

**FACTORS INFLUENCING WOMEN PARTICIPATION IN HOMESTEAD POULTRY
REARING IN NARAYANGANJ DISTRICT OF BANGLADESH**

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CERTIFICATE

This is to certify that the thesis entitled ‘**FACTORS INFLUENCING WOMEN PARTICIPATION IN HOMESTEAD POULTRY REARING IN NARAYANGANJ DISTRICT OF BANGLADESH**’ submitted to the Faculty of Agribusiness Management, Sher-e-Bangla Agricultural University, Dhaka, in partial fulfillment of the requirements for the degree of **Master of Science in Agribusiness And Marketing**, embodies the result of a piece of bona fide research work carried out by **SADIKUN NAHAR AMENA**, Registration Number: under my supervision and guidance. No part of the thesis has been submitted for any other degree or diploma.

I further certify that any help or source of information received during the course of this investigation has duly been acknowledged.

during the

Dated:

Dhaka, Bangladesh

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A teal-colored scroll graphic with a white outline, featuring a vertical strip on the left side and a circular element at the top right corner. The text is centered within the scroll.

**DEDICATED
TO
My Beloved
Parents**

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The author

ABSTRACT

The present study was undertaken to determine the factor influences the participation of rural women in poultry farming and to identify reasons, consequences and constraints to participation in two villages of the Narayanganj district of Bangladesh. A total of 80 rural women was randomly selected from two villages of Arahazar upazila of Narayanganj district. From the study it was found that majority of the respondents belong to the age group of 36-50 years, 48.8% was married, 57% women had nuclear family, 33.8% of the respondent's average monthly savings was between 1000 to 3000 taka, and majority of the respondents (62.0%) rear chicken. Binary logistic regression analysis was used to identify the relationships between the nine factors and the participation of rural women in poultry practices. The major findings of this study revealed that family size, husband's occupation and communication device like television positively influenced women participation in homestead poultry rearing. Besides, primary and secondary education level negatively influenced women participation in homestead poultry rearing. On the contrary, age, marital status, type of family, average monthly income and smartphone had no significant effect on women participation in homestead poultry rearing. Respondents marked source of income as 1st reason to participate in poultry rearing followed by rearing to supply food to their family in the 2nd ranking and meat production in the 3rd ranking. Insufficient fund, cultural/traditional belief, poor management skill and poor access to training facilities were the major constraints to women participation in poultry rearing. Most women thought respects from husband & children, independent decision making authority and consideration of their views for household decisions improved greatly due to participating in poultry.

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ABBREVIATION

%	=	Percent
Agril.	=	Agricultural
BADC	=	Bangladesh Agricultural Development Corporation
BARI	=	Bangladesh Agricultural Research Institute
BBS	=	Bangladesh Bureau of Statistics
BCR	=	Benefit Cost Ratio
BRAC	=	Bangladesh Rural Advancement Commission
DAE	=	Department of Agriculture Extension
DAM	=	Department of Agricultural Marketing
DEPS	=	Development and Poverty Studies
et.al	=	All Others
FAO	=	Food and Agriculture Organization
FY	=	Fiscal Year
ha	=	Hectare
HYV	=	High Yielding Variety
Kg	=	Kilogram
m	=	Million
MoA	=	Ministry of Agriculture
MS	=	Master of Science
mt	=	Metric tons
NGO	=	Non-Government Organization
No.	=	Number
SAAO	=	Sub Assistant Agricultural Officer
SAU	=	Sher-e-Bangla Agricultural University
SD	=	Standard Deviation
UAO	=	Upazila Agricultural Officer

CHAPTER I

INTRODUCTION

Female members of rural households in many developing nations, such as Bangladesh, lack possibilities to participate in value-adding economic activities other than domestic poultry farming. Women and girls are devalued, particularly in poor nations, with barely a tenth of one cent of every dollar spent on international development going toward assisting females (Levine, Lloyd, Greene & Grown, 2008). A rural lady spends her time caring for her husband, children, elderly relatives, and other family members. Rural women are unable to work outside of their homes or beyond their homesteads due to familial constraints, societal and cultural constraints. As a result, their potential is often untapped or misused. The majority of rural households lack enough food, clothes, housing, and medicine. Given these challenging conditions, farmhouse poultry farming is regarded as the most effective method of using women's ability to be productive and provide value to the family. Rural women may raise chicken on their homesteads since it takes little land, little cash, and relies on traditional technologies. Generally, the market for chicken goods is located close to the farmhouse. By including women in the decision-making process of their homes via poultry keeping techniques, women gain empowerment. Women's position in relation to their husbands and families improves as a consequence of their increasing engagement in decision-making. They have the ability to spend money on themselves, which provides them the independence to participate in family decision-making. Increased financial independence empowers rural women by increasing their negotiating power, reducing violence against women, and empowering them to exert more influence over family decision-making (Hadi, 1997).

1.1 Background of the study

Bangladesh is one of the world's most densely populated nations, with a population of 169.10 million people living in an area of 143,000 kilometers square (BBS, 2021). Approximately 62.6 percent of this country's population still lives in villages, and 10.5

percent of the population is very poor (BBS, 2021). Both the government and a diverse range of non-governmental organizations (NGO's) are actively encouraging poultry development on all fronts. According to the Bangladesh Rural Advancement Commission's (BRAC) annual report, more than 70% of rural families engage in chicken farming. However, they confront significant limits, since the mortality rate of poultry is estimated to be as high as 25%, owing to a combination of incorrect feeding habits, ignorance of management requirements, and insufficient vaccination distribution. The poultry industry, poultry executives said at a roundtable discussion titled “Present Crisis and Prospects of Poultry Industry in Bangladesh” (Financial Express, 23 July, 2010).

Poultry farming on a small scale has turned into a significant source of income for rural poor in a big number of developing nations worldwide. Recently, acknowledgment of small-scale commercial poultry production has aided in accelerating the pace of poverty reduction in Bangladesh, which has reached a new high. The poultry business has grown to become one of the country's most successful industries. Additionally, the industry has had remarkable growth over the previous two decades, despite the fact that it began farming in this nation in the mid-1960s (Hossain & Ali, 2020). It has already grown at a rate of around 20% each year over the previous two decades. This business has enormous potential in terms of economic development, meeting fundamental necessities, keeping prices down, and providing human nutrition, particularly animal protein.

Women from rural households that are landless or partly landless raise a variety of fowl on their property. Without a doubt, women can play a critical part in domestic poultry keeping if their full potential is realized. If women can correctly and expertly execute their duties in domestic poultry keeping, they would be able to assure food security, enhance family nutrition, boost family income, and contribute to Bangladesh's general development. As a result, when rural women are informed and included in development efforts and are aware of their rights and demands, their involvement in domestic poultry keeping is significantly boosted. However, particular involvement is decided solely on

the basis of many factors of rural women's poultry keeping activities. Taking this into account, the researchers decided to undertake the current study.

1.2 Current status of livestock and poultry in Bangladesh

The poultry and livestock industries are critical components of Bangladesh's agricultural systems. The nation has around 2821.45 lakh chickens and 558.53 lakh ducks. Around 89 percent of rural livestock households raise poultry, with an average of 6.8 birds per home (BBS, 2018). It is a significant source of monetary income for impoverished rural communities, especially women. The majority of chickens are raised in scavenging systems and fed domestic garbage and agricultural wastes. The hen produces around 40-60 eggs every year. Other exotic varieties such as the Rhode Island Red, the White Leghorn, the Barred Plymouth Rock, the Australorp, and the Fyaumi are now available at government poultry farms.

According to Table 1.1, there were 3494.75 lakh livestock in 2012-13, which climbed to 3931.37 lakh in 2017-18.

Table 1.1. Total livestock in Bangladesh (in lakh number)

Livestock Species	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Cattle	233.41	234.88	236.36	237.85	239.35	240.86
Buffalo	14.50	14.57	14.64	14.71	14.78	14.85
Sheep	31.43	32.06	32.70	33.35	34.01	34.68
Goat	252.77	254.39	256.02	257.66	259.31	261.00
Total Ruminant	532.11	535.90	539.72	543.57	547.45	551.39
Chicken	2490.11	2553.11	2617.70	2683.93	2751.83	2821.45
Duck	472.54	488.61	505.22	522.40	540.16	558.53
Total Poultry	2962.64	3041.72	3122.93	3206.33	3292.00	3379.98
Total Livestock	3494.75	3577.62	3662.65	3749.90	3839.45	3931.37

Source: DLS, 2018

1.3 Contribution of livestock and poultry in the national economy of Bangladesh

According to the Department of Livestock Services (DLS, 2018), livestock contributed 1.54 percent to Gross Domestic Product (GDP) in 2017-18. The livestock sector contributed 13.62 percent to agricultural GDP, directly and indirectly supporting 20 and 45 percent of employment, respectively (Table 1.2).

Table 1.2. Contribution of livestock and poultry in the national economy of Bangladesh (2017-18)

Contribution of Livestock in Gross Domestic Product (GDP)	1.54%
GDP growth rate of Livestock	3.40 %
GDP volume (Million Taka)	396246
Share of Livestock in Agricultural GDP	13.62%
Employment (Directly)	20%
Employment (Partly)	45%

Source: DLS, 2018

1.4 Production of milk, meat and eggs

There is a shortage of poultry meat and eggs relative to the country's population, and current production is inadequate, in Bangladesh. For instance, each Bangladeshi consumes 32 eggs per year, compared to the recommended 104 eggs. Economic disparities exist, since people lack purchasing power as a consequence of low per capita income. Bangladesh has a population of around 160 million chickens and 36 million ducks (Ahmmad, 2005). Despite the rapid expansion of commercial chicken production, eggs and meat are still produced on smallholder farms by the traditional scavenging method. Chicken accounts for over 90% of national production, followed by duck (8%), and a few pigeons, geese, and quail. Almost every rural household has between ten and twenty chickens, ducks, or pigeons, which are traditionally reared by female family members and fed home waste and agricultural remains (Saleque, 2001; Rahman, 2003). Commercial poultry farming has expanded across the country in recent years to fulfill market demand for poultry meat and eggs from mostly urban and municipal populations.

In 2017-18, total milk production totalled 94.06 lakh metric tons, total meat production amounted 72.60 lakh metric tons, and total egg production totaled 1552.00 lakh metric tons, according to government data.

Table 1.3. Production of milk, meat and eggs

Products	Unit	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Milk	Lakh Metric Ton	50.70	60.92	69.70	72.75	92.83	94.06
Meat	Lakh Metric Ton	36.20	45.21	58.60	61.52	71.54	72.60
Egg	Crore number	761.74	1016.80	1099.52	1191.24	1493.31	1552.00

Source: DLS, 2018

1.5 Demand, production, availability and deficiency of milk, meat and eggs

Bangladesh's government has prioritized livestock growth in recent years to fulfill expanding demand for milk, meat, and eggs, as well as to provide jobs and income for rural poor. Bangladesh has developed self-sufficiency in meat production, which is an excellent source of protein and vitamins. However, the nation falls short of meeting demand for milk and eggs. According to the Department of Livestock Services (DLS), during fiscal years 2009-10 and 2018-19, meat and egg production increased 496 percent and 198 percent, respectively. Meat supply, mainly by chicken, has surpassed demand. While milk output has climbed 319 percent in almost a decade to over 100 lakh tons, it is still less than the current demand of around 152.29 lakh tons (table 1.4).

Table 1.4. Estimated demand, production, availability and deficiency of milk, meat and eggs (2017-18)

Products	Demand	Production	Deficiency	Availability
Milk	152.29 Lakh Metric Ton (250 ml/day/head)	99.06 Lakh Metric Ton	56.23 Lakh Metric Ton	158.19 (ml/day/head)
Meat	72.14 Lakh Metric Ton (120 gm/day/head)	72.60 Lakh Metric Ton	Surplus 0.46 Lakh Metric Ton	122.10 (gm/day/head)
Egg	1712.88 Crore number (104 numbers/year/head)	1552.00 Crore numbers	160.88 Crore numbers	95.27 (numbers/year/head)

Source: DLS, 2018

1.6 The scope of homestead poultry development for women in Bangladesh

The following opportunities exist for women to participate in poultry development:

1. Around 70% of rural and landless women are engaged in poultry farming operations, either directly or indirectly. Traditionally, these ladies have some expertise with poultry husbandry, and hence possess certain talents (Saleque and Mustafa, 2010).
2. Poultry farming is economically viable on a homestead. If disadvantaged women are properly educated, given with funding and other necessary inputs, and placed under the supervision of extension workers from both the public and private sectors, the chicken business has the potential to be one of the most productive in the world.
3. Poultry raising is well suited for general adoption since it is inexpensive, needs few skills, is extremely productive, and can be integrated into home chores.
4. For landless and underprivileged women, work options are few or nonexistent. Poultry is the only occupation in which a sizable proportion of impoverished women may engage.

5. Poultry farming is both culturally and technically acceptable, as well as commercially successful. Additionally, women own 100% of poultry. This is a resource that disadvantaged women genuinely control.

1.7 Justification of the study

Women's engagement in domestic poultry farming is critical for rural poverty reduction. A rural lady goes through many phases of her life. She was a daughter before to marriage; a dependent housewife after marriage; and then a dependent mother responsible for all domestic duties, including cooking, child raising, and caring for her husband and other family members. Rural women are unable to work outside their houses due to social and cultural constraints. As a result, their potential is often untapped (Islam et al., 2012). They are a disadvantageous group in terms of education, independence, asset control, and household decision-making (Sultana & Hossen, 2013). Rural women, on the other hand, are becoming more aware of their life patterns, children's education, health, and financial well-being as time passes. Rural women have become into excellent income producers and home managers. They are working diligently to enhance their way of life and to overcome poverty via their involvement in domestic poultry farming. The purpose of this research was to ascertain the factors that impact rural women's engagement in chicken farming and to identify the causes, repercussions, and restrictions to participation in two villages in Narayanganj district's Araihasar upazila.

1.9 Research questions

- a) How do women in the study region do socioeconomically?
- b) What variables impact women's engagement in backyard poultry husbandry?
- c) What are the benefits of poultry rearing?
- d) What difficulties do women involved in household poultry raising face?
- e) What are the implications of women's involvement in domestic poultry rearing?

1.8 Research objectives

The study's primary purpose is to determine the degree to which women participate in domestic poultry farming in Bangladesh's Araihasar upazila of Narayanganj district.

1.8.1 Specific objectives

The study has the following precise objectives:

1. To identify the socio-economic characteristic of rural women in the study area;
2. To determine factors influencing women participation in homestead poultry rearing;
3. To demonstrate the reasons to participate in poultry rearing;
4. To analyze constraints to participation in poultry rearing among the respondents;
5. To outline the consequences of women participation in homestead poultry rearing.

1.10 Scope of the study

The study's conclusions will have a specific bearing on the Araihasar upazila in the Narayanganj district. These results may also be relevant to other regions of Bangladesh with comparable environmental, cultural, and socioeconomic characteristics to the research area.

Poultry farming, especially chicken farming (followed by duck farming), is critical to Bangladesh's socioeconomic growth. The primary characteristic of this manufacturing system is its minimal input/output requirements, which may result in a rapid return on investment. Scavenging fowls and ducks continue to play a significant role in Bangladesh's poultry farming, which may finally be regarded a vital mechanism and vehicle for rural economic development. The impact of the Smallholder Livestock Development Project (SLDP) on rural communities in various rural areas of Bangladesh revealed that the beneficiaries' overall socioeconomic conditions, their ability to consume eggs and meat, rural women's empowerment in decision-making issues, involvement in

family affairs, and employment opportunities improved significantly as a result of the SLDP intervention (Alam, 1997).

1.12 Organization of the thesis

This report has been organized based on six chapters. The first chapter will describe the introduction, background, research questions, objectives, scope, assumptions and limitations of the study. The second chapter will represent a review of previous studies. Chapter three will explain the research methodology. Chapter four will demonstrate socioeconomic and farming characteristics of respondents. In chapter five factors influencing participation, reasons to participate, constraints and consequences will be identified. Finally, chapter six will present key findings, conclusion and recommendation.

1.13 Limitations of the study

Several limitations were noted throughout the research period, including the following:

- ✓ To begin, this study was limited to a specific geographic area with a larger number of female chicken farmers.
- ✓ Second, the researcher was forced to deal with tiny sample sizes due to time and other resource restrictions. Although the data were thoroughly evaluated, a larger sample size may have bolstered the conclusions.
- ✓ Thirdly, due to time and cost constraints, all data and other relevant information were gathered as quickly as feasible.
- ✓ Fourthly, respondents were probed within the confines of their memory in order to recall the proper responses to the questions posed.
- ✓ Additionally, certain challenges were encountered during data collection in getting responses from a number of women. At first, individuals are hesitant to provide accurate facts. They were eventually persuaded to report the facts.

Throughout the research period, numerous restrictions were addressed with deliberate attention in order to reduce any voice faults.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter covers the literature on previous studies on chicken farming conducted by different researchers. It begins with defining poultry farming and reviewing the research on rural women's engagement in domestic poultry and other agricultural operations.

2.2 Literature review

Akter and Uddin (2009) argue that as a significant subsector of livestock production, the poultry business in Bangladesh contributes significantly to economic development while also creating countless job opportunities. As a critical component of animal agriculture, the poultry sector is devoted to providing the country with a low-cost source of high-quality healthy animal protein in the form of meat and eggs.

Afridi *et al* (2009) found that on an average, a rural woman was spending 5 to 6 hours daily in different livestock management activities where 68% of that time was spent on the activities of milking, farmyard manure collection, stall feeding and fodder cutting. They determined that a woman from a family with a small farm spends the most of her time managing cattle cutting feed (64.8 minutes) and cleaning sheds (43 minutes). Their engagement in various livestock management chores was greatest (98.76 percent) in shed cleaning, followed by farmyard manure collection (87.34 percent), stall feeding (87.05 percent), and watering/hauling (87.05 percent) (85.78 percent).

In a study conducted by Hashmi *et al.* (2007) in the rural areas of district Punjab, women found more conscious than that of men regarding animals' care. The probability of disease(s) to be found in animals was relatively lower and income generation was higher from the animals reared by women than that of managed by men. Highly significant results showed positive impact of women participation in the livestock management and thus in poverty alleviation.

Khan *et al.* (2006) observed that local chickens dominated poultry rearing in Bangladesh. Sylhet is mostly populated by impoverished folks who immigrated from outside and were landless and reared chicken. The majority of families (58.33 percent) possessed between 0 and 15 chickens. The majority of households (75 percent) raised chickens in a combined home with ducks. Housing materials were comparable to those utilized in other sections of the nation. Female members were mostly responsible for poultry raising. Around half of farmers received less than 70 eggs per bird each year on average. A few farmers (5.56 percent) reported collecting more than 130 eggs from a single bird in a single year. In the majority of instances (47.22 percent), the clutch length was less than 20. The greatest percentage of time between two clutches was discovered (42.22 percent). The winter season produced the most eggs (52.78 percent), followed by summer, spring, and late fall. The majority of farmers (60 percent) had vaccinated their birds, and 55% received assistance from the Department of Livestock Services.

Banerjee (2004) observed that in comparison to other livestock, poultry requires less investment to start the farming. Persons from low income group may also start the business on a small scale. Poultry farming offer opportunities for fulfillment or part-time employment particularly women, children or elderly person on the farm operation.

Rural women engage in a variety of agricultural occupations both in the field and at home, but their contribution to the rural economy has never been fully recognised. Livestock management is generally a female-dominated occupation. According to a few existing time allocation studies, a woman's estimated time spent on livestock-related chores each day varies between 3 and 5 hours (Hamdani, 2002). It is commonly accepted that women do the majority of cattle production and management tasks (Tulachan & Karki, 2000).

Jehan (2000) stated that women's involvement rates were quite high in a variety of rural economy subsectors. Their impact to animal productivity was more obvious than in crop output. A rural woman in Punjab spent around one-fifth to more than a quarter of her

daily working hours engaged in livestock-related activities, while male input exceeded female input in just four of fourteen livestock production-related activities.

Numerous studies have shown that women engage in more livestock-related activities than crop production. These women performed a variety of activities, including feeding, gathering fodder, grazing, cleaning animals and barns, preparing dung cakes (properly securing them for use as fuel), collecting manure, milking, milk processing, and even selling animal goods (like butter, butter oil or ghee etc.). Rural women were found to be significantly involved in virtually all aspects of livestock raising, with a few notable exceptions. Women are an excellent candidate for leaving the duty of cattle production as an independent business to. Including one or two animals in a household's assets results in large economic returns without requiring additional physical inputs. The primary obstacles confronting rural women include a low literacy rate, poor health and nutritional circumstances, the strain of many responsibilities, and the use of incompatible tools/technology for agricultural and animal management.

2.3 Reviews on rural women participation in homestead poultry and other agricultural activities

Mahabub and Manik (2004) found women's working hours in economic activities were low due to their extensive involvement in non-economic household work, as only 6% of women worked more than six hours a day in economic activities such as livestock rearing, homestead gardening, and cottage industries, which are significantly higher than those of men, while men allocated more time to non-agricultural activities with higher earnings, which influenced women's participation in agriculture.

Mirtorabi *et al.* (2012) conducted an applied research using a survey method to analyze factors influencing rural women participation in food processing activities in Asara Karaj, Iran. The data were analyzed using both descriptive and inferential statistics. The findings of this research suggested that rural women's engagement in processing activities was contingent upon factors such as education level, family size, animal ownership, and internal and external extension and education courses. Additionally, the results indicated

a negative significant relationship between education level and rate of participation. Rural women with a low literacy level were more likely to engage in food processing activities than women with a higher degree of schooling.

Farid *et al.* (2009) undertook a study in Bangladesh using quantitative methods to determine and describe the nature and the extent of rural women participation in agricultural and nonagricultural activities. Their survey discovered that the majority of disadvantaged rural women were engaged in agricultural and non-agricultural occupations. The findings indicated a negative association between education level and rate of agricultural activity involvement. Those from rich homes spend more time caring for children and doing household chores. The impoverished engaged in a variety of occupations to enhance their family income and fulfill basic requirements.

Kalyani *et al.* (2011) made a research in India to determine tribal women participation in agriculture also found similar results. Tribal women contributed more to family income than males. Although these women came from impoverished backgrounds and had access to resources necessary for good agricultural output, their total rate of engagement in agriculture was greater than that of males, owing to their willingness to work harder and longer hours.

Unnati *et al.* (2012), undertook a study to establish the extent of women participation in farm decision-making in Renapur and Ausa Tahsils of Latur district, India. The research discovered that age, education, and yearly income all had a favorable and substantial effect on women's involvement in agricultural decision-making.

Rahman (2008) conducted a study in Northern and Southern Kaduna State in Nigeria to examine the status of women involved in agriculture. The author analyzed the data using descriptive statistics and a logit regression model to determine the elements that satisfy women in agriculture. The study's major conclusion was that women farmers were less involved in agricultural decision-making than males. Damisa & Yohanna (2007), who conducted a comparable research in the same location, corroborate these results.

Additionally, the authors indicate that some women were unable to acquire necessary agricultural inputs or embrace new technology due to their lack of decision-making authority without their husband's approval. On the contrary, Raidimi (2014) discovered that the majority of women in six agricultural projects in Thulamela Municipality were self-sufficient.

Thagwana (2009) showed that women were the scheme's primary agricultural producers. They took up farming in order to alleviate food insecurity. According to the survey, the primary barriers to entry for women at the scheme were water scarcity, time restrictions, and inadequate finances to finance inputs. Thagwana further said that owing to water scarcity, some women chose to irrigate at night since water was plentiful at the time. This was challenging for ladies who were afraid to work at night. Some women were forced to hire males to irrigate for them, depleting their little agricultural revenue.

Nahar (2008) observed in her research in a selected area of the Gazipur district that the involvement of rural women in each of the homestead activities was highly encouraging in all cases, i.e. homestead vegetable cultivation, post-harvest activities, poultry raising and goat rearing and the degree of participation. In fact, these kinds of activities were mostly carried out in our country by rural women and have been completely reflected in her research.

Uddin (2008) conducted a study among women from the Shariatpur district. He discovered that 68.63 percent of respondents participated in home gardening activities on a moderate level, whereas 31.37 percent participated on a low level.

Hasan (2006) found that the majority of traditional rural women (98 percent) participated in household activities on a moderate basis. On the other hand, organic female farm laborers engaged in somewhat more homestead agricultural activities than typical rural women farmers.

Akanda's (1994) research showed that the highest majority of indigenous women were highly involved in vegetable cultivation, while only 15% were highly involved in fruit tree cultivation.

Halim *et al.* (1994) study said that during the summer season in Bangladesh, women successfully developed Indian spinach, amaranth, okra, gourd, cucumber and pumpkin and country bean, brinjal and tomato during the winter season in their homestead garden.

Vlassak (1993) observed that women have a critical role in agricultural output in third-world nations. Agriculture and food distribution tasks offer women with an independent source of income, which is critical given the growing value of money in developing nations. Women desired to boost agricultural productivity, but their actions hampered them in a variety of ways.

Akhter (1989) found that women are engaged in farm home-grown activities for the purpose of food and family income, such as vegetable, fruit, wood, small animals and poultry.

Halim (1987) found that women were potential producers of home-grown agricultural products and that intensive home-grown products could be developed through their participation. However, the production volume remained lower than expected due to the lack of expertise and the lack of proper technology and manageable practices.

Smith-Sreen and Smith-Sreen (1991) conducted a study with women dairy farmers in Bihar, Nadu and Gujarat in India found dairy farming as an important development program for alleviating rural poverty. From their findings, income is viewed by Women as only one of many factors identified in their assessment of the value of owning dairy cattle.

Chayal *et al.* (2010) found that there is greater involvement of women in various agricultural operations. They concluded that policy intervention could enhance women participation in actual farm work to as high as 70%.

2.4 Literature review on factors affecting women participation in poultry management

Rural women in Punjab are involved in almost every aspect of livestock management and production. They work more than men. Numerous socioeconomic and cultural factors are impeding their ability to achieve their full potential in this endeavor. The purpose of this section is to identify those factors and to quantify their impact on women's participation in livestock management activities. These factors are the determinants that can either increase or decrease the likelihood of women participating in livestock management, or in other words, can have a positive or negative effect on women participation.

2.4.1 Age of the respondent

Shephard (1999) reported that aging is associated with a progressive decrement in various components of physical work capacity, including aerobic power and capacity, muscular strength and endurance, and the tolerance of thermal stress.

Azid *et al.* (2001) observed that in the rural areas of Pakistan the women after the middle age are not in the good health condition.

Nahar (2000) observed that homestead agriculture is not influenced by age of the rural women.

2.4.2 Education:

Alderman and Chishti (1991) stated that existence of a relationship has been found between the level of education and women participation in extra- and intra-household activities.

2.4.3 Marital status:

The marital status of a woman matters in influencing her degree of engagement in the revenue producing activities. Social and economic standing of the widowed women mixed with the family's headship status placed them in a scenario where they had to labor hard to fulfill the sustenance demands of the family. Numerous studies on poverty and women vulnerability have shown that disadvantaged families or households headed by women are more likely to be economically susceptible than male-headed households (Kishore and Gupta, 2009), owing to their lower level of education and work options.

2.4.4 Health status

Condition of health is an indicator of a person's working abilities and efficiencies. A lady in excellent health will be more energised and will have a comparative edge when it comes to exerting effort. Becker (1985) discovered that married women, child care, and housekeeping are the most time-consuming and exhausting occupations, and that women who shoulder these tasks have less energy available for economic activities. Women in rural Pakistan have inadequate educational, health, and nutritional condition. Jehan (2000) found a girl is treated by her parents as inferior to a boy; hence, as compared to boy, she has to face discrimination in education, food, and other facilities or necessities of life. Saghir et al. (2005) discovered that women were nutritionally deficient in both quantity and quality. Women are primarily responsible for fodder cutting, poultry keeping, and milk processing, yet despite devoting a substantial portion of their time to animal care and management, their diets remain protein deficient, resulting in malnutrition.

2.4.5 Family type

Azid *et al.* (2001) showed Familial system, that is, living in a joint or nucleus family has an effect on rural women's employment engagement. According to a survey performed by (Amin et al., 2010), data on the family structure indicated that the majority of respondents in Punjab lived in mixed families (70.6 percent).

2.4.6 Size of landholding:

Habib (2004) found that paying for agricultural labor is not economically viable for smallholders. Thus, the smaller the landholding, the more intensive, active, and efficient the role of women becomes in economically viable agriculture.

2.4.7 Average annual income of the family

Shafiq (2008) stated that women's contributions to poverty-stricken households are often required to keep the family out of acute poverty. As a consequence, women from less affluent homes tend to be more involved in poultry raising than women from more affluent ones.

Chowdhury (2009) performed a study on women's participation in agricultural and non-farm activities in two villages in Sadar Upazilla's Mymensingh district. Women's engagement in non-farm activities is somewhat greater in poor and middle-income families than in high-income households, according to this research.

2.4.8 Level of participation in decision making in family matters

Tibbo *et al.* (2009) found that men are mostly active in official economic and social concerns and decision-making processes within their society and family under a patriarchal family structure. However, in Pakistan's Punjab region, women have a prominent part in decision-making processes including family matters, farming, and livestock management.

2.4.9 Cultural settings

Jehan (2000) found that women participation rate in agriculture is very high in rural areas and due to strong cultural norms they work predominantly on their own land holdings

Bravo-Baumann (2000) stated that women are mostly responsible for animals kept at the homestead.

Therefore, literature assessment for this study found that few investigations have been done on the variables that impact women engagement in poultry keeping. Seeing the role and the factors of rural women engagement in poultry management and production activities, the research proposes to analyze the influence of socio-economic on the degree of women participation in Narayanganj district.

CHAPTER III

METHODOLOGY

3.1 Introduction

This chapter gives a full discussion of the procedures utilized at various phases of the investigation. Methodology is a vital and fundamental aspect of every study. This chapter provides the methodology used in the research, which includes the selection of the study region, selection of samples, preparation of survey schedule, method of data collection, duration of survey, editing, processing and tabulation of data and analytical procedures. The techniques and procedures utilized and followed for the research with considering the particular aims of the study are provided below.

3.2 Research design

The major objective of the research was to discover variables impacting women involvement in domestic poultry farming in the study region. Different socioeconomic characteristics were selected to identify the factors affecting women participation in homestead poultry rearing. Besides that purpose the research will investigate the motives to participate, issues and repercussions of women engagement in domestic poultry farming.

3.3 Selection of study area

As the selection of the research area is a key phase and it primarily relies upon the goals of the study. Therefore, great effort was made on the selection of the research area. Data were obtained from both the women participating and not involved in domestic poultry raising in Araihasar upazila under Narayanganj district of Bangladesh.



Source: wikipedia

Figure 1.1. Map of Narayanganj district

According to Bangladesh Bank, the district is rated third in country in terms of gross national income (GNI) and ownership of wealth. Now-a-days Network marketing is the best position here. So, the economy of Narayanganj has been developing day-by-day and also contributing to the nation building activities.

Poraporde and Kalibari village in Araihasar upazila of the district was chosen purposively for the research. Araihasar upazila has 52963 homes and total area is 183.35 km².

The key factors for the selection of the above villages in Narayanganj district are follows:

- A considerable number of women active in poultry keeping in those communities
- These settlements have some same traits like geography and climatic conditions.
- Easy accessibility and adequate communication facilities in such communities.

3.4 Selection period of study

The current study covers 6 months from November 2019 to April 2020. Data were obtained during the period from February to April, 2020 by face to face interview with the ladies of two villages of Araizahar upazila within Narayanganj district, utilizing organized survey schedule. For gathering supplemental data the researcher personally visited the region.

3.5 Selection of the sample

There were 80 participants, among them 50 participants were engaged in poultry rearing and 30 participants were not engaged in poultry rearing.

Table 3.1. Selection of the sample

Village	No. of respondents engaged in poultry rearing	No. of respondents not engaged in poultry rearing
Poraporde	25	15
Kalibari	25	15
Total	50	30

3.6 Preparation of interview schedule

An interview timetable was established for obtaining relevant data from the sample communities. The program comprised questions regarding the socioeconomic characteristics of women and several inquiries linked with poultry keeping. The program also contained varied causes of involvement, issues confronted by them throughout production and effects of household poultry farming. Interview schedule was established on the basis of particular goals of this research, pretested and eventually produced after thorough changes.

3.7 Methods of data collection

Relevant data were acquired from the randomly chosen sample reas via face to face interview. Before taking real interviews the complete academic goal of the research was properly communicated to the respondents. Both primary and secondary data were used

for the study. The major sources of secondary data were the Department of livestock services (DLS), BBS and internet.

3.8 Editing, processing and tabulation of data

The initial step was conducted to check the data of each and every schedule to find out any discrepancy or omission in the data collecting and to prevent unnecessary information. The data were adjusted carefully to remove probable inaccuracies present in the schedules while recording information. Processed data were uploaded to SPSS spread sheet and assembled with a view to aiding tabulation. Necessary tables were generated by summarizing the data. The acquired data were examined according to the goals of the research. Inconsistencies in the data were deleted. Analysis was done using the relevant program SPSS.

3.9 Analytical technique

Collected data were examined using both descriptive and inferential statistics. The descriptive statistics such as frequency distribution and percentage were used to assess the purpose of this research, while inferential statistics such as logistic regression analysis were utilized to examine the variables impacting women involvement in the poultry farming.

3.9.2 Description of variables

The variables were coded as dummy (0,1) for the categorical variables. Table 3.2 shows the description of variables estimated on women participation in poultry farming.

Table 3.2. Description of variables estimated on women participation in poultry

Variable name	Variable value	Variable code
Women participation	Y_1	Dummy (Women engaged in poultry rearing = 1, otherwise = 0)
Age	X_1	Dummy (Above 30 years = 1, otherwise = 0)
Marital status	X_2	Dummy (Married =1, otherwise= 0)
Education level: Primary	X_3	Dummy (Primary = 1, otherwise = 0)
Education level: Secondary+	X_4	Dummy (Secondary = 1, otherwise = 0)
Family size	X_5	Number of members
Type of family	X_6	Dummy (Joint = 1, Nuclear = 0)
Husbands occupation	X_7	Dummy (Non farming = 1, otherwise = 0)
Monthly income	X_8	Dummy (BDT 3000 and above = 1, otherwise = 0)
House structure	X_9	Dummy (Pucca house = 1, otherwise = 0)
Communication device: Smartphone	X_{10}	Dummy (Smartphone = 1, otherwise = 0)
Information received: Television	X_{11}	Dummy (Television = 1, otherwise = 0)

3.9.3 Model specification

$$\text{Logit}(Y_i) = \ln[P(Y_i = 1)/1 - P(Y_i = 1)]$$

$$\ln Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} + \beta_{11} X_{11} + \varepsilon \quad (i=1, 2, 3, 4, \dots)$$

Where,

- Y_i = choice variable (participate poultry rearing=1, otherwise=0)
- X_1 to X_{11} are the independent variables.
- β_0 to β_{11} are the regression parameters to be estimated.

- ϵ is the random error, normally and independently distributed with zero mean and constant variance.

3.9.5 Null hypothesis

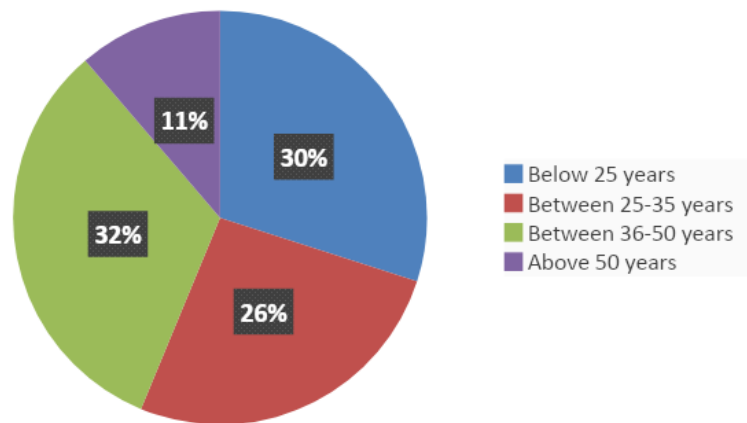
There are no any significant influence of age, marital status, education, husband's occupation, type of family, family size, average monthly income, structural condition of house, and communication device on the involvement in homestead poultry keeping.

CHAPTER IV

CHARACTERISTICS OF RESPONDENTS

4.1 Age of the respondents

Figure 4.1 shows age of the women in the study area. Age of the respondent categorized into 4 categories. As can be seen from the pie chart, 32.5% of the respondents belong to the age group of 36-50 years and followed by below 25 years age category 30%, between 25-35 years age category 26.3% respectively and remaining 11.3% of the respondents belong to above 50 years age.

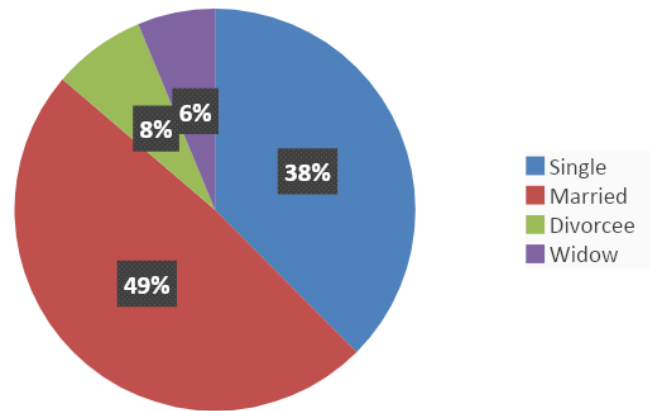


Source: Field survey, 2020

Figure 4.1. Age of respondents

4.2 Marital status of the respondents

The figure 4.2 shows marital status of the respondents. It is seen that 48.8% of the respondents were married followed by single (37.5%), divorced (7.5%) and widow (6.3%) respectively.

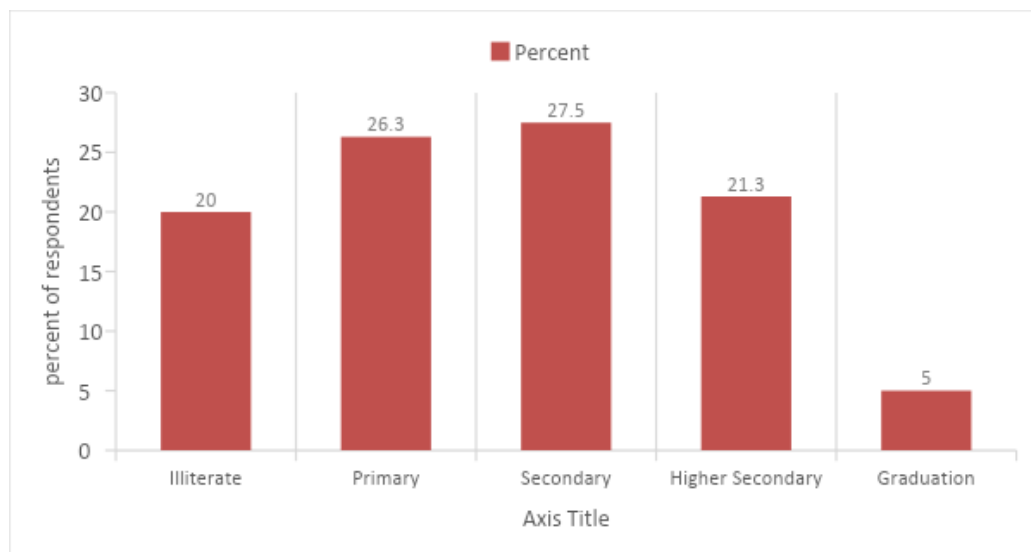


Source: Field survey, 2020

Figure 4.2. Marital status of the respondents

4.3 Educational qualification of the respondent

The figure 4.3 depicts the educational qualification of the respondents. Education levels ranged from illiterate to graduation. It is inferred from the table that, about 28% of the respondents completed secondary level education. 26.3% of the respondents completed primary level education in addition 21.3% of the respondents completed higher secondary level education, 20.0% of respondents were illiterate and 5% of the respondents completed graduation in the study locations.

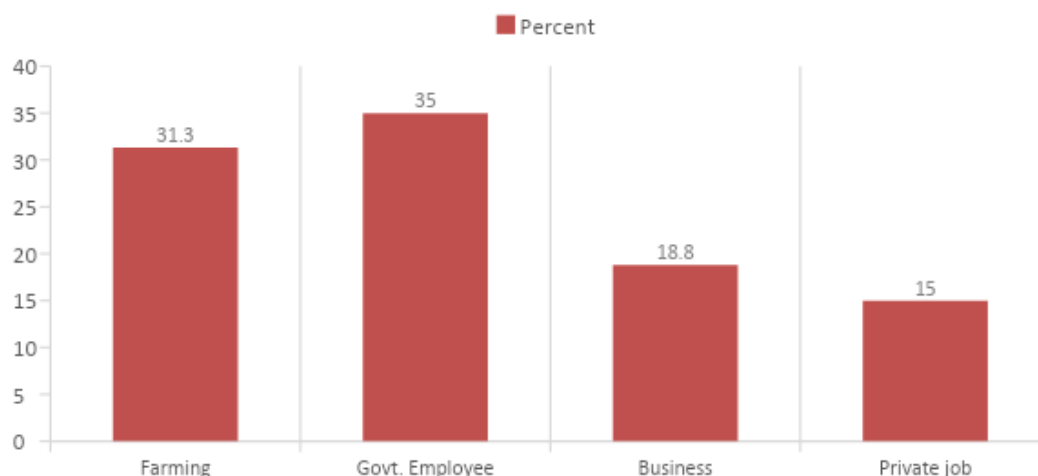


Source: Field survey, 2020

Figure 4.3. Educational qualification of the respondent (%)

4.4 Respondent’s husband occupation

The figure 4.4 shows the respondent’s husband occupation. The majority (35.0%) of respondent’s husband occupation were govt. employee followed by 31.3% engaged in farming activities, 18.8% businessman and only 15.0% of the respondent’s husband occupation were private job respectively.

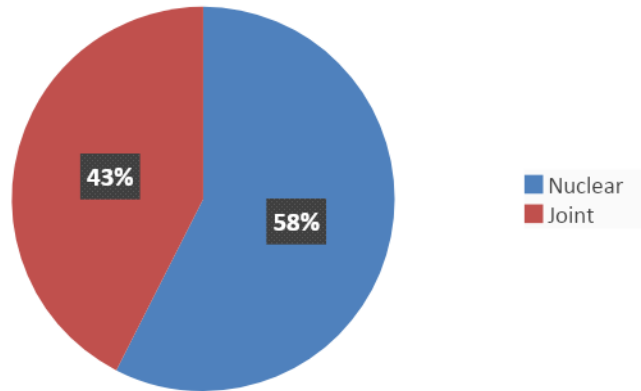


Source: Field survey, 2020

Figure 4.4 Respondent’s husband occupation (%)

4.5 Respondent's family type

The figure 4.5 indicates respondent's family type. The majority (57%) of respondents had a nuclear family, while 43% of the respondents had a joint family.



Source: Field survey, 2020

Figure 4.5 Respondent's husband occupation

4.6 Respondent's family size

It is found that respondent's family size ranged from 1 to above 7 persons. Respondents were classified into three categories on the basis of their family size. Respondent's having a family size of 1 to 4 members were 43.8%, family size of 5 to 7 members were 27.5% and more than 7 members were 28.8% (Table 4.2).

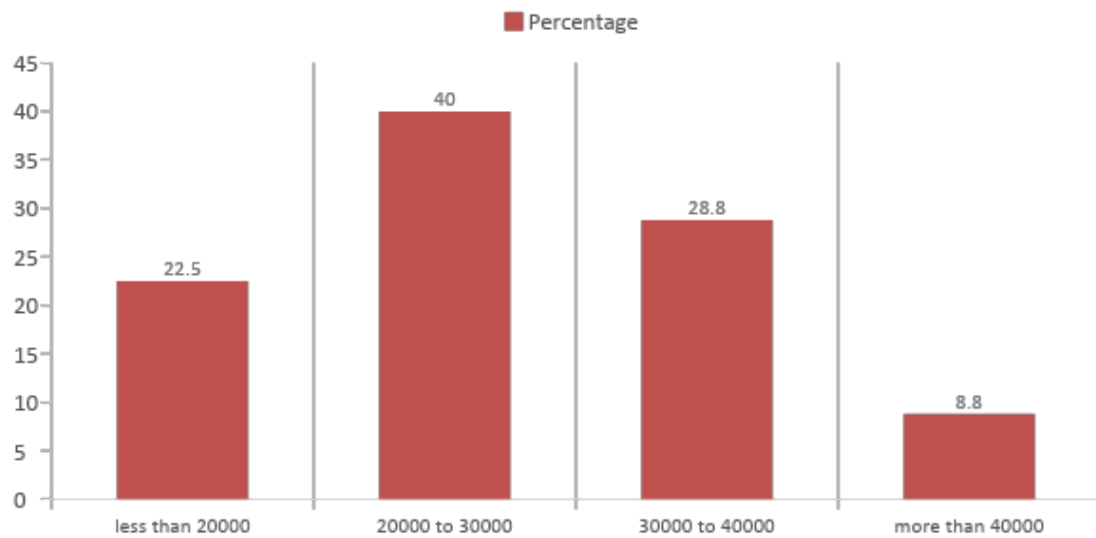
Table 4.1. Respondent's family size

Members (No.)	Frequency	Percent
1 to 4	35	43.8
5 to 7	22	27.5
More than 7	23	28.8
Total	80	100.0

Source: Field survey, 2020

4.7 Respondent's average monthly income

From the figure 4.6, it is seen that in the case of average monthly income, about forty percent of the respondents earned between 20000 to 30000 taka per month. About 29% respondent's monthly income is between 30000 to 40000 taka. Besides, 22.5% of the respondents earned less than 20000 taka per month whereas, 8.8% of the respondents earned more than 40000 taka in a month.

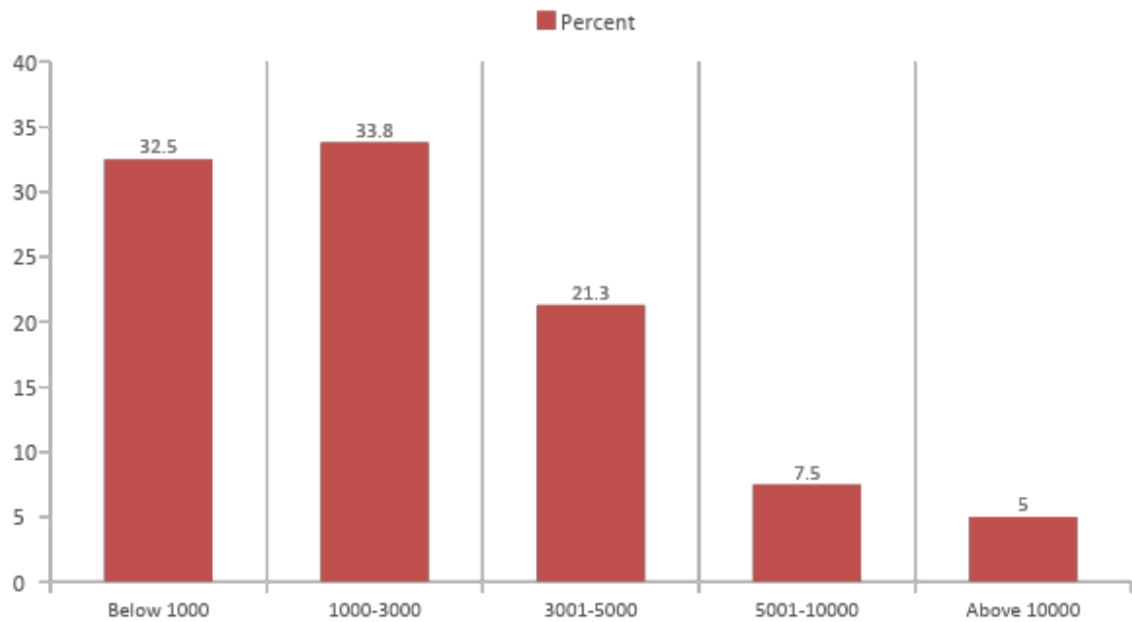


Source: Field survey, 2020

Figure 4.6. Respondent's average monthly income

4.8 Respondent's average monthly savings

The figure 4.7 shows that 33.8% of the respondent's average monthly savings were between 1000 to 3000 taka, while 32.5% of respondents saved below 1000 taka in a month. Besides, 21.3% of the respondent's average monthly savings were 3001-5000 taka and 7.5% of the respondent's average monthly savings were 5001-10000 taka. Only 5.0% of the respondent's average monthly savings were above 10000 taka.



Source: Field survey, 2020

Figure 4.7. Respondent's average monthly savings

4.9 Respondent's structural condition of house

It is seen from the table 4.2 that, majority of the respondent (37.5%) had a semi pucca house followed by 30.0%, 21.3% and 11.3% of the respondents having a tin shed, kuccha house, pucca house and hut respectively.

Table 4.2. Respondent's structural condition of house

Items	Frequency	Percent
Kuccha house	17	21.3
Tin shed	24	30.0
Semi pucca	30	37.5
Pucca house	9	11.3
Total	80	100.0

Source: Field survey, 2020

4.10 Communication device of respondents

Table 4.3 shows the type of device that the respondents had in their house. It is seen from the table that, majority of the respondents (41.3%) had a television in their house

followed by 21.3%, 21.3% and 16.3% of the respondents having smartphone, feature phone and both television and smart phone in their house, respectively.

Table 4.3. Respondent’s communication device

Particulars	Frequency	Percent
Television	33	41.3
Smartphone	17	21.3
Feature phone	17	21.3
Both Television and Smart phone	13	16.3
Total	80	100.0

Source: Field survey, 2020

4.11 Type of poultry

The table 4.4 shows the type of poultry reared by the respondents. It is seen from the table that majority of the respondents (62.0%) reared chicken whereas, 14.0% of the respondents reared duck and 10.0% of the respondent’s reared both chicken & duck. Besides, 8.0% and 6.0% of the respondents reared turkey and quail, respectively.

Table 4.4. Type of poultry rearing

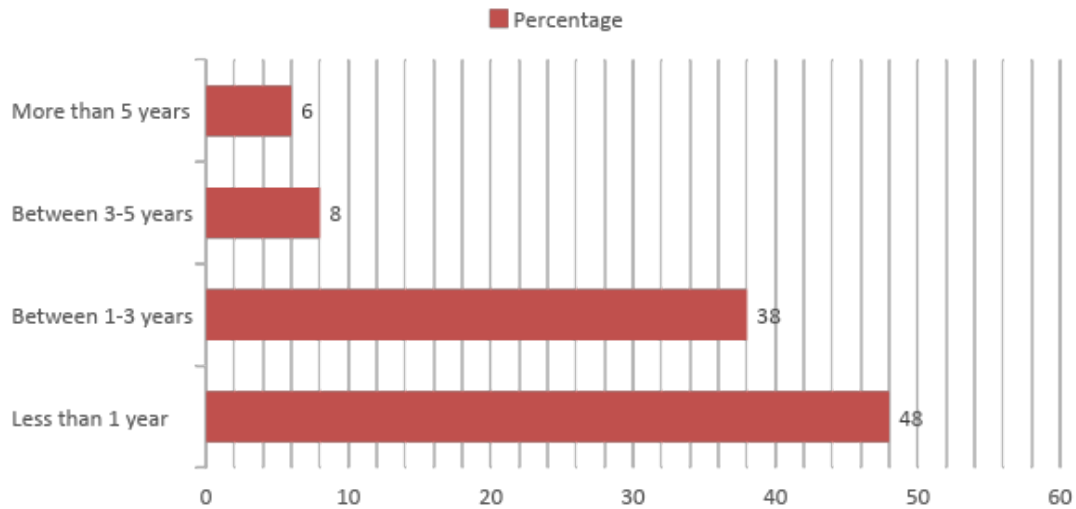
Name of the poultry	Frequency	Percent
Chicken	31	62.0
Duck	7	14.0
Turkey	4	8.0
Quail	3	6.0
Both chicken & Duck	5	10.0
Total	50	100.0

Source: Field survey, 2020

4.12 Number of years involved in poultry rearing practices

Respondents were classified into four categories based on number of years involved in poultry rearing. The figure 4.8 shows that the highest portion of the respondents (48.0%) were involved in poultry rearing of less than 1 year and 38.0% of the respondents were involved in poultry rearing practices between 1-3 years. Besides, 8.0% of the respondents

had an experience of between 3-5 years in poultry rearing on the other hand 6.0% of the respondents were involved more than 5 years in poultry rearing in the study locations.

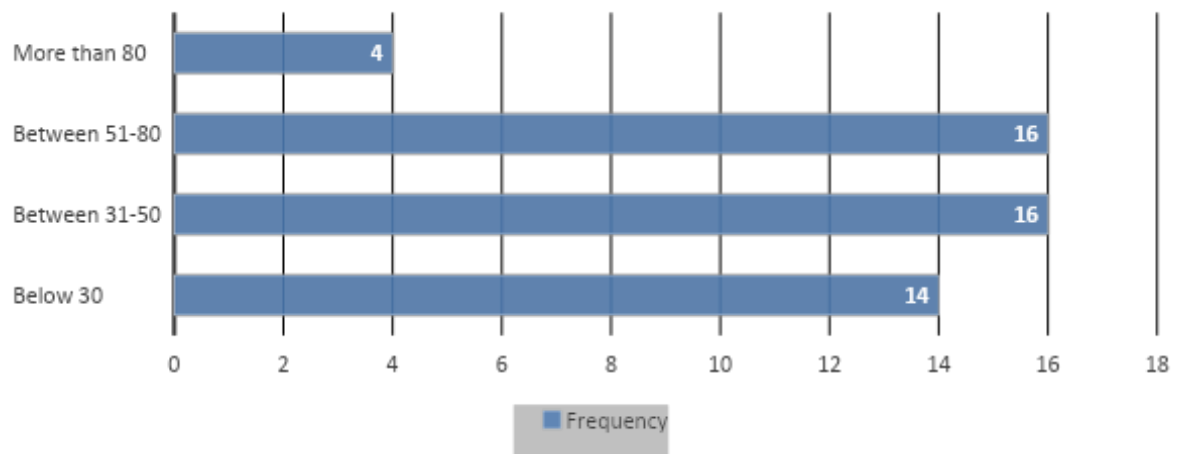


Source: Field survey, 2020

Figure 4.8. Experience of poultry rearing (%)

4.13 Number of poultry

It is seen from the figure 4.9 that 64 percent of women reared a number of 31 to 80 poultry. About 28 percent of respondents had a number of below 30 poultry. Only 8 percent of respondent had a number of more than 80 poultry in the study areas.

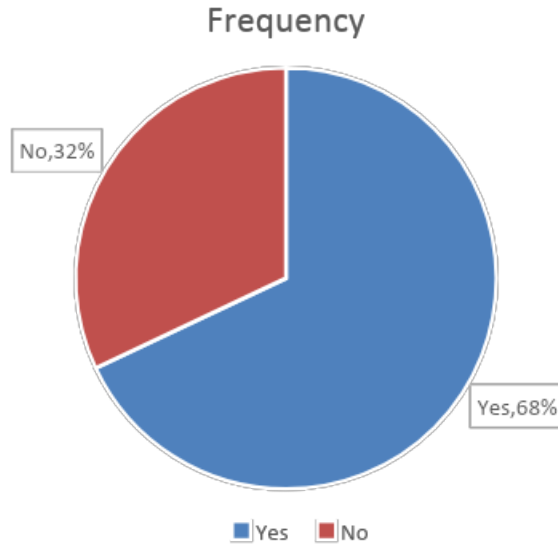


Source: Field survey, 2020

Figure 4.9. Number of poultry

4.14 Access to credit

Figure 4.10 shows that among 50 respondents, 68 percent of respondent (34 out of 50) had access to credit facilities to run their poultry rearing whereas, 32 percent had no access in the study locations.

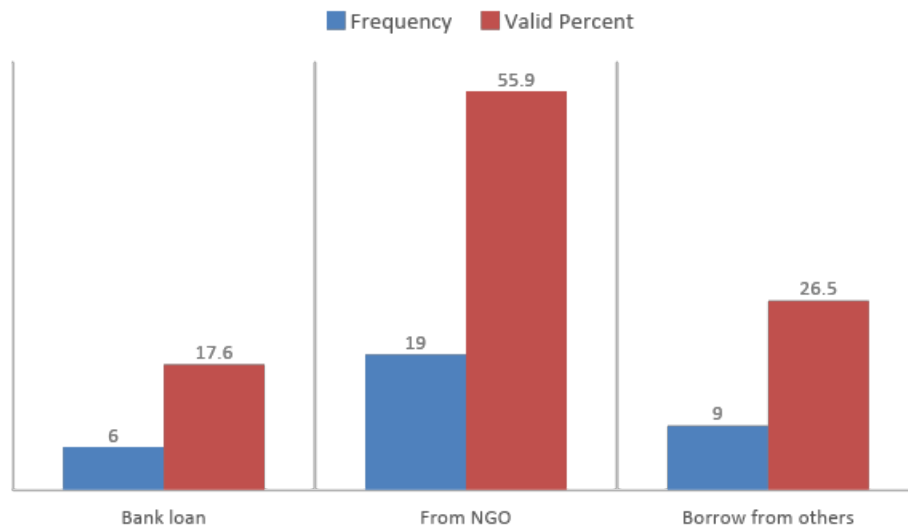


Source: Field survey, 2020

Figure 4.10. Access to credit (%)

4.15 Source of fund

It is seen that among 50 respondents only 8 respondents (16%) took loan from bank to run the farm whereas majority of the respondents (50%) took credits from different NGO's and remaining respondents (34%) in the study area borrow from others such as relatives or neighbors. (Figure 4.11)

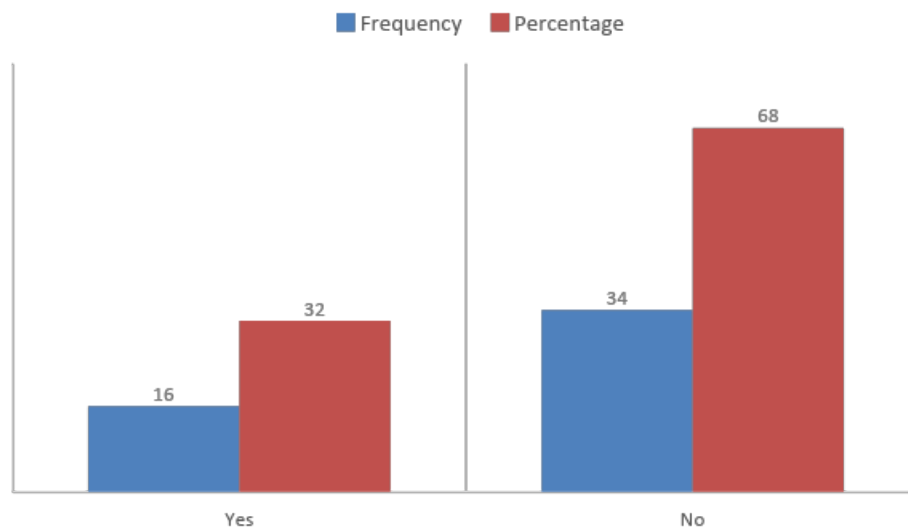


Source: Field survey, 2020

Figure 4.11. Source of fund

4.16 Employment status besides poultry rearing

It is seen from the figure 4.12 that 68.0% of respondents were not involved with other activities apart from poultry rearing whereas, 32.0% of respondents had other occupations like field labor, work at others home except poultry rearing.

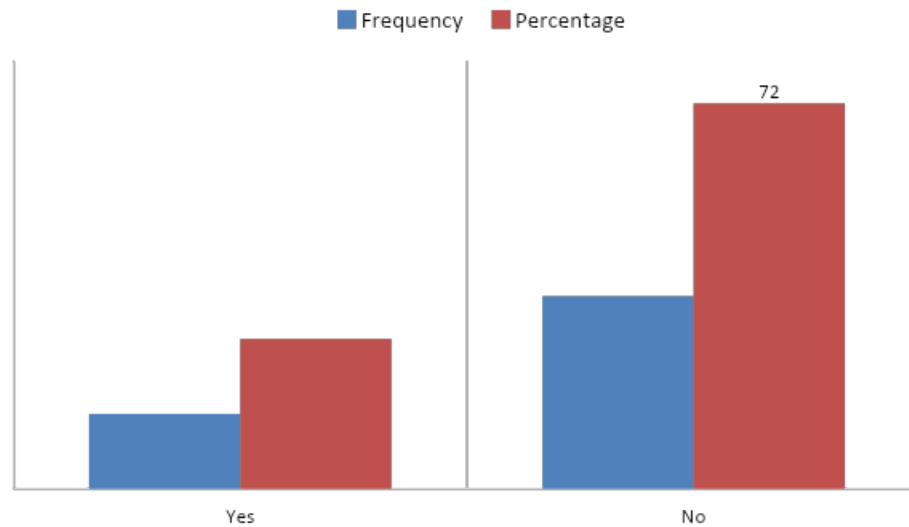


Source: Field survey, 2020

Figure 4.12. Employment status besides poultry

4.17 Does poultry rearing hamper your regular activities?

Among the 50 respondents only 28 percent women agreed that their regular activities were hampered due to poultry rearing and majority (72%) of respondents told that their regular activities were not hampered due to homestead poultry rearing. (Figure 4.13)



Source: Field survey, 2020

Figure 4.13 Poultry rearing disturbance

4.18 Factors affecting women participation in homestead poultry

Binary logistic regression model was used in this study where engagement in poultry rearing was dependent variable and some socioeconomic factors were the independent variable. P=0.000 denotes that the model fitted properly. Cox & Snell R square is 0.505 and Nagelkerke R square was 0.688 which denotes that the model can explain 50.5% to 68.8% of the variables properly (Table 4.5).

Table 4.5 Model fitting information among the selected variables

Step 1 ^a	Omnibus Tests of Model Coefficients			
		Chi-square	df	P value
	Step	56.200	11	.000
	Block	56.200	11	.000
Model	56.200	11	.000	
Model Summary				
	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square	
	49.650 ^a	.505	.688	

a = Estimation terminated at iteration number 7 because parameter estimates changed by less than .001.

Source: Field survey, 2020

The table 4.6 showed which socioeconomic factors influence women participation in poultry farming. The dependent variable (women participation) was set as ‘women engaged in poultry rearing’ = 1 and ‘otherwise’ = 0. Variables indicating ‘education level: secondary+’ and ‘communication device: television’ had a p value of less than 0.01, which denoted that those two variables were significant at 1% level of significance. P value of ‘family size’ and ‘household occupation’ were 0.026 and 0.024 which were lower than 0.05. So that, ‘family size’ and ‘household occupation’ were significant at 5% level of significance. Besides ‘education level: primary’ had a p value of 0.062, which denoted that it is significant at 10% level of significance.

The coefficient of ‘education level: primary’= -2.063 and ‘education level: secondary+’=-4.512. The coefficient of negative sign reveals that an increase in those two variables decreases chances of women participation in homestead poultry rearing.

The odd ratio of 'education level: primary' was 0.127 which implies that *ceteris paribus*, an increase in education level by one from illiterate to primary decreases women participation by 0.127 times. The odd ratio of 'education level: secondary+' was 0.011 which implies that *ceteris paribus*, an increase in education level by one from illiterate to secondary+ decreases women participation by 0.011 times.

The coefficient of 'family size' = 0.512, 'husband's occupation' = 2.360 and 'communication device: television' = 3.481. The coefficient of positive sign reveals that an increase in those three variables increases chances of women participation in homestead poultry rearing.

The odd ratio of 'family size' was 1.668 which implies that *ceteris paribus*, an increase in the number of family member increases the women participation by 1.668 times. The odd ratio of 'husband's occupation' was 10.593 which implies that *ceteris paribus*, an increase in husband's occupation by one from farming to non-farming increases the women participation by 10.593 times. The odd ratio of 'communication device: television' was 32.477 which implies that *ceteris paribus*, an increase in having television at home comparing feature phone by one increases the women participation by 32.477 times.

Table 4.6 Estimates of the factors influence on the women participation in homestead poultry rearing using logit regression

Variables in the Equation					
	Factors	Coefficient	df	Sig.	Odd ratio
Step 1 ^a	Age	-.889	1	.267	.411
	Marital status	-.352	1	.703	.703
	Education level: Primary	-2.063	1	.062*	.127
	Education level: Secondary+	-4.512	1	.001***	.011
	Family size	.512	1	.026**	1.668
	Type of family	.591	1	.463	1.806
	Husbands occupation	2.360	1	.024**	10.593
	Monthly income	-1.046	1	.224	.351
	House structure	-1.196	1	.176	.302
	Communication device: Smartphone	.143	1	.864	1.153
	Communication device: Television	3.481	1	.001***	32.477
	Constant	-.279	1	.901	.756
LR Chi: 56.20, Prob>Chi square: 3.843, Log likelihood: 49.650					

Note: ***, **, * indicates significance at 1%, 5% and 10% level of significance

Source: Field survey, 2020

CHAPTER V

REASONS, CONSTRAINTS AND CONSEQUENCES

5.1 Reasons to participate in poultry rearing

The table 5.1 shows the reasons to participate in homestead poultry rearing. Among eight reasons 44 (88%) respondents (out of 50) marked source of income as 1st reason to participate in the poultry rearing. Forty six percent respondents (23 out of 50) were engaged in poultry rearing to supply food to their family and ranked at 2nd position. In the 3rd ranking majority (14 out of 50) of the respondents mentioned meat production as their reason to participate in poultry rearing. Peer influence was their reason to participate in poultry rearing which was in 4th position. Egg production and source of employment was in 5th (36%) and 6th (26%) ranking respectively. Fifty percent respondent's reared poultry to utilize their leisure time and thirty percent respondents reared poultry for research purpose which was recommended in 7th and 8th ranking respectively.

Table 5.1 Reasons to participate in poultry rearing

Reasons	Frequency (percent)	Rank							
		1	2	3	4	5	6	7	8
Source of Income	N(%)	44(88)	3(6)	1(2)	1(2)	1(2)	0	0	0
Source of employment	N(%)	1(2)	6(12)	10(20)	8(16)	4(8)	13(26)	5(10)	3(6)
Source of leisure	N(%)	0	0	2(4)	2(4)	9(18)	6(12)	25(50)	6(12)
Peer influence	N(%)	0	2(4)	4(8)	11(22)	8(16)	7(14)	5(10)	13(26)
Source of food for family	N(%)	1(2)	23(46)	12(24)	6(12)	3(6)	3(6)	0	2(4)
Research purpose	N(%)	0	2(4)	2(4)	7(14)	6(12)	10(20)	8(16)	15(30)
Meat production	N(%)	2(4)	16(32)	14(28)	10(20)	5(10)	1(2)	1(2)	1(2)
Egg production	N(%)	2(4)	0	5(10)	7(14)	18(36)	8(16)	6(12)	4(8)

Source: Field survey, 2020

5.2 Constraints to women participation in poultry rearing

About 70% of respondents mentioned that insufficient fund was a problem of participating in homestead poultry rearing whereas 24% and 6% think it as the worst problem and no problem at all respectively. Domestic and Household work was thought to be the problem of participating in homestead poultry rearing by 58% and worst problem by 28% of respondents. About 84% and 16% of respondents agreed on Cultural/traditional belief as the worst problem and general problem respectively (Table 5.2).

About 80% of the respondents told that poor management skill was the worst problem of poultry rearing whereas 16% think it as a problem and 4% thought it as no problem at all. About 52%; 44% and 4% of respondents mentioned high cost of feed as to the worst problem; problem and no problem at all, respectively (Table 5.2).

Poor access to training facilities of poultry farming was thought to be the worst problem of homestead poultry rearing by 66% respondents whereas 28% as problem and 6% as no problem at all. The majority of the respondents (64%) mentioned inadequate veterinary services as a problem followed by 16% as the worst problem and 20 as no problem at all (Table 5.2)

According to table 5.2, about 72% of the respondents told that hatchery problem was the worst problem of homestead poultry rearing followed by 26% and 2% of respondents who thought it as a problem and no problem at all respectively of homestead poultry rearing.

Table 5.2. Constraints to women participation in poultry rearing

Type of Problems	Frequency / percentage	Worst problem	Problem	No problem at all
Insufficient fund	N	12	35	3
	%	24	70	6
Domestic and Household work	N	14	29	7
	%	28	58	14
Cultural /traditional belief	N	42	8	0
	%	84	16	0
Poor management skill	N	40	8	2
	%	80	16	4
High cost of feed	N	26	22	2
	%	52	44	4
Poor access to training facilities	N	33	14	3
	%	66	28	6
Inadequate veterinary services	N	8	32	10
	%	16	64	20
Hatchery problem	N	36	13	1
	%	72	26	2

Source: Field survey, 2020

5.3 Consequences of homestead poultry rearing

Table 5.3 shows the consequences of participating homestead poultry rearing. About 72% of the respondents thought that respects from husband improved greatly due to participating in poultry where 28% of respondents thought respect from husband improved slightly. About 46% of the respondents thought opined respects from parents-in-laws improved greatly due to participating in poultry followed by 36% of respondents thought respect from parents-in-laws improved slightly and 18% of respondents thought it remained constant. Majority of the respondents (64%) mentioned that respect from children was improved greatly, 34% thought it was improved slightly and 2% thought it was constant after participating in homestead poultry rearing. Participation in community activities was improved agreed by 34% of the respondents. Besides, 28%, 26% and 8% of respondents thought their participation in community activities became constant, slightly bad and worsened respectively due to participating in poultry rearing. About 54% of respondent thought consideration of their views for household decisions was improved greatly and 34% thought it improved slightly. About 42% of the respondents mentioned that independent decision making authority was improved greatly due to participating in poultry rearing whereas 56% of the respondents mentioned it improved slightly. About 46% of the respondents opined that independence of spending money was improved slightly and 14% of the respondents told that it improved greatly due to participating in poultry respectively followed by 36% of respondents thought it remained constant and 4% of respondents thought it was slightly bad.

Table 5.3. Consequences of homestead poultry rearing

Consequences	Frequency / percentage	Improved Greatly	Improved Slightly	Remain constant	Slightly bad	Worsened
Respect from Husband	N	36	14	0	0	0
	%	72	28	0	0	0
Respect from Parents/ In-laws	N	23	18	9	0	0
	%	46	36	18	0	0
Respect from Children	N	32	17	1	0	0
	%	64	34	2	0	0
Participation in Community activities	N	2	17	14	13	4
	%	4	34	28	26	8
Consideration of your views for household decisions	N	27	17	6	0	0
	%	54	34	12	0	0
Independent decision making authority	N	21	28	1	0	0
	%	42	56	2	0	0
Independence of spending money	N	7	23	18	2	0
	%	14	46	36	4	0

Source: Field survey, 2020

CHAPTER VI

KEY FINDINGS, CONCLUSION AND RECOMMENDATION

6.1 Key findings

- ✓ According to the respondents' socioeconomic characteristics, the majority of respondents (32.5 percent) are between the ages of 36-50 years, while 30.0 percent are under the age of 25 years.
- ✓ The most of the respondents were married (48.8%) followed by single (37.5%), divorced (7.5%) and widow (6.3%).
- ✓ Around 27.5 percent of respondents finished secondary level education, 26.3 percent completed elementary level education, 21.3 percent completed upper secondary level education, 20.0 percent were illiterate, and 5% completed graduation.
- ✓ About (35.0%) of respondent's husband occupation was govt. employee followed by 31.3% engaged in farming activities, 18.8% businessman and 15.0% was private job.
- ✓ In the household majority (57%) of respondents had a nuclear family, while 43% of the respondents had a joint family.
- ✓ Respondents with a family size of 1 to 4 people made up 43.8 percent of the total, those with a family size of 5 to 7 members made up 27.5 percent, and those with more than 7 members made up 28.8 percent of the total.
- ✓ In terms of average monthly income, the majority (40.0 percent) of respondents earned between 20000 and 30000 taka per month.
- ✓ About 34% of the respondent's average monthly savings were between 1000 to 3000 taka, while 32.5% of respondents saved below 1000 taka in a month.
- ✓ About 37.5% had a semi pucca house followed by 30.0%, 21.3%, 10.0% and 1.3% of the respondents having a tin shed, kucca house, pucca house and hut respectively.

- ✓ Majority of the respondents (41.3%) had a television in their house followed by 21.3, 21.3 and 16.3% of the respondents having smartphone, feature phone and both television and smart phone in their house respectively.
- ✓ Majority of the respondents (62.0%) rear chicken , 14.0% of the respondents rear duck and 10.0% of the respondent's rear both chicken & duck. Besides, 8.0% and 6.0% of the respondents rear turkey and quail respectively.
- ✓ The highest portion of the respondents (48.0%) were involved in poultry rearing practices of less than 1 year followed by 38.0% of the respondents involved in poultry rearing practices between 1-3 years.
- ✓ In the family 64% of women rear a number of 31 to 80 poultry, 28% of respondents had a number of below 30 poultry and only 8 percent of respondent had a number of more than 80 poultry.
- ✓ Among 50 respondents, 68% of respondent (34 out of 50) had access to credit facilities to run their poultry rearing whereas, 32 percent had no access.
- ✓ Among 50 respondents, majority of the respondents (50%) took credits from different NGO's and 34%of the respondents in the study area borrow from others such as relatives or neighbors.
- ✓ In the family 68.0% of respondents were not involved with other activities apart from poultry rearing whereas, 32.0% of respondents had other occupations except poultry rearing.
- ✓ Among the 50 respondents, only 28 percent women agreed that their regular activities were hampered due to poultry rearing and majority (36%) of respondents told that their regular activities were not hampered due to homestead poultry rearing.
- ✓ Family size, husband's occupation and television as communication device positively influenced women participation in homestead poultry rearing. Besides, primary and secondary education level negatively influenced women participation in homestead poultry rearing. On the contrary, age, marital status, type of family,

average monthly income and smartphone had no significant effect on women participation in homestead poultry rearing.

- ✓ Respondents marked source of income as 1st reason to participate in poultry rearing followed by production to supply food to their family in the 2nd ranking and meat production in the 3rd ranking. Besides, peer influence was their reason to participate in poultry rearing which was in 4th position whereas, egg production and source of employment was in 5th and 6th ranking respectively. Lastly, source of leisure and research purpose was recommended in 7th and 8th ranking respectively by the respondents as reason to participate in homestead poultry rearing.
- Insufficient fund, cultural/traditional belief, poor management skill and poor access to training facilities were the major constraints to women participation in poultry rearing.
- Respondent thought respects from husband, respect from children, independent decision making authority and consideration of their views for household decisions improved greatly due to participating in poultry.

6.2 Conclusion

Women engagement in poultry farming in the Araihasar upazila under Narayanganj district was being affected by several social-economic aspects. There is no doubting the fact that poultry keeping techniques should be supported as it empowers women and increases their social position. Therefore, domestic poultry farming and other similar business enterprises led by women should be fostered by the government and non-government development groups. As a consequence, it will improve women's autonomous decision-making capacity via income production and the engagement of women in their home issues boosts the socio-economic growth of the economy.

6.3 Recommendation

In order to enhance women involvement in poultry keeping and against the background of results of the research, the following are recommended:

- Credits and loan facilities should be made accessible to the women at a single digit interest rate so that the women may overcome the issue of shortage of capital. This would optimize their potential of poultry breeding in order to boost their contribution of food security in the country.
- Proper and better extension services should be offered to the women. This would aid in increasing their scope of output as well as the techniques of overcoming those challenges they confronted in farmhouse poultry farming.
- The women should be encouraged to organize cooperative organizations so that they may collectively overcome the obstacles preventing their full engagement in poultry production.
- The initiatives /projects should focus more on women who carry out most of the livestock related activities. Besides, the programs / initiatives should study ways of teaching the farmers on illnesses and poultry management.
- The government should encourage women to engage in household poultry keeping as it would help in national economy.

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APPENDICES

APPENDIX A.

FACTORS INFLUENCING WOMEN'S PARTICIPATION IN HOMESTEAD POULTRY REARING IN NARAYANGANJ DISTRICT OF BANGLADESH

1. **Name:** _____
2. **Age:**
3. **Marital status:** a) Single b) Married c) Divorcee
4. **Education:** a) Illiterate b) Illiterate but can sign c) Primary d) Secondary e) Diploma/Technical f) Graduation g) Others
5. **Husband's occupation:** a) Farming b) Govt. Employee c) Business d) Private job e) Other
6. **Type of family:** a) Nuclear b) Joint
7. **Household size (No.):**
8. **Size of house area:**
9. **Structural condition of house:** 1. Kuccha House 2. Pucca House 3. Semi pucca 4. Tin-shed 5. Hut
10. **Ownership Status of House:** 1. Owned 2. Rented 3. Given by Govt.
11. **Which cooking Fuel do you Use:** 1 Straw 2. Wood 3. Kerosene 4. Gas 5. Cow dung 6. Others (specify)
12. **Which type of device you have in your house?** A) Television B) Mobile c) Land Line d) Others
13. **Major Sources of Household Income:** 1. Agriculture and related activities 3. Industrial/ Agriculture labor 4. Employment 5. Business 8. Others
Specify_____
14. **Average Monthly Income:** _____
15. **Average Monthly savings:**
16. **Do you engaged in poultry rearing?** a) Yes b) No

If yes,

17. **Which type of poultry are you rearing?** a) Chicken b) Duck c) Turkeys d) Quail e) all
18. **Number of poultry:**
19. **Number of years involved in poultry rearing practices:**
20. **Monthly income from poultry:**
21. **Monthly expenditure in poultry rearing:**
22. **Do you have employment beside poultry rearing?** a) Yes b) No
23. **Do you have access to credit to enable you run your poultry?** a) Yes b) No
24. **If yes, where did you get your financing from?** a) Bank loan b) Saving c) Borrow from others
25. **Is this hamper your regular activity?** a) Yes b) No

26. Reasons to participate in poultry rearing

Reason	1	2	3	4	5	6	7	8
Income								
Source of employment								
Source of leisure								
Peer influence								
Source of food for family								
Research purpose								
Meat production								
Egg production								

27. Consequences of homestead poultry rearing

Consequences	Improve d Greatly (5)	Improve d Slightly (4)	Remain constant (3)	Slightly bad (2)	Worsened (1)
Respect from Husband					
Respect from Parents/ In-laws					
Respect from Children					
Participation in Community activities					
Consideration of your views for household decisions					
Consideration of your views for children education/marriages					
Independent decision making authority					
Independence for spending money					

28. Constraints to women participation in poultry rearing

Type of Problems	Worst problem	Problem	No problem at all
Insufficient fund			
Domestic and Household work			
Cultural /traditional belief			
Poor management skill			
High cost of feed			
Poor access to extension services			
Inadequate veterinary services			
Hatchery problem			

Suggestions _____

Thank you so much for your cooperation

Name of the enumerator:

Signature & date:

APPENDIX B. Results of binary logistic regression

Case Processing Summary			
Unweighted Cases ^a		N	Percent
Selected Cases	Included in Analysis	80	100.0
	Missing Cases	0	.0
	Total	80	100.0
Unselected Cases		0	.0
Total		80	100.0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding	
Original Value	Internal Value
Yes	0
No	1

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	-.511	.231	4.893	1	.027	.600

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	47.515	9	.000
	Block	47.515	9	.000
	Model	47.515	9	.000

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	58.336 ^a	.448	.610
a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.			

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	v.1	-1.068	.432	6.121	1	.013	.344
	v.2	-.661	.602	1.204	1	.272	.516
	v.3	-1.059	.406	6.799	1	.009	.347
	v.4	.798	.393	4.118	1	.042	2.222
	v.5	3.089	1.306	5.597	1	.018	21.965
	v.6	-1.478	.863	2.935	1	.087	.228
	v.9	.346	.389	.792	1	.374	1.414
	v.20	-1.002	.418	5.744	1	.017	.367
	v.22	.992	.385	6.655	1	.010	2.696
	Constant	1.412	2.108	.448	1	.503	4.103
a. Variable(s) entered on step 1: v.1, v.2, v.3, v.4, v.5, v.6, v.9, v.20, v.22.							