



Economic Empowerment of *Haor* Women through Duck Farming in Bangladesh

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Received: 16 March 2015

Accepted: 06 June 2015

Abstract

A study was conducted to investigate the extent of women participation in duck rearing farm and to address women's economic empowerment in Hakaluki *haor* area of Maulvibazar district in Bangladesh. Primary data from 80 women duck raisers were collected through face to face interview. In this case *haor* women played an important role in the duck rearing activities which were carried out to explore the meaningful interpretation of women's present status. The result of the study revealed that duck rearing farming has exerted greater impact on improving socioeconomic condition and economic empowerment of *haor* women. The successful duck farming provides the women with economic independence and improved livelihood leading to their empowerment.

Keywords: Women participation, Hakaluki *haor*, economic empowerment, socioeconomic condition, improved livelihoods

1. Introduction

Women's contribution to agricultural development is enormous (Adeokun, 2000) and half of the world's food is used to be grown by them (Corrat and Ranson, 2000) as producers, distributors, processors, storers and marketers etc. But our society is still male-dominated and women's contributions to socioeconomic development are not visible due to a set of social norms (Bose *et al.*, 2009). A study conducted by Hossain and Jaim (2014) showed that the lack of power or disempowerment is due to their less educational level and thus reflects in less income, less control over their own income, less bargaining power in selling their own produce and labour, less participation in decision making body, less access to production inputs and

resources and employment opportunity than men. Thus, development practitioners are concerned to raise their empowerment level so that women are capable to challenge their dependency or oppressive situation in the family and society (Basu and Basu, 2001).

Women's empowerment is therefore, defined as "the capacity of women to be economically self-sufficient and self-reliant with control over decisions affecting their life options and freedom from violence" (Rao and Kelleher, 1995).

Duck farm can be a vital tool to improve women's status, households' food security, and employment opportunity. In Bangladesh, rural women feel more comfortable to participate in home-based income activities (Hossain and

Bayes, 2009). Moreover, duck meat is highly demandable for people of all over Bangladesh which is also considered as low cost, easy to handle, highly productive, adaptability to stressful environmental conditions, comparatively more resistant to common diseases. It serves dual purpose-egg and meat, which accounts for about 6.34% (42.68 million) of total poultry population (270.71 million), occupying second place next to chicken in the production level (Bangladesh Economic Review, 2010, and 2012). Similarly, in the report of Food and Agriculture Organization (FAO), it is evident that the position of Bangladesh with respect to duck meat and egg production is 11th and 4th, respectively among the Asian countries (Pingel, 2011).

An economic analysis of few studies conducted by Ghosh *et al.* (2012), Pervin *et al.* (2013), Khanum *et al.* (2005) revealed that low status of duck farmers seems to affecting duck productivity in different areas of Bangladesh. But still there is a lack of sufficient studies in *haor*¹ areas of Sylhet region, where a significant number of *haor* women were involved in duck rearing farm. It appears that inadequate or no systematic study (Alam *et al.*, 2012; Huque *et al.*, 1993; Huque and Sultana 2002) has been conducted on *haor* women's participation in intra-family decision making process in duck rearing farm.

Understanding of their income level, participation, and contribution to household decisions may provide evidence based information that might help the government to enrich formulation and implementation of appropriate policy for achieving their better livelihood patterns. Hence, the findings of the study may be helpful for policy makers to design

better duck farming options for achieving socioeconomic development as well as the formulation of effective women development policies. Such study may also help explain the theoretical background of women empowerment in the country. The present study was therefore undertaken aims to search the level of participation of *haor* women in duck rearing as well as level of women empowerment in intra-household decision making process.

2. Materials and Methods

2.1. Study area and sampling

In this study, the survey method was used. Four villages viz. Kandigaon, Radhanagar, Brahman Bazar and Routhgaon under Kulaura Upazila of Maulvibazar District were purposively selected. Twenty women duck raisers from each village were randomly selected and thus total sample size became 80. The locale of the study belongs to Hakaluki *haor* area, highly favorable for duck rearing, specially for *desi* duck (Rana *et al.*, 2010). The *haor* is the cheaper source of feed like aquatic weeds, various types of insects, tadpoles, earthworms, oyster's snail and crabs, a variety of small fishes, green forages etc. Different fallen grains are also other sources of nutrients for ducks (Ahmed, 1986) in those areas. Duck rearing is therefore, one of the major income generation opportunities. About 29% of the respondent's livelihood earning comes from selling duck and eggs in the area (Rana *et al.*, 2010).

2.2. Data collection and analysis

Both primary and secondary sources of information were used for figuring the overall situation of women in duck rearing activities. The primary data were collected by means of a pre-tested and a set of well-structured interview schedule germane to the objectives of the study. The secondary information was collected from different published paper, report, BBS etc. Both closed and open-ended questions were used to see the economic impacts of duck rearing activities on women's household income, their

¹ A back swamp or bowl-shaped depression located between the natural levels of rivers may comprise a number of *beels* of low lying water reservoirs, abundant marshy land and water logged areas.

savings, decision making power, and role of participation.

A group of participatory techniques like face to face interview and Focus Group Discussion (FGD) was used with the women duck raisers through check lists and finalized interview schedule after necessary changes, correction, modification and adjustment. Focus group discussions (FGD) were conducted to determine women involvement in home-based small farming and cross verify the information collected through interview schedule. A total of eight FGDs were conducted through two sessions in each village, comprising ten women duck raisers. The main information were collected from *haor* women consisting of educational level, age, occupational status, ownership of land, decision making process, economic empowerment and participation in duck rearing activities, and finally get their suggestions to improve duck rearing activities as well as increase supply of egg and meat. Data were collected during April to July 2013. Several visits were made for gathering data and information. The collected information were coded, tabulated and analyzed using appropriate statistical methods.

2.3. Analytical techniques

Different indices of analyses were employed to accomplish the objectives of the study. Two indices- participation index and women empowerment index were used to estimate the nature of participation in home-based farming activities and decision making process in *haor* area.

2.3.1. Estimation of participation index (PI)

To assess the nature of participation of women, all activities related to duck rearing were classified into 7 categories. Then women were asked to what extent they were involved in rearing activities. A 3-point rating scale was used to measure the extent of participation such as frequently, occasionally and never; and accordingly, scores of 2, 1, and 0 were assigned, respectively. Thus, a woman participation score

could range from 0 to 14 for 7 Duck Rearing Activities (DRAs). Participation Index of DRAs was estimated following Sheheli (2012) as:

$$\text{Participation Index (PI)} = \sum_{i=1}^7 \text{RAFS}_i$$

Where,

RAFS_i = Rearing Activity Frequency Score
(2 = frequently, 1 = occasionally, and 0 = never)
 i= Number of rearing activities ranged from 1 to 7.

2.3.2. Determination of women empowerment index (WEI)

Women Empowerment Index (WEI) was constructed in consideration of women participation in household decision making process in duck rearing and household related activities. In this regard, 16 household decision related activities were identified as indicators of WEI. Out of 16 decision related activities, three were duck rearing related, five were family matters related and eight were women mobility related. Three point rating scale was used to measure household decision activities in the following manner:

Household decision activities	Score assigned
Decision taken by husband	0
Decision taken by both husband and wife	1
Decision taken by wife alone	2

In case of duck rearing related decision, women were asked who decides about i) purchasing/rearing duck, ii) duck treatment, and iii) selling eggs/duck etc. In case of family matters related decision; i) child education, ii) household assets, iii) savings, iv) coping crises, and v) marriage of daughter and boy etc. Similarly, in the case of women mobility related decision women were asked about ; i) different training programme, ii) bazar (marketing), iii) health centre or hospital, iv) social or political meeting, v) vote center, vi) upazila or zila offices, vii) attending social festival, viii) married women to their father’s home or any other relative home etc.

The average scoring value of X_i (i.e. i th indicator) for all decision indicators would be the average of the value K_i denoted by the following equation

$$X_i^- = K_i^- \dots\dots\dots(1)$$

The individual woman's empowerment index such as Women Empowerment Index of duck rearing related (WEI_{ei}), Women Empowerment Index of family matters (WEI_{fi}), and Women Empowerment Index of mobility (WEI_{mi}), are given in equations 2, 3, and 4 respectively (Bose *et al.*, 2009):

$$WEI_{ei} = \frac{\sum_{i=1}^n X_i}{3} \dots\dots\dots(2)$$

$$WEI_{fi} = \frac{\sum_{i=1}^n X_i}{5} \dots\dots\dots(3)$$

$$WEI_{mi} = \frac{\sum_{i=1}^n X_i}{8} \dots\dots\dots(4)$$

Therefore, the overall WEI_i stand for an i th indicator is shown in equation 5;

$$WEI_i = \frac{(WEI_{ei} + WEI_{fi} + WEI_{mi})}{3}$$

Again, to assess the individual empowerment status and position of *haor* women farmers, two randomly defined ranges were arranged as given below;

- Not empowered $WEI_i \leq 1$
- Empowered $WEI_i > 1$

3. Results and Discussion

3.1. Socioeconomic status of haor women

The present profile of duck is summarized and presented in Table 1. It was found that 40% of the women respondents belonged to young aged group (20-35 years), followed by middle aged group (39%). About 46% of duck raisers received primary education, only 10% of the respondents had secondary level of education, but 44% women in the study area were illiterate.

Table 1 also shows the marital status of the *haor* women. Most of them (49%) were married, 30% were widow and 21% divorced. In case of occupational status, 89% of the respondents were

involved in duck rearing activities and this is the main source of income among *haor* women, followed by vegetable gardening (10%), and small business women (1%) with none as the service holders. It is also revealed that 99% of *haor* women were landless which only 1% had own land in which most of land was owned by male counterpart (husband/father) in the family.

3.2. Participation in duck rearing activities (DRAs)

Women participated in different activities of duck rearing, which were classified into 7 categories; i) putting & take out of duck to shelter, ii) feeding and collecting snails/fish/earthworms etc., iii) cleaning of shed, iv) collecting of eggs, v) selling eggs/duck, vi) purchasing medicine for treatment. To assess extent of participation, women were asked as to what extent they were involved in all the selected DRAs. There were three options of their extent of participation which were: frequently, occasionally and never; score were assigned as 2, 1, and 0 respectively.

In Bangladesh, rural women mostly stay at home due to social custom which might be an important reason to more involvement in home-based agricultural/livestock /poultry activities rather than field level activities outside the home. However, considerable proportion of women duck raisers (about 56%) frequently participates but only 10% of them never participate in shelter and shelter out of the ducks. On the contrary, 69% women were frequently participated in cleaning the shed while 84% had never involvement in selling eggs/ducks (Table 2). Findings also indicated no participation of women in purchasing medicine/going to doctor for treatment of the ducks, while about 44% of *haor* women duck raisers were participated occasionally in feeding & collecting snails/fish/earthworms and 14% of them participated frequently. The overall findings of participation of *haor* women in duck rearing activities were more focused on home-based activities which are also supported by others (Bose *et al.*, 2009).

Table 1. Village wise percentage distribution of women duck raisers of Hakaluki *haor* area

Characteristics of Women Raisers	Selected study villages				Average (%)
	Khandigaon (%)	Radhanagar (%)	Braman bazar (%)	Routhgaon (%)	
Age					
Young (20-35)	45	35	50	30	40
Middle (36-50)	35	50	30	40	39
Old (50 and Above)	20	15	20	30	21
Educational level					
Illiterate	50	70	40	15	44
Primary	40	30	35	80	46
Secondary	10	0	25	5	10
Marital status					
Married	35	45	35	80	49
Divorced	30	15	25	15	21
Widow	40	35	40	5	30
Occupational Status					
Duck rearing	84	86	94	90	89
Service	0	0	0	0	0
Business	0	4	0	0	1
Vegetable gardening	16	10	6	10	10
Ownership of cultivated land					
Landless	98	100	100	99	99
Own	2	0	0	1	1
Ownership of homestead land					
Landless	100	100	100	97	99
Own	0	0	0	3	1

Source: Field survey, 2013

Table 2. Extent of participation of *haor* women in duck rearing activities

Duck Rearing Activities (DRAs)	Percentage of women's participation in DRAs (N=80)		
	Never	Occasionally	Frequently
In shelter and shelter out of the ducks	8 (10)	27 (34)	45 (56)
Feeding and collecting snails/fish/earthworms	34 (42)	35 (44)	11 (14)
Cleaning of shed	7 (9)	18 (22)	55 (69)
Collecting of eggs	2 (3)	24 (30)	54 (67)
Selling eggs/duck	67 (84)	8 (10)	5 (6)
Purchasing medicine for treatment of duck	80 (100)	0 (0)	0 (0)

Note: Figures in the parentheses indicate percentages of total

3.3. Women empowerment in intra-family decision making process

Women's participation in intra-family decision making process indicates that the democratic right exists among the family members and also shows better women empowerment status. Their economic contribution to the family income is important factor of participation in their intra-family decision making process. In the study, there were sixteen indicators of decision to assess the degree of participation through asking to the *haor* women duck raisers whether the decision is taken by husband alone or husband and wife jointly or wife alone with respect to each of the activities as presented in the Table 3. It revealed that almost in all cases, decision was taken by jointly by husband and wife as child

education (about 71%) and household assets (66%) under family matters related decisions, respectively.

However, in a very few cases it was found that women participated alone particularly in the cases of marriage of daughter and boy (less than 1%) as well as attending in social and political meeting (less than 1%). Few expectations were also indicated the same scenario where husband was taken decision (less than 1%) alone in the cases of attending in different training programmes, purchasing/repairing of household assets and married women move to their father's home or any other relative home related decision.

Table 3. Participation of women in decision making process

Indicators of Decision making	<i>Haor</i> women in intra-household decision making process (N=80)			Average Women Empowerment Index (WEI)
	Decision by husband	Decision by husband and wife jointly	Decision by wife	
a) Duck Rearing Related				1.02
i) Purchasing/rearing duck	8	19	53	1.56
ii) Duck treatment	36	28	16	0.75
iii) Selling eggs/duck	31	37	12	0.76
b) Family Matters Related				0.99
i) Child education	11	57	12	1.01
ii) Household assets	6	53	21	1.19
iii) Savings	9	49	22	1.16
iv) Coping crises	18	51	11	0.91
v) Marriage of daughter and boy	32	43	5	0.66
c) Mobility Related				1.22
i) Different training programme	2	11	67	1.81
ii) Bazar (marketing)	17	29	34	1.21
iii) Health centre or hospital	23	38	19	0.95
iv) Social or political meeting	34	39	7	0.66
v) Vote center	18	26	36	1.23
vi) Upazila or Zila offices	9	31	40	1.39
vii) Attending social festival	12	48	20	1.10
viii) Married women to their father's home or any other relative home	7	38	37	1.40
Average decision Indicator (a+b+c)/3				1.08

N=Number of respondents women raisers;

Empowerment status: Not empowered, if WEI_i ≤ 1, and Empowered if WEI_i > 1

Finally, Women Empowerment Index (WEI) has been calculated to understand the overall empowerment status of *haor* women in duck rearing, family matters, and their mobility related decisions. The WEIs as presented in Table 3 clearly indicated that women were empowered slightly above the average level in overall decision making activities. Bose *et al.* (2009) showed that the value of the empowerment index for women is generally low, indicating that women are seldom given the opportunities to express their ideas for execution. In the study, the findings showed that the average WEI was 1.08 that means *haor* women are empowered through economic contributions to their family income.

4. Conclusions

The study explored the present socioeconomic status, participation level in duck rearing, and empowerment of *haor* women in intra-household decision making process. It might be concluded that *haor* women were in more suitable position for duck rearing, who were also more experienced to have cash inflow to meet up the family needs through the age-old traditional practices. Recently, the growth performance of *desi* ducklings could be improved by supplementation of improved diets under scavenging system (Pervin *et al.*, 2013) of duck rearing. Duck production is one of the promising sectors for empowering women to meet the family needs as well as commercial. The study revealed that *haor* women were more vulnerable in case of low educational level, landlessness in both cultivated and homestead, and limited scope of better occupational status.

It was evident that the most housewives were illiterate and were involved in duck rearing. The level of education, contribution to family income, increased participation in home based income generating activities and involvement in decision making process were important parameters indicating their improved empowerment. This implies that more

interventions need to be undertaken by the public and private agencies to help the *haor* women get involved in duck rearing activities. This would serve as an incentive to them in the *haor* areas.

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