

The Role of Rural Women in Household Food Security for Sustainable Livelihood: A Case Study on Natua and Jalduar Village of Puruliya District, West Bengal

Susmita Das¹, Dr. Sadhana Rani²

¹Research Scholar, Department of Geography, V.S.S.D. College (Chhatrapati Shahu Ji Maharaj University), Kanpur.

²Professor, Department of Geography, V.S.S.D. College (Chhatrapati Shahu Ji Maharaj University), Kanpur.

ABSTRACT

In the twenty-first century, the pursuit of food security remains a major challenge, especially for developing countries. At the household level, proper nutritional management through the contribution of rural women is capable of helping the reduction of hunger, food insecurity and ultimately reaching a sustainable livelihood. However, the role of rural women in ensuring household food security is now unrecognized in the developmental policy. This study was undertaken to explore the distinct participation of rural women in food security at the household level. Primary data were obtained by household survey using structured questionnaires from Natua and Jalduar village of Puruliya II block of Puruliya District. A total of 60 households particularly aged between 20 to 70 years women were selected based on a simple random sampling method. To organize and summarize field data used a frequency distribution table and percentage calculation. To determine food security status, the USDA (United States Department of Agriculture) household food security scale was used, to examine the relationship between household food security and the particular role played by women log linear model was also utilized. The survey result indicates that socioeconomic and demographic variables such as age group, and marital status, income, education, and occupation did not create a significant impact on household food security. Evidence from the household survey also showed that about 60% of households were food insecure with hunger and severe conditions, 26% out of them were faced with food security without hunger, and only 13% experienced food security in the study area. This finding should be useful for govt. and policy makers to make attempts to change the socio-economic condition and diversification in the role of rural women with a more focused approach to dealing with food security at the household level.

KEYWORDS: Food Security; Rural Women; Household; Sustainable Livelihood.

INTRODUCTION

Food security is a crucial component of economic progress, vital for upholding social cohesion. Food insecurity poses a worldwide challenge, with around 690 million individuals globally suffering from malnutrition. In 2019, an estimated 25.9% of the global population lacked consistent access to sufficient and nourishing food [UNICEF, 2019]. Food security was officially defined during the 1996 World Food Summit as the state in which individuals have consistent and reliable access to sufficient safe and nutritious food that fulfills their dietary needs and personal food preferences, allowing them to maintain an active and healthy lifestyle.

Food security is an intricate issue, but the World Bank's commonly accepted definition is that it refers to the ability of individuals to consistently obtain enough of a variety of food to maintain an active and healthy way of life. Food security is contingent upon several factors, which include agricultural production, food imports and donations, employment opportunities and income, decision-making within households, resource allocation, healthcare utilization, caring practices, as well as political stability, and national security [Maxwell et al., 1996].

Food security can be evaluated based on four key dimensions: availability, access, use, and stability, as outlined by the Food and Agricultural Organization. On the other hand, there are three levels of food security: household food security, national food security, and global food security. The International Fund for Agricultural Development [IFAD, 2010] define household food security as the ability of a household to get a consistent and sustainable supply of sufficient food. Ensuring sufficient food accessibility is crucial for sustainable livelihoods, which encompass individuals, their capacities, and their means of life, including food, income, and assets. Women, as a social collectively, are susceptible to experiencing food insecurity, despite their essential role in the food chain. However, their contribution to the maintenance of food security within households is often overlooked in policy-making and resource distribution, particularly in developing nation. Rural women have a substantial and multifaceted role in assuring food security and are essential for generating over 50% of the global food production. Women as a social group are vulnerable to food insecurity despite their crucial role in making of food The value of the role of maintaining household food security is frequently neglected in policymaking and the distribution of resources, especially among developing nations. Rural women are essential in achieving food security within households as they serve as the primary producers, providers, and managers of food resources (Agarwal, 2018). They are not only improving nutritional and health status

but also has the potential to enhance the economic and educational circumstances of their family members [Wei et al., 2021] Puruliya district is located in the southwestern region of West Bengal. It has the top position in terms of the overall number of underdeveloped villages. It is necessary to understand the condition of family food security, especially among rural women, who play a vital role in preparing food for their households. The productivity of female farmers is constrained by the same factors that affect small-scale agricultural producers in general, but is also worsened by gender-specific limitations. Female farmers face similar constraints as small-scale agricultural businesses, but they encounter additional constraints specific to their gender. The factors encompass constraints on time and mobility arising from domestic and reproductive tasks, restricted access to resources and agricultural services (such as extension programs), low literacy levels, limited involvement and influence in producers' organizations, and socio-cultural influences that impede their mobility and participation in governmental decision-making [Achampong, et al.]. Individuals of all genders and age groups in rural households participate in a diverse range of non-agricultural activities throughout the year. Women's contributions to overall household incomes are significant and should not be overlooked [Nahusenay & Tessfaye, 2015].

RATIONAL OF THE STUDY:

Now, there are 800 million people in the developing world who are facing food insecurity and

fighting to meet their food and nutrition needs. Experts anticipate that this issue will worsen in the future, with India being one of the affected nations. Rural areas are primarily characterized by their small size and remote location, often accompanied by insufficient infrastructure, such as poorly maintained roads and limited availability of electricity and clean water. The Puruliya II block in the Puruliya district has the largest number of underdeveloped villages in terms of absolute figures. The majority of this block is rural, with 90% of its regions classified as rural. The settlements of Natua and Jalduar have nearly identical gender ratios, with an equal distribution of males and females. Hence, it is imperative to comprehend the significance of women in guaranteeing the sustenance of household food security in these rural communities. Most of the population in these two communities' experiences poverty and lacks essential infrastructure and social engagement. Moreover, women, who are especially susceptible in rural communities, have made significant contributions to the advancement of the nation by proficiently handling diverse domestic requirements and pursuing numerous livelihood methods.

EMPERICAL LITERATURE REVIEW

This section provides an examination of pertinent literature relevant to the idea of food security and the different approaches or techniques used to assess it. Additionally, it offers an overview of the role of women in ensuring household food security on a global scale as well as regional level. There exist about 200 distinct definitions of food security [Hoddinott, 1999]. During the 1990s, the concept of better access was extended to include factors such as livelihood and subjective considerations [Maxwell,1996]. The Food Summit defined food security as the achievement of economic as well as physical access to sufficient, safe, and nourishing food that fulfills the dietary requirements and preferences of individuals, households, nations, regions, and the global population.

This ensures that everyone can lead an active and healthy lifestyle. [FAO, 1996]. The inclusion of household food security as a sub-concept is crucial for accurately assessing food security at the household level. It is crucial to acknowledge that the presence of national or regional food insecurity does not automatically imply food security at the familial level, Groundbreaking research on the occurrence of famine by [Sen,1981]. The International Fund for Agricultural Development (IFAD) defines household food security as the ability of household members to obtain a consistent and sustainable selection of sufficient food.

Elum and Digiteme (2023) examined the food security status of women residing in rural areas of Bayelsa State, Nigeria. Data was collected from 250 women living in rural areas using a comprehensive survey that utilized a multi-stage random sampling method. The results revealed that most of the ladies were elderly, married, and had a high degree of education. Furthermore, they had a substantial number of individuals residing in their families. Regarding the food security index, 77% of rural women were identified as having sufficient access to food, while the other 23% were classed as lacking consistent access to food. The rural women encountered significant obstacles such as elevated food prices, exorbitant living expenses, meagre income, unemployment, and flooding. As a reaction, the women addressed their food security concerns by resorting to less desirable and cheaper food options, seeking assistance from acquaintances or family members to borrow food, purchasing food on credit, and cutting

back on expenses related to their children's schooling.

Kamble (2021) reveals that the empowerment of rural women plays a vital role in achieving sustainable food security in Gobindapur hamlet, situated in the Islampur Block of Uttar Dinajpur District, West Bengal. Five food security variables have been utilized to ascertain the association between food security and degrees of women's empowerment. The variables encompassed in this study are the presence of a well-rounded diet, the ability to obtain nutritious meals on a regular basis, the amount of money spent on food per person in a family each day, the Body Mass Index (BMI), and the occurrence of malnutrition and/or anemia in women and children. This research demonstrates a significant correlation between multiple indicators of household food security and the attainment of women's empowerment. Promoting women's empowerment, namely by improving educational attainment, increasing income, and ensuring equal involvement in household decision-making, has a positive influence on eating habits, spending on food, and the overall nutritional welfare of family members.

Payne et al. (2016) discussed factors associated with food insecurity among women and children in rural Rajasthan, India the factors contributing to the vulnerability of both women and children encompass heightened poverty, limited dietary variety, tribal affiliation, and inadequate savings to meet food expenses. The primary determinant of food insecurity is the socio-economic obstacle, as well as decisions pertaining to integrated agriculture and nutrition. Comprehending the factors that influence food security can enable non-governmental and other health groups to better support India's most susceptible populations in enhancing nutrition and related health results.

In a study by **Kalansooriya & Chandrakumara (2014)** has demonstrated that women have a vital role in alleviating poverty and guaranteeing food security in rural households in Sri Lanka. Data was obtained from 100 families in the Thirappane division of the Anuradhapura district through a cross-sectional sample survey. Applied the ordinary least square (OLS) method to build a regression model and effectively determined that women's income, their nutritional awareness, and their utilization of indigenous food management expertise are key factors that impact family food security in rural families. Additionally, rural households mostly rely on their own agriculture to meet their staple food needs.

Achampong et al. (2012) Women have a vital role in attaining food security within households by ensuring that there is enough food available, easily accessible, and effectively utilized. A study carried out in 2012 investigated the role of rural women in achieving household food security in Ghana. The study focused on women farmers in the Ejura-Sekyeredumasi District. A sample of one hundred female farmers was selected using a simple random sampling procedure. The food security status of respondent households was determined using the United States Department of Agriculture (USDA)'s Household Food Security Scale. The correlation between household food security and specific tasks performed by women inside the household was examined using the Chi-square test of independence. Just 34% of the households experienced food security in the four weeks leading up to the study. This discovery starkly contradicts the widely accepted notion that households in the Ejura-Sekyeredumasi District. Women practitioners have been observed participating in both on-site and off-site endeavors, while also supervising domestic affairs. The majority of them were discovered to cultivate

maize, cassava, plantain, cowpea, and yam, with minimal engagement in growing vegetable crops. The study results revealed that most female farmers in the area owned farms that were predominantly classified as small-scale.

STUDY AREA

The Puruliya II block is located in the central region of the Puruliya district. The geographical extension of this particular block is from 23°31'15" North to 86°37'31" East. Precisely, this study has to be conducted in two distinct villages. The first is Jalduar is located in the north-western section of this specific block, under Golamara Gram Panchayat. It covers an area of approximately 66 hectares and is inhabited by an overall population of 474 individuals, consisting of 238 males and 236 females. Another one, Natua village, is located in this block under Ghonga Gram Panchayet; this region spans around 72.44 hectares and is home to a population of 49.48% females and 49.74% males. Regarding the limited economic diversity in this region, individuals depend primarily on a solitary means of sustenance. As a consequence, individuals often face poverty due to restricted income-generating prospects.

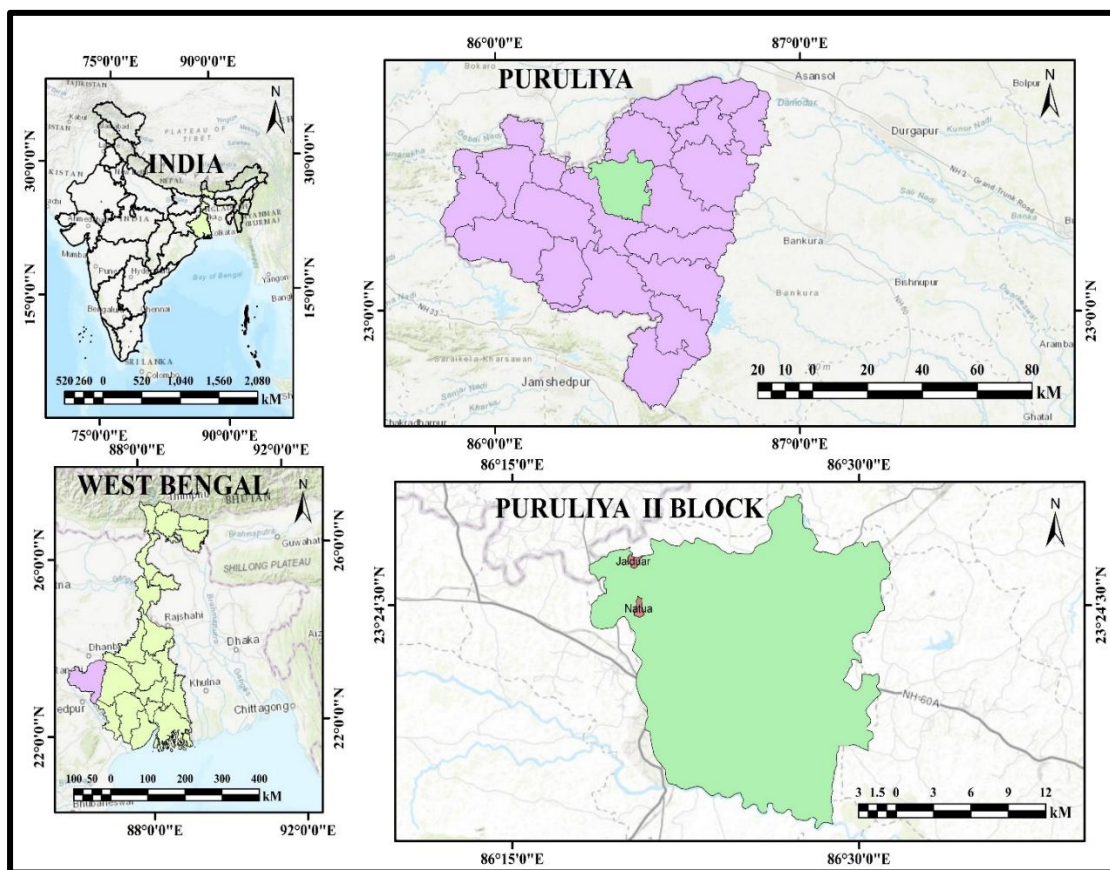


Fig. 1 Location Map of Study Area

OBJECTIVES

The aim of the study is to analyze the women role in assuring household food security and status of food security in Puruliya District in the rural context. In order to achieve these, aim

the study attempts to fulfil the following specific objectives:

- i) To examine various role of rural women in household food security.
- ii) To determine food security status of rural women for sustainable livelihood.

METHODOLOGY

This section provides a concise overview of the study's population, sampling design, data-acquiring method, and data- interpreting techniques used in the current research.

Universe of Population

This study entirely focused on rural women of particularly two villages Natua and Jalduar under Puruliya II block of Puruliya district of West Bengal and specifically aged between 20-70 years.

Sampling Design and Data Collection Method

The study was entirely depended on primary data. For collection of primary data sample is collected through simple random and purposive sampling method. To represent rural women in West Bengal at first Puruliya district was selected on the basis of highest number of backward villages then specifically Puruliya II block is to represented around 89.19% rural area and there after Natua and Jalduar villages under Puruliya II block have been chosen on the basis of total population as well as total female population. At the last stage following random sampling method thirty household were selected from each two villages totaling of 60 household. The structured questionnaire was basically directed to the primary women is defined in this analysis as a female member in the household who most actively participates in the household activities such as food preparation.

Analytical Procedure

Following the data collection phase, the gathered data undertook editing, coding, and analysis utilizing statistical software, specifically IBM SPSS (Statistical Package for Social Sciences Version 28) and Microsoft Excel. Both in tabular and functional form. Descriptive statistics (arithmetic mean and SD) and frequency distribution tables were employed to analyze the socio-economic characteristics of respondent household. The log linear model utilized for analysis, primarily to ascertain factors such as education encompasses the respondents (rural women) such as their personal income, household income, their type of occupation, their level of social activity for food security in their household. To classify the food security status of households, the responses collected from a series of questions were evaluated and assigned a numerical value. These individual scores were then combined. The additional scores were compared to the USDA (2000) food security status chart and subsequently classified as food security, food insecurity without hunger, food insecurity with hunger, and severe food insecurity.

RESULT AND DISCUSSION

Characteristics of Respondents:

Table 1 illustrates the socioeconomic attributes of the participants. The study revealed that the majority (75%) of the women surveyed were identified as belonging to families led by men at both two villages Natua and Jalduar.

Table 1 Respondents Characteristics

Variables	Frequency (N=60)	% of Respondents
Gender of Household		
Male	45	75
Female	15	25
Age		
20-30	22	36.66
31-41	21	35
42-52	11	18.33
Above52	6	10
Marital status		
Unmarried	2	3.33
Married	54	90
Widowed	4	6.66
Educational Level		
No Formal Education	30	50
Primary Level	17	28.33
Secondary Level	13	21.66
Post Secondary Level	0	0
Household Size		
1-3	8	13.33
4-6	38	63.33
7-10	13	21.67
>10	1	1.66
Farm Size		
Less than 1 Bigha	15	25
1-3 Bigha	36	60
3-6 Bigha	8	13.33
>6 Bigha	1	1.66

Primary Survey, 2023.

Approximately 3.33% of women are unmarried, while the majority of rural women, about 90%, are married. Widowed status applies to only 6.66% of rural women in the study area. Once more, half of rural women (50%) out of total respondents had achieved just the lowest possible level of education; besides that, no one could reach higher education category in both of two villages. In the case of farm size, 60% of respondents have 1–3 Bigha, and the rest of the respondents have the minimum quantity of farm size. Lastly, the modal size of household member in this particular study area was in the range of 4 to 6.

Socio- Economic Characteristics and Food Security:

Before delving into the diverse functions of rural women in ensuring household food security it is crucial to comprehend the interconnection between their fundamental socio-economic aspects and household food security.

Table 2 Respondents Age Groups and Food Security (%)

Do your household get basic protein food item such as various lentils, milk, fish, egg, meat?		
Age Group	Yes	No
20-30	3.33	33.33
31-41	5	30
42-52	3.33	15
Above 52	0	10

Primary Survey, 2023.

Table 3 Respondents Marital Status and Food Security (%)

Do your household get basic protein food item such as various lentils, milk, fish, egg, meat?		
Marital Status	Yes	No
Unmarried	0	3.33
Married	6.66	83.33
Widowed		6.66

Primary Survey, 2023.

Table 4 Respondents Educational Level and Food Security (%)

Do your household get basic protein food item such as various lentils, milk, fish, egg, meat?		
Educational Level	Yes	No
No Formal Education	8.33	41.66
Primary Level	11.66	16.66
Secondary Level	13.33	8.3
Post Secondary Level	0	0

Primary Survey, 2023.

Table 5 Respondents Occupation and Food Security (%)

Do your household get basic protein food item such as various lentils, milk, fish, egg, meat?		
Occupation	Yes	No
Farming	16.66	8.33
Industrial Worker	0	0
Local Wage Labourer	0	0
Professional Worker	0	0
Govt. Employee	0	0
Private Employee	0	0
Unemployed	8.33	66.66

Primary Survey, 2023.

Table 6 Respondents Income Level of Rural Women and food security (%)

Do your household get basic protein items such as various types of lentils, milk, fish, egg, meat?		
Income category	Yes	No
No Income	8.33	66.66
<5000	16.66	8.33
5000-20000	0	0
20001-35000	0	0
35001-50000	0	0
>50000	0	0

Primary Survey, 2023.

Table 2 to 6 present the correlation between the selected socioeconomic factors of participants and food security, as assessed by evaluating whether household receive sufficient essential nutrition items every month. Table 2 illustrates the importance of the age group in household food security. The research indicates that people between the ages of 20-40 experienced protein equipment. The correlation between marital status and food security level is depicted in Table 3, revealing that a substantial portion of married women experience a deficiency in obtaining vital food supplies. Many experts consider education to be a crucial factor in determining food security. Table 4 indicates 16.66% and 41.66% of individuals having primary and no formal education perceived a lack of security in protein foods. There is an increasing number of studies suggesting that increasing women’s income within the household has a significant beneficial effect on the well-being of both the family and society. Nevertheless, it is important to highlight that table 5 conflicting result, indicating a detrimental impact in this specific case. Unemployed women commonly experience food insecurity this particular table provided us with information on the issue.

Modelling:

To assess the impact of the explanatory variables, linear and log-linear models were initially calculated to identify the influence of specific factors on the household income of various household groups. However, the log-linear model outperformed in terms of the expected

signs and magnitudes of the correlation coefficient and p-values. Multiple factors can influence household food security; however, it is not appropriate to incorporate all variables into a model due to theoretical and economic constraints. A subset of crucial variables was chosen to ensure the model's simplicity. $\ln Y = \ln a + b_1 \ln X_{1i} + b_2 \ln X_{2i} + b_3 \ln X_{3i} + b_4 \ln X_{4i} + b_5 \ln X_{5i} + b_6 \ln X_{6i} + b_7 \ln X_{7i} + b_8 \ln X_{8i} + b_9 \ln X_{9i} + b_{10} \ln X_{10i} + b_{11} \ln X_{11i} + b_{12} \ln X_{12i} + b_{13} \ln X_{13i} + U_i$ Where, Y = Food security X1= Level of education (average level of respondent education) X2= Household size (No. of household members) X3= Farm size (Decimal) X4= Household income (Rs. / monthly) X5= Income of respondent (Rs. / monthly) X6= Savings (Rs. / Month) X7= Access to credit of rural woman X8= Employment X9= Nutritional knowledge of rural woman X10= Decision making ability X11 =Spending ability X12 =Social participation X13 = Control over capital U_i =Error terms b_1, \dots, b_{13} =Correlation of coefficient respective variables.

Pattern of Average Monthly Income and Expenditure of the Household

This study examines the monthly personal income of the participant, which refers to overall earnings they generate from several work-related endeavors. Once again, the monthly household income was determined by aggregating the earnings of all family members derived from their various engagements. Table 7 indicates that the monthly average salary from farming was 500 while as a private employee it was only 2000. Beside that the average household income from farming category was Rs.900, while in local wage Labourers and professionals it was Rs.2000 and Rs. 7000 respectively. Based on this income nature it may be simply asserted that they are unable to afford a wide range of dietary options.

Table 7 Monthly Respondents and Household’s Income Pattern

Sources of Income	Respondents Income (in Rs. /-)	Household’s Monthly Income (in Rs. /-)
Farming	500	900
Industrial Worker	0	0
Local wage Labourers	0	2000
Professional Worker	0	7000
Govt. Employee	0	0
Private Employee	2000	4000
Unemployed	0	0
Total	3500	13000

Primary Survey, 2023.

The monthly spending was determined by factoring in the expenses incurred on both food and non-food products consumed by all members of the family. According to Table 8, the overall monthly average spending was Rs.6843.71 with a significant portion of the income being used to purchase food and other products.

Table 8 Monthly Expenditure pattern of rural women in their household

Items	Mean	Std. Deviation
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Food	4266.66	1971.11
Fuel/Gas	268.83	567.19
Transport	433.89	603.18
Clothing	145.00	476.00
Health and Medicine	1043.33	1498.09
Children Education	686.66	1001.81

Primary Survey, 2023.

Owing to the limited financial resources in the surveyed region, participants reported an average monthly expenditure of 4266.66 Rs. in the food procurement category. They further indicated that they were only able to afford essential food items daily during the survey. However, there were instances when even these necessities could not be purchased due to lack of money. In the health and medical sector, a significant amount of money was invested, leading to a reduction in food related expenses. The expenditure in the education sector is significantly inadequate, amounting to only 686.66 Rs. They can allocate a relatively small amount of money towards acquiring a quality education. Which directly influences their choices of daily food consumption and the potential health benefits associated with certain food items.

Table 9 Distribution of Monthly Income of the Household and Respondents

Categories of income	Households		Respondents	
	Number	Percentage	Number	Percentage
No income	0	0	45	75
<5000	25	41.67	15	25
5000-20000	35	58.33	0	0
20001-35000	0	0	0	0
35001-50000	0	0	0	0
>50000	0	0	0	0

Primary Survey, 2023.

A minority of rural women in this study area were actively participating in their families as income earners. Table 9 represents the distribution of households and respondents according to their income. According to the table, the majority of respondents (75%) reported having no income generating activities, while 25% of respondents reported earning less than 5000 a month.

Effects of selected factors on food security

Measuring food security does not rely on a single clear measure. Food security relies on factors such as agricultural output, food imports and donations, employment possibilities and revenue generation, decision making within household and allocation of resources, consumption of healthcare services and caregiving practices (Jones et al.) According Obasi's (2004) research, the primary factors influencing household food security are income, household size, education,

price of staple food and gender of the household head. Although many studies in the field of food security rely on a limited set of indicators, it is important to note that not all initiatives can be assessed using these criteria. The outcome, including estimated correlation and relevant statistics, has been displayed in Table No 10. The significant factor further elucidated.

Table 10 Factor affecting food security in the studied household

Parameters	Mean	Std. Deviation	Std. Deviation of mean	Correlation	P value	Cohen’s d (95% confidence interval)
Education Level (x1)	12.000	15.384	7.692	0.051	0.108	-.408
Family Size (x2)	14.250	15.945	7.973	0.195	0.086	-.343
Farm Size(x3)	13.500	14.201	7.100	0.926	0.077	-.312
Household Income(x4)	17.667	15.695	9.062	0.937	0.095	-.454
Respondent Income(x5)	9.667	18.074	7.379	0.135	0.124	-.350
Employment(x6)	8.667	11.094	4.529	0.599	0.057	-.175
Savings(x7)	11.400	16.994	7.600	-0.183	0.104	-.345
Decision making ability (x8)	28.250	28.123	14.062	-0.959	0.069	-.283

Primary Survey, 2023.

Education: Lawal (2005) discovered that education and land size have a significant impact on the adoption of improved practices by rural women, to enhance household food security and nutrition. Pearson's correlation coefficient was calculated to be 0.051, which did not attain statistical significance at a p-value of 0.108. This suggests that it does not play a key role as an indicator of food security. The educational level of participants exhibits a very weak correlation with their household food security

Family Size: The total number of family members is a crucial component in determining the level of household food security. The correlation coefficient value for family size was 0.195, showing a very weak association between food security and the number of family members. The p-value suggests that the relationship between family size and food security did not reach the threshold for statistical significance.

Farm Size: The correlation coefficient between farm size and food security was 0.077, suggesting a very weak relationship between these two variables and approaching statistical significance.

Household Income: The household's ability to purchase enough food depends on its income.

Households with a lower income are more likely to encounter food insecurity. Conversely, households in the high-income category typically experience far more food security compared to those in the lower-income category, as they have the financial means to purchase a sufficient quantity of nutritious food items. The correlation coefficient for household income was 0.937, indicating a moderately strong and statistically significant association at the 1 percent level, with the p-value associated with this correlation being 0.095.

Respondent Income: After education, the income of the respondent is the direct role of rural women to ensure their household food security. However, the correlation value did not indicate a strong association between these two variables, such as their education, which showed just a tiny and insignificant relationship.

Employment Status: The correlation coefficient for the employment of rural women was 0.599. It indicates that, if all other variables remain constant, a 1 percent increase in employment would lead to a 0.599 percent improvement in food security. One possible explanation for this phenomenon is that employed individuals can effortlessly fulfil their daily requirements regarding food and nutrients. Although there is a moderate association between these two variables, the p-value of 0.057 did not reach the significance level.

Savings: Due to the limited source of income for rural women, their overall earnings were very low. Their savings value for ensuring household food security had a strong negative correlation of -0.183, which was very close to the significance threshold value of 0.104.

Decision Making Ability: This specific criterion is crucial as it empowers rural women to make decisions regarding their household's nutritional needs for food security. After performing statistical calculations, we determined that the Pearson correlation coefficient was once again negative, specifically -0.069. Therefore, their decision-making on food security was very feeble.

Table 11 Rank order of respondents by the role of rural women in household food security

Parameter	Weight Mean Score	Rank
Cultivation	6.00	1
Food Production	1.35	2
food for storage keeping	1.2	4
Buying varieties of food items for consumption	1.29	3
Reduction Child Nutrition	0.6	5

Primary Survey, 2023.

Table 11 represents the hierarchical arrangement of women's roles in ensuring food security inside the household. The findings indicate that cultivation crops have received the highest ranking, with a weighted mean score of 6.0 Subsequently, the household's welfare is ensured (1.9833), with the acquisition of diverse food products for consumption (1.35), as well as the

procedure of storage in the case of buying food was (1.29) and contribution of the acquisition of diverse food products for consumption (1.29) and while contributes to the decrease child nutrition has least mean score 0.6

Table 12 Food Security Status According to USDA Classification:

Sl. No.	Food Security Status	Frequency	Percentage
1	Food Secure	8	13.33
2	Food insecure without hunger	16	26.66
3	Food insecure with hunger	26	43.66
4	Food insecure with hunger (severe)	10	16.66
	Subtotal	60	100

Primary Survey, 2023.

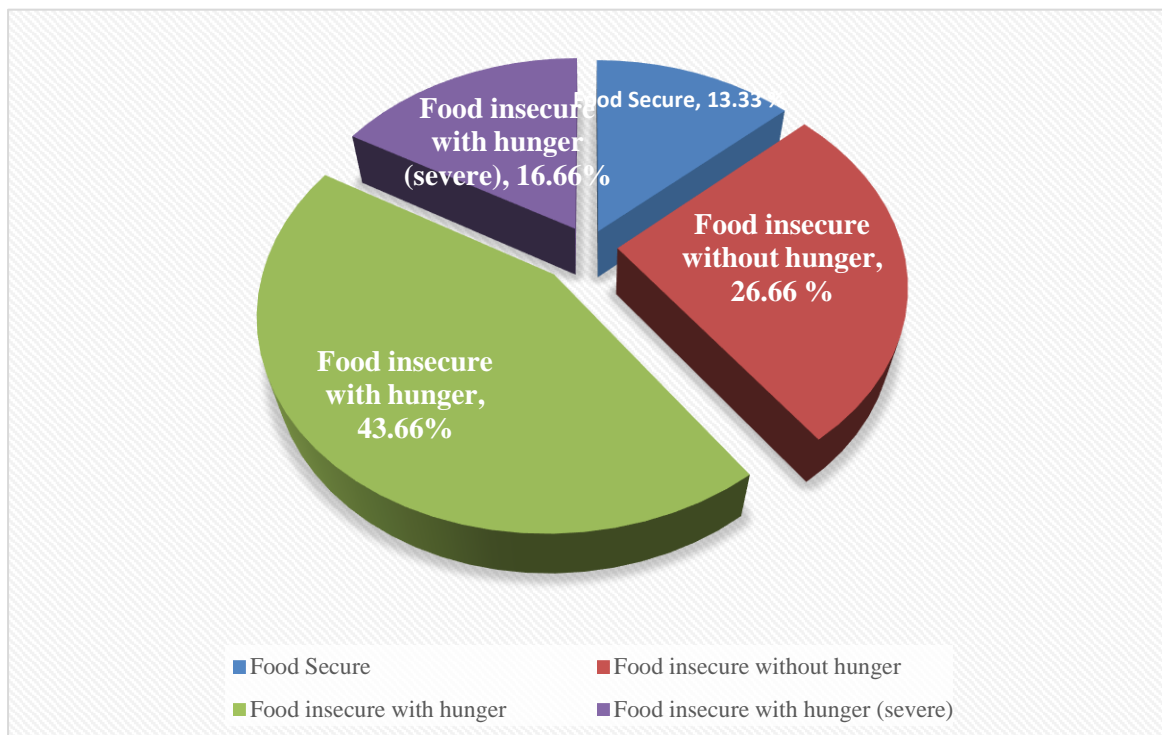


Fig. 2: Food Security Status in Natua and Jalduar Village

According to the information contained in Table 12 it is shown that just 13.33% of the households in Natua and Jalduar villages of Puruliya II block were found to be food secure during two-day primary survey. The search starkly contradicts the widely accepted notion that

households in the two villages of Purulia District have consistently significant food insecurity as a result of different physical barriers and constraints in the socio-economic sector. Conversely, 26.66% of the population suffered food insecurity without hunger, namely among adult in the household. Additionally, 43.66% of the population had food insecurity with hunger, which involved reducing meal quantities and skipping meals for all household members including children. The prevalence of severe hunger experiences in the research area is around 16.66% among those who are food secure.

SUMMARY OF MAJOR FINDINGS

The study findings indicate that the respondents had an average age ranging from 20 to 40 years, with 90% of them being married. Nearly half of the participants lack formal education, while around 28.33% possess only primary education. The mean number of family members ranged from 4 to 6. Approximately 75% of the participants belonged to the category of those with no income. Households allocate a significant amount of their monthly income to essential food products, healthcare, and medicine,

while spending minimally on education due to limited savings. The log-linear model employed eight distinct factors to ensure household food security. The findings showed that only the dimensions of farm size and household income exerted a discernible influence on food security. The remaining six variables, namely family size, respondent education level, income, employment, saving, and decision-making ability, did not exert a significant influence on food security. Finally, the USDA household food security scale was employed to determine the overall food security status of the households. The results demonstrated that the food security situation in these two villages is unsatisfactory.

LIMITATION OF THE STUDY

This study specifically focuses on two villages, Natua and Jalduar, located in the Puruliya II block. However, it is important to note that there are a total of 115 villages in this block. Examining every single village is unfeasible given the limited duration of data collection. Although this district comprises a total of 20 blocks, we have chosen only the Puruliya II block for this study due to its highest proportion of rural population. Therefore, it is recommended that a more extensive investigation be carried out to provide a full assessment of food security among all rural women in the district in the future.

CONCLUSION AND RECOMMENDATION

Women constitute nearly of half of the total population of Natua and Jalduar village of Puruliya district so the majority of the rural women have a great chance to ensure household food security but going by the findings of this study, it is generally revealed that women did not play a significant role in ensuring household food security. The environmental conditions in these two villages limited the ability of residents to engage in income-generating activities that involved various forms of occupational services. Consequently, they were unable to make significant contributions towards their food expenses. According to this particular study, women aged mainly between 20 and 24 years from two villages are obtaining the highest number of married positions. However, the absence of them in formal education and

knowledge leads to a limited comprehension of the significance of various food components.

Based on the aforementioned aspects, the following strategies are recommended.

Offering women in rural areas access to formal education can improve the food security of both women and their households. There is a requirement to improve the promotion of educational programs located in rural communities and specifically aimed at women. Government institutions, NGOs, and local community leaders should take the necessary actions to eliminate illiteracy and the resulting socioeconomic deficiencies in rural areas and policymakers ought to improve women's ability to create income to maximize the benefits of women's earnings for household food security and nutrition.

The government should guarantee the availability of vital infrastructure, such as a robust transportation network and sufficient marketing facilities, to facilitate the sale of domestically manufactured items and augment the income levels of people.

Finally, it is recommended to identify households that have been classified as highly food-insecure and then local government authorities should enact practical strategies to address the substantial challenges that women encounter in ensuring sufficient food availability within their households.

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