



Role of social safety net programmes for ensuring food security and reducing poverty in *char* area of Jamalpur district in Bangladesh

SA Badhan^{1*}, S Haque¹, M Akteruzzaman¹, N Zaman¹, K Nahar¹, F Yeasmin²

¹Department of Agricultural Economics, Bangladesh Agricultural University, Mymensingh 2202, Bangladesh;

²Department of Agricultural Extension and Rural Development, Bhangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur, Dhaka, Bangladesh.

Abstract

The study has been conducted to assess the social safety net programmes for ensuring food security and poverty reduction in *char* area of Jamalpur district, Bangladesh during the period of July-August in 2016. Survey method was used to collect primary data from Madargonj upazila of Jamalpur district. A total of 60 sample households were selected purposively for collecting data where 25 were under old age allowance, 15 were widow allowance and 20 were VGF/VGD card holders. Descriptive and tabular analysis was used to achieve the major objectives of the study. There are many Safety Net Programmes launched in the study area, like old age allowance, widow allowance, VGD/VGF, test relief, food for works and so on. The findings showed that after getting the allowance, the food consumption pattern, health, etc. are improving. Before joining SSNPs, about 77% people were food insecure but now the value is 68% and their calorie intake is 1834 kcal. The food security index became 0.79 and the food insecure household fall short of required calorie intake by 18 percent. It has been found that about 55% respondents are living below the poverty line but the joining to the SSNP, their situation is improving. Finally, it can be said that the SSNPs are much effective and could be a successful poverty alleviation strategy for the Government of Bangladesh.

Key words: Social safety nets, food security, poverty, Bangladesh

Progressive Agriculturists. All rights reserved

*Corresponding Author: badhan_sanjida@mail.com

Introduction

Bangladesh has a large population of around 160 million people. This is a country with scarce resources and its major challenges are to deal with poverty and to feed its huge number of population. Poverty is a human condition characterized by the sustained or chronic deprivation of resources, capabilities, choices, security and power necessary for an adequate standard of living and other civil, cultural, economic, politics as well as social rights (UNDP, 2009). It is well known that poverty is the major cause of food insecurity, while

food security refers to physical and social access by all people at all times to enough food for a healthy productive life (Uddin, 2013). Though determining the relationship between poverty and food insecurity is a complex, but food insecurity exists when people lack transiently or persistently, access to sufficient quantities of safe and nutritious food required for normal growth and development, and for an active and healthy life. The most important issue facing by the most people is inadequate access to food which is

fundamentally an outcome of poverty. To tackle the situation, the Government of Bangladesh, NGOs, private firms and charities has introduced several Social Safety Net Programs (SSNPs) which are non-contributory transfer programs seeking to prevent the poor or vulnerable to take out from falling below a certain poverty level (Begum *et al.*, 2014).

The people of the char areas in Bangladesh, in general, very poor, illiterate, and their livelihood depend on wage earnings and cultivation. The life of the people of the char area is increasingly vulnerable due to a persistent lack of assured entitlements to their resources base. The people of the *char* area are still reluctant to follow any modern conservation practices. There are different kinds of social safety net programs launched throughout the country. The people of the char areas are also under this programme. Based on the above situations, the present study has given much emphasis on focusing the issue of individual household food security and poverty situation, income, expenditure & food consumption pattern especially in the poorer segment of the population like char areas who are under the social safety net programs. For this reason, appropriate strategies need to be formulated which can help the people of the char areas to improve the poverty situation. The study may help the policy makers to get some ideas for judicious planning for improving the livelihood and food security of the char area's people.

Major safety net programs in Bangladesh: Social Safety Net Programs (SSNPs) are a set of public measures, which a society provides for its members to protect them from various types of economic and social hardships. SSNPs are generally targeted to the poor. The major social safety net programs (SSNPs) in Bangladesh can be divided under four broad categories: (i) employment generation programs; (ii) programs to cope with natural disasters and other shocks; (iii) incentives provided to parents for their children's education; and (iv) incentives provided to families to

improve their health status. The SSNPs can also be grouped into as follows:

i. Cash Transfer: Old Age Allowances, Maternity Allowance for Retired/Disable Person, Allowance to the Widowed, Honorarium for the Insolvent Freedom Fighters, Female Secondary School Assistance etc.

ii. Food transfer: Vulnerable Group Feeding, Test Relief, Food for Works Gratuitous Relief, Primary education Stipend Project, Community Nutrition Programme

iii. Price subsidy: Agricultural Inputs Subsidy, Subsidy for Marginal Farmers to cope with the Fuel Price Hike, Food Subsidy, Power Subsidy, health care

iv. Job generating: Vulnerable Group Development, Rural Employment Opportunities for Public Assets, 100 days Employment Generation Programme, Employment Project for Beggars, National Service

v. Others: Housing for the Homeless, Efficiency Development Fund for Expatriate Workers, Ekti Bari EktiKhamar, Microcredit, Free schooling (Sources: Barkat-E-Khuda, 2011), Rahaman and Chowdhury (2012), Ahmed *et al.*, (2010), Khan (2013)

Some of important works regarding present study are reviewed here. Akter (2014) mentioned about the effectiveness of 100 Days Employment Generation Programme in raising income generations and ensuring food consumption of rural extreme poor under SSNPs. Begum (2014) identified that insufficient co-ordination between the different agencies causing obstacle to implementing SSNPs and also recommend some guideline to expand the SSNPs. Uddin (2013) showed that SSNP program has a positive impact on the food accessibility of the beneficiaries. showed that eliminating poverty level from the people of Bangladesh will be capable to access in food irrespective of all classes. Rahman and Chowdhury (2011) examined a study on the review of issues and analytical inventory of social safety nets in Bangladesh that reviewed the gaps exist and elaborate on the strategic way forward. Nasrin (2011) studied the land

tenure system and assessed its impact on food security in some selected areas of Mymensingh district which concluded that the extent of food security situation was much better among the cash tenant household than the share tenant households in the study areas and thereby land tenure systems affect the food security situation of selected households. Rahman and Schmitz (2007) conducted a study on food security found that food security is achieved if adequate food is available and accessible for a satisfactory utilization by all individuals at all times to live a healthy and happy life. The above mentioned review reveals that a few studies have already been done concerning food security and poverty. A good number of studies are also available related to the social safety nets programmes. However, no such study has so far been reported in *Char* areas where lot of peoples is poor and vulnerable. The researcher attempted to fill in the gap of the past studies could be treated as a pioneering one in the field of estimating food security and reduction of poverty of the people of char area who are the beneficiaries of the social safety net programmes in Bangladesh.

Materials and Methods

The study has been conducted to assess the social safety net programmes for ensuring food security and poverty reduction in *char* area of Jamalpur district, Bangladesh during the period of July-August in 2015. Survey method was used to collect primary data from Madargonj upazila of Jamalpur district. A total of 60 sample households were selected purposively for collecting data. Among them, 25 were under old age allowance, 15 were widow allowance and 20 were VGF/VGD card holders. The collected data were then sorted and scrutinized. Descriptive and tabular analysis was used to achieve the major objectives of the study.

Estimation of energy and nutrient intake: The crops, animal products and other food items consumed from own production and those purchased from market by the sample households were taken into consideration for estimating the per capita daily energy and nutrient

intake of the respondent's households. For this purpose, household consumption data for the last three days were collected through interviewing female household members. In total, data on eighteen types of food items were collected and considered for analysis. The quantities of food items consumed were recorded in kilogram and calculated for the energy and nutrient values (i.e. protein, calcium, iron and fat). This divided by the adjusted household size to obtain the calorie and nutrient intake per capita per day by a household member. Irrespective of male and female, two children under six years of old were considered as one adult (Omotesho *et al.*, 2006). The tables of nutrient composition of Bangladeshi foods (Darnton-Hill *et al.*, 1988) were used to calculate the energy and nutrient values of the foods.

Determination of household level food security: In order to measure food security, a household food security index was constructed by defining a minimum level of nutrition necessary to maintain a healthy living. It also indicates the 'food security line' for the population under study (Omotesho *et al.*, 2006). Any household above this line was classified as food-secure. The food security line used in this study was measured using average recommended level of calorie intake of 2400 kcal as the desirable and cut off point (FAO, 2010). A similar approach was used by Olayemi (1998) which was 2260 kcal as a daily recommended level of calorie intake. The calorie content of both the produced and purchased food items were used to estimate the dietary energy availability in the household. The food security index was calculated as: Food security Index = X/Z ; Where, X = Household daily per capita calorie intake, and Z = Household daily per capita calorie (Z) required. Thus, for a household to be food-secure the index must be greater than or equal to one; otherwise, the household is considered food-insecure.

Food insecurity gap measured the extent to which households are food insecure and surplus index measured the extent by which food secured households

exceeded food security line. In implementing food security policies and programmes, the values of the index could be monitored one time and compared among different groups of the population. This index is given as,

$$P = \frac{1}{M} \sum_{i=1}^m G_i \quad (\text{Babatunde } et al., 2007)$$

Where, P = Food insecurity gap or surplus, M = Number of households that are food secured (for surplus index) or food insecured (for food insecurity gap); and G_i = Per capita calorie intake deficiency (or surplus) faced by the i th household.

$$G_i = \left(\frac{Y_i - R}{R} \right) \quad (\text{Babatunde, } et al., 2007)$$

Direct calorie intake (DCI) method: The direct calorie intake method estimates the per capita calorie intake at household level. In this method, the food consumed during the last three days in a household was first averaged and then the average content of food per day per household was converted into kilocalorie. The amount of calorie intake is then converted into per capita per day. According to this method, a household is considered as ‘hardcore poor’ with per capita calorie intake with less than 1,805 kcal per day, and ‘absolute poor’ with less than 2,122 kcal per day.

Results and Discussion

Socioeconomic characteristics of respondents: To examine the major socioeconomic characteristics of households, various information such as age, sex of the respondents, family size, educational status, occupational status, number of earning members, types of the respondent’s house were taken into account. These data and information are related to achieving food security and nutritional status, per capita consumption of the household members, level of household’s income and expenditure etc. It was found that most of the beneficiaries belong to the age group of 74-84 for old age allowance, 65-74 for widow

allowance and 45-54 for VGD card holders. Among the beneficiaries, about 42% were male respondents and 58% were female respondents who were the beneficiaries of old age allowance, widow allowance and VGF Programmes under SSNPs. Among the total beneficiaries, 42% got the old age allowance, 25% got widow allowance and 33% beneficiaries are under the VGF programme (Table 1).

Table 1. Percentage of beneficiaries and information about their age.

Types of SSNP	old age allowance	widow allowance	VGD card holders
% of beneficiaries	42	25	33
Age of the beneficiaries (Years)	74-84	65-74	45-54

Majority (89%) of the beneficiaries were illiterate, whereas 9% respondents could sign only and only 2% had completed primary education. The halves of the respondents belong to the size of 3-5 members and the rest of the respondents have higher number of family size. Among them, about 14% were farmers, 12% were unemployed, 58% housewife, and others were day laborer, fishermen, rickshaw puller, van driver etc. About 65% reported that they having only one earning member in their families (Table 2). Table 2 shows that the highest percent of the respondents (38%) live in tin made house. About 20% of them live in hut, 27% and 15.0% beneficiaries of SSNPs lived in fence made and soil-made houses, respectively.

Assessment of food security and poverty at household level: The picture of the extent of household food security in the study area has been presented in Table 3. However, 64% and 58% of the total households' were food-insecure. Majority of the food-insecure households, were calorie deficient. The amount of calorie consumed by a food insecure household was

much lower (33%) than that of food-secured household (Table 3).

Relative contribution of food items to household food security: The relative contribution of different food items consumed by the households in attaining food security is shown in Table 4. The table reveals that the per capita per day intake of all the food items was

much higher for food secure household compared to non-secure household.

If we look at the per capita per day calorie intake scenario, we can see that more than 77% of the total daily calorie consumed by a food secured households were supplied from rice followed by potato (11%), vegetables (4%) and edible oil (4%).

Table 2. Level of education of the respondents.

Level of education	Illiterate	could sign only	primary education	
	89%	9%	2%	
Family size	3-5 members		More than 5 members	
	50%		50%	
Occupation	farmers	unemployed	housewife	others
	14%	12%	58%	16%
Housing status	tin made	hut	fence made	soil-made
	38%	20%	27%	15%

Source: Field Survey, 2015.

Table 3. Food Security Status of Households under Different SSNPs.

Food security status	% of households			Energy intake (kcal/capita/day)		
	Old age allowance	Widow allowance	VGF	Old age allowance	Widow allowance	VGF
Food secure	28	40	30	2314	2516	2417
Food insecure	72	60	70	1858	1729	1935

*Food secure households are those with a per capita per day energy intake is >2122 Kcal. Source: Field Survey, 2015.

The similar results were also observed for food insecure households. This implies that rice, potato, vegetables, and edible oil were the most important food items since major share of the total calories was derived from these food items.

Poverty level of the households: Two methods were used in estimating poverty. The first one is based on direct calorie intake (DCI) and the other one is the cost-of-basic needs (CBN) method. According to calorie intake method, a household is considered as ‘hardcore poor’ with per capita calorie intake of less than 1,805 K.cal per day, and ‘absolute poor’ with less

than 2,122 K.cal per day. In this study, DCI method was used to estimate the poverty line (Table 5). Considering the average household consumption of food during the last seven days prior to the survey, the average per capita calorie intake was estimated at 2157.68 kcal. However, the average per capita intake of calorie was obtained as 1538.5 kcal and 1769.3 kcal for the households fall below the hardcore and absolute poverty respectively.

Estimation of the basic needs what beneficiaries receive and they need: From the field survey it is observed that there is a huge difference between the

Social safety net programmes for ensuring food security and reducing poverty

money needed for a person to meet the basic needs and the money or allowance they get. From the discussion of the respondents we calculate the amount of money

which is needed for food consumption, housing, clothing, and education and health facilities which is presented in Table 6.

Table 4. Contribution of food items in calorie intake for the household respondent.

Food items	Food secured households		Food insecure household	
	Qty. intake (g/capita/day)	Calorie intake (kcal/capita/day)	Qty. intake (g/capita/day)	Calorie intake (kcal/capita/day)
Rice	537.38	1891.58	411.08	1447
Wheat	2.19	7.45	1.25	4.27
Potato	288.65	279.99	152.11	147.56
pulses	7.53	25.30	4.63	15.57
Fresh fish	29.09	33.16	13.39	15.67
Dry fish	5.34	15.05	3.47	9.78
Egg(no.)	4.98	8.66	2.09	3.64
Leafy vegetables	93.95	61.07	92.65	59.30
Other vegetables	80.36	26.52	71.75	32.68
Meat	3.20	3.76	0.15	0.18
Edible oil	10.05	90.45	8.62	77.58
Spices	22.14	38.03	17.59	30.22
Total	1089.23	2481.02	778.78	1834.45

Source: Field Survey, 2015.

Table 5. Estimation of the extent of poverty at household level by DCI method.

Per capita average intake of calorie	2157.68
Per capita average intake of calorie below hardcore poverty line	1538.5
Per capita average intake of calorie below absolute poverty line	1769.3
% of households below hardcore poverty line	41.46%
% of households below absolute poverty line	58.54%

Source: Field Survey, 2015.

Suppose if a family consists of 5 family members (all adult) in which there is a beneficiaries of SSNPs then we can estimate average amount of money which is

needed to fulfill their basic needs. Table 6 shows the expenditure of a family (consists of 5 adult family members) in a year to meet the basic needs.

From the above table and pie chart (Figure 1), we can see that to meet the basic needs about Tk. 82,850 is needed per household in a year. And the most important portion is used to meet the first basic need that is food. It means that for one person it is about Tk.16,570 approximately which is needed for a minimum standard of life. Now the money or allowance which is given to the beneficiaries cannot fulfill their basic needs. They have a deficit about Tk.11, 770 (allowance is equal to Tk. 4800/year). It's a huge amount but the money or allowance can fulfill

some of their basic needs like food consumption, clothing and health. But they cannot fulfill the other basic needs like education and housing. As a result, a large number of people are lack behind. Most of them are illiterate and lives in an unhygienic condition.

Table 6. Expenditure on basic needs of a household (consists of 5 adult members).

Food items	Quantity(kg/day/household)	Cost of Household (Tk./day)
Rice	2	55
Leafy vegetables	1.5	15
Others vegetables	1	30
Egg (no.)	2	15
Milk	0.5	25
Fish/Meat	0.25	50
Fruits(no.)	5	20
Total		210
Total cost for food(in a year)		76,650
Housing cost(household/ year)		1000
Clothing cost(household/year)		1200
Education cost(household/year)		1500
Health cost(household/year)		2500
Total cost		82,850
Per capita cost(Tk./year)		16,570

Source: Field Survey, 2015.

From the above study we see that most of the respondents are food insecure. Among different SSNPs, 72% beneficiaries under old age allowance, 60% of widow allowance and 70% of VGF/VGD programme are food insecure. Calorie intake for food secure household is 2481.02 and for food insecure household is 1834.45. From the study, it can also be concluded that 41.46% households live below the hardcore poverty line where 54.54% live below absolute poverty line. And there is a huge amount of deficit between the allowance and the money needed for the fulfillment of the Basic needs.

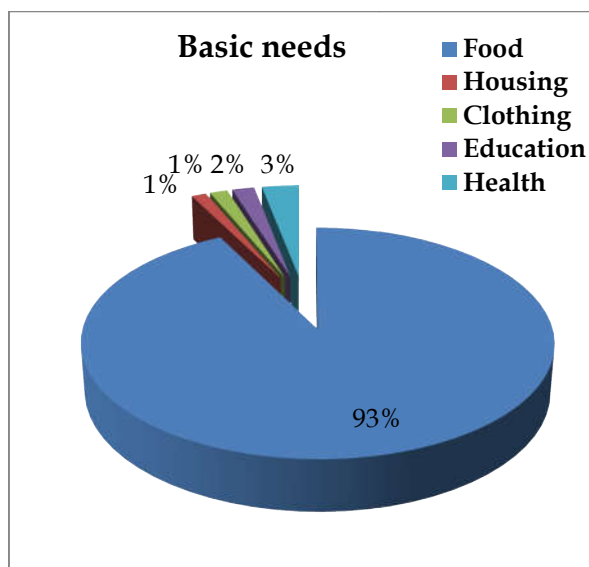


Figure 1. Proportions of basic needs.

Impact of different social safety net programmes on the income, expenditure and food consumption of the respondents

Monthly income of the respondents: The social safety net programmes has a little contribution on the income earning of the beneficiaries. Table 7 shows that most of the respondents' (55.45%) income was Tk. 3000-5000. About 23.35% earn Tk. 6000-8000 monthly. The respondents who earn Tk.9000-11000 and Tk.12000-14000 are 19.3% and 1.67% respectively. Table 7 shows that after joining the programmes, some of the respondents' income had increased.

Table 7. Monthly Incomes of the Respondents (Before Joining the SSNPs).

Income range	Before joining the SSNPs (Percentage)	After joining the SSNPs (Percentage)
3000-5000 TK	55.45%	50.50%
6000-8000 TK	23.35%	26.3%
9000-1100 TK	19.30%	21.4%
12000-14000 TK	1.67%	1.8%

Source: Field Survey, 2015.

Expenditure pattern of the beneficiaries: Before joining SSNPs, the people spend their entire amount of money for food consumption for their family. About 69% of the people were using their money for buying food item. Only 18% of them kept a small amount of money for their own expenditure and rarely 4% of them could invest their money for long term investment and savings. In that time they have no money for their own expenditure.

But after joining the programme, about 28.33% beneficiaries uses the allowance in own expenditure like self health expenditure, for buying medicine, cloth etc. About 51.67% beneficiaries use their money for family expenses such as for family food consumption, repairment of house, buying cloths for family members, health and educational expenses and others expenses. Nearly 13.3% people of the beneficiaries kept the allowance for their future purpose and savings another 6.67% people among the beneficiaries are invested the money as a long term investment suppose for buying poultry, livestock etc. Table 8 shows the percentage of respondent's expenditure sectors where they use the amount of SSNPs.

Table 8. Expenditure pattern of the beneficiaries.

Expenses (%)	Before	After
Own expenditure	18.67%	28.33%
Family expenses (food, housing, clothing, health, education etc.)	68.67%	51.67%
Future purpose	10.33%	10.0%
Savings	2.33%	3.33%
Long term investment	-	6.67%

Source Field Survey, 2015.

Food security status of the beneficiaries' household:

Food security indices before and after joining to SSNPs have been presented in the Table 9. The multiple indices were used to provide a basis for examining from different perspective. The table reveals that about 23.33 percent of the households were food secure with an average daily per capita intake of 2330.75 kcal while 76.67 percent households were food insecure with an average daily per capita calorie intake of 1360.59.

Table 9. Food security indices of the household.

Food security indices	Before Joining SSNPs		After Joining SSNPs	
	Food insecure households	Food secure households	Food insecure households	Food secure household
Percentage of household (%)	76.67%	23.33%	68.33%	31.67%
Food security index	0.76	1.19	0.79	1.25
Per capita daily calorie availability (kcal)	1360.59	2330.75	1834.45	2481.02
Food insecurity gap/surplus index(P)	-0.21	0.19	-0.18	0.24

Source Field Survey, 2015.

Food insecurity/surplus (P) which measures the extent of deviation from the food security line by the household presents that, the households who were food secured exceeded the minimum caloric requirement by 19 percent and calorie intake of food insecure households was 21 percent less than the minimum daily requirement.

Based on the recommended daily caloric intake 2122 kcal, it is observed Table 9 that after joining in SSNPs, the percentage of the food secure household increased to 31.67% and the rests was food insecure. The value of food security index for food secure household was 1.25 where for the food insecure household, it was 0.79. Average caloric intake of food secured

households is 2481.02 kcal which is higher than the national average. On the other hand, calorie intake of food insecure households is 1834.45 kcal which was much lower than the national average. The food insecurity gap/surplus index shows that the food secured households exceeded the food poverty line by 24%, while food insecure household fell short of the required calorie intake by 18%.

Thus it can be firmly concluded that the extent of food security situation is much better among the beneficiaries after joining the social safety net programmes. The key point which has been explored through this discussion is that the social safety net programmes clearly affect the food security situation of the selected households.

Social Safety Net Programme played a significant role in food consumption. About 63% respondents said that their food intake has been increased after coming

SSNP and only 5% said that there is no change in food intake after coming SSNP. About 27% mention that their rice consumption had increased after joining to SSNPs. Nearly 30% expressed that they can also eat vegetables, 28.2% people can eat egg and drink milk and; others can eat fish/meat/local fruits.

Treatment issues of the respondents before and after joining SSNPs: Before joining SSNP, about 45% respondents went to local doctor for treatment. But after joining SSNP about 37% respondents go to local doctor for treatment, whereas 52% respondents started then to go to the govt. hospital or private doctors (Table 10). From this table, it can be seen that before getting the money from SSNP, most of the respondents went to local doctor or to *kobiraj* for their treatment. But after getting the money their treatment place changes into govt. hospital.

Table 10. Place of Treatment after joining SSNPs.

Place of treatment	% of the respondents (before joining SSNPs)	% of the respondents (after joining SSNPs)
Govt. hospital	31.33%	51.67%
Local doctor	45%	36.67%
Private doctor and private hospital	2.0%	6.34%
Others (<i>kobiraj</i>)	21.67%	5.32%

Conclusion

The study found that the respondents are mostly illiterate, in some households the family sizes are much larger than the national average size of the family and socioeconomic characteristics differ among themselves under the different social safety net programmes. It is clear from the above discussion that the SSNPs has a positive impact on respondents' income, expenditure and food consumption. The respondents can also spend some money for their own expenditure and some use the allowance for their future purpose. Consumption and health were the most common heads on which

beneficiaries spent major share of their received SSNP supports. About 52% beneficiaries spend their money for family expenses like food consumption and health care, respectively followed by other basic needs. After joining the programmes, about 32% household became food secure and they exceeded the food poverty line by 24%.

From the study, it can be summarized that the social safety net programmes has generated the opportunity of better living for the very poor segments. It acts as a safety net for those vulnerable people by securing their food consumption, income etc. The overall pattern of livelihood is improved by this programme. Benefits of

this programme also include the reduction of physical damages and loss of human lives, improvements of livelihood standard, got dignity in family and so on. This programme has a good contribution to food security, economic growth of the beneficiaries to maintain a minimum standard of living. The social safety net programmes contributes to the improvement of the women's situation. These programmes can be a successful poverty alleviation strategy for the disadvantaged people of Bangladesh. As the people from those regions are much more poor, deprived from their rights, little and no access to justice and health service, victim of climate change effects, underprivileged and different social and economical hazards, so the government and nongovernment organizations should pay attention to address the problems facing the people of this region.

- Increase the coverage of safety nets programs in *Char* and other vulnerable regions, making sure that the actually needy households are included into the programs.
- Develop awareness among those communities about food security, specially, nutritional balance in food intake; hygienic condition, particularly use of sanitary toilet.
- Initiative should be taken to improve educational status of the beneficiaries in collaboration with relevant GOs and NGOs.
- Take proper steps to reduce poverty and improve food security of the study area.

Reference

- Akter T (2014). "A study on the Effect of social Safety Net Programme on Livelihood Pattern and Income Generation in Comilla", MSS Thesis, Department of Socioligy, University of Dhaka.
- Babatunde RO, Omotesho OA, Sholotan OS (2007). 'Factor influencing food security status of rural farming households in North Central Nigeria', *Agricultural Journal*, 2(3): 351-357.
- BBS (2011). 'Bangladesh Population Census', Bangladesh Bureau of Statistics, Statistical Division, Ministry of Planning government of the People's of Bangladesh, Dhaka.
- Begum IA, Akter S, Alam MJ, Rahmatulla NM (2014). Social Safety nets and productive Out comes: Evidence and Implication for Bangladesh Working paper, National Food Policy capacity Strengthening Programme.
- Darnton-Hill P, Webb P, Harvey WJ, Hunt JM, Dalmiya N, Chopra M, Ball MJ, Bloem MW, Benoist BD (2005). Micronutrient deficiencies and gender: social and economic costs; *American Journal of Clinical Nutrition*, 81 (5): 1198S–1205S.
- FAO (2010). State of Food Insecurity in the World 2010, Rome, Italy. Ministry of Planning, Government of People's Republic of Bangladesh, Dhaka
- GOB (2014). Budget Documents 2014-15, Safety Nets, 2014-15.
- Halder RS (2003). Level of Food Insecurity and POverty in Bangladesh: An Agro-Economic, Social and Vulnerability Analysis. Research And Evaluation Division, BRAC
- Hossain M (2009). 'Impact of price hike on Boro rice production and food security of disadvantaged people of Basail Upazila in Tangail district', MS Ag. Econ. thesis, Bangladesh Agricultural University, Mymensingh.
- <http://www.wikipedia on Social safety nets> (Accessed on 10.12.2014).
- https://en.wikipedia.org/wiki/United_Nations_High_C ommissioner_for_Refugees.
- Kashem MA, Sarker MA (2004). Secondary Information and Analysis on Food Security and Hunger in Bangladesh. Edited in Survey on Food Security and Hunger in Bangladesh, RDRS. Rangpur, Bangladesh.
- Mannaf M (2012). 'An Economic study on Maize production and its impact on food security in selected areas of Bogra district', MS Ag. Econ. thesis, Bangladesh Agricultural University, Mymensingh.

- MOF (1999). Food Security in Bangladesh: Current Policies and Future Plans, Ministry of Food, Government of People's Republic of Bangladesh, Dhaka
- Mozdalifa J (2012). "Poverty and Food Security; A report Elusive progress, State of Food Security in Bangladesh."
- Nasrin M (2011). Land tenure system and food security in some selected areas of Mymensingh district, M.S.Ag.Econ. thesis, Bangladesh Agricultural University, Mymensingh.
- NFPCSP, BRAC University and BRAC (2009). "Study on the first phase of the 100-Day Employment Generation Programme." Dhaka.
- Omonona TB, Agoi, Adetokunbo G (2007). An analysis of food security situation among Nigerian urban households: Evidence from Lagos State, Nigeria. *Journal of Central European Agriculture*, 8(3):397-406.
- Omotesho OA, Adewumi MO, Muhammad-Lawal A, Ayinde OE (2006). Determinants of Food Security Among The Rural Farming Households in Kwara State, Nigeria. *African Journal of General Agriculture*, Vol. 2, No. 1.
- Rahman KMM, Schmitz PM (2007). "Food Production Sustainability and Security in Bangladesh; Status and Prospects". A Book Published in Germany in Wissenschaftsverlag Vauk Kiel KG. Postface 4403, D240443Kiel.www. Vauk.De, email: verlog@vauk.de.
- Rahman ZH, Choudhury AL (2011). Social Safety Nets in Banglades, vol(1): Review of Issues and Analytical Inventory, Power and Participation Research Centre(PPRC), United Nation Development Programme(UNDP).
- The Professors' Current Affairs (2014). "Poverty Rate Now." Vol.19, No.219, Page-19, September 2014, Professors Publication, Banglabazar, Dhaka.
- The World Bank (2006). *Social Safety Nets in Bangladesh: An Assessment*. Bangladesh Development Series-Paper No. 9. Dhaka.
- Uddin MA (2013). "Social Safety Nets In Bangladesh: An Analysis of Impact of Old Age Allowance Programme." A paper published from Institute of Government Studies (IGS), BRAC University, Dhaka, Bangladesh.
- UNDP (2009). 'Social Safety Net Programmes in Bangladesh' UNDP, Bangladesh. www.asiaticociety.org.bd/banglapedia.htm.