



Socio-Economic Determinants of Rural Poverty: Evidence from the Haor Region of Netrakona District

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HOW TO CITE

Sana, M. H. (2026). Socio-economic determinants of rural poverty: Evidence from the haor region of Netrakona district. *Development Compilation*, 19(2), 235–254. <https://bips.bd/journal>

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ARTICLE HISTORY

Received: 25 July 2026
Revised: 10 August 2026
Accepted: 13 September 2026
Available online: 20 October 2026

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Abstract

This study is an attempt to explore the socio-economic determinants of rural poverty of selected haors of Netrokona district, Bangladesh. A structured questionnaire was used to collect primary information from 45 household of the selected respondents. Principal Component Analysis (PCA) was utilized to develop a Household Wealth Index to categorize households into poor and non-poor groups and Binary Logistic Regression model was utilized to determine the major socio-economic factors influencing household poverty. The figures indicate that there were 40 and 60 households in the sampled households who were poor and non-poor respectively. From the regression results it is observed that education level and land ownership have significant negative impact on the poverty status of the household, but savings have negative impact which is not statistically significant. Based on these findings, it can be inferred that in the haor region human capital and productive assets are significant to enhance the welfare of the households. The study adds to the literature by using PCA and Binary logistic regression models to analyse the multidimensional poverty situation in haor areas of Netrokona. The results indicated that policies which encourage education and access to productive land as well as fortifying rural poverty alleviation programmes can help achieve sustainable poverty alleviation in the study area.

Keywords: Rural Poverty; Socio-economic Determinants; Haor region; Netrokona; Household Wealth Index; Principal Component Analysis (PCA); Binary Logistic Regression.

1. Introduction

Rural poverty is a multi-faceted socio-economic problem, which cannot be attributed only to low income. It is affected by various factors such as education, employment status, income/expenditure of the household, land ownership, savings, credit access and other socio-economic factors. The factors contribute to the economic well-being and standard of living of rural household through interaction. Thus, to gain an understanding of poverty it is essential to analyse the whole socio-economic situation affecting the livelihoods of households. Poverty is one of the big challenges to development in Bangladesh, especially in the haor area where farming

is the means of livelihood; although there has been tremendous economic growth. Unique geographical and environmental features of haor ecosystem leave rural households vulnerable to frequent flooding, out-of-work during specific seasons, low productivity of farming, poor infrastructure, low education level, poor health condition and lack of financial services. These limitations create a negative effect on household incomes, the ability to invest in productive assets and savings, and exacerbate the risk of rural households falling into chronic poverty.

Education, land ownership, household income, productive assets, and access to financial services have been identified as important factors in the determination of rural poverty in previous studies. Bangladesh Bureau of Statistics (BBS, 2022) further indicated that disparities in education, household income, land ownership and productive assets are among the key drivers of rural poverty in Bangladesh. Additionally, Principal Component Analysis (PCA) is well established as a statistical tool to create household wealth indices using multiple socio-economic indicators (Jolliffe, 2002); and Binary Logistic Regression has been widely used to identify socio-economic factors associated with household poverty (Gujarati & Porter, 2009; Hosmer et al., 2013).

Previous studies have contributed a lot in understanding the rural poverty of Bangladesh; however, the socio-economic determinant of rural poverty in the haor area of Netrokona district of the country has not been studied together using Principal Component Analysis (PCA) and Binary Logistic Regression (BLR). Additionally, there is limited literature studying the joint effect of education, occupation, household income and expenditure, land ownership, savings and credit on poverty condition of the households in this environment-vulnerable region. This is an important research gap, which should be further studied empirically. Thus, the ultimate goal of this study is to explore the socio-economic issues that affect rural poverty of the haor area in Netrokona district.

2. Literature Review

Rural poverty is a key social-economic issue in Bangladesh particularly in the ecologically fragile area like haor region. In addition to income, factors such as education, productive assets, savings, employment opportunities, standard of living and access to basic services are important determinants of rural household poverty. This is also very significant in the haor area where the households rely heavily on agriculture for their livelihoods and are constantly vulnerable due to seasonal flooding and other environmental challenges. Previous studies have analyzed rural poverty from various socio-economic, livelihood and environmental perspectives. So, the urban determinants and dimensions of rural poverty, particularly education, land ownership, savings and vulnerability in haor households are the major concern in this literature review. Furthermore, the present study points out the research gaps which have been addressed in literature through various techniques in measuring the household well-being.

Poverty is taken as a multi-faceted phenomenon in the existing literature. Townsend (1979) and Sen (1981) argued that the poverty is not only limited to the lack of income, but also to lack of assets, capabilities and opportunities. This idea was subsequently extended by Alkire and Foster (2009) with multidimensional poverty measurement (MPM), which focuses on deprivation in different dimensions of human well-being. Chowdhury and Mukhopadhyay (2012) also emphasized on the key role of multiple dimensions in poverty measurement in the context of Bangladesh. These studies can serve as a foundation for evaluating household poverty levels in terms of more than one socio-economic indicator, rather than income.

Education is acknowledged as a significant factor in the socio-economic factors which are considered as determinants of poverty. Education enhances human capital, employment and potential to earn income. Educational attainment has been found to be related to poverty or poverty transition at household level for rural households in Bangladesh, as earlier studies have shown (Rahman et al., 2013; Ahmed & Tauseef, 2022). Ownership of productive assets such as agricultural land is important as well because it gives the possibilities of agricultural production, income generation and food security. The studies have shown that ownership of agricultural land is linked with better household wellbeing when conducted on households in areas with flood prone wetlands (Parvez, 2022). In the same way, savings can assist households to buffer against economic shocks and unexpected expenses. The capacity for saving, though, is related to the income and economic

position of the households. So, to determine the connection between savings and poverty, one can only use empirical evidence, not assumptions. The haor areas in particular offer a distinct picture of rural poverty: households are severely vulnerable to floods and seasonality, are harsher hit by livelihood disruption but simultaneously rely significantly on agriculture and natural resources. This study revealed that level of livelihood vulnerability was high among the haor households affected by the flood in Bangladesh, including the affected households of Netrokona. Likewise, the studies on the Household level in the wetlands have revealed that the poverty, education, occupation, land ownership and household wealth has impact on household well-being and food security (Parvez, 2022). A recent study conducted in Netrokona, Dingapota Haor, also noted that the households in the area faced poverty, issues of flood, debts, seasonal migration and reliance on alternative livelihood activities (Rezwana et al., 2025). These studies indicate that socio-economic conditions as well as environmental risks are very crucial to understand the poverty situation of haor areas.

Although there have been several studies that offer useful evidence, each study has focused on a particular research area and uses a different method of analysis. Multidimensional poverty, livelihood risk, food security, flood resilience or adaptation strategies are some topics of studies. Therefore, there are important aspects of the local household poverty that have yet to be analysed. Particularly, little attention has been paid to the development of a Wealth Index by aggregating a set of household socio-economic indicators and then determining what factors are correlated with poor and non-poor households. Principal Component Analysis (PCA) is an appropriate technique for the creation of a composite Wealth Index based on several socio-economic factors which are likely to be correlated. However, Binary Logistic Regression can be used to investigate the factors associated with poor and non-poor outcomes (Jolliffe, 2002; Gujarati & Porter, 2009, Hosmer et al., 2013).

Concluding all the above, the literature shows that productive assets, savings, environment, livelihood opportunities and education are all intertwined aspects affecting the poverty in rural areas. The literature review further reveals that the poverty situation of Haor's households is worsened by not only frequent flooding but also agricultural dependent economy. But previous studies have focused mostly on food security and coping strategies, food prices, general rural poverty, and flood-related risks. However, very few studies are conducted on household poverty analysis using PCA based Wealth Index and Binary Logistic Regression in selected Haor areas of Netrokona. Further analysis at local level is thus required for the relationship between household poverty and important socio-economic factors like education, land ownership and savings. Based on this overview of the research gap, the present study has aimed at identification of the socio-economic determinants of poverty in the selected households of Netrokona haor by constructing Household Wealth Index (HWI) based on PCA and using Binary Logistic Regression.

3. Theoretical Framework

The theoretical foundation of this research is integrated theoretical model as the Vicious Cycle of Poverty Theory, Culture of Poverty Theory, Situational Theory of Poverty and Structural Perspective. These theories were chosen because they respectively account for a particular aspect of rural poverty. The Vicious Cycle of Poverty Theory puts an emphasis on the economic constraints, the Culture of Poverty Theory on behaviour, the Situational Theory on environmental and/or outside shocks, and the Structural Perspective on institutional and/or structural inequalities. All the above theories when combined can create a comprehensive framework to understand the socio-economic, environmental, institutional aspects involved with rural poverty in Netrokona district's haor area.

3.1 Theory of Vicious Cycle of Poverty

The Vicious Cycle of Poverty Theory was proposed by Ragnar Nurkse (1953) which provides account of vicious cycle of poverty as a result of low income leading to low saving, less investment and less productivity. The haor areas of Netrokona are often subjected to seasonal flooding and disasters due to climatic conditions, which leads to low agricultural output and income of the people of the areas. This means that the household can neither save nor acquire productive assets, and as such, can find it difficult to increase their standard of

living. According to this theory, household income, savings, and land ownership are crucial factors which determine rural poverty in this study.

3.2 Culture of Poverty Theory

Oscar Lewis (1966) suggested the Culture of Poverty Theory which posits that poverty can affect livelihood strategies, expectations and attitudes. Repeated environmental shocks and economic uncertainties in the haor region easily compel the households to take up short-term coping over long-term investment. This study, however, does not presume that poverty is a consequence of individual behaviour. Rather, it can be viewed as an adaptive response contingent upon existing economic deprivation and environmental exposure. This attitude can account for the differentials in savings, education and household livelihood choices found among rural households.

3.3 Situational Theory of Poverty

The Situational Theory of poverty posits that poverty is more of an outside than an inner problem. Seasonal flooding, flash flooding, water logging and inadequate employment opportunities are often responsible for the disruption of agricultural production and income generation in the haor region. Therefore, many families become poor or stay poor because of environmental factors over which they have no control. Incorporation of occupation, household income and expenditure as important variables for analysing rural poverty, as well as the need of context-specific policy interventions, is supported by this theory.

3.4 Structural Perspective

The Structural Perspective suggests that poverty is due to inequitable access to resources, institutions and economic opportunities. Heterodox land ownership in the haor region, small size of formal credit organizations, lack of adequate infrastructure, poor market linkage, low health services etc. lessen economic opportunities of rural household in the haor. These structural aspects constrain the ability of households to enhance their livelihoods and promote the continued occurrence of poverty. Hence, this allows to analyze the impact of land ownership, credit availability and other socio-economic attributes on household poverty from this theoretical standpoint.

The four theories have been integrated which supports one another in explaining poverty in the haor region of Netrokona district. Vicious Cycle of Poverty is the theory, which shows how low income, low savings and limited investment keep the household in poverty. The Culture of Poverty Theory incorporates the concept of how chronic poverty affects how families meet their livelihood needs. The Situational Theory focuses on the effect of seasonal floods and other environmental shocks on household poverty. The Structural Perspective emphasizes the unequal access to land, credit, infrastructure and economic opportunities as a cause of ongoing poverty. These theories, taken together, offer a complete set of criteria for analysing socio-economic determinants of rural poverty.

3.5 Conceptual Framework

This study is based on the assumption that poverty in households depends on a number of social-economic factors. The independent variables are education, occupation, household income, household expenditure, land ownership, Saving status, access to credit. Such variables are determinants of the socio-economic status of households and ultimately affect their poverty status. In this study PCA is used as method of measurement of socio-economic status and Binary Logistic Regression is used as to identify socio-economic determinants of rural poverty.

4. Research Methodology

This study used cross sectional quantitative research design with Primary data collected from 45 rural households of three selected Upazilas of Netrokona district by questionnaire. The study area was chosen due to its high rate of rural poverty and the vulnerability of its rural population to seasonal flooding. Household were selected by an appropriate sampling technique and data collected by face-to-face interview. Household poverty status (poor = 1 and non-poor = 0) was used as dependent variable with the independent variables of

education, occupation, household income, household expenditure, land ownership, savings status, and access to credit. The Household Poverty Index (HPI) was created using Principal Component Analysis (PCA) and Binary Logistic Regression was used to determine the socio-economic factors influencing rural poverty. The data were analysed using a statistical software. The survey was voluntary and all respondents gave informed consent and the confidentiality of information by respondents was respected throughout the study. Validity and reliability of results was ensured through questionnaire pre-testing, careful data checking, and using appropriate statistical procedures.

5. Results and discussions

The results of the study based on the data collected, are presented and discussed in this chapter. It starts with descriptive analysis of socio-economic features of the respondents. The chapter then presents the results of the Principal Component Analysis (PCA) used to construct the household wealth index, the Binary Logistic Regression analysis to identify the determinants of poverty. The results are represented by tables and discussed to achieve the objectives of the study.

5.2 Construction of Poverty Index Using Principal Component Analysis

Poverty Index was constructed based on Principal Component Analysis method. This study used Principal Component Analysis (PCA) to create a wealth index which was based on 10 socio-economic factors to measure household poverty. These are such as income, expenditure, consumption, land ownership, education, saving, members of households, migration, medical care and sanitation facilities. The PCA method was applied since it is a technique of aggregating multiple variables when they are related to each other, the single index coming from the PCA method is a more comprehensive indicator of household well-being than any one of the indicators included in it. The results of PCA indicate that the first principal component had an e value of 3.48 accounting for 34.79% of the variance. The first component was taken up as the household wealth index because it had the highest percentage of the variation between households. Items that loaded highest were income (0.450), expenditure (0.431), land ownership (0.381), consumption (0.354), sanitation facilities (0.335) and education (0.305). Among household the quintiles were created depending on the PCA based wealth index. The bottom two quintiles were considered as poor, while the top 3 quintiles were considered as non-poor. According to the results 18 households (40.0%) were poor and 27 households (60.0%) were non-poor. This finding indicates high level of economic hardship among households in the study area. Hence PCA based poverty index was used for further econometric analysis.

Table 5.1: PCA Factors Loadings of Major Variables

Variable	Loading
Income	0.450
Expenditure	0.431
Land Ownership	0.381
Consumption	0.354
Toilet Facility	0.335
Schooling	0.305

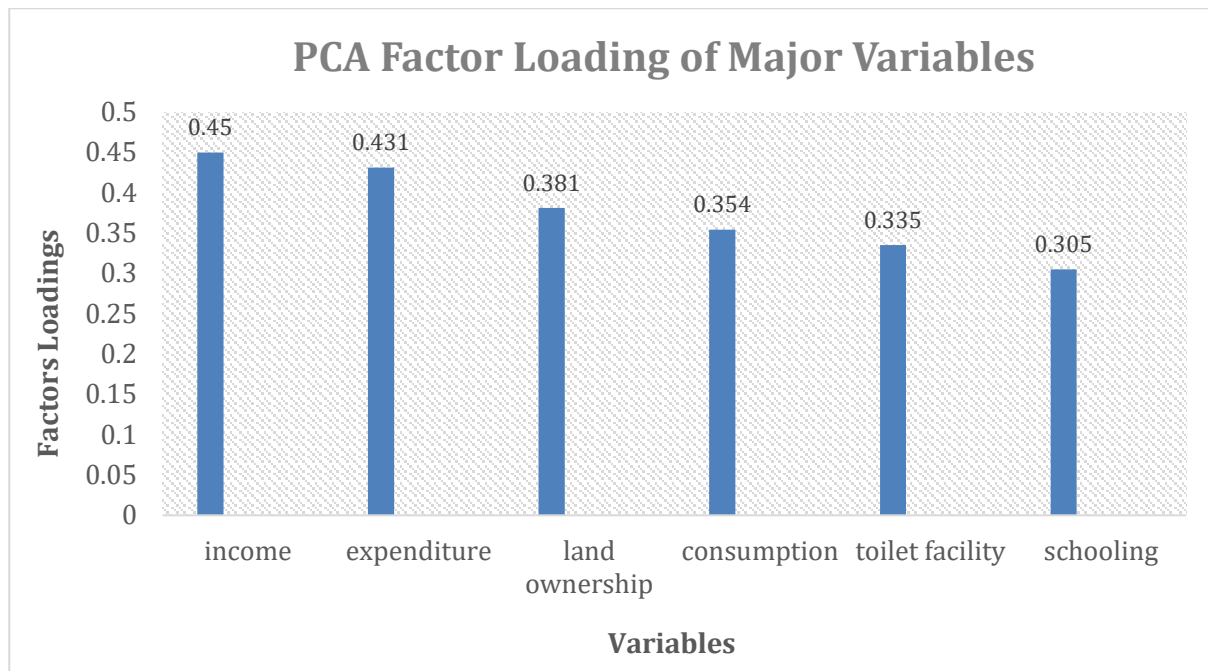


Figure 3.1 PCA Factor Loading of Major Variables

Table 5.2: Poverty Status Frequency Percentage

Poor	18	40%
Non- poor	27	60%
Total	45	100

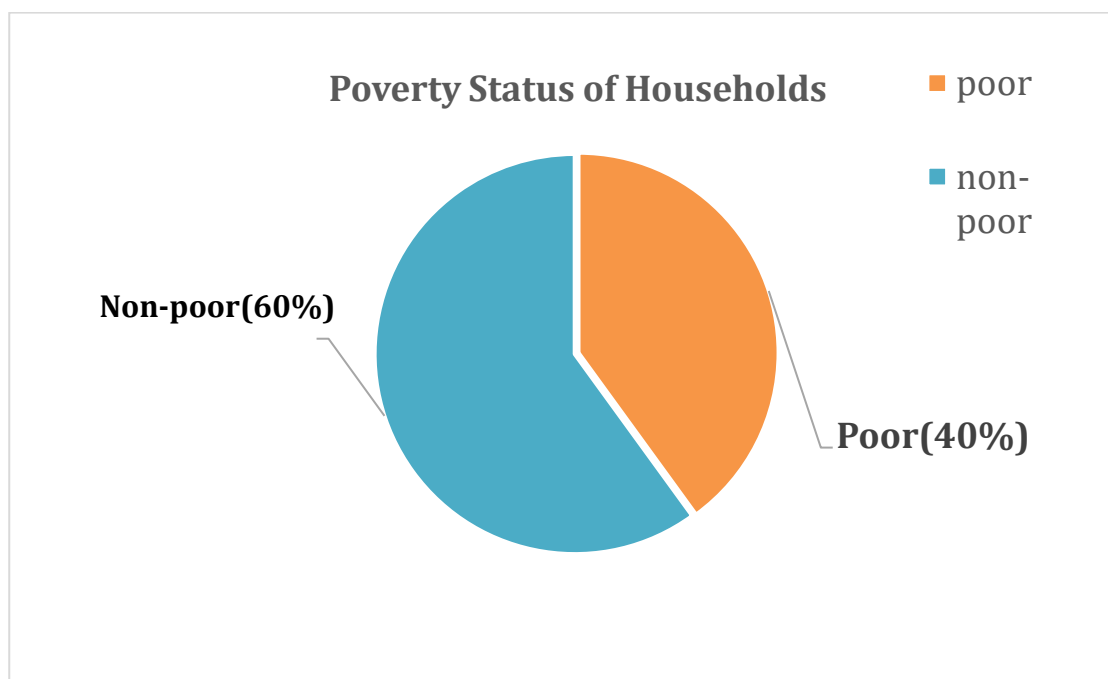


Figure 3.2 Poverty Status of Households

5.3 The Logistic Regression Analysis

The model of binary logistic regression was used to determine the factors affecting household poverty in the study area. The dependent variable used was poverty status; poor households coded as 1 and non-poor households coded as 0. Schooling, land ownership and savings were explanatory variables. The overall model was statistically significant (LR $\chi^2 = 23.70$, $p < 0.001$) which means that, the selected variables as a whole account for the household poverty status. The model explained about 39.1% of the variance in poverty status, gives a Pseudo R^2 value of 0.391. The coefficient of schooling had a negative value and was significant at 2% ($\beta = -1.517$, $p = 0.020$), meaning that if an individual's education level is increased, the likelihood of household poverty is decreased. Employment opportunities, productivity, and income generation is enhanced through education. A negative and significant association was also found for poverty with land ownership ($\beta = -0.040$, $p = 0.007$). This result implies that higher land ownership increases the resilience of households to poverty, as land is an important productive asset and source of income. The coefficient estimates for savings were negative ($\beta = -0.356$) indicating that increase in savings may lead to decrease in poverty. The result was statistically insignificant ($p = 0.672$), however, showing that savings had no significant effect on poverty status as seen in this study. In general, the results of the regressions suggest that schooling and ownership of land significantly lower the probability of poverty status, but savings do not have a statistically significant effect on poverty status of households.

Table 5.3: Logistic Regression Results

Variable	Coefficient (β)	P-value	Decision
Schooling	-1.517	0.020	Significant
Land Ownership	-0.040	0.007	Significant
Savings	-0.356	0.672	Insignificant

Table 5.4: Model Summary

Statistic	value
Number of Observations	45
LR χ^2	23.70
Prob > χ^2	0.00
Pseudo R^2	0.391

5.4 Interpretation of Socio- Economic Condition

5.4.1 Gender Distribution

Nearly 100% of the respondents to this survey were men. One of the respondents was a female. This could indicate that there is more participation by men in the economic activities in the study area.

Table 5.5: Gender Distribution

Gender	Number	Percentage
Male	44	97.8
Female	1	2.2
Total	45	100

Source: Field Survey, 2026

5.4.2 Age Distribution

Among the respondents, 15 were aged 29-39, 14 were aged 40-49, 11 were aged 50-59, 5 were aged 60 or older. It is known that the middle-aged group has a significant contribution in the family's income and other economic activities, which is the age group that most of the respondents belonged.

Table 5.6: Age Distribution

Age Group (years)	Number of Respondents
29-39	15
40-49	14
50-59	11
60 years or above	5
Total	45

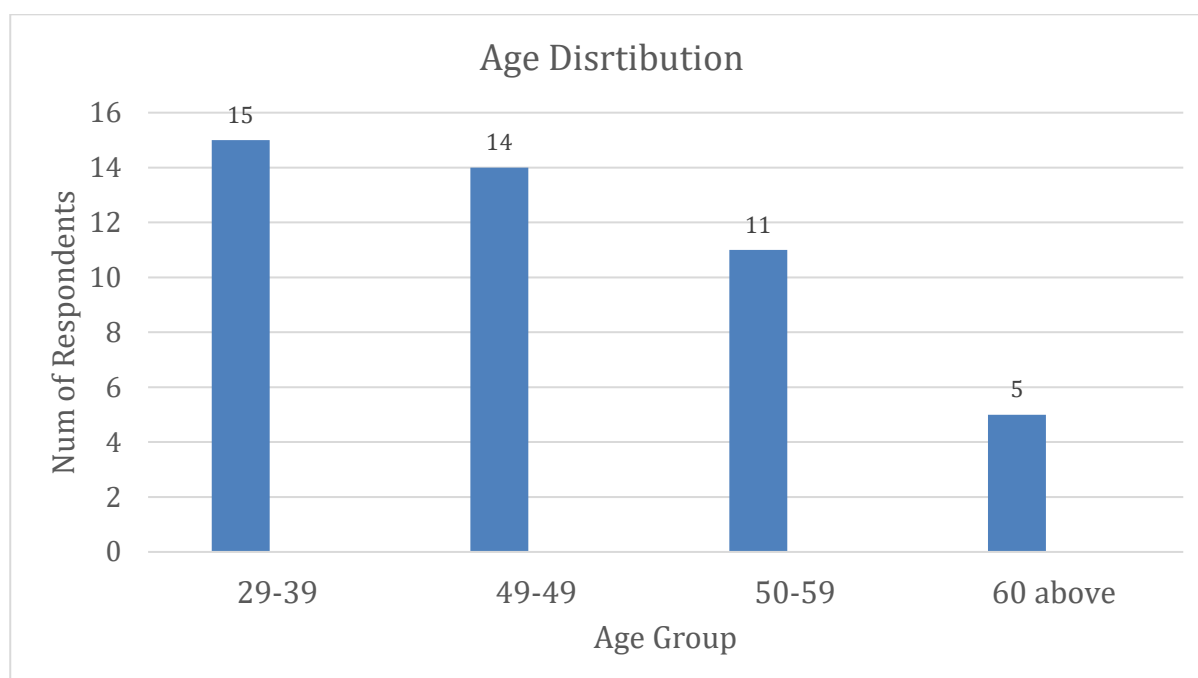


Figure 6.1 Age Distribution

5.4.3 Educational Status

From the table it is observed that 18 respondents had completed their education upto 3-5 years. 3 had 2-12 years of education. Only 6-8 years of education were completed by 9 of them while only 5 completed 9-10 years of education. This suggests that the level of education of most of the respondents was primary or basic level.

Table 5.7: Education Status

Schooling Level (years)	Number
0-2	13
3-5	18
6-8	9

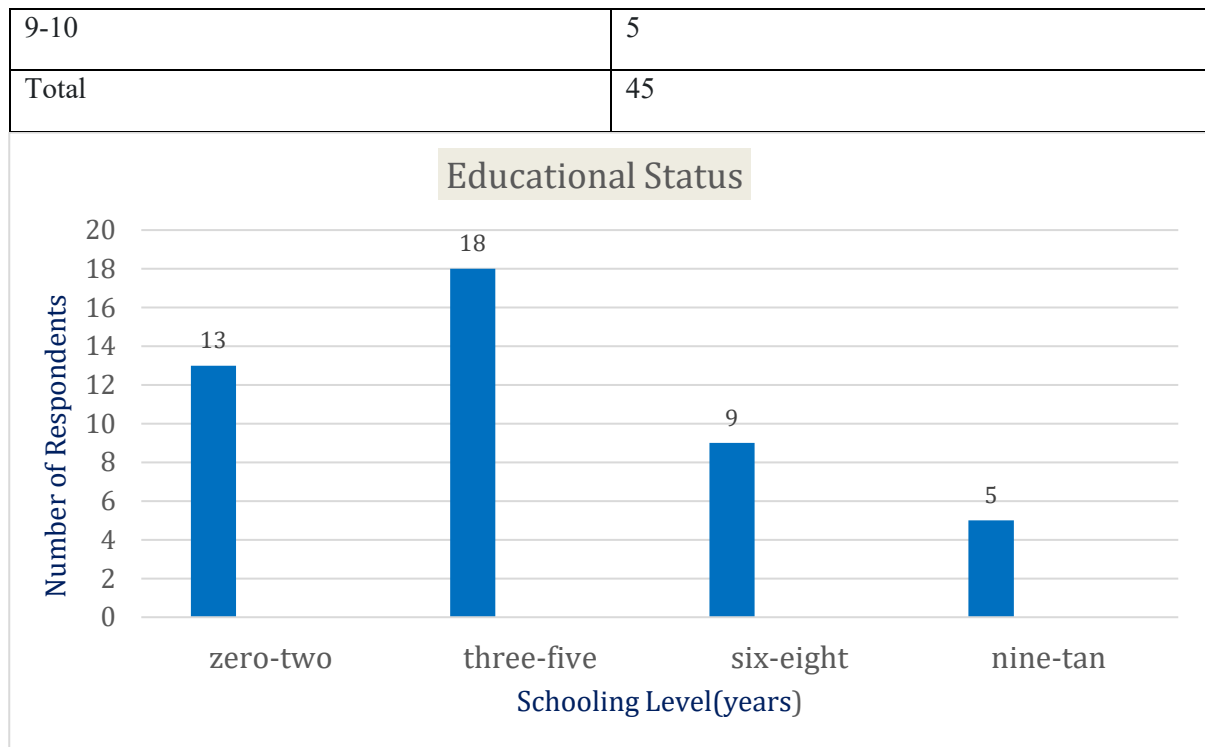


Figure 6.2 Educational Status

5.4.4 Occupational Distribution

The main occupation in this area is agriculture. Approximately half of the respondents are directly reliant on labour in agriculture. Due to low land ownership, many also work as agricultural daily wage workers. There are comparatively low numbers of business, construction and transport jobs.

Table 5.8: Occupational Distribution

Occupati on	Agricultu re	Agri. Day Labo r	Small Busine ss	Constructi on	Ricksha w Pulling	Other Occupatio ns	Privat e Job	Gov t. Job	Private Compan y
Number	19	8	4	3	3	4	2	1	1

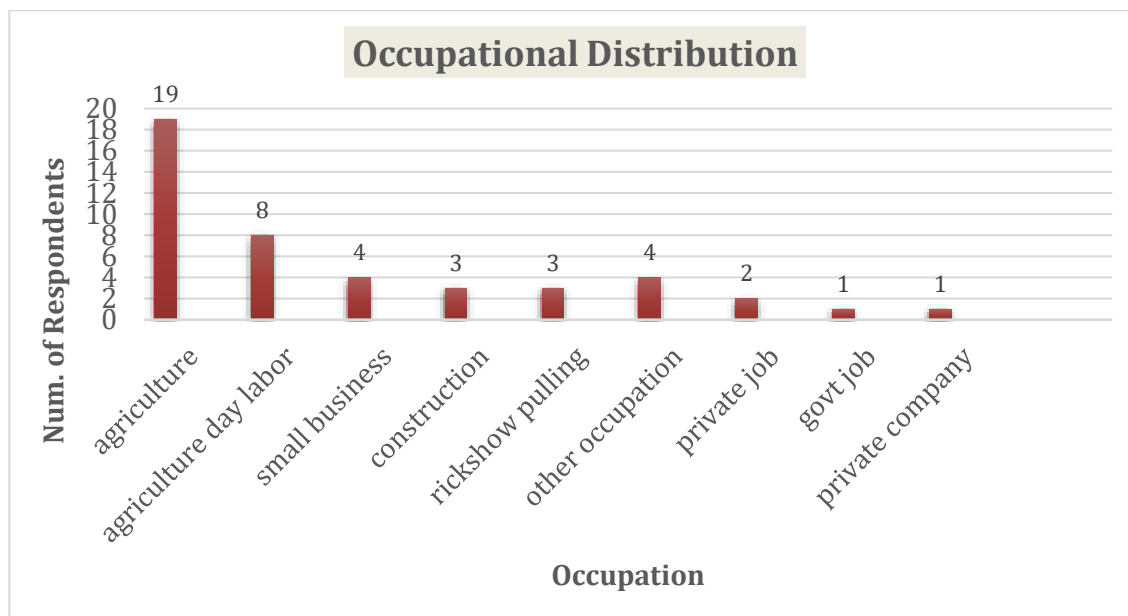


Figure 6.3 Occupational Distribution

5.4.5 Household Size

As can be seen in the number of households members, the majority of households are medium-sized (5 to 6 household members). There are both small (3-4) and large (7 or more) households.

Table 5.9: Household Size

Family Members	Numbers of Households
3-4	13
5-6	27
7 or above	5
Total	45

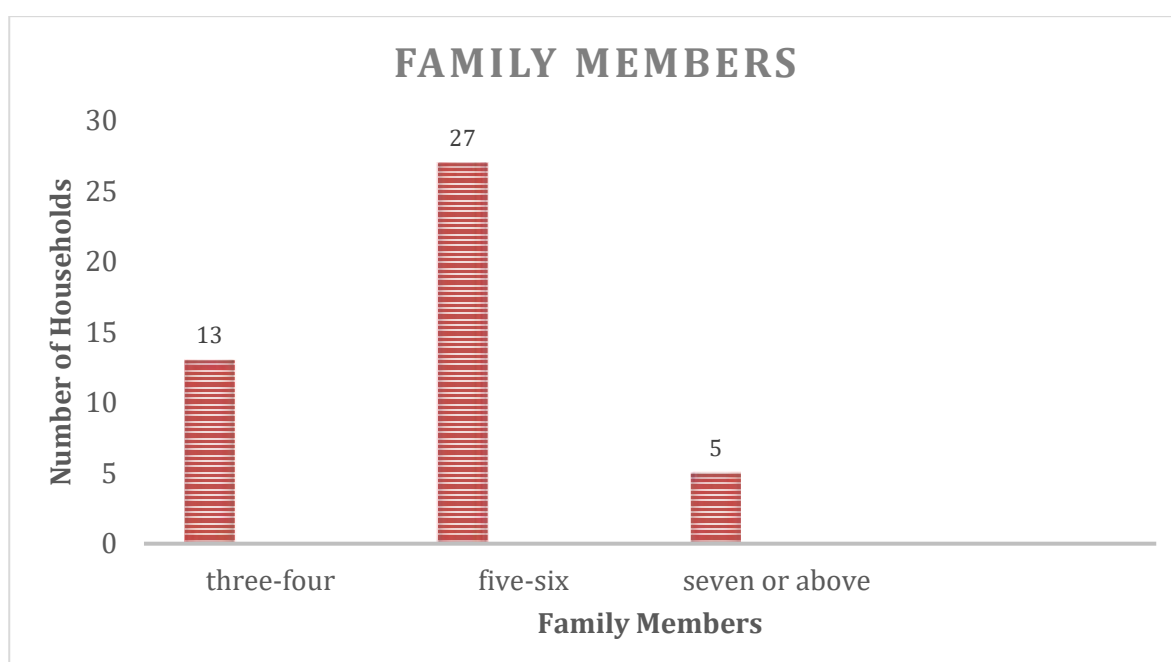


Figure 6.4 Family Members

5.4.6 Migration Status

The majority of families do not have a migrant family member. There were only 11 households that had migration members, this means that migration is not a global phenomenon in the study area.

Table 5.10: Migration Status

Migration Members	Number	Percentage (%)
Yes	11	24.44
No	34	75.56
Total	45	100

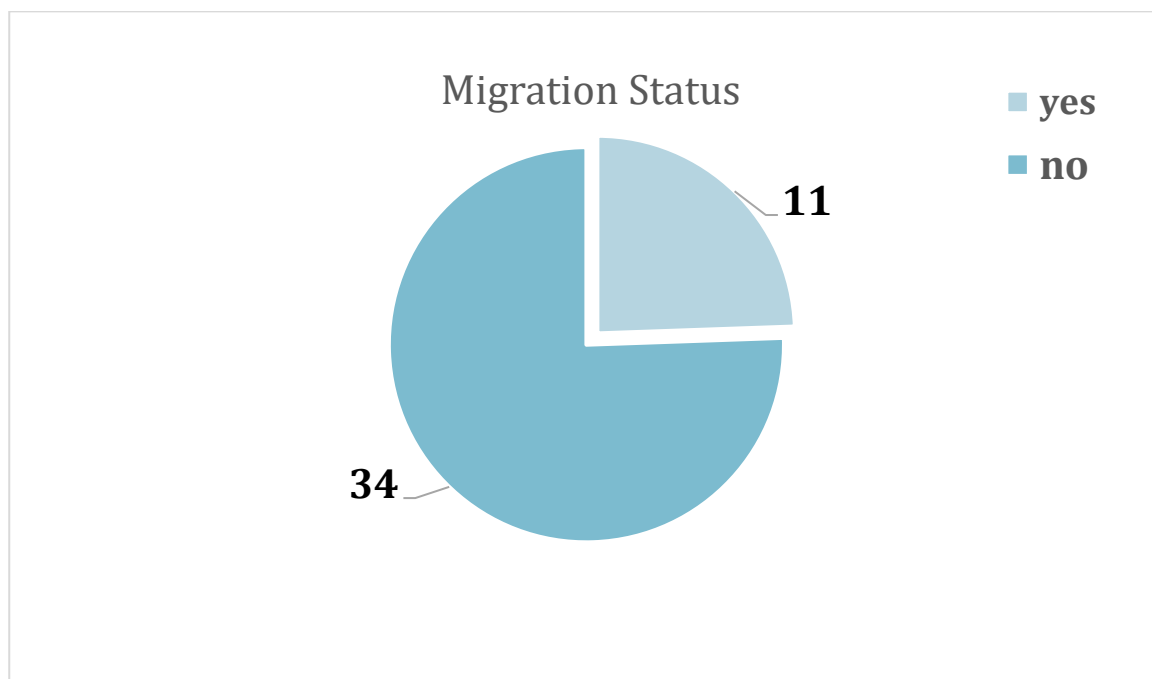


Figure 6.5 Migration Status

5.4.7 Monthly Income

The majority of the households have a monthly income ranging from 10001-15000 BDT. The percentage of respondents earning above 20000 BDT is very less which indicates that majority are in low to lower middle-income group.

Table 5.11: Monthly Income

Income Group (BDT)	Number of Respondents
Below 10000	10
10001-15000	19
15001-20000	16
Total	45

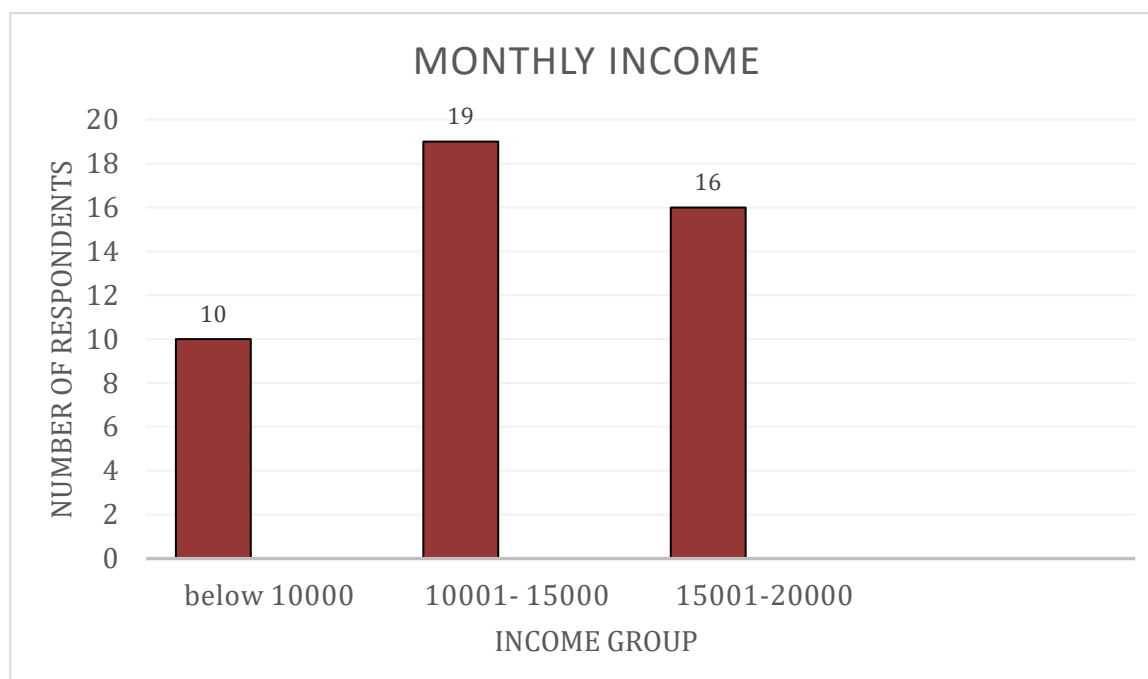


Figure 6.6 Monthly Income

5.4.8 Monthly Expenditure

The monthly expenditure of the respondents is shown below. Majority of the respondents say that they spend 10001 takas to 15000 taka every month. Moreover, there are also 15 respondents who have an expenditure less than 10000 taka and 7 respondents who have an expenditure ranging from 1501 taka to 20000 taka. These results indicate that the monthly expenditure of most of the households is moderate.

Table 5.12: Monthly Expenditure

Expenditure Group (BDT)	Number of Respondents
Below 10000	15
10001- 15000	23
15001- 20000	7
Total	45

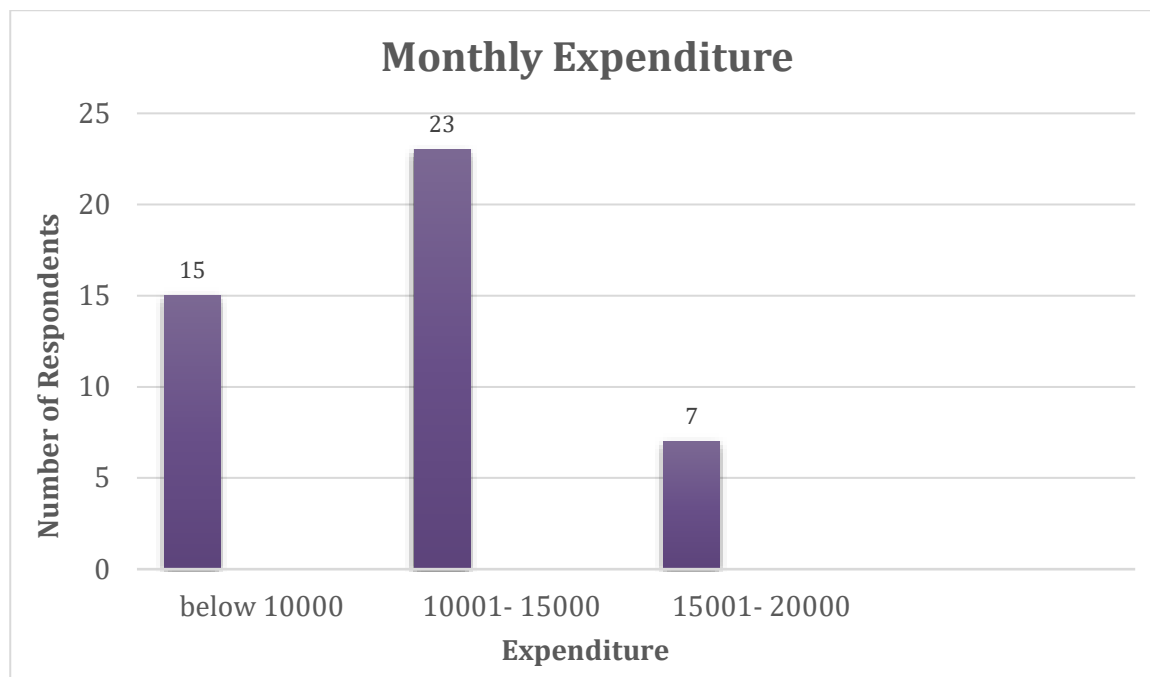


Figure 6.7 Monthly Expenditure

5.4.9 Consumption Expenditure

This table shows the week's consumption expenditure of respondents. From the observation it is clearly understood that majority of the respondents (25) have been spending 1501 to 2500 taka in a week. Moreover, 11 respondents spend 2,501-3,500 taka and less than 1,500 taka for respondents. This indicates that the consumption expenditure of most of the households is moderate.

Table 5.13: Consumption Expenditure

Consumption Group (BDT) at 7days	Number of Respondents
Below 1500	9
1501- 2500	25
2501- 3500	11
Total	45

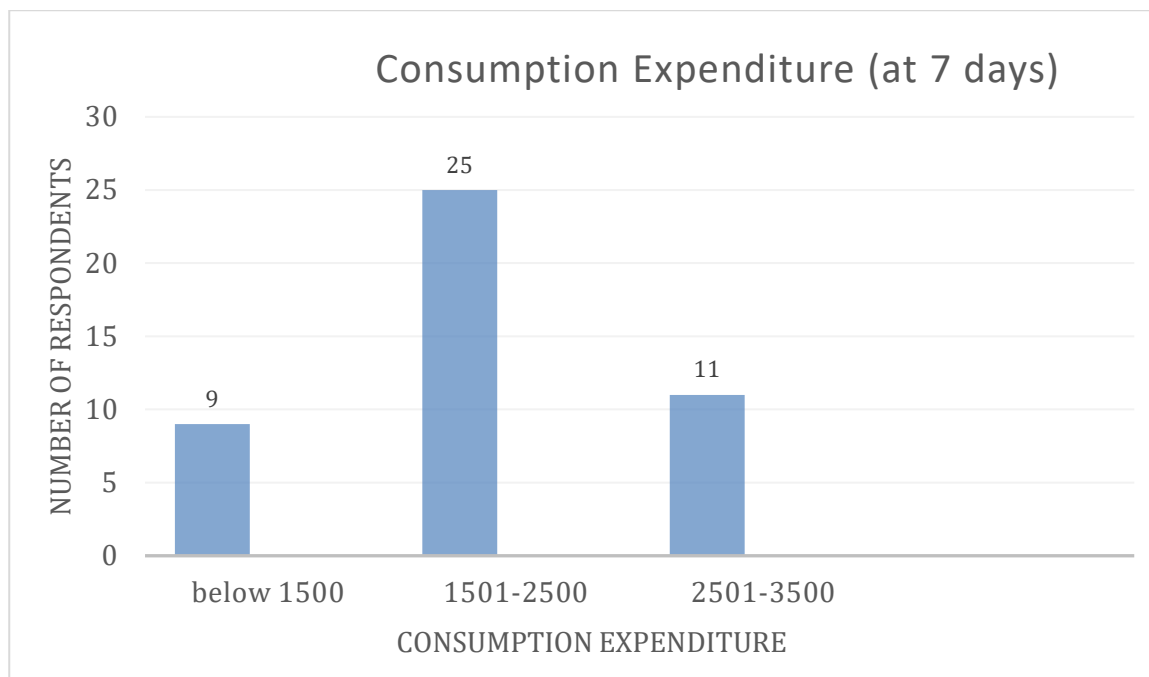


Figure 6.8 Consumption Expenditure

5.4.10 Distribution of Land Ownership

This table reflects the status of land ownership of the respondents. Only 37.8% of the respondents have 10-20 decimal land. However, 31.1% of the respondents, on the other hand, have land area less than 10 decimals and 31.1% have land area greater than 20 decimals. The results suggest that the distribution of land ownership is relatively balanced.

Table 5.14: Land Ownership

Land Ownership (Decimal)	Numbers of Respondents	Percentage (%)
Below 10	14	31.1
10- 20	17	37.8
Above 20	14	31.1
Total	45	100

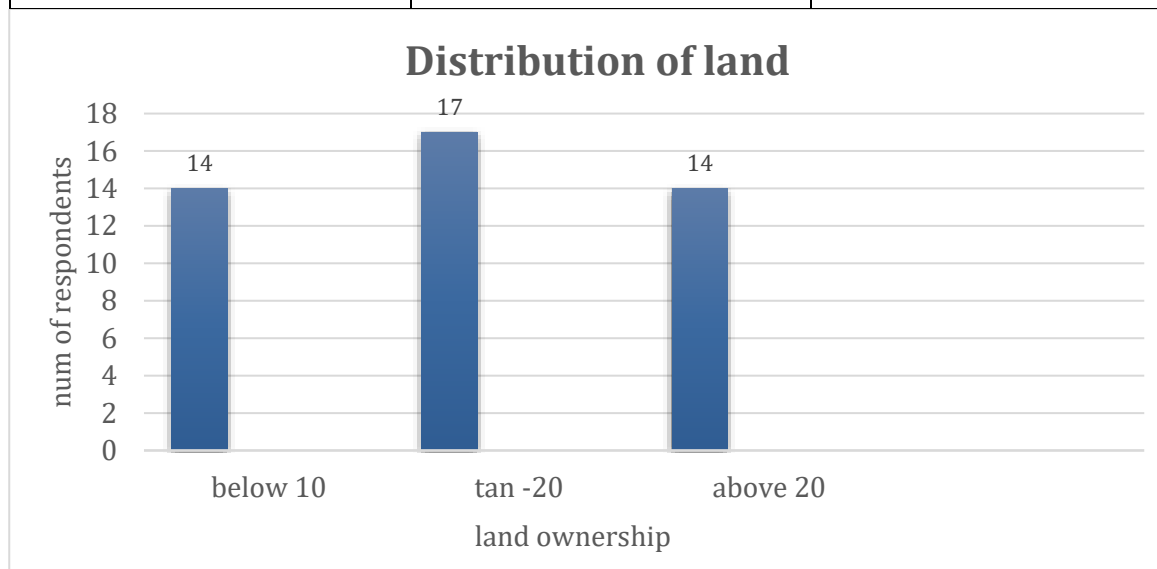


Figure 6.9 Distribution of Land

5.4.11 Distribution of Savings Status

The following table indicates the savings position of the respondents. The average (or typical) response was that 62.2% indicated that they have none and 37.8% indicated that they have savings. This indicates that the majorities of the respondents save part of their income. This shows that the households are financially aware and there is a positive tendency to save.

Table 5.15: Saving Status

Savings Status	Numbers of Respondents	Percentage (%)
Yes	28	62.2
No	17	37.8
Total	45	100

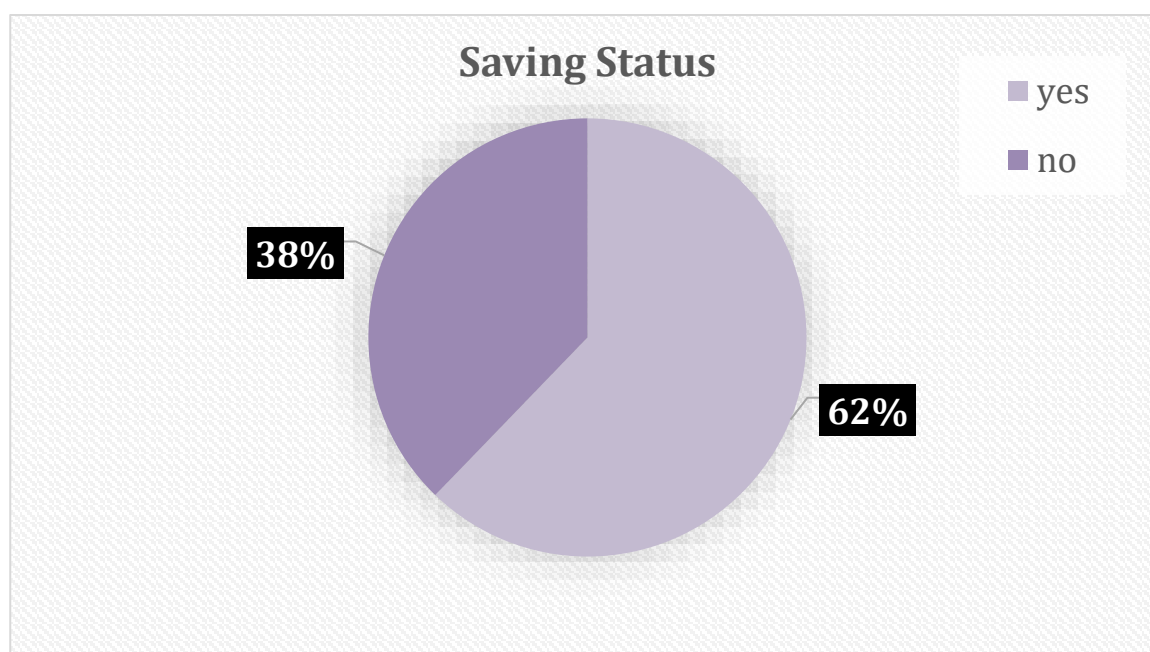


Figure 6.10 Savings Status

5.4.12 Distribution of Loan Status

More than half of the households are dependent on dept (25 households are in dept). Thus, we observe that significant number of households are credit-burdened for the interest and burden of their livelihood, agriculture or emergency expenses.

Table 5.16: Loan Status

Loans Status	Numbers of Respondents	Percentage (%)
Yes	25	55.6
No	20	44.4
Total	45	100

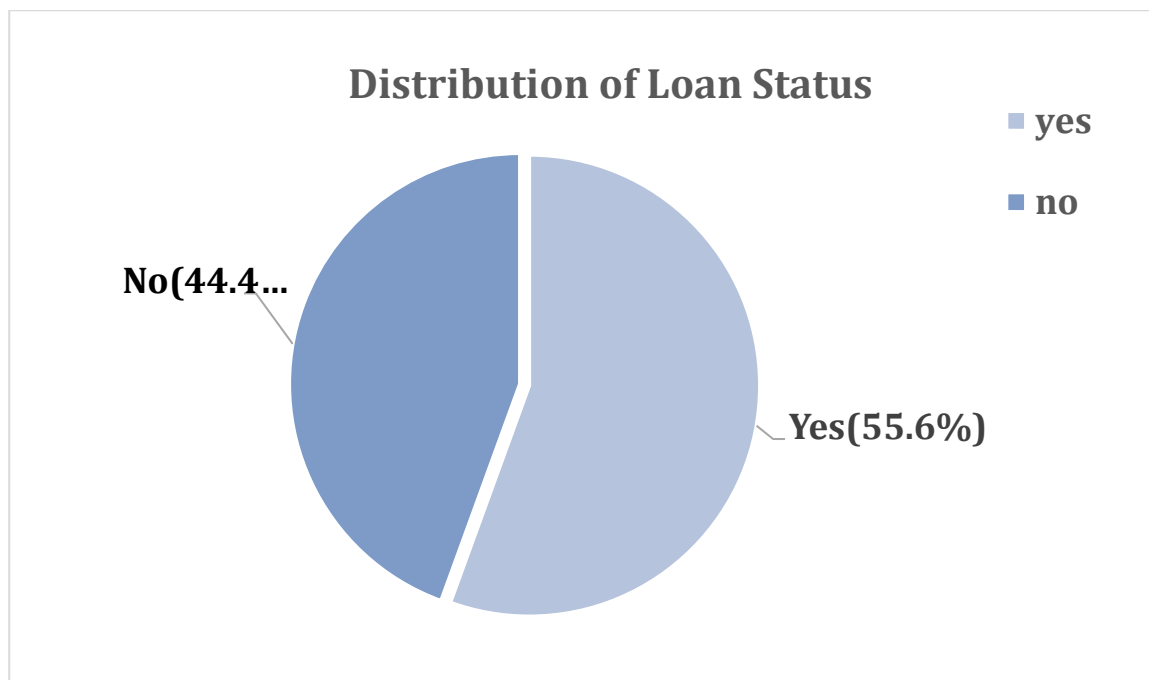


Figure 6.11 Distribution of Loan Status

5.4.13 Distribution of Medical Treatment Access

Of the 45 households, 39 households reported having medical needs in the last 30 days. The vast majority of households are stressed over incomes and vast majority of households have medical requirements. This indicates that there are many health issues in the study area.

Table 5.17: Medical Treatment Access

Received Medical Treatment	Numbers of Respondents	Percentage (%)
Yes	39	86.7
No	6	13.3
Total	45	100

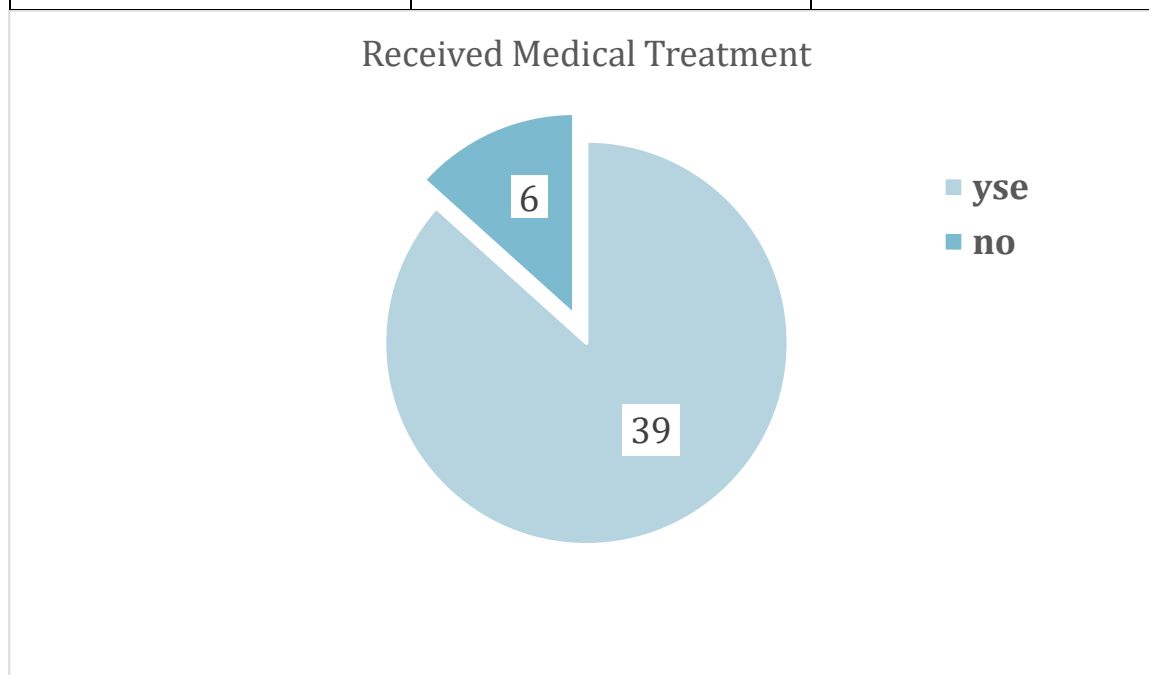
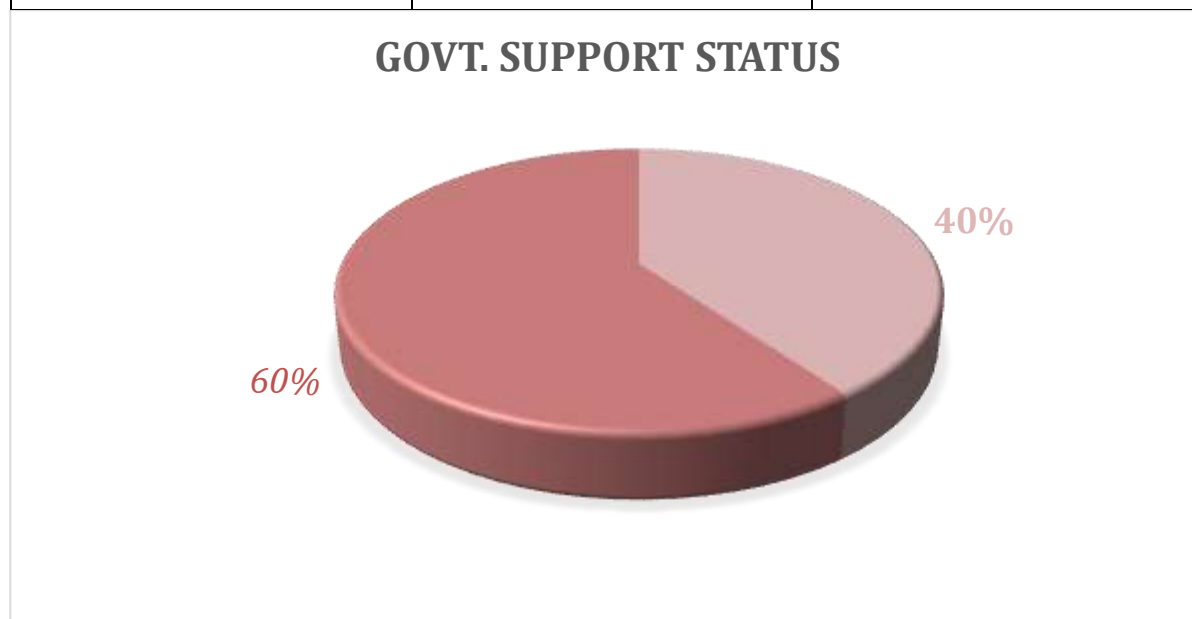


Figure 6.12 Received Medical Treatment**5.4.14 Distribution of Govt. Support**

18 households are receipt government assistance, 27 do not receive government assistance. This outcome shows that the social security coverage in the area is lacking or inadequate, as most households do not have a social security coverage.

Table 5.18: Government Support

Govt. Support Status	Numbers of Respondents	Percentage (%)
Yes	18	40
No	27	60
Total	45	100

**Figure 6.13 Govt Support Status****5.4.15 Distribution of Drinking Water Source**

45 households are provided with safe drinking water sources while 19 households obtain water from unsafe sources which accounts for 57.8% and 42.2% respectively. This shows that the overall safe water coverage of a majority of households is achieved, though there are some households using unsafe water.

Table 5.19: Drinking Water Source

Drinking Water Source	Numbers of Respondents	Percentage
Safe	26	57.8
Unsafe	19	42.2
Total	45	100

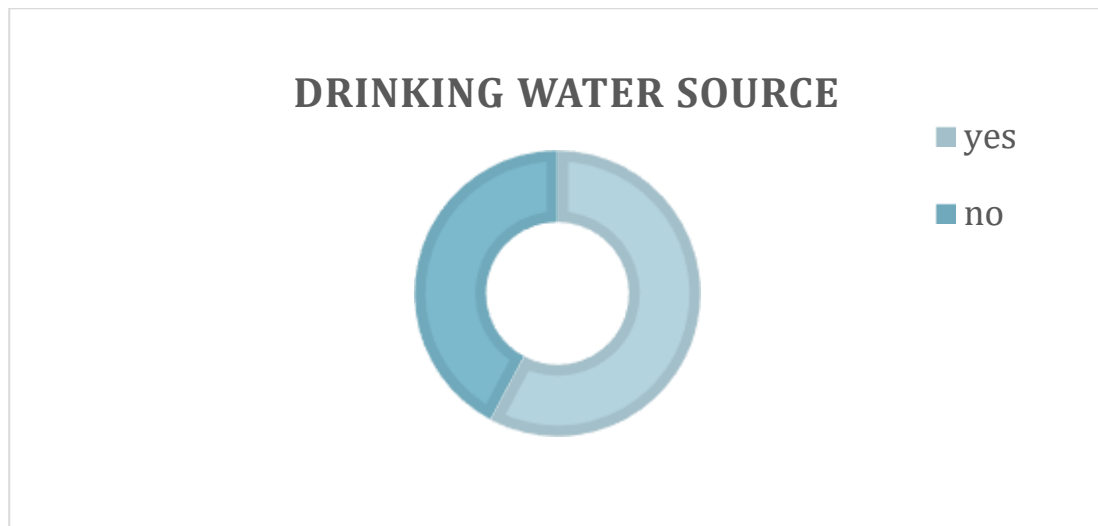


Figure 6.14 shows that 45 households (100%) use drinking water source, whereof 24 households (53.3%) use sanitary toilet facility, and 21 (46.7%) use unsanitary toilet. This shows that although the use safe sanitary facilities are slightly higher, there is room for further improvement.

Table 5.20: Sanitary Toilet

Toilet Facility	Numbers of Respondents	Percentage (%)
Sanitary	24	53.3
Unsanitary	21	46.7
Total	45	100

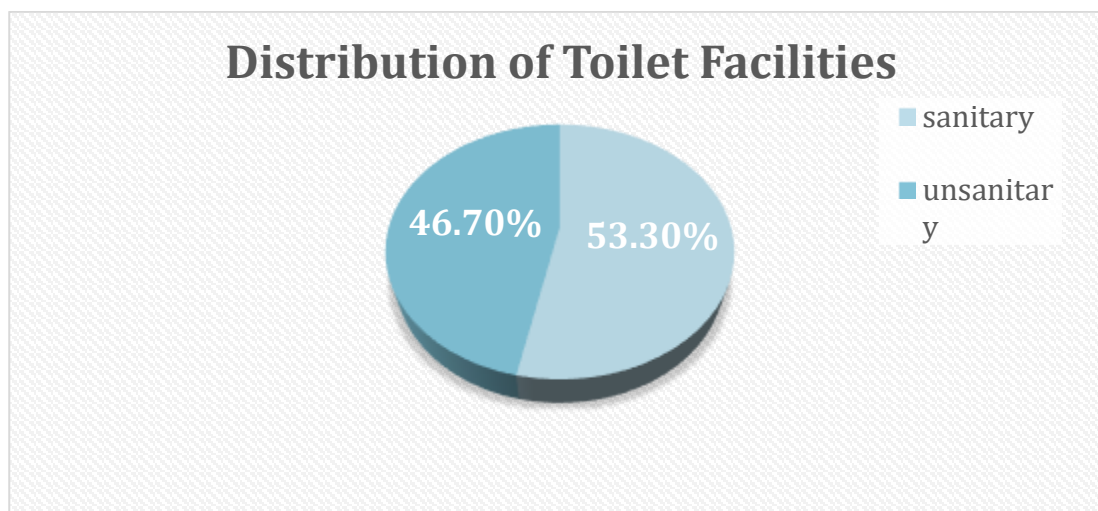


Figure 6.15 Distribution of Toilet Facilities

5.5 Discussion

The findings of the study indicate that poverty is still a big issue in the selected haor areas of Netrokona. The majority of households rely on the agriculture sector and are extremely vulnerable to floods, crop failures, water-logging and other natural calamities. This can lead to declining agricultural output and income at the household level, leading to further poverty risks. The socio-economic analysis also indicates that the livelihood opportunities of many households are limited and their primary source of income is seasonal agriculture. The findings of the study also show that education and land ownership is significant in alleviating poverty in the households. People with more education will be more likely to gain better employment and more income. In the same way, the greater the land ownership the better the production of agriculture and the economic security.

However, poverty was not statistically influenced by savings suggesting that it is not enough to enhance the economic status of households in the study area. Finally, the study results indicate that both the socio-economic and environmental factors affect poverty in the selected haor areas. Hence, there is an urgent need to increase the educational opportunities, improve agricultural productivity, increase government support, develop easily accessible agricultural credit and develop alternative avenues of income through which poverty can be reduced and socio-economic status of rural households can be improved. The findings of the present study revealed that poverty is a big issue in the areas of haor selected in the Netrokona district. Based on the PCA wealth index, 40 percent of the households are poor while 60 percent are non-poor. Results of Logistic Regression show that education and land ownership are significant factors in decreasing poverty, while although savings has a negative impact, it is found to be statistically insignificant. Thus the findings of the study show that the poverty can be reduced and the socio-economic status of the haor people improved through expansion of education, access to productive assets and provision of alternative income generating sources.

6. Conclusion

The socio-economic determinants of rural poverty in the haor region of Netrokona district has been explored in this study by employing Principal Component Analysis (PCA) and Binary Logistic Regression. The results show that the human capital, income, land ownership, savings and credit access have significant contributions in defining the household poverty. The study reveals that the rural poverty situation in the haor region is multidimensional in nature, where socio-economic and structural aspects play a role in influencing it. This study investigates the rural poverty in Bangladesh through PCA and Binary Logistic Regression, and the findings provide empirical evidence that is helpful in comprehending rural poverty in Bangladesh and will serve as a base to formulate effective poverty reduction strategies in the haor region.

7. Policy Recommendations

Considering the results of this study, greater emphasis should be laid on increasing educational opportunity, creating more sustainable employment and enhancing the agriculture productivity of the haor region. Access to affordable and institutional credit and promotion of household savings need to be expanded for strengthening economic resilience through government and relevant development organizations. Strengthening investments in rural infrastructure, health and climate resilient agriculture technologies should also be included to minimize impacts of seasonal floods. Moreover, active collaboration among government agencies, local government and financial institutions and development partners is necessary to guarantee successful implementation of poverty alleviation measures and sustainable rural development in the haor area.

8. Limitations of the Study

This study has some limitations that should be taken into account when interpreting the study findings. The study was done on the data collected from 45 households in three selected upazilas of Netrokona district only. Therefore, the findings of the study may not be exactly representative of the whole haor region. Second, the study adopted a cross-sectional approach, thus it was not possible to analyse any changes in household income, livelihood and poverty from one season to the other. Furthermore, because of limited time and resources, a limited set of socio-economic variables were considered for analysis. The forthcoming studies with a larger sample, longitudinal data along with other socio-economic variables may offer a complete and more accurate picture of rural poverty in the haor region.

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