Abstract

Objectives: The broad objective of this study to explore the level of nutritional deprivation, food insecurity and child malnutrition in a rural community of West Bengal. The specific objectives are to (a) examine the pattern of nutritional consumptions in rural households; (b) understand the nutritional deficiency, dietary pattern and household food security among rural households; (c) examine the households participation in food based safety net programs and coping strategies adapted by the households to mitigate the households food insecurity condition; (d) examine the level of childhood illness and child malnutrition in the rural Bankura and linkage with household food security.

Data and Method: The present study is based on the cross-sectional primary data conducted on 485 households and collected from Bankura district, West Bengal. Semi-structured questionnaires were used to collect various information on household socio-economic condition, food consumption pattern, coping strategies, and child malnutrition. The study calculated household’s nutritional intake using the information of food consumption quantity in the last 30 days of reference period at the household. Nutritional intake per capita was estimated based on adult male equivalent norm or consumer unit norm. Nutritional deficiency at the household was estimated following the Recommended Dietary Allowance (RDA) provided by ICMR-NIN, which is adjusted with the household’s age and sex composition. Household food security was assessed using food security survey module designed by U.S Census Bureau. The tool was tested using Cronbach’s alpha value (Cronbach’s alpha=0.77). This study measured underweight, wasting and stunting to assess the child nutritional status using WHO growth standard, 2006. Appropriate uni-variate, bi-variate and muti-variate techniques were used. Apart from percentage distribution, mean and standard deviation (SD) were computed as per the requirement. Suitable multi-variate techniques were applied in this study to understand the effect of independent or explanatory variables on the outcome variable.

Findings: Average nutritional intakes were low in the study population. Mean calorie, protein and fat intake level per day per capita (adjusted with consumer unit) were 2643 kcal, 66.6 gms, and 27.8 gms respectively. Nutritional consumption in all the three nutrients was lower among Muslims than Hindus. Scheduled tribe households consume the lowest amount
of calorie (2028 kcal), protein (50.5 gms) and fat (22.6 gms) per capita per day compared to other castes households. Result shows that cereal is the major source for calorie and protein, 76 percent to total calorie and 70 percent of total protein come from the cereal only. Contribution of nutritious food like milk and milk products, eggs, fish and meat etc are found very low in the calorie and protein consumption. Results show that 72%, 57% and 75% households were deficient in calorie, protein and fat respectively. More than 80% Muslim households were deficient in both calorie and fat. Among all the castes, Scheduled tribe households were more deprived, 84% of them were calorie deficient and 91% were fat deficient households. Multiple linear regression model shows that household size (p<0.10), availability of livestock (p<0.10), sources of income (p<0.10), are significantly associated with the level of nutritional intake. Study shows that majority of the households are food insecure. Findings revealed that only 20 percent households were food secure whereas 44 percent categorised as ‘food insecure’, 30 percent were categorised as ‘food insecure with hunger (moderately)’ and six percent households identified as ‘food insecure with hunger (severe) category. Multivariate binary logistic regression model showed that education of head of the household, castes, source of income, MPCE status, and availability of livestock in households were significantly associated with the household food security status. The most common consumption coping strategies opted by households were to consume less preferred and less expensive food (98%), followed by borrowed food from relative (73%), reduced number of meals eaten in a day (66%). Similarly, households opted some livelihood coping mechanisms such as use of past saving cash (95 percent), reduction of spending on other expense (94%), compromise with heath care and treatments (84%). Results also indicate the most common form of malnutrition among under-five children is stunting (51%) followed by underweight (41%) and wasting (22%). The study finds that underweight, stunting and wasting among children in the households were significantly and positively associated with the household’s food insecurity. Gender discrimination is observed with the increase of age. Girls are more deprived in nutritional indices than boys in the late younger age compared to younger age Results from multivariate analyses predict age, religion, caste and birth-order of the child as significant predictors in determining the child nutritional status.

Conclusion: The present study documented the depth of food insecurity and child malnutrition in the study area and seeks attention among policy planners to address the issue through proper implementation of food safety based interventions. Better access to nutritious food in the households has the potential to improve the child malnutrition. Lack of resources make the households deprived in nutritional consumption. Thus, access and proper management of physical, human and economical capitals may improve nutritional intake in the househols.