FOOD INSECURITY FACED BY THE RURAL PEOPLE OF COMILLA SADAR UPAZILA

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ABSTRACT

The main objectives of this study were to determine the level of food insecurity condition faced by the rural people of South Sadar Upazila of Comilla District and to explore the relationship between food insecurity of the respondents and their selected characteristics. The study was conducted with randomly selected 120 rural households of three villages namely, Dumuria, Lohipur and Dayapur of Chowara union under the South Sadar upazila of Comilla District. Family head of each of the farm families was treated as the respondent. Pearson's product moment correlation co-efficient (r) was computed to examine the relationship between the variables. Food insecurity faced by the rural people was the dependent variable and ten selected characteristics of the respondents constituted the independent variables of this study. More than two- thirds (66.67%) of the respondents were found to be in food secured condition followed by low insecured (20%) and medium food insecured (13.33%). None faced high food insecured condition. Correlation (r) between food insecurity and characteristics of the respondents showed that education, farm size, annual family income and daily time allocation in farm work of the respondents had negative significant relationship, while family size and daily dietary needs of the family had positive significant relationship with food insecurity.

Keywords: food insecurity, definition, causes, consequences

INTRODUCTION

Food insecurity is an ever- present curse for the rural people of Bangladesh. Farmers grow food crops working in the field from dawn to dusk, but they surrender to food insecurity suffering from chronic hunger. Food insecurity remains a reality for the millions of poor people in Bangladesh. Bangladesh has an average food deficit of 1- 2 million metric tons (Rahman et al., 2009). The country is facing challenges of natural disasters and high food price in recent years. According to the report of the Household Income and Expenditure Survey, average food intake in the rural area was 946.3, 898.7, 910.5 and 878.1 grams per day in the year of 2005, 2000, 1995-96 and 1991-92, respectively (Mannan et al., 2007). The people who do not have access to food are vulnerable due to the function of various economic, ecological, geographical and demographic factors. Among the economic factors, level of income, occupation, ownership of land etc. are predominant. Different measures like income, expenditure and calories intake provide different figures regarding its incidence. While poverty is an overall denominator of this food insecurity in the country, the additional intensifiers are disability and location (disaster proneness etc.) as well as other aspects related to utilization (education, awareness etc.). The present study has given much emphasis on focusing the issue of rural farm household food insecurity, especially in the poorer segment of the population like rural people who are actually subsistence farmers and forest dwellers, and vulnerable to various natural calamities. This is because under the burden of chronic poverty, this category of the population may use their natural environment in unsustainable ways, leading to further deterioration of their livelihood conditions. It needs to open new avenues for defeating food insecurity. Not enough systematic investigation on existing food insecurity faced by rural people has been undertaken so far either by private or government organizations. In this context present study was undertaken entitled, "Food insecurity faced by the rural people" with the

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hope that the findings of the study are expected to be of great value for researchers, extension service providers and food policy makers. The findings of the study will show a comprehensive picture as to how the rural people face food insecurity and their management system. The study was undertaken to describe the selected determinant factors of the respondents, to assess the extent of the existing food insecurity among the rural households, to explore relationships between the selected characteristics of the respondents and their food insecurity.

MATERIALS AND METHODS

South Sadar upazila of Comilla district was selected purposely as the locale of the study. Three villages namely, Dumuria, Lohipur and Dayapur of Chowara union under South Sadar upazila were selected randomly. Head of the farm families who permanently reside in the selected villages constituted the active population of this study. Twenty percent of the farm families of these villages were randomly selected as representative sample by using a table of Random Numbers (Kerlinger, 1973). According to the relevance of the research area, the researcher selected 10 characteristics of the respondents as the independent variables. On the other hand food insecurity faced by the rural people was the only dependent variable. Five point rating scale was used to determine food insecurity faced by the rural people. It was measured by asking their opinions on fifteen selected questions. For each question score was assigned to indicate extent of food insecurity as 'mostly', 'often', 'sometimes', 'rarely' and 'never' (FANTA, 2005). For each of the questions associated with household food insecurity was determined by summing-up the scores obtained by a respondent for the fifteen concerned questions. After completion of field survey data recorded in the interview schedules were coded, compiled, tabulated and analyzed in accordance with the objectives of the study. Various statistical measures like number, percentage distribution, range, mean, standard deviation etc. were calculated for describing the selected characteristics of the respondents and the food insecurity. In order to explore the relationship between the food insecurity faced by the rural people and their selected characteristics, Pearson's Product Moment Correlation Co-efficient (r) was used. One and five percent level of probability was used as the basis for rejection/acceptance of any null hypothesis.

RESULTS AND DISCUSSION

Behavior of an individual is determined to a large extent by his personal and psychological characteristics. There were various characteristics of the rural people that might have consequence to face household food insecurity. But in this study, ten characteristics of them were selected as independent variables, which included their age, education, family size, farm size, annual family income, daily dietary needs of the family, daily time allocation in farm works, credit received, knowledge on agriculture and extension contact. The purpose of this section is to find out relationships of on ten characteristics of the respondents with the food insecurity faced by them. Table-1 describes all the personal characteristics, their categorizations, distribution of the respondents under each category, their mean and standard deviations.

Data in the Table 1 show that majority (46.66%) of the respondents were middle aged and had education ranged from primary to above secondary level (90.83%). About one half of the respondents (49.17%) had medium family size and an overwhelming majority of the respondents (70%) had medium family income. In respect of daily dietary needs of the family, time allocation for farm work, extension contact and knowledge on agriculture belongs to medium category.

Food Insecurity Faced by Rural People

Food insecurity was measured exerting a series of questions designed to identify whether household members experienced less quantity or poor quality of food over a specific period of time. Food insecurity faced by the rural people scores ranged from 2 to 38 against possible score of 0 to 60. The mean score was 13.53 and standard deviation being 9.92 (Table 2). On the basis of food insecurity

Table 1. Salient features of the selected characteristics of the sample rural people

Characteristics (measuring unit)	Range		Respondents			Mean	Std. Dev.
	Pos.	Obs.	Category	No.	%		
Age (year)	-	27-69	Young (≤30)	16	13.33	47.43	12.18
			Middle-aged (31-50)	56	46.66		
			Old (>50)	48	40		
Education (years of schooling)	0-12	0-13	Illiterate (0)	3	2.5	7.20	3.79
			Can sign only (0.5)	8	6.67		
			Primary education (1-5)	34	28.33		
			Secondary education (6-10)	54	45		
			Above secondary (>10)	21	17.5		
Family size (member)	-	3-9	Small family (≤4)	24	20	5.8	1.49
			Medium family (5-6)	59	49.17		
			Large family (>6)	37	30.83		
Farm size (ha)	-	0.17-7.35	Landless (≤0.02 ha)	0	0	1.79	1.06
			Marginal (0.03-0.20 ha)	2	1.67		
			Small (0.21-1.00 ha)	19	15.83		
			Medium (1.01-2.5 ha)	84	70		
			Rich (> 2.5)	15	12.5		
Annual family income ('000' Tk.)	-	49-155	Low (≤50)	4	3.33	88.29	22.55
			Medium (51-100)	93	77.5		
			High (>100)	23	19.17		
Daily dietary needs of the family ('000' kcal)	-	5.4-18.4	Low (<8)	12	10	10.95	2.78
			Medium (8-12)	69	57.5		
			High (>12)	39	32.5		
Daily time allocation in farm work (hour per day)	-	3-9	Low (≤4)	6	5	6.87	1.37
			Medium (5-7)	72	60		
			High (>7)	42	35		
Credit received ('000' Tk.)	-	0-50	Low (≤20)	73	60.83	18.63	15.31
			Medium (21-40)	34	28.33		
			High (>40)	13	10.83		
Extension contact (Score)	0-54	5-42	Less (≤8)	21	17.5	26.07	10.48
			Medium (19-36)	80	66.67		
			High (>36)	19	15.83		
Knowledge on agriculture (Score)	0-52	16-46	Low (≤20)	32	26.67	30.33	9.16
			Medium (21-36)	60	50		
			High (>36)	28	23.33		

condition of the rural people, the respondents were categorized into four classes namely food secure, low food insecure, medium food insecure and high food insecure respondent. According to the observed value of food insecurity of the respondents in the rural area, majority (66.67%) of the respondents positioned in the food secure condition while of them 20 percent found in the low food insecure condition and remaining 13.33 percent were in medium food insecure condition and no one them faced high food insecure condition. In this study, food insecurity referred to extent of problem faced by the rural people in fifteen selected aspects of availability of food items. Among the respondent more than two thirds (66.67 percent) were found to be food secured. Only the remaining one third had food insecurity ranged from low food insecured (20%) to medium food insecured (13.33%). In the study area food security state was high because of some characteristics of the respondents such as their moderate education, farm size, annual family income and daily time allocation for farm work were found to be higher and family size and daily dietary need of the respondents found lower than any other area of Bangladesh. In addition, they had more knowledge in agriculture. They used to contact with various media and got more information about new agricultural technologies and crop varieties as a result they faced least food insecurity problem.

Table 2. Food insecurity faced by the rural people

Range (%)		Respondents			Mean	Std. Dev.
Possible	Observed	Category	No.	%		
0-60	2-38	High food insecure ($\geq$46) Medium food insecure (31-45) Low food insecure (15-30) Food secure (<15)	0 16 24 80	0 13.33 20 66.67	13.53	9.92

Relationships between farmers' characteristics and food insecurity

This section deals with the relationship of the ten selected characteristics of the rural people and the food insecurity faced by the rural people. The purpose of this section was to examining the relationships of each of the independent variables with dependent variable. The coefficient of correlation (r) was used to test the null hypothesis regarding the relationship between two concerned variables. The null hypothesis was formulated as H_0: There is no relationship between their selected characteristics and the food insecurity faced by the rural people. Five percent level of probability was used as the basis for rejection of a null hypothesis. The computed values of 'r' were compared with the tabulated values for 118 degrees of freedom at the designated level of probability in order to determine whether the relationships between the concerned variables were significant or not.

Ten null hypotheses were tested to explore the relationship of the ten selected characteristics of the respondents with the food insecurity. Correlation analysis showed that family size and daily dietary needs of the family were positively correlated with the food insecurity faced by the rural people. But education, farm size, annual family income and daily time allocation in farm work of the respondents showed negative relationship. The rest of the characteristics *viz.* age, credit received, extension contact and knowledge on agriculture of the respondents remained uncorrelated with the food insecurity. That is food insecurity has no relationship with the above mentioned variables.

Table 3. Relationships between dependent and independent variables

Characteristics of the rural people	'r' value with 118 d.f.	At 5% level of Significance	At 1% level of Significance
Age	-0.139 NS		
Education	-0.213*		
Family size	0.333**		
Farm size	-0.412**		
Annual family income	-0.513**	0.180	0.234
Daily dietary needs of the family	0.219*		
Daily time allocation in farm work	-0.183*		
Credit received	0.139 NS		
Extension contact	-0.119 NS		
Knowledge on agriculture	-0.167 NS		

** Significant at 1% level of probability
* Significant at the 5% level of probability
NS = Non significant

Findings of the study showed that the highest proportion of the respondents (66.67%) was found to be food secured. Food insecurity was minimum because high profile of the respondents with regard to education, farm size, annual family income and daily time allocation for farm work were found to be higher and family size and daily dietary need of the respondents found lower than any other area of Bangladesh. Therefore, food insecurity situation is not much severe in the study area. Recommendation could be forwarded for the extension service that sustainability of the present food insecurity should be maintained by offering training on modern agriculture and adoption of appropriate technology.