among welfare recipients, with only 43.1per cent showing awareness compared to 76.2per cent of non-recipients. This suggests the need for targeted efforts to enhance emergency preparedness knowledge and skills among welfare recipients. Similarly, awareness of retirement planning is relatively low among welfare recipients (49.2per cent) compared to non-recipients (76.2per cent). This indicates that there is a need for increased focus on promoting retirement planning awareness among the welfare recipients. Financial Literacy among welfare recipients is significantly lower as compared to non-recipients (Pg Md Salleh, 2015). Enhancing awareness in money management, emergency preparedness, and retirement planning can empower welfare recipients to make informed financial choices and improve their overall financial well-being.

Chi Square results

Table 2. Chi-square results comparing welfare recipients and non-recipients

Aspect	Welfare recipients(N=65)	Non-recipient(N=63)	
	n (%)	n (%)	Pearson χ^2 Statistics
Money Management			8.217***
Correct	34 (52.3)	50 (79.4)	
Incorrect	31 (47.7)	13 (20.6)	
Emergency Preparedness			1.732
Correct	28 (43.1)	48 (76.2)	
Incorrect	37 (56.9)	15 (23.8)	
Retirement planning			1.611
Correct	32 (49.2)	48 (76.2)	
Incorrect	33 (50.7)	15 (23.8)	
*** 1% level of significance. Estimated using survey data			

Source: Estimated using survey data.

Table 2 presents the results of the Chi-square analysis comparing welfare recipients and non-recipients in three key aspects: Money Management, Emergency Preparedness, and Retirement Planning. The data was collected from a sample of 65 welfare recipients and 63 non-recipients. The analysis reveals that 52.3per cent of welfare recipients provided correct responses in terms of money management, while a higher proportion of non-recipients (79.4per cent) answered correctly. On the other hand, 47.7per cent of welfare recipients and a smaller percentage of non-recipients (20.6per cent) provided incorrect responses. The Pearson χ^2 statistics for this aspect is 8.217, indicating a significant difference at 1per cent level of significance. This suggests that welfare recipients may face challenges in managing their finances compared to non-recipients. Among welfare recipients, 43.1per cent provided correct responses regarding emergency preparedness, whereas a larger proportion of non-recipients (76.2per cent) answered correctly. Conversely, 55.9per cent of welfare recipients and 23.8per cent of non-recipients provided incorrect responses. The Pearson χ^2 statistics for this aspect is 1.732, indicating no significant difference at the tested significance level. While there is a disparity, it is not statistically significant. Similarly, 43.1per cent of welfare recipients and 76.2per cent of non-recipients provided correct responses in retirement planning. In contrast, 55.9per cent of welfare recipients and 23.8per cent of non-recipients provided incorrect responses. The Pearson χ^2 statistics for this aspect is 1.611, indicating no significant difference at the tested significance level. Similarly, with emergency preparedness, there is a disparity, but it is not statistically significant. In conclusion, the Chi-square analysis highlights significant differences in money management awareness between welfare recipients and non-recipients, with non-recipients displaying a higher percentage of correct responses. However, no significant differences were found in emergency preparedness and retirement planning awareness. This suggests that while welfare recipients may face challenges in money management, there are no statistically significant differences in their awareness of emergency preparedness and retirement planning when compared to non-recipients. The absence of significant differences in emergency preparedness and retirement planning awareness between welfare recipients and non-recipients in Gaya district can be attributed to a shared reliance on informal support systems and government safety nets. Both the group, have a limited access to formal financial products. They lack the knowledge and incentives necessary for formal financial planning, which correctly justifies the insignificant difference between welfare recipients and non-recipients in emergency preparedness and retirement planning aspect of financial literacy.

Determinants of financial literacy among the welfare recipients and non-recipients

This section determines the socio-economic factors affecting financial literacy among respondents. Logistic regression is undertaken to determine the socio-economic indicators affecting the level of financial literacy.

Money management

Money Management = $\beta_0 + \beta_1$ (age) + β_2 (gender) + β_3 (years in formal education) + β_4 (marital status) + β_5 (household size) + β_6 (employment status) + β_7 (monthly income) + β_8 (home ownership)

Table 3 Logistic regression analysis predicting the probability of respondents providing a correct answer to a money management scenario

Socio-economics variable	β	Robust SE (β)	dy/dx	df	p	Odds ratio	95% CI for odds ratio	
							Lower	Upper
Gender	0.8514473	0.6173664	0.1717194	1	0.168	2.343036	-0.3585685	2.061463
Age	-0.022717	0.0204534	-0.0044633	1	0.267	0.9775391	-0.062805	0.0173709
Years in formal education	0.1421578	0.0384281	0.0279304***	1	0	1.152759	0.668401	0.2174756
Marital status	-0.3336424	0.7275261	-0.0634301	1	0.647	0.7163099	-1.759567	1.092283
Household size	-0.0417316	0.0558286	-0.0081992	1	0.455	0.9591271	-0.1511538	0.0676905
Employment	-0.1858237	0.6451508	-0.0366713	1	0.773	0.83042	-1.450296	1.078649
Monthly income	0.000021	0.0000173	4.13E-06	1	0.223	1.000021	-0.000128	0.0000549
Homeownership	0.1682959	0.5416778	0.033932	1	0.756	1.183287	-0.893373	1.229965
Constant	-0.2824274	1.102171		1	0.798	0.7539514	-2.442643	1.877788
N=128 Pseudo R^2 = 0.2814 Wald χ^2 =27.71 p = 0.0005 mfx = .7313552 (* 1% level of significance, ** 5% level of significance, * 10% level of significance)**								

Source: Estimated using survey data.

Table 3 provides the logistic regression results aimed to predict the probability of respondents giving a correct answer to a money management scenario based on various socio-economic variables. The results revealed interesting insights into the relationships between these variables and the probability of demonstrating effective money management skills. Among the socio-economic factors examined, 'Years in formal education' emerged as a significant predictor ($p < 0.001$) of providing a correct response. A positive marginal effect (dy/dx = 0.0279) indicates that for each additional year of formal education, the probability of giving the correct response increase by approximately 2.79per cent. The level of financial literacy increases with increased level of education (Markow & Bagnaschi, 2005). However, other socio-economic variables, such as gender, age, marital status, household size, employment status, monthly income, and homeownership, did not show statistically significant associations with the likelihood of providing the correct response. The overall model is significant (p = 0.0005) and performed reasonably well, explaining about 28.14per cent (Pseudo R^2 = 0.2814) of the variability in predicting correct money management responses.

Emergency preparedness

Emergency Preparedness = $\beta_0 + \beta_1$ (age) + β_2 (gender) + β_3 (years in formal education) + β_4 (marital status) + β_5 (household size) + β_6 (employment status) + β_7 (monthly income) + β_8 (home ownership)

Table 4. Logistic regression analysis predicting the probability of respondents providing a correct answer to an emergency preparedness scenario

Socio-economics variable	β	Robust SE (β)	dy/dx	df	p	Odds ratio	95% CI for odds ratio	
							Lower	Upper
Gender	0.0884707	0.6115791	0.0198649	1	0.885	1.092502	0.3294923	3.622425
Age	-0.0359517	0.0210639	-0.0080537*	1	0.088	0.9646869	0.9256712	1.005347
Year in formal education	0.136791	0.0403307	0.0306433**	1	0.001	1.146589	1.059444	1.240901
Marital status	0.4047685	0.7848626	0.0927285	1	0.606	1.498955	0.3218937	6.980153
Household size	-0.0008731	0.0524289	-0.0001956	1	0.987	0.9991273	0.9015571	1.107257
Employment	-0.0707298	0.6188681	-0.0158631	1	0.909	0.9317136	0.2770135	3.133747
Monthly income	-0.0000415	0.0000247	9.31E-06*	1	0.093	1.000042	0.9999931	1.00009
Homeownership	-0.0718259	0.5703838	-0.0159592	1	0.9	0.9306929	0.304295	2.846545
Constant	-0.7008744	1.247744		1	0.574	4961513	0.0430064	5.723945
N=128. Pseudo R^2 = 0.2680. Wald χ^2 =27.59. p = 0.0006. mfx = .66119736 (* 1% level of significance, ** 5% level of significance, * 10% level of significance)**								

Source: Estimated using survey data.

Table 4 presents the logistic regression results aimed to predict the probability of respondents giving a correct answer to an emergency preparedness scenario based on various socio-economic variables. Among the socio-economic factors examined, 'Years in formal education' emerged as a statistically significant predictor (p = 0.001) of providing the correct response. The positive marginal effect (dy/dx = 0.03) indicates that for each additional year of formal education, the probability of giving the correct response increase by approximately 3per cent. The variable 'Age' (p = 0.088) and 'Monthly income' (p = 0.093) showed a marginally significant association with the likelihood of providing the correct response. Individual with higher income and wealth are likely to have high financial literacy scores (Lusardi et al., 2010). On the other hand, the remaining socio-economic variables, including gender, marital status, household size, employment status, and homeownership did not exhibit statistically significant associations with the likelihood of providing the correct response to the emergency preparedness scenario. The overall model is significant (p = 0.0006) and the performance of the model indicated by the Pseudo R^2 (0.2680), suggests that approximately 26.8per cent of the variability in predicting correct emergency preparedness responses can be explained by the included socio-economic variables.

Retirement planning

Retirement Planning = β_0 + β_1 (age) + β_2 (gender) + β_3 (years in formal education) + β_4 (marital status) + β_5 (household size) + β_6 (employment status) + β_7 (monthly income) + β_8 (home ownership)

Table 5 presents the logistic regression analysis aimed to predict the probability of respondents giving a correct answer to a retirement planning scenario based on various socio-economic variables. The results provide insights into the associations between these variables and the probability of demonstrating effective retirement planning skills. Among the socio-economic factors examined, 'Years in formal education' emerged as a statistically significant predictor (p = 0.001) of providing the correct response. The positive marginal effect (dy/dx = 0.027) indicates that for each additional year of formal education, the probability of giving the correct response increase by approximately 2.7 per cent. The variable 'Age' also showed a significant association (p = 0.038) with the likelihood of providing the correct response. The negative coefficient (dy/dx = -0.097) implies that with each one-unit increase in age, the odds of giving the correct response decrease by approximately 9.7per cent. The variable 'Monthly income' (p = 0.067) and 'Homeownership' (p = 0.069) showed a marginally significant association with the likelihood of providing the correct response. Income and homeownership positively affect the level of financial literacy

(Pg Md Salleh, 2015). On the other hand, the remaining socio-economic variables including gender, marital status, household size and employment status did not exhibit statistically significant associations with the likelihood of providing the correct response to the retirement planning scenario. The overall model is statistically significant (p = 0.0009) and model's performance, indicated by the Pseudo R^2 (0.2982), suggests that approximately 29.82per cent of the variability in predicting correct retirement planning responses can be explained by the included socio-economic variables.

Table 5. Logistic regression analysis predicting the probability of respondents providing a correct answer to a retirement planning scenario.

Socio-economics variable	β	Robust SE (β)	dy/dx	df	p	Odds ratio	95% CI for odds ratio	
							Lower	Upper
Gender	0.139551	0.6542351	0.0286184	1	0.831	1.1497757	0.3189483	4.144691
Age	-0.0478073	0.0230197	-0.0097559**	1	0.038	0.9533175	0.9112618	0.9973141
Year in formal education	0.1334081	0.039418	0.0272243***	1	0.001	1.142716	1.057757	1.2345
Marital status	0.2051192	0.7497164	0.0425789	1	0.784	1.227671	0.2824375	5.33632
Household size	-0.0427474	0.0549948	-0.0087234	1	0.437	0.9581534	0.8602475	1.067202
Employment	-0.1495424	0.6679051	-0.030617	1	0.823	0.8611019	0.2325588	3.188427
Monthly income	0.0000397	0.0000217	8.09E-06*	1	0.067	1.00004	0.999972	1.000082
Homeownership	0.9040143	0.4967277	0.2039046*	1	0.069	2.469497	0.9328097	6.537682
Constant	-0.3971696	1.185212		1	0.738	0.67222	0.0658654	6.860657
n =128 Pseudo R^2 = 0.2982. Wald χ^2 = 26.31. p = 0.0009. mfx = .71431853 (* 1% level of significance, ** 5% level of significance, * 10% level of significance)**								

Source: Estimated using survey data.

Analysis of socio-economic variables influencing financial literacy

The findings from the analysis of socio-economic variables across the three dimensions of financial literacy – money management, emergency preparedness, and retirement planning – emphasize the complex interplay of financial behaviour and structural factors in Gaya district. Education, income and age emerged as significant factors influencing financial literacy. Individuals with higher years of education had greater financial awareness, as formal education boosts cognitive abilities and fosters better understanding of budgeting and long-term financial planning. Similarly, respondents with high-income demonstrated better financial literacy, this is likely due to the increased exposure to financial services and the capacity to engage with formal financial institutions. Furthermore, despite older individuals having greater life experience, they rely more on informal financial practices such as borrowing within social networks, while younger individuals tend to be more inclined towards mobile payments and banking services, making age a significant indicator.

However, the significance of homeownership was limited, primarily influencing retirement planning. While owning a home is often perceived as a financial asset that provides security, the lack of accessible retirement planning products in Gaya diminishes the incentive to engage in formal retirement strategies. This marginal significance suggests that while homeownership may encourage a sense of long-term financial stability, it is insufficient to drive comprehensive retirement planning behaviour without supportive financial infrastructure.

On the contrary, variables such as gender, marital status and household size were not statistically significant. In the socio-cultural setting of Gaya, financial decision is a collective process. Both men and women work in either informal sector or agriculture for their livelihood. This dynamic reduces gender-based disparities in financial literacy. The insignificance of marital status and household size also reflects the prevalence of informal financial support networks. In larger households, financial responsibilities are often distributed among members, limiting individual engagement with financial decision-making.

Additionally, both single and married individuals frequently rely on family or community support in times of financial stress, reducing the need for formal financial planning.

Lastly, employment status was not a significant indicator across any aspect of financial literacy. This is due to the dominance of informal employment in Gaya, which does not offer employer-sponsored financial products and most of the workers are paid subsistence wages. Therefore, there exists no significant difference in financial literacy of employed and unemployed respondents.

In conclusion, while education and income remain critical in enhancing financial literacy, the broader reliance on informal financial practices limits the role of other socio-economic variables. These findings suggest the need for comprehensive financial literacy programs, particularly targeting low-income and less-educated populations. Expanding access to financial products, promoting community-based financial education, and addressing behavioural barriers can contribute to improved financial resilience and well-being in Gaya district.

Conclusion

The study attempts to understand how financial literacy has differential impacts among different categories of households, i.e., welfare recipients and non-recipients. To examine the financial literacy, it has taken three indicators – money management, retirement planning and emergency preparedness. The sample study from Gaya district of Bihar found – though there exist a significant difference between the welfare recipient and non-recipient households in the money management aspect of financial literacy, there is no such differences found in case of other two aspects. The reason might be though there is differences in the level of living of welfare recipient and non-recipient households, however since the overall living in Gaya districts is not so high, it might not be having significant impacts with regards to retirement planning and emergency preparedness. However, the behavioural and social norms in Gaya district may be explored further to explain the insignificant result. Because after retirement and in case of emergency, the households depend on their immediate relatives and neighbours as safety net.

Furthermore, it is crucial to acknowledge that one size fits all approaches may not be effective as there are needs within the welfare recipient population. For those who are financially vulnerable focusing on day-to-day money management is essential while individuals on the brink of poverty could benefit from a combination of emergency planning and money management skills. The timing of a financial literacy program aligns with the idea of 'teachable moments,' during which individuals are particularly open to learning due to significant life events or circumstances, as highlighted by Lusardi (2008). Individuals tend to be more inclined to make financial decisions during certain periods rather than others (Lusardi, 2008). Understanding the requirements of the people is pivotal for the success of the initiative. Hence, it is also suggested to conduct research on financial literacy of welfare-recipients and explore the social and behavioural aspects that affect certain financial decisions.

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