



## Women's participation in poultry farming to alleviate poverty from Batiaghata upazila under Khulna District

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### Abstract

The purpose of the study was to determine the participation of rural women in poultry farming as a means to reduce poverty from two villages namely Kismatpur and Kharabad of Amirpur union under Batiaghata upazila of Khulna district, Bangladesh. Data were collected from 55 rural women involved in poultry farming practices using questionnaires. The socio-economic study revealed that majority of the women (72.7%) were young aged having medium sized families (63.6%) and 90.9 percent women poultry farmers being literate. About half of the respondents (54.5%) were belongs to marginal farmer's category and all respondents (100%) had medium annual income. The study revealed that women participation was maximum in poultry feeding activities and least in purchasing, processing and marketing activities. About 34.5 percent of the respondents had no organizational participation. Among the respondents, 76.4 percent had low extension contact. About 58.2 percent had no training while 45.5 percent had high knowledge about poultry farming activities. Among thirteen selected characteristics of the respondents age had shown negative significant and education level had positive significant relationship with participation of women in poultry farming activities. Poultry farming contributes 23 percent to the total income which improved income, rate of wearing good clothes, improved housing condition, access to medical care and adequate and safe food which has considered as the poverty reduction indicators. So participation of women in poultry farming activities had a more or less positive impact on income which ultimately leads to alleviate poverty.

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## Introduction

Bangladesh is a small country having large population and majority of this (76.61%) population live in rural area conducting agricultural activities. Livestock is one of the important segments of the overall economy of Bangladesh and it contributes about 36.31% of the Gross Domestic Product (GDP) and employing about 62% of the labor force (BBS, 2011). Poultry farming is a major component of livestock. Obviously the economic development of the country depends on a great extent on the prior development of poultry sector. In the male dominant society, rural women are not able to work outside of their home and as a result they have lack of facilities in terms of education, independence, controlling their own assets and household decision making. But this situation seems to be changing day by day due to participation of women in poultry farming activities.

To ensure a balance socio- economic development of the country, empowerment of women is a pre-condition but there are usually few or no job opportunities for the landless, disadvantaged women. This may be achieved only when there is an increased participation of women in income generating activities. Poultry farming is the only activity in which a large number of landless women can participate easily. About 70% of the rural, landless women are directly or indirectly involved in poultry farming activities (BBS, 2014). Poultry farming is suitable for widespread implementation as it is of low cost, requires little skills, is highly productive and can be incorporated into the household work. The role of women in poultry farming plays a significant influence in the rural families and it is the most important means through which rural women are able to contribute meaningfully to the cash needs for themselves and their family members which ultimately helps in alleviating poverty which will ultimately help to enrich national economy. The study was conducted to fulfill the following objectives;

- I. To assess the socio-economic characteristics of rural women participating in poultry farming activities.
- II. To investigate the extent of participation of rural women in poultry farming activities in the study area.
- III. To find out the contribution of the rural women poultry farmers to alleviate poverty in the study area.

## Materials and methods

### *Locale and sampling*

The study was conducted at two villages of Amirpur union under Batiaghata upazila in Khulna district. The rural women of the study area who were participating in poultry farming activities were treated as population of this study and selected randomly taking 25 from Kismatpur and 30 from Kharabad village. Thus the sample size was 55.

### *Selection and measurement of variables*

Reviewing related studies, the researchers considered 13 characteristics of the rural women as independent variables. These were; age of respondent, level of education, family type, family size, farm size, organizational participation, farming experience (poultry), farming experience (agriculture), extension media contact, knowledge about poultry farming, training, poverty reduction and total household income. On the other hand, the participation of rural women in poultry farming activities was treated as dependent variable.

Five important broad aspects of poultry farming activities were included to measure participation of rural women and a number of 19 relevant issues were also included under the five broad aspects of poultry farming activities. A four-point Likert scale in which 0 = not at all, 1 = some extent, 2 = average extent, 3 = great extent was employed against each of the issues to determine the extent of participation of rural women. A score of 3, 2, 1 and 0 were assigned against each of the scale. Participation score of a respondent was determined by summing up all the scores obtained by the respondent against all the issues of the five selected aspects. The participation score of a

respondent could range from '0' to '57' where '0' indicates no participation and '57' indicate high participation.

To compare the level of participation in 5 major aspects as well as 19 issues a participation index (PI) was calculated by using the following formula:

$$PI = N_{ge} \times 3 + N_{ae} \times 2 + N_{se} \times 1 + N_{na} \times 0$$

Where, PI= Participation Index

$N_{ge}$ = No. of the respondent participated to a great extent

$N_{ae}$ =No. of the respondent participated to an average extent

$N_{se}$ = No. of the respondent participated to some extent

$N_{na}$ = No. of the respondent not at all participated

As there were 55 respondents, so Participation Index (PI) could range 0-165. Where '0' indicate no participation and '165' indicated to great extent participation. Based on PI the five aspects as well as 19 issues were ranked to compare the level of participation by the respondents in selected aspects and issues.

#### *Data collection and Analysis*

Data were collected with the help of the interview schedule keeping the objectives in mind during 4<sup>th</sup> March to 6<sup>th</sup> April, 2018. After completion of survey, local units were converted into standard unit and then all the qualitative data were converted into quantitative form by means of suitable code and score whenever necessary. Statistical measure such as number, percentage, minimum-maximum, rank order, mean and standard deviation were used in describing the independent and dependent variables. For exploring the relationships Pearson's Product Moment Correlation Co-efficient (r) was computed by Statistical Package for Social Science (SPSS) version 20.

### **Results and discussions**

#### *Selected characteristics of the respondents*

Majority of the women poultry farmers (72.7%) were young aged, followed by 23.6 percent were middle aged and only 3.7 percent were old aged. Middle and elder farmers seem to be somewhat less motivated to adopt new poultry farm practices than young aged farmers. About 43.6 percent of the respondents had secondary level of education while 23.7 percent had

primary level of education and only a few of the respondents (9.1%) were illiterate. Educated people are more innovative and conscious about farming practices. Majority of the respondents (63.7%) had medium sized family while 23.6 percent of the respondents had small sized family and only 12.7 percent had large sized family. The average family size (4.89) of the study area indicates that the respondents are not conscious about their family size and population growth because the average family size of the study area is more than that of national average (BBS, 2011). Most of the respondents (80%) had small to marginal farm size while about 20 percent belonged to land less. The average farm size of the poultry farmers of the study area (0.15ha) were lower than that of national average (0.60ha) of Bangladesh (BBS, 2014). All the respondents (100%) had medium household income.

Majority of the respondents (98.2%) had low to medium farming experiences in poultry farming followed by 1.8 percent high farming experiences. On the other hand, in case of agricultural farming about 94.5 percent had low to medium farming experiences while only 5.5 percent had high experience. Majority of the respondents (63.7%) had low organizational participation while 34.5 percent had no participation and only 1.8 percent had medium participation in different organizations. In case of knowledge about poultry farming, it seemed that 54.5 percent women farmers had medium knowledge while 45.5 percent had high knowledge. In terms of training received it seemed that majority of the respondents (58.2%) had received no training while 41.8 percent had received low training in conducting poultry farming activities. Majority of the respondents (76.4%) had low extension contact while 23.6 percent had medium extension contact to conduct their farming activities. About half of the respondents (47.3%) believed that poultry farming played medium role in reducing poverty while 38.2 percent thought it played low role and only 14.5 percent thought it played high role in reducing poverty. Halcyan and Rahman (2012) observed similar types of socio-economic characteristics in their research work entitled; A socioeconomic study on household poultry rearing in

some selected areas of Mymensingh district in farmers are given in Table 1. Bangladesh. All socio-economic data of women

**Table 1.** Socio-economic characteristics of the respondents.

Characteristics	Categories (Score)	Respondents (N=55)		Mean	SD	Min	Max
		No.	(%)				
Age (Yrs)	Young (up to 35)	40	72.7	31.89	8.38	19.00	55.00
	Middle (36 to 50)	13	23.6				
	Old (> 50)	2	3.7				
	Illiterate (0)	5	9.1				
Educational Qualification (Yrs of schooling)	Primary (1 – 5)	15	27.3	2.81	1.02	0.0	12.0
	Secondary (6 – 10)	24	43.6				
	Higher secondary (11-12)	7	12.7				
	Higher education (> 12)	4	7.3				
Family size (No.)	Small (1-4)	13	23.6	4.89	0.60	3.0	12.0
	Medium (5-7)	35	63.7				
	Large (>7)	7	12.7				
	Landless (<0.02)	11	20.0				
Farm size (ha)	Marginal (0.02-0.20)	30	54.5	0.14	0.15	0.01	0.70
	Small (0.21-1.0)	14	25.5				
	Medium (1.01-3.0)	0	0				
	Large (>3.0)	0	0				
Total household income (000 Tk)	Low (<100)	0	0	85.27	18.82	60.0	150.00
	Medium (100-150)	55	100				
	High (>150)	0	0				
	No (0)	0	0				
Farming experience (Poultry)	Low (<5)	37	67.3	3.77	2.57	1.00	15.00
	Medium (5-10)	17	30.9				
	High (>10)	1	1.8				
	No (0)	0	0				
Farming experience (Agriculture)	Low (<5)	25	45.5	5.05	3.30	1.00	15.00
	Medium (5-10)	27	49.1				
	High (>10)	3	5.5				
	No (0)	19	34.5				
Organizational participation	Low (1-6)	35	63.7	1.15	1.35	0	8.00
	Medium (7-12)	1	1.8				
	High (>12)	0	0				
	No (0)	0	0				
Knowledge	Low (1-3)	0	0	6.53	1.50	4.0	10
	Medium (4- 6)	30	54.5				
	High (>7)	25	45.5				
	No (0)	32	58.2				
Training	Low (1-3)	23	41.8	0.472	0.60	0.0	2.0
	Medium (4-6))	0	0				
	High (>6)	0	0				
	No (0)	0	0				
Extension contact	Low (1-8)	42	76.4	4.42	3.20	1.0	12
	Medium (9-16)	13	23.6				
	High (>16)	0	0				
	No (0)	0	0				
Poverty reduction	Low (1-10)	21	38.2	12.79	5.47	2.00	22
	Medium (11-20)	26	47.3				

	High (>20)	8	14.5
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Source: Field Survey, 2018

*Participation of rural women in poultry farming activities*

The participation scores of the rural women in poultry farming activities ranged from 7 to 41 with a mean of

13.40 and standard deviation of 8.28. The distribution of rural women according to their extent of participation in poultry farming activities is shown in Table 2.

**Table 2.** Distribution of rural women according to their extent of participation in poultry farming activities.

Categories	Scores	Respondents(N=55)		Mean	SD	Min	Max
		Number	Percentage				
No Participation	0	0	0				
Low participation	1-19	5	9.1				
Medium participation	20-38	40	72.7	13.40	8.28	7.00	41.00
High participation	39-57	10	18.2				
Total		55	100				

Data presented in above table indicate that 72.7% of the respondents had medium participation and only 18.2% of the rural women had high participation in poultry farming. Bose *et al.* (2009) observed that majority of the rural women farmers participate actively in income generating activities especially poultry farming.

*Extent of participation of the respondents in selected 5-aspects along with 19 issues*

To measure the extent of participation of the rural women poultry farmers in selected 5-aspects along with the 19 selected issues a participation index (PI) was calculated. Based on PI, the relative position of the 5-aspects as well as the 19-issues were determined indicating rank order (Table 3).

**Table 3.** Relative position of the selected 5-aspects along with 19 issues.

Activities (5 aspects)	Variable (19 issues)	Total Score	Rank order
Economic activities	Choosing of birds for farming, Purchase of birds, Selling of eggs, Selling of broiler	85.75	4 <sup>th</sup>
Feeding Activities	Feed supply, Water supply, Cleaning of feeders, Cleaning of waterer	143	1 <sup>st</sup>
Poultry Farm Management	Management of chicks, Maintenance of farm records, Egg collection, Changing of litter, Excreta collection	97	3 <sup>rd</sup>
Activities of health care	Care of sick birds, Vaccination, Medication of birds	100	2 <sup>nd</sup>
Purchasing, processing and marketing	Purchasing of feed, Purchasing of equipment, Marketing of poultry products	48.67	5 <sup>th</sup>

Computed participation index score presented in above table indicate that the respondents participation was highest in feeding activities ( $\bar{x}=143$ ) while it was least in purchasing, processing and marketing ( $\bar{x}=48.67$ ). The other dominant aspects of poultry farming activities as participated by the respondents were activities of health care ( $\bar{x}=100$ ) and poultry farm management ( $\bar{x}=97$ ). Okoh *et al.* (2010) found that women are intensively involved in poultry feeding, farm management and health care activities.

*Relationship between the characteristics of the rural women and their participation*

Person's Product Moment Co-efficient of Correlation (r) was used to explore the relationship between the selected

characteristics of the rural women and their participation in poultry farming activities shown in table 4.

Data presented in above table indicate that, age of the respondents had negative significant relationship with their participation in poultry farming activities. It means that higher age of the respondent the lower is the participation in poultry farming activities. Level of education of the rural women had positive and significant relationship with their participation in poultry farming activities. It was observed in study area that educated women are more interested in poultry farming as they aware about the economic benefits of poultry farming by which they can improve their livings. On the other hand, family size, farm size, total household income, extension media contact,

organizational participation, knowledge and poverty reduction indicator of the rural women had no significant relationship with their participation in poultry farming activities.

**Table 4.** Relationship between the characteristics of the rural women and their participation.

Characteristics(Independent variable)	Dependent variable	Correlation coefficient
1. Age	Participation of rural women in poultry farming activities	-0.349**
2. Level of Education		0.316*
3. Family Size		-0.212 <sup>NS</sup>
4. Farm Size		0.233 <sup>NS</sup>
5. Total household income		-0.049 <sup>NS</sup>
6. Extension media contact		0.020 <sup>NS</sup>
7. Organizational participation		0.076 <sup>NS</sup>
8. Knowledge about poultry		0.088 <sup>NS</sup>
9. Poverty reduction indicator		0.214 <sup>NS</sup>

\*Significant at the 0.05 level (2-tailed), \*\*significant at the 0.01 level (2-tailed), NS Non significant (P>0.05)

*Extent of reducing poverty by the rural women poultry farmers in selected 10 issues*

To measure the extent of reducing poverty of the respondents in selected 10 issues under a poverty reduction index (PRI) was calculated. Based on PRI, the relative position of the 10 issues was determined indicating rank order (Table 5).

**Table 5.** Relative position of the selected 10 issues based on poverty reduction index (PRI).

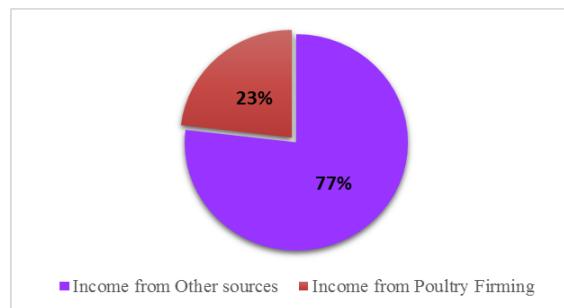
Livelihood status	Total score	Rank order
Increased family income	145	1 <sup>st</sup>
Increased family saving	102	8 <sup>th</sup>
Wear good cloths	140	2 <sup>nd</sup>
Access to medical care	124	4 <sup>th</sup>
Adequate and safe food	120	5 <sup>th</sup>
Ability to establish a new farm	85	10 <sup>th</sup>
Reduced gender discrimination	110	6 <sup>th</sup>
Increased happiness	94	9 <sup>th</sup>
Improved education	103	7 <sup>th</sup>
Improved housing conditions	127	3 <sup>rd</sup>

Computed PRI score presented in above table indicate that the respondents poverty reduction was highest in family income ( $\bar{x}$ =145) while it was least in ability to establish new farm ( $\bar{x}$ =85). The other dominant aspects of reducing poverty by the respondents were to wear good clothes ( $\bar{x}$ =140) and improved housing condition

( $\bar{x}$ =127) respectively. Akhter and Rashid (2010) observed that poultry production by the rural women helps in reducing poverty and improving livelihood.

*Contribution of income from poultry farming to the total family income*

The contribution of poultry farming to total income of women poultry farmers revealed that about one-fourth (23%) of total income was from poultry farming and is shown in a pie chart (Fig. 1).



**Fig. 1.** Contribution of income from poultry farming to total family income.

Average Income 23%= Average 25818.18tk, Contribution from poultry farming, 77%=Average 85727.27tk, other family income by her husband and others. Akhter (2009) found poultry farming as beneficial tools to rural women in his research work; Profitability Analysis of Broiler Farming in Some Selected Areas of Mymensing.

**Conclusion**

Young and educated rural women farmers are more interested in participating poultry farming in a meaningful way to conduct their farming activities. Majority of the women poultry farmers has medium participation in conducting poultry farming and are more interested in feeding activities, health care, farm management etc. Participation of women in poultry farming activities has a more or less positive impact on family income which ultimately leads to alleviate poverty from the rural society.

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