

Food and Nutritional Security among Schedule Caste (SC) Women in Lakhimpur District of Assam: An Empirical Study

Dr. Bikash Hazarika^{1*}

^{1*}Assistant Professor, Department of Economics North Bank College, Ghilamara, Assam, India

Citation: Dr. Bikash Hazarika et.al (2023), Food and Nutritional Security among Schedule Caste (SC) Women in Lakhimpur District of Assam: An Empirical Study, *Educational Administration: Theory and Practice*, 29(4), 923-927
Doi: 10.53555/kuey.v29i4.6062

ARTICLE INFO

ABSTRACT

Food is the basic necessity of life. Food self-sufficiency and nutrition security are the essential components of food security. Therefore, food security should ensure both adequate food availability and desired nutrition. It is a major problem of the state like Assam, because of shortage of food grain production, poverty and lack of nutritional knowledge. In this study, an attempt has been made to assess the extent of food security among the SC Women of Lakhimpur district of Assam. For finding out the extent of food security, Per Capita per day Calorie Intake (PCCI) and Food Insecurity Gap (FIG) have been employed. For final assessment of the extent of food security among SC women, calculated calorie intake of sample SC women have been compared with 2230 kilocalories, which is recommended by the Indian Council of Medical Research (ICMR, 2010) for an adult women doing moderate activity. For obtaining final sample, multistage mix-sampling technique has been used. It has been found that out of 41 sample women only 44 per cent has been found as food secure and another 56 percent is found as food insecure.

Index Terms- Food Security, Lakhimpur, SC Women, Per Capita per day Calorie Intake.

1. INTRODUCTION

Ensuring the food security continues to be a challenging issue of vital importance for the developing countries like India. The Millennium development goals provide us with the starting point to assess the level of food security and prioritize our efforts to achieve it. Removal of malnutrition and hunger from the country is not only socially desirable but also necessary for improving overall economic development, as healthy people contribute more to the economy with their relatively higher level of productivity and efficiency. Hunger and malnutrition put enormous cost burden on the society. A World Bank Report states that malnutrition brings down three percent of countries GDP annually. The Indian planners, right from the beginning, realized the need to attain self-sufficiency in food grains as one of the important goals of planning (Singh, 2013).

Food security refers to a household's physical and economic access to sufficient, safe and nutritious food that fulfils the dietary needs and food preferences of that household. The Universal Declaration of Human Rights in 1948 recognized right to food as a core element of an adequate standard of living. Following this, and more especially from world food crisis of 1972-74, food security became an important "organizing principle" in development. Following are the some important definitions of food security:

World Development Report (1986) defined food security as "access by all people at all times to enough food for an active, healthy life."

The 1996 World Food Summit redefined food security as "Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life."

In 2001, the FAO Expert Consultation on Food Security gives a working definition of food security: Food security exists when all people, at all times have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life.

Food insecurity exists when people do not have adequate physical, social or economic access to food as defined above. Food insecurity, thus, is just an opposite situation of food security.

A total of 811 million people in 2020, or around one in three people in the world were estimated to be suffering from chronic hunger regularly and not getting enough food to conduct an active life due to poverty (Food and Agricultural Organization [FAO], 2020). The South Asian region is home to more chronically food insecure people than any other region in the world and Global Hunger Index (GHI, 2022) placed India in 107th rank among 121 countries.

According to FAO (2020) estimate (The State of Food Security and Nutrition in the world), 189.2 million people are undernourished in India. By this measure 14 per cent of the population is undernourished in the country and also 51.4 per cent of women of reproductive age between 15 to 49 years are anaemic.

As per the NSSO 75th round data, the food availability status in Assam is the lowest among all the states of the country. Moreover, the estimate shows that the poverty headcount ratio in the state stands at 32 per cent. Due to the deficiency of the required food supply and extreme poverty, the food security status of the state has been worsened. According to the India State Hunger Index (ISHI), the undernourished population in Assam was more than 40 per cent in 2021 and placed among the “serious” states (Khan et al., 2021).

As compared to state scenario, the food security situation of Lakhimpur district is poor. Because, Lakhimpur district having the second highest BPL households among all the districts of the state. Hence the extent of food security among the people residing in the district is not satisfactory. Most of the SC population of the district inhabits on river banks and their educational level is also very poor. Agriculture and fishing are the main livelihood source, but the food grains production in the district is found significantly low, due to perennial floods causing extensive damage to crops every year. It is a major supply side challenge of food security.

2. OBJECTIVES

The present study has been taken up with the following objectives-

- I. To assess the extent of food security among Schedule Caste women of Lakhimpur district.
- II. To recommend suitable policy measures for improvement of the extent of food security.

3. DATA AND METHODOLOGY

The present study has been conducted based on both primary and secondary data. The main sources of secondary data are the publications of government agencies such as National Sample Survey Organization; Office of the Census of India, Directorate of Food and Civil Supplies; Agriculture and the Economic and Statistics; Government of Assam and Government of India; District Census Handbook of Lakhimpur.

Since the study area is Lakhimpur district, the detail analysis has been made mainly based on primary data collected by carrying out field survey from the district. The sample has been selected through a process of multistage mix-sampling. As per 2011 census, there are 9 development blocks in the district. Among these 9 blocks, 3 have been selected purposively on the basis of blocks having the highest percentage of BPL family. Again, in the second stage, one SC village from each block has been taken purposively on the basis of village having the highest percentage of BPL family. Lastly, a number of representative SC women, i.e. 20 per cent of total women have been selected randomly from each village and finally 41 SC women have been surveyed. A structured schedule has been used to collect the necessary information about actual intake of food. For finding out the extent of food security from primary information the Per Capita per day Calorie Intake (PCCI) and Food Insecurity Gap (FIG) has been employed. The survey has been conducted as per the guideline prepared by International Food Policy Research Institute (IFPRI, 2007). For analysing the extent of food security PCCI has been calculated, based on average nutritive value of Indian food (Gopalan, et al, 2012). For final assessment of the extent of food security, calculated calorie intake of sample women have been compared with 2230 kcal, which recommended by the Indian Council of Medical Research (ICMR, 2010). The calorie intake above the recommended level has been considered as food secure and food insecure otherwise.

4. ANALYSIS OF THE STUDY AND FINDINGS

4.1 Food Security among Schedule Caste Women

On the basis of PCCI, the detail analysis of extent of food security among SC women has been shown in Table 1. It is clear from the table that across the study area 44 per cent SC women are found with intake above the recommended level, i.e. they are food secure and another 56 per cent are found with intake below the recommended level, hence they are food insecure. PCCI across the area has been found 2272 kcal, where the same is found as 2619 kcal for the food secure households and 1924 kcal for the food insecure households. Among the three blocks, highest (2300 kcal) per capita per day calorie intake has been found in Narayanpur block and lowest (2227 kcal) per capita per day calorie intake has been found in Dhakuakhana block. Again,

highest percentage (54%) of food secure households has been found in Narayanpur block and lowest, i.e., 37 percent food secure households have been found in Dhakuakhana block.

Table 1: Extent of Food Security among SC Women across the Blocks.

Blocks		Food Secure Women	Food Insecure Women	Overall
Dhakuakhana	PCCI	2596	1858	2227
	Number & Percentage	6(37)	11(63)	17(100)
Narayanpur	PCCI	2635	1964	2300
	Number & Percentage	7(54)	6(46)	13(100)
Ghilamara	PCCI	2627	1951	2289
	Number & Percentage	5(45)	6(55)	11(100)
Overall	PCCI	2619	1924	2272
	Number & Percentage	18(44)	23(56)	41(100)

Source: Calculated from primary data, (Figures in the bracket indicates percentage to total).

4.2 Extent Food Security among Different Occupational Categories of SC Women

Table 2 reveals that the extent of food security is different among the sample SC women with different occupation. From the table it is clear that the extent of food security among daily wage labour is lowest, i.e. 25 percent, with compared to it, the extent of food security is slight better among the agricultural labour (33%). The highest extent of food security has been found among government service holders. Although, more than 60 per cent of the sample women have been involve with cultivation as their primary occupation, but among them only 48 per cent women are found to be food secure.

Table 2: Extent of Food Security among SC Women of Different Occupational Categories in the Study Area.

Occupation	No. & percentage of food secure women	No.& percentage of food insecure women	Total
Cultivator	12(48)	13(52)	25(100)
Agricultural labour	1(33)	2(67)	3(100)
Animal Husbandry	2(50)	2(50)	4(100)
Other daily wage labour	2(25)	6(75)	8(100)
Service	1(100)	0(00)	1(100)
Total	18(44)	23(56)	41(100)

Source: Calculated from primary data, (Figures in the bracket indicates percentage to total).

4.3 Food Security among SC Women with Different Level of Education

The following Table 3 shows that incidence of food security is different among sample SC women with different educational level. From this Table 3, it is clear that there is a positive relationship between extent of food security and level of education. In all the three blocks SC women with below primary and primary to high school level education shows low level of food security. On the other hand, women having graduated have shown high level of food security. It is because of educated people are aware about their health and nutrition, in addition to it they can also earn more.

Table 3: Extent of Food Security among SC Women with Different Level of Education.

Blocks	Educational level	No. & percentage of food secure households	No. & percentage of food insecure households	Total
Dhakuakhana	Below Primary	0(00)	2(100)	2(100)
	Primary to High School	2(22)	7(78)	9(100)
	Matriculates and undergraduates	3(60)	2(40)	5(100)
	Graduate	1(100)	0(00)	1(100)
Narayanpur	Below Primary	0(00)	2(100)	2(100)
	Primary to High School	4(57)	3(43)	7(100)
	Matriculates and undergraduates	3(75)	1(25)	4(100)
Ghilamara	Below Primary	0(00)	1(100)	1(100)
	Primary to High School	1(33)	2(67)	3(100)
	Matriculates and undergraduates	3(50)	3(50)	6(100)
	Graduate	1(100.00)	0(00.00)	1(100)

Source: Calculated from primary data, (Figures in the bracket indicates percentage to total).

4.4. Food Insecurity Gap Analysis:

For computing the extent of food security gap, food insecurity gap of the sample SC women have been calculated, i.e. total food insecurity gap and squared food insecurity gap has been calculated separately.

Food insecurity gap (FIG_i): Food insecurity gap of ith food insecure SC women can be defined as

$$FIG_i = \frac{(TCR_i - TCC_i)}{TCR_i} \quad (\text{Guja, 2012})$$

Where TCR_i= Total per capita calorie requirement for ith food insecure SC women.

TCC_i= Total per capita calorie consumption by ith food insecure SC women.

Total Food Insecurity Gap (TFIG), which indicates the depth of food insecurity among the food insecure SC women, is expressed as-

$$TFIG = \sum_{i=1}^m \frac{FIG_i}{m}$$

Here, m=total number of food insecure SC women.

In this study, $\Sigma FIG_i = 9$; $m = 23$

TFIG=0.39

Or, TFIG= 39%

Squared Food Insecurity Gap (SFIG), which indicates severity of food insecurity among the food insecure SC women, is given as-

$$SFIG = \sum_{i=1}^m \frac{(FIG_i)^2}{m}$$

In this study, $\Sigma (FIG_i)^2 = 5$; $m = 23$

SFIG=0.22

Or, SFIG=22%

The food insecurity gap measures the mean depth of food insecurity among the food insecure SC women. It is the mean proportion by which the food security status of the food insecure SC women falls below the minimum level of calorie requirement. The result of this study indicated that food insecure women are 39 percent far off from the minimum level of calorie requirement, recommended by ICMR. The square food insecurity gap measures the severity of food insecurity of the food insecure SC women. Thus, it measures the squared proportional shortfall from the minimum level of calorie intake. It has been found that bottom 22 per cent sample SC women are severely food insecure.

4.5 Some Suggestive Measures

For improvement of the status of food security, following recommendations can be considered-

- For increasing food-grain production in the district, the farmers should try to modernize the agriculture sector by applying modern inputs, using high yielding variety of seed, applying adequate quantity of organic fertilizers, by adopting scientific rotation of crops and careful crop planning and finally through intensifying agricultural research and percolating the fruits of research to the farmers.
- Agricultural extension services are needed to disseminate knowledge on the income generating potential of rural people. They need to be advised on low labour requirement crops, and crops need minimum land preparation, weeding techniques and sources of irrigation.
- For increasing economic accessibility of food, employment guarantee schemes should be implemented successfully.
- Micro-credit facilities should be examined as an effective and sustainable strategy for supporting livelihood, which would have direct bearing on the nutritional status of the family.
- Community afforestation programmes could be an important policy measure to increase the availability of traditional food as well as firewoods.
- Edible oil and more amount of sugar should be made available under PDS like other states of the country.
- Moreover, problem of irregular supply, supplying bad quality PDS items in remote areas should be addressed properly.
- Intensifying the provision of nutritional education and vocational training for women to ensure food security for all. Government can arrange awareness programme about food and nutritional security in rural areas under the Department of Food and Civil Supplies or Health, the NGOs also can play a significant role in this respect.

5. CONCLUSION

Food security is described as the state when people have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. Hence, a healthy and well-nourished population is imperative for building a strong nation. In the present study, it has been found that the food security status of the SC women of the study area is not good, i.e. only 44 percent SC women are found to be food secure. Again, it is found that 39 per cent food insecure SC women are far off from minimum level of calorie requirement and the severity of food insecurity of the sample SC women is about 22 percent. Although government of India as well as state government initiated the special scheme for the SC community by providing livelihood security and for enhancing agricultural productivity, still due to wrong implementation of the schemes the food security status is far away from the satisfactory level.

REFERENCES

1. Acharya, K.C.S. (1983). "Food Security of India" Concept Publication Company, New Delhi.
2. Brown, L. R. (1965). "Increasing World Food Output: Problem and Prospects", Foreign Agricultural Economics Report, No. 25, U. S. Department of Agriculture, Washington DC.
3. Bryeson, D. E. (1990). "Food Insecurity in the Social Division of Labour in Tanzania", Macmillan Oxford.
4. Chand, R. (2007). "Demand for Foodgrains in 2020", Economic and Political Weekly, Vol. XLII, No. 52, pp.-10-13.
5. FAO 1996, "Rome Declaration on World Food Security, World Food Summit", Rome, Food and Agriculture Organization.
6. Gopalan, et. al. (2012). "Nutritive Value of Indian Foods", (Revised & updated by B.S. Narasinga Rao, Y.G. Deosthale and K.C. Pant), National Institute of Nutrition, Indian Council of Medical Research, Hyderabad.
7. Guja, M. M. (2012). "Household Food Security Status and Coping Strategies in Humbo Wereda, Snnprs, Ethiopia" *International Journal of Sciences: Basic and Applied Research*, Vol. 6, No. 1.
8. Handique, P. & Alok Sen (2016). "Food Security of the Below Poverty Line (BPL) Households: A Case Study of Golaghat District, Assam, India", *International Journal of Interdisciplinary Research in Science Society and Culture*, Vol. 2, Issue 1.
9. ICMR, 2010 "Nutrient Requirements and Recommended Dietary Allowances for Indians", A Report of the Expert Group of the Indian Council of Medical Research, National Institute of Nutrition, Hyderabad.
10. Singh, P. S. (2013). "Supply-Side Challenges of the National Food Security Bill", *Kurukshetra*, Vol. 62, No. 1.
11. Smith, L. & A. Subandoro (2007): "Measuring Food Security Using Household Expenditure Surveys", International Food Policy Research Institute, Washington DC.
12. World Bank (1986). "Poverty and Hunger and Options for Food Security in Developing Countries", World Bank Policy Study, Washington DC.