

## Farmers' communication exposure and knowledge in poultry farming

M. A. Sayeed Bhuyian<sup>1\*</sup>, M. K. I. Akanda<sup>2</sup>, S. M. Hasanuzzaman<sup>3</sup> and S. Uddin Tipu<sup>4</sup>

<sup>1</sup>Department of Agricultural Extension Education, <sup>2</sup>Department of Crop Botany, <sup>3</sup>Department of Agronomy, Bangladesh Agricultural University, Mymensingh, Bangladesh, and <sup>4</sup>Department of Agriculture Extension, Khaliajuri, Netrakona, Bangladesh, \*E-mail: sayeedkaiser76@gmail.com

### Abstract

The main purpose of the study was to analyse the farmers' communication exposure and knowledge in poultry farming. The research was conducted in three selected unions of Bhaluka upazila under Mymensingh district. Each of the six selected characteristics of poultry farmers namely age, education, family size, family education, farm size and organizational participation are the independent variables; while farmers' exposure to communication media for poultry production and farmers' knowledge on poultry were the two dependent variables. In case of farmers' exposure to communication media for poultry production, majority of the farmers (54 percent) had low exposure to communication media, while 46 percent had medium exposure and none of them had high exposure. In the case of poultry farming knowledge, majority of the farmers (57 percent) had medium knowledge while 29 percent of them had low knowledge and only 14 percent had high knowledge. Tests of hypotheses indicated that education of the farmers was positively related to communication exposure for poultry production while the rest independent variables had no relationship with any of the dependent variables.

**Keywords:** Communication, Exposure, Knowledge, Poultry farming

### Introduction

Poultry is one of the most important and promising industrial sectors for the economical development of Bangladesh. Traditionally poultry rearing was considered as a small scale operation and an additional source of income for the rural people. At the doorstep of 21<sup>st</sup> century, there are many commercial sectors, which make the globalization concept to work and for strengthening the future economic development. Poultry industry is a developing sector of Bangladesh. The Food and Agricultural Organization (FAO, 2009) estimated poultry population in Bangladesh to be around 156 millions chickens and 13 millions ducks. According to Bangladesh Bureau of Statistics (BBS, 2011) there are about 120.75 million poultry in Bangladesh. Food and Agricultural Organization reported a total annual production of 1,30,000 metric tons of eggs and 1,10,000 metric tons of meat in Bangladesh from poultry. Poultry dropping are a good bio-fertilizer for agricultural crops, fish food and a good source of gas for fuel produce by fermentation. Other byproducts like viscera, feathers and blood have been the good sources of livestock feed, poultry feed, pet animal feed, fertilizers and industrial raw materials. To reduce poverty and improve nutritional status, poultry can play a significant role in the subsistence economy of rural people by providing them sources of income, high quality nutrition and self employment for vulnerable rural families including unemployed men, women and the youth. Government and non government organization have undertaken intensive programmes to increase poultry production by setting up poultry farms. Poultry farming requires small space and comparatively less capital for investment and can be operated in the backyards even in small towns or on small farms (Sikder, 2006). Poultry population has been increasing day by day in Bangladesh, more especially since the 1990s. Considering the above factors, the study was undertaken with the following objectives:

- i. to determine farmers' exposure to communication media on poultry farming
- ii. to determine farmers' knowledge in poultry farming.

### Materials and Methods

Total 10 (ten) villages from 3 (three) unions namely Habirbari, Kachina and Mallikbari union all under Bhaluka upazila of Mymensingh district were purposively selected as the locale of research. All the poultry farmers of those villages constituted the population for this study. The researcher did not find enough poultry farmers. So, all the respondents were taken as a sample of the study. With the final

interview schedule and tests, data were collected from 56 farmers. All possible efforts were made the purpose of the study to respondents in order to get valid and pertinent information from them. Data were then coded into a master coding sheet. These were then compiled and analyzed in accordance with the objectives of the study. The first dependent variable "exposure to communication media on poultry farming" was defined as one's extent of exposure to the medias for poultry production message over a year prior to data collection. The extent of contact of a respondent was, therefore, determined by adding the total responses against the extension medias. The second dependent variable "Knowledge in poultry farming" was measured using a test that consisted 20 items where 10 were on multiple choice format and the rest 10 were on "true-false" format. A score of one was given for correct answer and zero for no or no answer. Also there was no scope for assigning partial score. Thus, the total score of a respondent could range theoretically from 0 to 20 where 0 indicating no knowledge at all and 20 indicating highest level of knowledge on poultry farming. In studding relationship between variables, research hypothesis are formulated which stated anticipated relationship between the variables. The statistical measures used in the study were frequency distribution, range, mean, percentage, standard deviation and rank order. Tables and bar graphs were used to find out the meaningful result. In order to explore the relationships between the exposure to communication media and knowledge level for poultry production and the selected independent variables, co-efficient of correlation (r) was measured. Five percent (0.05) level of significance was used as a basis for rejecting any null hypothesis. However, for statistical test it becomes necessary to formulate null hypotheses. A null hypotheses states that there is no relationship between the variables (Goode and Hatt, 1992). In this study, the following two null hypotheses were formulated to examine the relationship of the selected characteristics of the farmers' with their exposure to communication media and knowledge level for poultry production.

1. There is no relationship between each of the selected characteristics of the farmers' and their exposure to communication media for poultry production.
2. There is no relationship between each of the selected characteristics of the farmers' and their level of knowledge on poultry.

## Results and Discussion

Findings in respect of farmers' communication exposure and knowledge in poultry farming are the two dependent variables which are presented below: and described in Table 1 to Table 3.

### Farmers' exposure to communication media for poultry production

The exposure to communication media for poultry production of the farmers ranged from 15 to 30 with a mean of 20.73 and standard deviation of 3.79 against the theoretical range of 0 to 100. Based on the scores farmers were classified into three categories, "Low exposure" (upto 32), "medium exposure" (33-66), and "high exposure" above 66. Table 1 shows the distribution of the farmers according to their media exposure.

**Table 1. Distribution of the farmers according to their communication exposure for poultry production**

Categories of farmers communication exposure' for poultry production messages (scores)	Farmers		Mean	Standard deviation	Range	
	Number	Percent			Minimum	Maximum
	Low (upto 32)	30			54	20.73
Medium (32-66)	26	46				
High above 66	0	0				
Total	56	100				

Table 1 indicates and the below Fig. 1 indicates that 54 percent of the farmers had low exposure, while 46 percent had medium exposure and no respondents had high exposure. Media exposure is important for receiving farm information through various teaching methods. But in the study area, generally exposure to communication media is relatively low. This might reflect that an “severe information crisis” phenomenon exists in that economy.

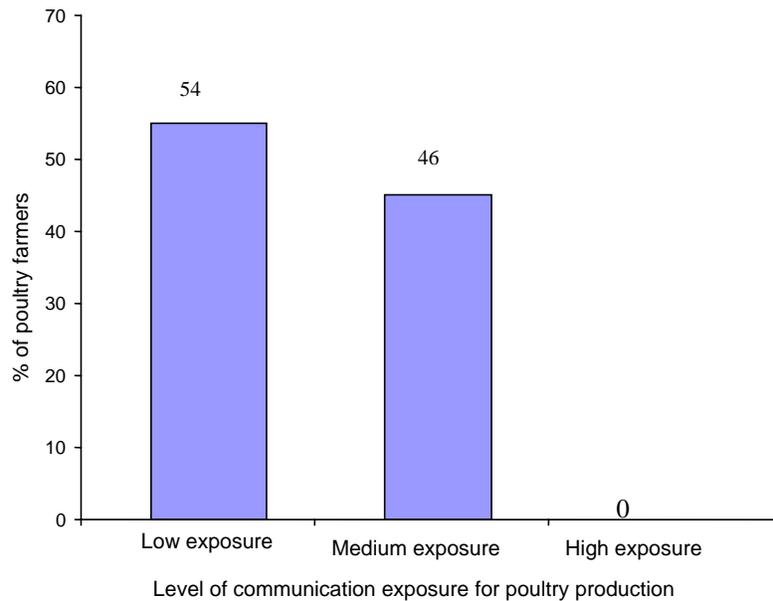


Fig. 1. Distribution of the poultry farmers according to overall exposure facing in communication

**Farmers’ knowledge on poultry production**

The poultry farming knowledge scores of farmers range from 10 to 17 against the actual score could range from 0 to 20, the mean score was 13.61 with the standard deviation of 1.67. Based on the observed knowledge scores the farmers were classified into three categories: “Low knowledge” (10 - 12), “medium knowledge” (13-15), and “high knowledge”(above 15). The distribution of farmers according to their poultry farming knowledge in shown in Table 2 and Fig. 2.

**Table 2. Distribution of the farmers according to their poultry farming knowledge**

Poultry farming knowledge Categories (scores)	Farmers		Mean	Standard deviation	Range	
	Number	Percent			Minimum	Maximum
Low e( 10-12)	16	29	13.61	1.67	10	17
Medium (13-15)	32	57				
High (above 15)	8	14				
Total	56	100				

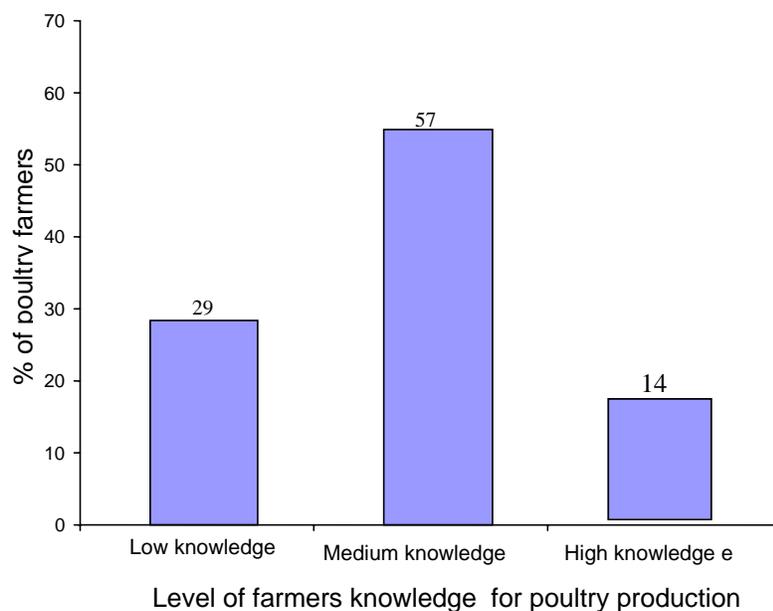


Fig. 2. Distribution of the poultry farmers according to knowledge in poultry

Data presented in Table 2 or in Fig. 2 indicate that the highest proportion (57 percent) of the farmers possessed medium knowledge, 29 percent low knowledge and lowest proportion 14 percent possessed high knowledge. Findings show that an overwhelming (71 percent) possessed medium to high levels of knowledge. Hossain (2000) found that 65 percent farmers possessed medium knowledge, 21 percent low knowledge and lowest proportion (14 percent) possessed high knowledge.

### Hypothesis testing

In order to determine the relationships between selected characteristics of the poultry farmers with their exposure to communication media for poultry, hypothesis were advanced and tested. The result of the hypothesis testing is described below:

**Table 3. Coefficient of correlation showing relationship between farmers characteristics and their communication exposure for poultry production**

Independent Variables	Dependent Variables		Table value with df 54 (N-2) significant	
	Farmers' communication exposure	Farmers' knowledge	0.05 level	0.01 level
Farmers' characteristics				
Age	- 0.167 NS	- 0.225 NS	0.257	0.333
Education	0.387**	0.457 **		
Family size	- 0.098 NS	- 0.165 NS		
Family education	0.113 NS	0.089 NS		
Farm size	- 0.042 NS	0.020 NS		
Organizational participation	0.00 NS	0.069 NS		

\* Significant at 0.05 level of probability

\*\* Significant at 0.01 level of probability

NS = Not significant

The computed “r” values (- 0.167 and - 0.225) from the above Table 3 show that the relationship between the variables lead to an insignificant finding, although both values had a negative trend. On the basis, the null hypothesis could not be rejected and hence, it was conducted that the age of the farmers had no relationship with their communication exposure and knowledge of poultry. Studies of Latif (1974), Rahman (1974), Ahmed (2007), Roy (1981), Kadam and Sabale (1983), Bhuiyan (1988), Alamin (1997), Hossain (2010) and Sarkar (2002) show insignificant relationships. Thus, the present findings corroborate with all these studies.

The computed “r” values ( 0.387 and 0.457) from the above Table 3 show a significant relationship between the farmers’ education with their communication exposure and knowledge of poultry production. Thus, the null hypothesis was rejected. Rahman (1974), Ahmed (2007), Roy (1981), Kadam and Sabale (1983), Kasem and Jones (1988), Kumari (1988), Hansra and Chopra (1986), Mia and Rahman (1995), Hamid (1995), Sarkar (2002) also found a significant relationship between the concerned variables. Thus, the present findings corroborate with all these findings.

The computed “r” values (- 0.098 and – 0.165) from the above Table 3 show a negative and insignificant relationship between the farmers’ family size with their communication exposure and knowledge of poultry production. Thus, the null hypothesis could not be rejected and hence, it was concluded that the family size of the farmers had no relationship with their communication exposure and knowledge of poultry production. Studies of Latif (1974), Kadam and Sabale (1983), Kashem (1987), Mia and Rahman (1995) also found an insignificant relationship between the same variables. Thus, the present findings show consistency with all these findings.

The computed “r” values ( 0.113 and 0.089) from the above Table 3 show an insignificant relationship between the farmers’ family education with their communication exposure and knowledge of poultry production. Thus, the null hypothesis could not be rejected and hence, it was concluded that the family education of the farmers had no relationship with their communication exposure and knowledge of poultry production

The observed value of “r” ( 0.042 and 0.020) from the above Table 3 reveals an insignificant relationship between the farmers’ farm size with their communication exposure and knowledge of poultry production but showed a positive trend. Thus, the null hypothesis could not be rejected. Ahmed (1977), Roy (1981), Kadam and Sabale (1983), Alamin (1997) also found an insignificant relationship between these variables.

The observed value of “r” ( 0.00 and 0.069) from the above Table 3 reveals an insignificant relationship between Organizational participation of the farmers’ with their communication exposure and knowledge of poultry production but showed a positive trend. Thus, the null hypothesis could not be rejected. Bhuiyan (1988), Alamin (1997) and Rahman (1995) also found an insignificant relationship between these variables.

## Conclusion

Most of the Farmers (72%) were either young or middle aged. Education was positively and significant related to two dependent variables- communication exposure for poultry production and poultry farming knowledge. It is thus precisely concluded that the role of education in information dissemination and knowledge gain by the client system is the greatest, and is of paramount importance. The average family size of the study area is 5.82, which is not much higher than the national figure of 5.6. But majority farmers (more than 60%) do not feel that other family members be the recipients of poultry farming message. The average farm size of the study area is 1.03 hac which is more than the national figure of 0.81 hac. It may be concluded that the level of living of the general people in the study area is somewhat better than a typical farming community. It was observed that 58% farmers had low or no participation while 42% of them had medium to high participation. Thus, it may be concluded that people in the study area had comparatively low social participation. Findings revealed that the exposure to communication

media for poultry farming had a positive and significant relationship with only education. It may thus be concluded that education has been the precursor of communication behaviour of the farmers to all the media. It was observed that 46% farmers possessed medium to high communication exposure for poultry production. Here hypothesis testing showed that poultry farming knowledge among the farmers is significantly high. Thus, it may conclusively be observed that the exposure receiving behaviour for poultry message has been following a direction opposite to the "Mere Exposure Phenomenon" (Tan, 1981). In order to increase the communication exposure of the farmer, it may be recommended that other adult member of the family be considered also as the clients of the extension system. This then will form a communication network within the family itself. It is interesting to note that out of eighteen media only short listed personal localite media for poultry production message. Thus, credibility of the institutional media seems to be questionable and it is strongly recommended that credibility of personal cosmopolite sources and other media be established and then employed for field poultry extension work. In the other hand, the Department of Livestock Services does not have field workers at the grass root level. This could be one of the reasons for farmers' lower exposure to communication in poultry farming.

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