PARTICIPATION OF RURAL WOMEN IN INCOME GENERATING ACTIVITIES THROUGH LIVESTOCK REARING

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CERTIFICATE

This is to certify that the thesis entitled **"Participation of Rural Women in Income Generating Activities through Livestock Rearing"** submitted to the Faculty of Agriculture, Sher-e-Bangla Agricultural University, Dhaka, in partial fulfillment of the requirements for the degree of **Master of Science in Agricultural Extension**, embodies the result of a piece of bona fide research work carried out by **Nadira Imam**, Registration No.**18-09087** 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 been duly acknowledged.

Dated: June, 2020
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DEDICATED
TO
MY BELOVED
PARENTS

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The Author

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PARTICIPATION OF RURAL WOMEN IN INCOME GENERATING ACTIVITIES THROUGH LIVESTOCK REARING

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Abstract

The main purposes of this study were to assess and describe some selected characteristics of the rural women, to assess the extent of participation of rural women in income generating activities through livestock rearing and to explore the contribution of the selected characteristics of the rural women to their participation in income generating activities through livestock rearing. Data were gathered from randomly selected 110 farmers of three villages of Jhalakathi Sadar upazila under Jhalakathi district by using personal interview schedule during the period from 25thJuly to 12th October, 2020. Regression co-efficient was used to examine the contribution of the selected characteristics of rural women to their participation in income generating activities through livestock rearing. The findings revealed that the rural women belonged to medium participation category constitute the highest proportion 64.5% followed by low participation 19.1% and high participation 16.4%. Regression co-efficient exposed that level of education, knowledge about livestock rearing, and extension media contact of the rural women had significant positive contribution to their participation in income generating activities through livestock rearing. Problem faced in livestock rearing of the rural women had significant negative contribution to their participation in income generating activities through livestock rearing. Based on the findings, it may be concluded that government, non-government and private livestock extension providing organizations of Bangladesh should take appropriate action for increasing rural women's participation in income generating activities through livestock rearing.

Key words: Participation, Income generation, Livestock rearing

CHAPTER 1
INTRODUCTION

1.1 General Background

Bangladesh is an agricultural and densely populated country having about 158.9 million of people (BBS 2015). Half of the total populations of this country are women. Women are most important part of human resources who need attention for their development. There is a close relationship exists between the status of women and the socio-economic development in/of any country. Hence, development of the society will be ensured when through active participation of women in development activities.

To ensure a balance socio-economic development of the country, amelioration of women with change in the status is a precondition. This may be achieved only when there is an increased participation of women in development activities.

In a country like Bangladesh, more involvement of women in agriculture particularly livestock rearing becomes mandatory to combat over all food shortage, malnutrition and also to uplift the socio-economic condition of the rural women. Rural women in Bangladesh employed themselves in different income generating activities (IGAs) like livestock rearing for earning money.

Livestock is commonly defined as domesticated animals raised in an agricultural setting to produce labor and commodities such as meat, milk, egg, fur, leather and wool etc. Livestock are the domesticated animals reared commercially for sale on as farm or agricultural business, it is an inclusive general word, which includes animals like cattle, sheep, goat, buffalo, chicken, duck etc. but not refer to animals like dogs. They substantially contribute to the rural economy and provide livelihood to the poor sections and supplement their food with nutritious milk, meat and egg.

Women play the most dominant part in rearing livestock. The role of women in livestock keeping is very significant in the rural families and livestock is the most important means through which rural women are able to contribute meaningfully to the cash needs for herself and their family members. Increased income of the rural women helps them, according to the findings of Sultana and Hasan (2010), to improve their cash savings, asset ownership of both productive (cattle, goat, poultry) as well as non-productive (jewelry, TV/radio, small vehicle).

The livestock species play very important economic and socio-cultural roles for the wellbeing of rural households, such as food supply, source of income, asset saving, source of employment, soil fertility, agricultural diversification and sustainable

agricultural production. The livestock sector a predominantly a rural activity. It's a source of protein and also generates a substantial cash income and creates employments for the families who engaged in this sector.

Some GOs (Government Organization) and NGOs (Non-Government Organization) provide training, technical support and credit to the rural women and other necessary support services to improve their livelihood development. On the other hand, Downs (2007) has concluded that rural women increased income help to meet up their treatment expense, upgraded sanitation, payment of their children's school fees with improved nutrition for other members of their family.

Livestock contribute about 1.43% to the GDP (Gross Domestic Product) of Bangladesh and GDP growth rate of livestock (constant prices) is 3.04% (2019-20). Livestock production is closely interrelated with crop production. The use of livestock and its sub product manure are important in crop production. Livestock is a source of energy providing draught animal power while manure improves soil structure and fertility as well as water retention. But very little research has been done on this aspect. Considering the above facts the researcher became interested to undertake a study on "Rural Women Participation in Activities for Generating Income through Livestock Rearing".

1.2 Statement of the Problem

Women are the disadvantageous class of the society. Women can play a vital role according to economic demand of farm families and other farm activities by rearing livestock. But due to the lack of proper knowledge and satisfactory participation towards/in livestock rearing, they are not able to maximize the output from livestock rearing. Housing of the livestock species is one of the major problems. Essential vaccines and medicine are not readily available to the rural women in time. Lack of capital, outbreak of diseases and also lack of adequate knowledge about precautionary and remedial measures of livestock rearing are the major problems. Marketing is another problem commonly they faced in case of livestock rearing. Training can help their knowledge on the matter of livestock rearing. But training facilities are not available to the rural women. Therefore the present study entitled "Rural Women's Participation in Activities for Generating Income through Livestock Rearing" has been undertaken to answer the following questions:

- What are the characteristics of the rural women who participate in income generation activities through livestock rearing?

- What is the extent of rural participation of rural women in income generating activities through livestock rearing?
- What are the contributions of the selected characteristics of the rural women to their participation in income generating activities through livestock rearing?

1.3 Specific objectives of the Study

The following specific objectives have been drawn in order to give proper direction to the study:

- To assess and describe some selected characteristics of the rural women.
- To assess the extent of participation of rural women in income generating activities through livestock rearing.
- To explore the contribution of the selected characteristics of the rural women to their participation in income generating activities through livestock rearing.

1.4 Justification of the study

Women may be/are considered as the key operators of the homestead production activities. Rural women can play a vital role if they are properly engaged in income generating activities. Government has also given priorities to involve rural women in livestock rearing. Livestock rearing will not only erase poverty, but also help the rural women become self-reliant and satisfy national economical and nutritional needs. Potentiality of livestock rearing in Bangladesh is to accelerate protein production. To achieve this goal an effective extension program is needed for speedy diffusion of information to the rural women. Moreover, this research finding will give some basic information about participation of women in income generating activities through livestock rearing especially in the developing countries like Bangladesh. The female beneficiaries of livestock rearing program can make money by selling milk, meat, and egg. This also leads to enrich nutrition for the beneficiaries' family and provides the former product for the community's consumption.

1.5 Assumptions of the Study

An assumption is the supposition that an apparent fact or principle is true in the light of the available evidence (Goode and Hatt, 1952). The following assumptions were in mind of the researcher while under taking this study:

- The respondents rural women included in the sample had enough capability to provide proper response of the question reflected in the interview schedule.
- The responses furnished by the respondents were reliable, valid and free from bias.
- The respondents selected for the study area would be competent enough to the reply the questions made by the investigator.
- Views and opinions furnished by the respondents included in the sample would be representative of the population.
- The findings of the study would give clear concept about Rural Women's Participation in Activities for Generating Income through Livestock Rearing.

1.6 Scope and Limitations of the Study

Considering time, money, and other necessary resources to the researcher and also to make the study manageable and meaningful, the researcher has recognized certain limitations as mentioned below:

- This study was confined to a selected area i.e. three villages of Jhalakathi Sadar upazilla under Jhalakathi district.
- The characteristics of the respondents were many in number in the study area but only ten characteristics were selected for investigation in this study.
- There were many agricultural activities participated by rural women but only livestock rearing was considered for this study.
- The researcher depended on data as furnished by the selected rural women during collection of data.
- The findings could be applicable only for the study area and only for the similar situations of physical, socio-economic and cultural conditions.

1.7 Definition of the Terms

Participation: Participation referred to the extent of performing the developing activities including crop development, livestock development, fish development etc.

Rural Women: In this study rural women meant the married, unmarried, widow, divorced, or living separated in rural areas as individuals or families and involved in income generating activities.

Livestock: Livestock is commonly defined as domesticated animals raised in an agricultural setting to produce labor and commodities such as meat, milk, egg, fur, leather and wool etc. Livestock are the domesticated animals reared commercially for sale on as farm or agricultural business, it is an inclusive general word, which includes animals like cattle, sheep, goat, buffalo, chicken, duck etc. but not refer to animals like dogs.

Poultry farmers: The poultry farmer refers to those farmers who are engaged in poultry rearing activities in their families for economic purpose.

Goat farmers: Goat farmers refer to those farmers who are engaged in goat rearing activities in their families for income generation.

Cattle farmers: Cattle farmers refer to those farmers who are engaged in cattle rearing activities in their families for additional income.

Production: Production means the creation of something from basic inputs.

Breeding: It is the process of reproduction of livestock.

Problem: Problem means difficult situation which requires some actions to minimize the gap between "what ought to be "and "what is" The term problem refers to difficult situation faced by the women at the time of livestock rearing.

Age: Age of an individual respondent defined to the number of years having elapsed from her birth to the time of interview.

Education: Education refers to the development of desirable knowledge, skill and attitude in individual through the experience of reading, writing, observation and other related activities and measured in terms of actual years of successful schooling.

Family size: It referred to the actual number of family members of the respondent including herself, her husband, children and other members.

Farm size: It refers to the area owned by the farmer including the homestead on which he carried on her livestock farming.

Family income: It means the total earning of the entire family member from livestock rearing and other agricultural and non-agricultural sources during a year. It was expressed in taka.

Livestock rearing knowledge: It refers to the basic understanding of the farmers on different management practices namely breeding, feeding, care and management, housing, prevention and control of disease of different livestock species.

Extension media contact: It refers to the extent of contact with various communication media by the rural women in receiving livestock related information.

Family member's support: It was defined as the nature and extent of support provided from her family members to perform different livestock rearing activities.

Income generating activities: Income generating activities referred to those activities through which the rural women could earn directly.

CHAPTER 2
REVIEW OF LITERATURE

Review of literature is presented in this Chapter. The present study is mainly concerned with rural women's participation in activities for generating income through livestock rearing in a selected area. The researcher tried her best to collect essential information on this aspect from various sources such as relevant studies, journals, articles, internet etc. This enhanced the researcher's knowledge for better and clear understanding of the present study. This chapter has been presented in three major sections, the first section dealt with previous research studies related to livestock rearing, the second section dealt with the relationship between rural women's participation in activities for generating income through livestock rearing and their selected characteristics.

2.1 Previous Research Studies Related to Livestock Rearing

Christy and Thirunavukkarasu (2002) analyzed the association between the socio-economic characteristics of farm women and the extent of their participation in livestock farming. Using multistage random sampling technique, 30 women respondents from the categories of landless, marginal, small, and large farmers are selected from 4 villages of Villupuram district in Tamil Nadu, India pertaining to the year 1999-2000. Linear regression model is fitted to assess the factors influencing the extent of female participation in livestock farming. The results of the study indicate that the farm women performed most of the tasks related to livestock keeping. Farm women had developed close associations with livestock farming in the state.

Anita et al. (2001) examined women's involvement in various behavioral processes relating to household and crop-livestock practices in West Bengal, India. The study revealed that age, education, family size, family income, land holding, average lactation yield, hard size, social participation, mass media exposure, and faith had significant impact on women's involvement in various behavioral aspects like decision making, planning, perceptual process and participatory process concerning household and crop-livestock farming practices.

Naher (2000) reported that time utilization of rural women in agricultural activities was highest in poultry raising (0.82 hour/person/day) followed by cattle rearing (0.75 hour/person/day) and goat (0.62 hour/person/day). The role of women in livestock

rearing is very significant in the rural families through which rural women are able to contribute meaningfully to the cash needs for her and their family members.

Shivalingaiah and Vurabhadraiah (1996) stated that female youth participation was more in dairy activities than that of male youth, because animal-related tasks were predominantly women concerned and were mostly performed.

Islam et al. (1996) found that age and family size of participating women had no significant relationship with their extent of participation but education, mass media exposure, contact with extension agent women respondent attitude and their husbands attitude were found to be significant associated with women's extent of participation in agricultural activities.

Akhter (1989) stated that women are involved in homestead agricultural production activities such as vegetables, fruits, timber, small animals (goat, sheep) and poultry birds to supply food and to increase family income.

Sattar (1985) reported that women participation in the post-harvest operations, vegetables cultivation, and fruit cultivation. Livestock care as well as other economic activities which had a great contribution in the family income.

Castillo (1985) reported that in the Philippine rural women contribute mostly in transplanting, harvesting, care of animals, processing and marketing of products.

2.2 Contribution of Participation of Rural Women in Income Generating Activities through Livestock Rearing and Their Selected Characteristics

Age

Nafisa (2015) found no significant contribution of rural women to their participation.

Manna (2004) found age of the Proshika beneficiaries had contribution in their participation.

Akter (2000) in his study found a significant positive relationship between age of the women in RDRS clientele group and their participation in decision making role in the family with regard to development activities.

Islam et al. (1996) studied women's participation in some agricultural income generating activities like vegetable production, poultry, livestock and fish culture. The findings indicated that age of participate women had no significant effect to their extent of participating in agricultural activities.

Anwar (1994) in his study found that the age of the rural youth had positive significant influence to their participation in agricultural activities.

Sarker (1983) observed that age of farmers had no contribution in participation towards poultry rearing.

Education

Nafisa (2015) found the positive significant contribution of education to their participation of income generating activities through livestock rearing.

Kabir (2001) in his study found that the education of the rural women had no significant effect to the impact of their participation in SUS development activities.

Varma & Kumar (1991) reported a positive and significant relationship between the educations of farmers and their participation.

Islam (1994) revealed that level of education of women was directly related with their extent of participation in agricultural income generating activities.

Basak (1997) in his study found that education of the rural women under BRAC had a positive significant relationship with their impact of participation in BRAC rural development activities.

Family size

Halim and McCarthy (1983) reported that women performed different types of economic activities like post-harvest, vegetable gardening, livestock care etc. and their rate of involvement depends on family structure.

Sarker (2002) found that family size had positive contribution in World Vision farmer's attitude.

Chowdhury (2003) observed that family size of farmers had no contribution in participation.

Tania (2003) observed that there was no relationship between family size and the participation in income generating activities.

Farm size

Shehrawat (2002) found in that farm size had a significant contribution in participation of farmers.

Akter (2000) found that there was a significant positive relation between farm size of the women and their participation in decision making role in the family with regard to development activities.

Noor (1995) observed in his study that farm size of the farmer's had no contribution in their participation.

Verma and Kumar (1991) found that there was a positive and significant contribution in participation.

Saugwan et al. (1990) conducted a study on participation of women in farm activities and found that involvement of women decreased in farm activities with increasing farm size.

Westernguard (1981) stated that in landed families the females were engaged in income generating activities within the family farm both in post-harvest operation and in the maintenance of vegetable and animals.

Family income

Chowdhury (2003) found that Annual Family Income had a positive and significant contribution in participation.

Sherwat et al. (2002) observed in their article that a significant contribution in their participation.

Islam and Shahidullah (1989) found that annual family income had a significant contribution in participation.

Paul (1996) conducted a study on the impact of livestock program of BRAC in sadar thana of Mymensing district the results of the experiment revealed that a substantial positive change occurred in family income of the participants after their joining the milch cow rearing and beef fattening program of BRAC.

Sattar (1979) found that women had a larger contribution to the country's economy but their contribution was not considered objectively. Findings of the study revealed that women participated in the post-harvest operations of vegetable cultivation, fruit culture, livestock care etc. which had a great contribution to the family income.

Family members' support

Research and Evaluation Division, BRAC (1995) reported that family cooperation of the rural women had significant influence on their average household revenue earning assets. It revealed that with the increase of family cooperation average household revenue earning also increased.

BRAC Annual Report (1996) revealed that there was a significant effect of family cooperation on attitude change of rural women.

Knowledge

Nafisa (2015) found that knowledge had more significant contribution to the participation in livestock rearing. This represent that knowledge of the rural women was an important factor in participation in livestock rearing and with the increase of knowledge of the respondent's participation towards livestock rearing increases.

Tania (2003) found that there was no relationship between agricultural knowledge and the participation in income generating activities.

Haque (2002) found that women more agricultural knowledge have more positive significant participation.

Research and evaluations Division, BRAC (1995) reported that BRAC individual contact of rural women had a significant influence on their knowledge attitude and skills.

Extension media contact

Naher (2000) found her study that there was a significant positive effect in the homestead agricultural activities. Her findings reveal that extension contact had immense influence on the participation of rural women in all types of homestead agricultural production activities. It is obvious that contact with extension agents and other extension teaching methods changes attitude of clients radically and he/she becomes interested to adopt new technology which has somewhat been reflected here.

Easmin (1987) was concluded that the extension contact of the farmers had significant positive effect on their knowledge on poultry production which influences the participation.

Islam & Shahidullah (1989) also found that extension media contact had positive contribution to livestock knowledge that enhance the livestock rearing participation.

Kaur (1998) in a study observed that extension contact and mass media exposure had significant influence upon opinion, level of knowledge and adoption of selected practice by rural women.

2.3 Conceptual Framework of the Study

In scientific research, selection and measurement of variables constitute an important task. The hypothesis of a research while constructed properly consist at least two important elements i.e. “a dependent variable” and “an independent variable”. A dependent variable is that factor which appears, disappears or varies as the researcher introduces, removes or varies the experimental variables (Townsend, 1953). An independent variable is that factor which is manipulated by the researcher in his/her attempt to ascertain its relationship to an observed phenomenon.

It is not possible to deal with all the characteristics in a single study. Considering the facts, constructed a conceptual frame work which is self-explanatory and is presented in Figure 2.1.

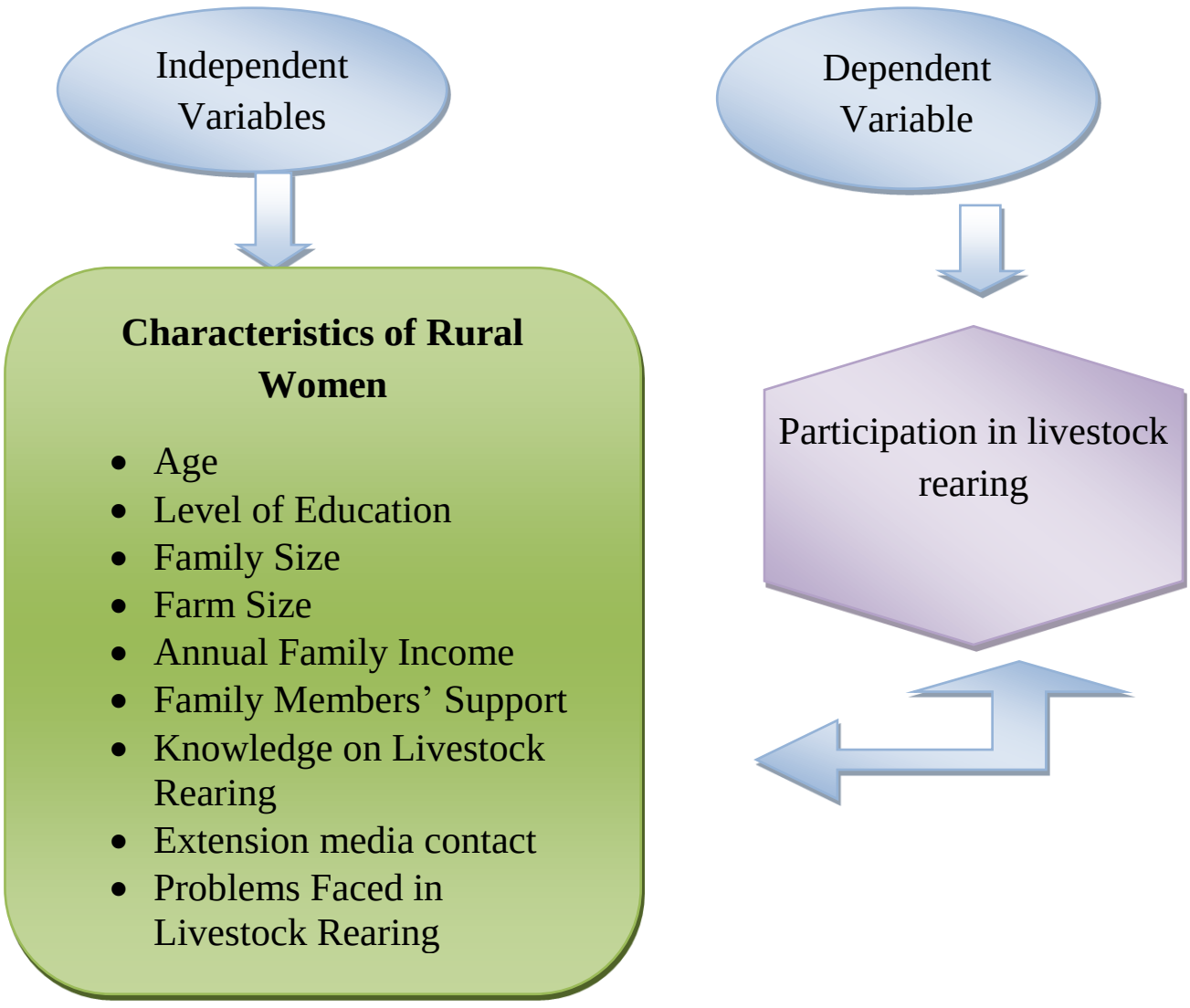

Figure 2.1 Conceptual Framework of the Study

CHAPTER 3

METHODOLOGY

A sequential description of the methods and procedures followed in conducting this research work has been presented in this chapter.

3.1 Locale of the study

The study was conducted in Jhalakathi Sadar upazila under Jhalakathi district. Three villages were randomly selected as the locale of the study like Perkefait Nagar, Kefait Nagar & Ram Nagar. Maps of Jhalakathi district and Jhalakathi Sadar upazila showing the study area are presented in figures 3.1 & 3.2 respectively.

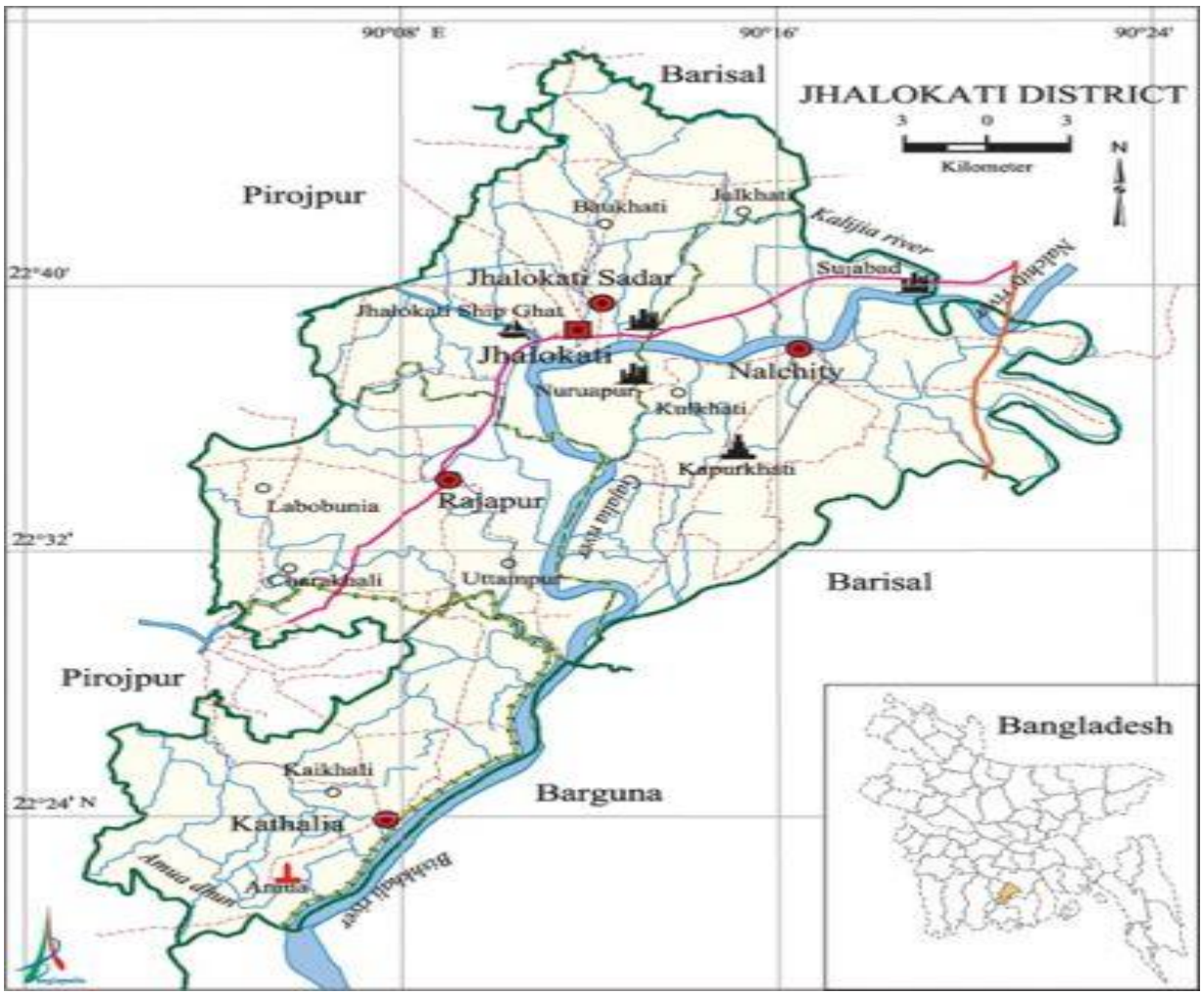

Figure 3.1 A Map of Jhalakathi District Showing Jhalakathi Sadar Upazila

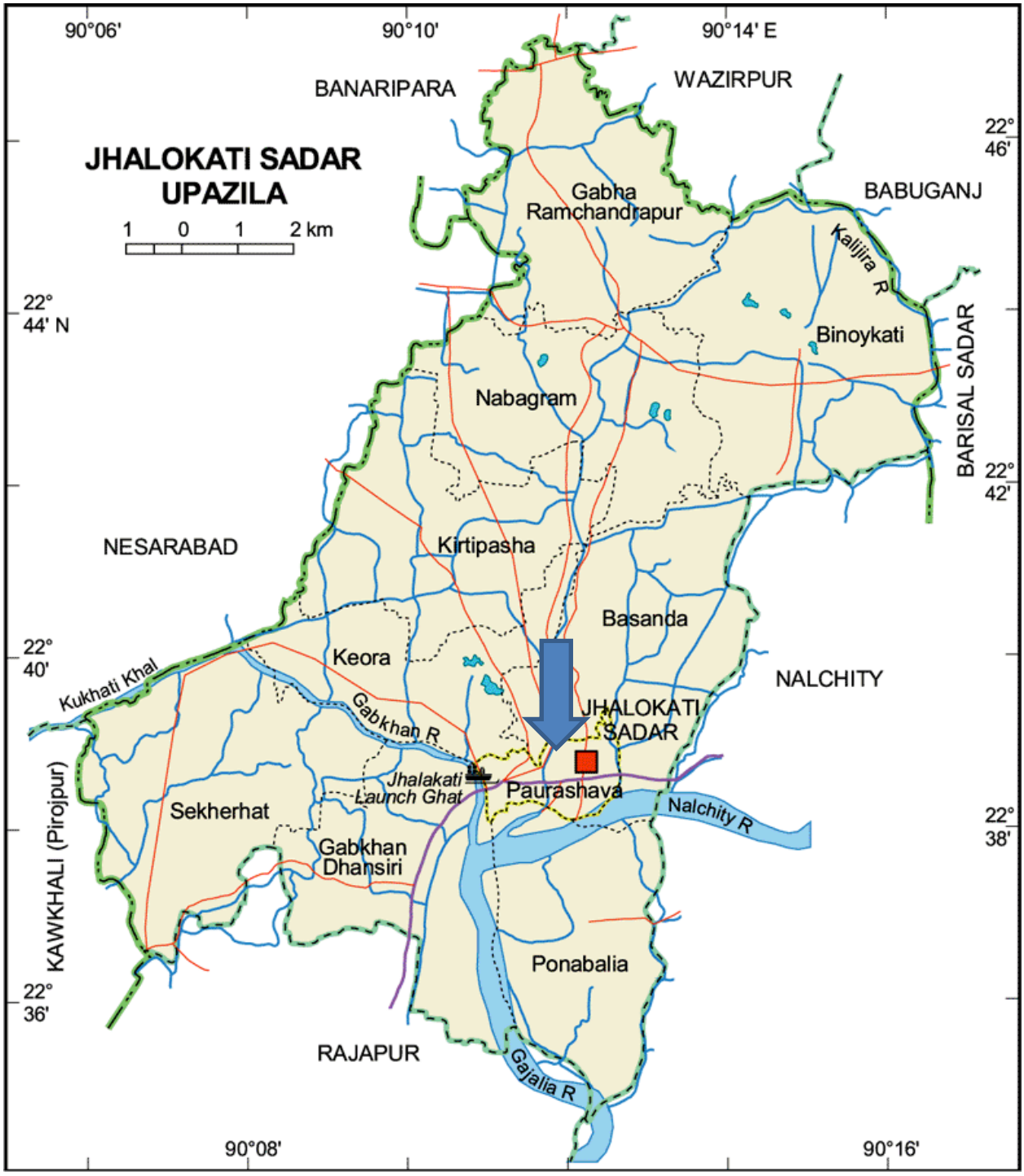

Figure 3.2 A map of Jhalakathi Sadar Upazila Showing the Study Area

3.2 Population and Sample

Livestock rearing rural women of Perkefait Nagar, Kefait Nagar & Ram Nagar villages in Jhalakathi Sadar upazila constituted the population of the study. Update lists of 375 farmers from the selected villages were prepared with the help of Upazila Livestock Officer (ULO), Livestock Extension Officer (LEO), Veterinary Field Assistant (VFA), Local leaders and other various records. Out of which 110 rural women were randomly selected as sample size and sample size was calculated by using an online sample size calculator by considering 8% confidence interval of the total population. Table 3.1 shows the distribution of the population and sample of the livestock rearing rural women.

Table 3.1 Population and sample of the study area

Name of the Upazila	Name of the Village	Population Size	Sample Size
Jhalakathi Sadar Upazila	Per-kefait Nagar	112	35
	Kefait Nagar	138	30
	Ram Nagar	125	45
Total		375	110

3.3 Variables of the Study

A research work usually contains at least two important variables viz. independent and dependent variable. An independent variable is that factor which is manipulated by the researcher in his/her attempt to determine its relationship to an observed phenomenon. A dependent variable is that factor that appears, disappears or varies as the researcher introduces, removes or varies the independent variable (Townsend, 1953).

3.4 Measurement of Independent Variables

Nine (9) characteristics of the livestock rearing rural women like age, level of education, family size, farm size, annual family income, family member's support, knowledge about livestock rearing, extension media contact, problems in livestock rearing were considered for the study as independent variables. The procedures for measuring the independent variables are described below:

3.4.1 Age

Age of the respondent was measured in terms of actual years from her birth to the time of interview on the basis of her response. A score of one (1) was assigned for each years of her age.

3.4.2 Education

Education was measured in terms of years of schooling. A score of one (1) was assigned for each year of schooling completed. For example, if the respondent did not know how to read and write, her education score was given as "0" (zero) while score 0.5 was assigned for those who was able to could sign only, 10 for passing the S.S.C. examination, 12 for passing H.S.C., 14 FOR Bachelor's degree and 16 for Master's degree.

3.4.3 Family Size

The actual number of family members was considered the family size score of the respondents. For example, if a respondent had four members in her family, the score of her family size was assigned as 4.

3.4.4 Farm Size

Farm size of respondents was measured in terms of hectare. Here, farm size was computed by using the following formula:

$FS= A_1+A_2+ ½(A_3+A_4) +A_5$

Where,

FS= Farm size

A_1= Homestead area

A_2= Own land

A_3= Land given to others on barge

A_4= Land taken from others on barge

A_5= Land taken from others on lease

3.4.5 Annual Family Income

Family income of a respondent was measured by taking sum of income earned by the respondent herself and other family members of her family in a year from such sources viz. poultry rearing, cattle rearing, goat rearing, fish culture, crop cultivation and other non-agricultural sources. A score of 1 was assigned for each thousand taka.

3.4.6 Family members' support

Scores assigned for a respondent's in extent of family member's support were as follow:

Extent of support	Scores
Regularly	4
Often	3
Occasionally	2
Rarely	1
Not at all	0

The score of the respondent could range from 0 to 28. The score zero (0) was obtained by a woman for the 7 dimensions indicates no support from her family members while score 28 indicates maximum support from her family members.

3.4.7 Knowledge about livestock rearing

Livestock rearing knowledge of a respondent was measured on the basis of answer to the thirteen questions asked to the respondent. Each question had assigned 2 marks. For correct answer to a question, a respondent could get a score of 2 and zero (0) for every wrong answer. Partial score was given for partially correct answer. Knowledge score of the rural women could range from 0 to 26, where "0" indicates no knowledge about livestock rearing and score "26" indicates very high livestock rearing knowledge.

3.4.8 Extension media contact

The extension media contact of a respondent was measured on the basis of her nature of visits to the seven selected media. The following scores were assigned for computing the respondent's score:

Extent of contact	Scores
Regularly	4
Often	3
Occasionally	2
Rarely	1
Not at all	0

This variable appears in item number seven (7) in the interview schedule as presented in Appendix-I. The score of extension media contact could range from 0 to 28 while '0'

indicates no contact with extension media and '28' indicates regular contact with extension media.

3.4.9 Problems faced in livestock rearing

Ten problems were selected to rating the livestock rearing problems. The following scores were assigned for computing the respondent's score:

Extent of problem	Scores
High	3
Moderate	2
Low	1

The score of problem faced on different livestock rearing of the women ranged from 1 to 30. Score 1 to 10 indicating low problem, 11-20 indicating moderate and above 20 indicating high problem in case of livestock rearing.

3.5 Measurement of dependent variable

Participation of rural women in income generating activities through livestock rearing was the only dependent variable of the study. Scores were assigned for a respondent participation in income generating activities through livestock rearing as follows:

Extent of support	Scores
Regularly	4
Often	3
Occasionally	2
Rarely	1
Not at all	0

Nine items of the livestock rearing were considered for the study. Thus, the score of the respondent could range from 0 to 36. The score zero (0) was obtained by a woman for the nine dimensions indicates no participation and score of 36 indicates highest participation in income generating activities through livestock rearing

3.6 Hypothesis of the study

Goode and Hatt (1952) defined "A hypothesis is a proposition which can be put to a test to determine its validity. It may seem contrary to, or in accord with common sense. It may prove to be correct or incorrect. In any event, however, it leads to an empirical test". It may be broadly divided into two categories-research hypothesis and null hypothesis.

3.6.1 Research hypothesis

"There is a contribution of each of selected characteristics of rural women to their participation in income generating activities for generating income through livestock rearing."

3.6.2 Null hypothesis

"There is no contribution of the selected characteristics of rural women to their participation in t income generating activities through livestock rearing."

3.7 Research Instrument

An interview schedule was developed for collecting valid and reliable information from respondents. Both open and closed form questions were contained in the questionnaire. The questionnaire was constructed containing easy, simple, and direct questions.

The questionnaire was pretested with ten rural women in the sample villages before finalized it for collection of data for the main study. Necessary correction, addition, deletion, modification and adjustment were made in the interview schedule on the basis of pretest experience. An English version of interview schedule is presented in Appendix I.

3.8 Collection of data

The researcher herself collected data for this study with the help of an interview schedule. Interviews were made individually in the houses of the respondents. The researcher took all possible efforts to establish rapport with the respondents so that they feel free to furnish proper responses to the questions. The researcher didn't face serious difficulty during the data collection and received good cooperation from the respondents. Data collection was started on 25 July, 2020 and completed by 12 October, 2020.

3.9 Processing of Data

For data processing and analysis the following steps followed:

3.9.1 Compilation of data

After data collection, these were compiled, coded, tabulated and analyzed according to the objective of the study. Local units were converted into standard units. In some cases,

qualitative data were converted into quantitative data by means of suitable scoring to facilitate interpretation.

3.9.2 Categorization of respondents

For describing the various independent and dependent variables, the respondents were classified into various categories. In developing categories the researcher was guided by the nature of data and general consideration prevailing on the social system.

3.10 Statistical procedures

Several statistical measures such as range, mean, percentage, and standard deviation were used in describing variable of the study. SPSS computer program were used for analyzing the data. The categories and tables were used in describing data. The categories and tables were used in describing and presenting data for better understanding.

Regression coefficient was used for determining the contribution of each of the selected characteristics of the rural women to their extent of participation in income generating activities through livestock rearing.

CHAPTER 4
RESULT AND DISCUSSION

In this Chapter, the findings of the study and its interpretation have been presented in three sections in accordance with the objectives of the study. In the first section, selected characteristics of the respondents have been discussed. The second section deals with rural women's participation in activities for generating income through livestock rearing, and the third section deals with the contribution of the selected characteristics of the rural women to their participation in activities for generating income through livestock rearing.

4.1 Selected Characteristics of the respondents

In this section, findings of the farmers' nine characteristics have been discussed. These selected characteristics were age, level of education, family size, farm size, annual family income, family member's support, knowledge about livestock rearing, extension media contact, problems faced in livestock sector. Summary profile of the characteristics (independent variables) of the study is shown in Table 4.1.

Table 4.1 The salient features of the selected characteristics of the rural women

Sl. No.	Characteristics	Measuring Unit	Range		Mean	SD
			Possible	Observed		
1.	Age	Year	-	20-70	45.10	13.750
2.	Level of education	Year of schooling	-	0.5-16	6.300	2.932
3.	Family size	No. of member	-	2-10	5.69	2.471
4.	Farm size	Ha.	-	.002-4.05	1.333	1.027
5.	Annual family income	000' taka	-	72-540	202.43	126.833
6.	Family member's support	Score	0-28	6-20	12.75	4.493
7.	Knowledge about livestock rearing	Score	0-26	8-20	14.35	3.230
8.	Extension media contact	Score	0-28	9-22	14.94	2.767
9.	Problems faced on different livestock rearing	Score	0-30	9-20	14.46	2.818

*(SD: Standard Deviation)

4.1.1 Age

The age of the sample farmers ranged from 20 to 70 with an average of 45.10 and standard deviation of 11.754. The respondents were classified into three categories on the basis of their age (Table 4.2).

Table 4.2 Distribution of the rural women according to their age

Categories	Number of Farmers	%	Observed Range	Mean	S.D
Young Aged (up to 35 years)	33	30.0	20-70	45.10	13.75
Middle Aged (36 to 50 years)	39	35.5			
Old Aged (Above 51 years)	38	34.5			
Total	**110**	**100**			

Data shows that the highest proportions (35.5 percent) of the respondents were middle aged category compared to 34.5 percent old and 30.0 percent young. Data also indicates that the middle and old aged respondents constitute an overwhelming majority (70.0 percent) of the respondents. The middle and old aged respondents generally tend to be involved in livestock rearing than the youngest group.

4.1.2 Education

The education of the respondents ranged from 0.5 to 16 with the mean and standard deviation of 6.30 and 2.932 respectively. Based on their education, the respondents were classified into four categories such as can sign only (0.5), primary level (1-5), secondary level (6-10), and above secondary level (>10). The distribution of the respondents according to their education is presented in Table 4.3.

Table 4.3 Distribution of the f rural women according to their level of education

Categories	Number of Farmers	%	Observed Range	Mean	S.D
Can Sign Only (0.5)	2	1.8	0.5-16	6.30	2.932
Primary Level (1-5)	58	52.7			
Secondary Level (6-10)	38	34.5			
Above Secondary	12	10.9			
Total	**110**	**100**			

Table 4.3 shows that a large proportion (52.7 percent) of the respondents fell under secondary level of education followed by 1.8 percent could sign their name only, 34.5 percent had secondary, and 10.9 percent respondents had above secondary level of education.

4.1.3 Family Size

The score of family size of the rural women ranged from 2 to 10 with a mean and standard deviation of 5.69 and 2.471 respectively. Family size of the respondents was classified into three categories as shown in Table 4.4.

Table 4.4 Distribution of the rural women according to their family size

Categories	Number of Farmers	%	Observed Range	Mean	S.D
Small Family (up to 4 members)	33	30.0	2-10	5.69	2.471
Medium Family (5 to 7 members)	39	35.5			
Large Family (Above 7 members)	38	34.5			
Total	**110**	**100**			

Table 4.4 indicate that the highest proportion (35.5 percent) of the rural woman participation in livestock rearing fell under medium family category compared to large (34.5 percent) and small (30.0 percent). Data also indicate that women with medium and large family size spent more time in income generating activities to provide food and cash for the family.

4.1.4 Farm Size

The farm size of the respondents ranged from .002 to 4.05 ha with an average of 1.333 and standard deviation of 1.027. The respondents were classified into three categories on the basis of their livestock farm size as suggested by DAE (1999) which shown in table 4.5.

Table 4.5 Distribution of the rural women according to their farm size

Category	Number of Farmers	%	Observed Range	Mean	S.D
Small Farm (Less than 1 ha)	30	27.3	.002-4.05	1.333	1.027
Medium Farm (1 to 3 ha)	70	63.6			
Large Farm (Above 3 ha)	10	9.1			
Total	**110**	**100**			

Table 4.5 shows that the highest proportion of the respondents (63.6 percent) belonged to medium livestock farm size while 27.3 percent belonged to small and 9.1 percent belonged to large for livestock farm. Thus most of the respondents had small to medium size livestock farm area.

4.1.5 Annual Family Income

The annual family income of the respondents ranged from 72 to 540 thousand taka with the mean and standard deviation of 202.43 and 126.83 respectively. Considering the annual income, the respondents were classified into three categories namely low, medium and high annual family income group. The distribution of respondent rural women according to their annual family income is presented in Table 4.6 on the basis of (mean +/- SD).

Table 4.6 Distribution of the rural women according to their income

Categories	Number of Farmers	%	Observed Range	Mean	S.D
Low Income (up to 150 BDT)	57	51.82	72-540	202.43	126.83
Medium High (150.5 to 300.00 BDT)	27	22.73			
High Family (Above 300.00 BDT)	28	25.45			
Total	**110**	**100**			

Data in Table 4.6 revealed that 51.82 percent of respondents have low annual income, 22.73 percent respondents have medium income and 25.45 percent respondents have high annual income. It shows that majority of the respondents belonged to low family income.

4.1.6 Family Members' Support

The score of family member's support ranged from 6-20 with a mean and standard deviation of 12.75 and 4.493 respectively. Women were classified into three categories such as low support, medium support and high support. The distribution of the respondents in accordance with their family members support is presented in table 4.7 on the basis of (mean +/- SD).

Table 4.7 Distribution of the a rural women according to their family members' support

Categories	Number of Farmers	%	Observed Range	Mean	S.D
Low Support (up to 8)	44	40.0	6-20	12.75	4.493
Medium Support (9 to 17)	37	33.6			
High Support (Above 17)	29	26.4			
Total	**110**	**100**			

Data in Table 4.7 indicates that the majority of the women belonged low support category constituted the highest proportion (40.0 percent) followed by (33.6 percent) medium support and (26.4 percent) high support category. Data also indicate that a total 73.6 percent rural women belongs to the group of low to medium support category.

4.1.7 Knowledge about Livestock Rearing

Knowledge of women in livestock rearing was measured on the basis of 13 questions. Knowledge score of a respondent was determined by adding the scores obtained by her from all the questions. Knowledge score of the respondents ranged from 8 to 20 against the possible range of 0-26, with a mean and standard deviation of 14.35 and 3.230 respectively. Women were classified into three categories on the basis of their knowledge such as low, medium and high knowledge. The findings are presented in Table 4.8 on the basis of mean +/-SD.

Table 4.8 Distribution of the rural women according to their Knowledge about livestock rearing

Categories	Number of Farmers	%	Observed Range	Mean	S.D
Low Knowledge (up to 11)	23	20.9	8-20	14.35	3.230
Medium Knowledge (12 to 18)	80	72.7			
High Knowledge (Above 18)	7	6.4			
Total	**110**	**100**			

Table 4.8 indicates that the medium level knowledge group was the highest proportion (72.7 percent) of the respondents followed by low knowledge group (20.9 percent) and high level knowledge group (6.4 percent). Among the respondent, a total of 93.6 percent of the respondent have low to medium knowledge group.

4.1.8 Extension Media Contact

The scores of the respondents regarding extension media contact ranged from 9 to 22 with a mean of 14.94 and standard deviation of 2.767. On the basis of their extension contact scores, the farmers were classified into three categories as low contact, medium contact and high contact as shown in table 4.9.

Table 4.9 Distribution of the rural women according to their extension media contact

Categories	Number of Farmers	%	Observed Range	Mean	S.D
Low contact (up to 12)	17	15.5	9-22	14.94	2.767
Medium contact (13 to 18)	81	73.6			
High contact (Above 18)	12	10.9			
Total	**110**	**100**			

Data presented in the table 4.10 indicate that the highest proportion (73.6 percent) of the respondents had medium contact as compared to 15.5 percent and 10.9 percent having low and high extension media contact respectively.

4.1.9 Problem Faced in Different Livestock Rearing

The score of problem faced on different livestock rearing of the rural women ranged from 9 to 20 with a mean and standard deviation of 14.46 and 2.818 respectively. On the basis of problems faced by the respondents in livestock rearing the respondents were classified into three categories as shown in Table 4.10.

Table 4.10 Distribution of the rural women according to their Problems in Livestock Rearing

Categories	Number of Farmers	%	Observed Range	Mean	S.D
Low problem (up to 12)	23	20.9	9-20	14.46	2.818
Medium problem (13 to 17)	80	72.7			
High problem (Above 17)	7	6.4			
Total	**110**	**100**			

Data in Table 4.9 revealed that the majority of the rural women belonged to medium problem category classified highest proportion (72.7 percent) followed by 20.9 percent as low problem and 6.4 percent as high problem.

4.2 Participation in Livestock Rearing

The score of participation on different livestock rearing of the rural women ranged from 11 to 24 against the possible range of 0-36 with a mean and standard deviation of 17.03 and 3.505 respectively. Based on the participation of livestock rearing, the respondents were classified into three categories as shown in Table 4.11 on the basis of (mean+/- SD)

Table 4.11 Distribution of the rural women according to their participation in activities for generating income

Categories	Number of Farmers	%	Observed Range	Mean	S.D
Low participation (up to 13)	21	19.1	11-24	17.03	3.505
Medium participation (14 to 20)	71	64.5			
High participation (Above 20)	18	16.4			
Total	**110**	**100**			

Table 4.11 indicate that rural women belonged to medium participation category constituted the highest proportion (64.5 percent) followed by low participation (19.1 percent), and high participation (16.4 percent).

4.3 Contribution of the selected characteristics of the rural women to their participation in income generating activities through livestock rearing

In order to determine the contribution of the selected characteristics of the rural women to their participation in income generating activities through livestock rearing, regression analysis was carried out which is presented in Table 4.12.

Table 4.12 Regression co-efficient of the selected characteristics of the rural women and their participation in activities for generating income through livestock rearing

Dependent variable	Independent Variables	β	P	R^2	Adj. R^2	F
Participation in income generation activities through livestock rearing	Age	-0.119	0.183	0.789	0.772	42.615
	Level of Education	0.375	0.000**			
	Family Size	-0.012	0.883			
	Farm Size	0.111	0.083			
	Annual Family Income	0.059	0.391			
	Family Member's Support	0.114	0.151			
	Knowledge on Livestock Rearing	0.338	0.000**			
	Extension Media Contact	0.267	0.000**			
	Problems Faced in Livestock Rearing	-0.155	0.026*			

* Significant at $p<0.05$ ** Significant at $p<0.01$

Among the nine selected characteristics, four variables namely level of education, knowledge about livestock rearing, extension media contact and problems faced in livestock rearing had found significantly contribution to the rural women's participation in income generating activities through livestock rearing (Table 4.12), while rest of the characteristics showed no significant contribution. All the factors jointly contribute 78.9% variance of the participation (R^2= 0.789). However, each predictor may explain some of the variance in respondents' participation conditions simply by chance. The adjusted R^2 value penalizes the addition of extraneous predictors in the model, but values of 0.772 still show that the variance in respondents' participation can be attributed to the predictor variables rather than by chance, and that both are suitable models. In summary,

the models suggest that the respective authority should consider education, knowledge about livestock rearing, extension media contact, and problem faced in livestock rearing for participation of the rural women in income generating activities through livestock rearing.

4.3.1 Significant contribution of level of education in participation of rural women in income generating activities through livestock rearing

The contribution of level of education in participation of rural women in income generating activities through livestock rearing was measured by testing the following null hypothesis:

"There is no contribution of level of education in participation of rural women in income generating activities through livestock rearing."

The following observations were made on the basis of the value of the study under consideration.

- The contribution of the level of education was at 1% significance level.
- So, the null hypothesis could be rejected.

The β-value of the concerned variable was found 0.375. Based on the above finding, it can be said that education enhances the participation of rural women in livestock rearing. So, the level of education has significant contribution to the participation of rural women in income generating activities through livestock rearing.

4.3.2 Significant contribution of knowledge on livestock rearing in participation of rural women in income generating activities through livestock rearing

The contribution of knowledge on livestock rearing in participation of rural women in income generating activities through livestock rearing was measured by testing the following null hypothesis:

"There is no contribution of level of education in participation of rural women in income generating activities through livestock rearing."

The following observations were made on the basis of the value of the study under consideration.

- The contribution of knowledge on livestock rearing was at 1% significance level.
- So, the null hypothesis could be rejected.

The β-value of the concerned variable was found 0.338. So, it can be stated that, as rural women's knowledge increased by one unit, participation of rural women in income generating activities increased by 0.338 unit.

Based on the above findings, it can be said that rural women's had more knowledge on livestock rearing increased the participation of rural women. So, knowledge on livestock rearing has high significantly contributed to the participation of rural women in income generating activities through livestock rearing.

4.3.3 Significant contribution of extension media contact in participation of rural women in income generating activities through livestock rearing

The contribution of extension media contact in participation of rural women in income generating activities through livestock rearing was measured by testing the following null hypothesis:

"There is no contribution of level of extension media contact in participation of rural women in income generating activities through livestock rearing."

The following observations were made on the basis of the value of the study under consideration.

- The contribution of extension media contact was at 1% significance level.
- So, the null hypothesis could be rejected.

The β-value of the concerned variable was found 0.267. So, it can be stated that, as the extension media contact increased by one unit, participation of rural women in income generating activities increased by 0.267 unit.

The findings demonstrate that, the extension media contact of the rural women had significant positive contribution to their participation in income generating activities through livestock rearing. This implies that with the increase of extension media contact of the rural women will increase their participation in income generating activities through livestock rearing.

4.3.4 Significant contribution of problems faced in livestock rearing in participation of rural women in income generating activities through livestock rearing

The contribution of problems faced in livestock earing in participation of rural women in income generating activities through livestock rearing was measured by testing the following null hypothesis:

"There is no contribution of problems faced in livestock rearing in participation of rural women in income generating activities through livestock rearing."

The following observations were made on the basis of the value of the study under consideration.

- The contribution of problems faced in livestock rearing was at 5% significance level.
- So, the null hypothesis could be rejected.

The β-value of the concerned variable was found -0.155. So, it can be stated that, as the problems faced in livestock rearing increased by one unit, participation of rural women in income generating activities decreased by 0.155 units.

The findings demonstrate that, problems faced in livestock rearing had negative significant contribution to the participation of rural women in livestock rearing. Therefore, it can be said that increases of problems faced in livestock rearing will decrease the participation of rural women in income generating activities through livestock rearing.

CHAPTER 5

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of the Major Findings

5.1.1 Selected characteristics of the respondents

Age: The middle aged rural women constitute the highest proportion (35.5 percent) followed by old aged (34.5 percent) and young aged (30.0 percent).

Education: Rural women under primary level category constitute the highest proportion (52.7 percent) compared to secondary level (34.5 percent) and 10.9 percent above secondary level. On the other hand the lowest 1.8 percent belonged to can sign only category.

Family size: The highest proportion of the respondents (35.5 percent) had medium family size while 34.5 percent had large and 30.0 percent had small family size.

Farm size: The medium farm holder constitutes the highest proportion 63.6 percent followed by 27.3 percent as small farm and 9.1 percent as large farm holder.

Annual family income: The highest proportion of the farmers (51.8 percent) had low annual income. And the other 25.5 percent & 22.7 percent respondents had large and medium family income.

Family members' support: The highest proportion of the rural women belongs to low support category (40.0 percent) followed by 33.6 percent medium support category and 26.4 percent high support category.

Knowledge about livestock rearing: The medium level knowledge group was the highest proportion (72.7 percent) of the respondents followed by 20.9 percent low knowledge group and 6.4 percent high level knowledge group.

Problems faced in different livestock rearing: The majority of the rural women belonged to medium problem category (72.7 percent) followed by 20.9 percent as low problem category and 6.4 percent as high problem category.

Extension media contact: The highest proportion (73.6 percent) of the respondents had medium contact as compared to 15.5 percent and 10.9 percent had low and high extension media contact respectively.

5.1.2 Participation of rural women in income generating activities through livestock rearing

The highest proportion (64.5 percent) of the respondents had medium participation while 19.1 percent had low participation and the rest 16.4 percent had high participation for generating income through livestock rearing.

5.1.3 Contribution of the selected characteristics of the rural women to their participation in income generating activities through livestock rearing

Out of nine selected characteristics of the rural women, only four namely level of education, knowledge about livestock rearing, extension media contact and problems faced in livestock rearing had significant contribution to participation in income generating activities through livestock rearing. Rest five characteristics i.e. age, family size, farm size, annual family income, and family members' support had no contribution to participation in income generating activities through livestock rearing.

5.2 Conclusions

On the basis of the findings of the study and relevant facts of research work prompted the researcher to draw the following conclusions:

- Overwhelming majority (83.6 percent) of the rural women had low to medium participation in income generating activities through livestock rearing. It is therefore, concluded that there is scope to increase rural women's participation in income generating activities through livestock.
- Education of the rural women had significant contribution to their participation in income generating activities through livestock rearing. This fact leads to the conclusion that educational level of the rural women would definitely be helpful to increase their participation in livestock rearing.
- Knowledge on livestock rearing showed positive significant contribution to the rural women's participation in livestock rearing. Therefore, it may be concluded that knowledge of the rural women was an important factor in their participation in income generating activities through livestock rearing. Therefore, it may be concluded that increase of knowledge of the rural women could increase their participation in livestock rearing.
- Extension media contact of the rural women had a significant positive contribution to their participation in income generating activities through

livestock rearing. Therefore, it may be concluded that extension media contact of the rural women is an important factor that influence rural women's participation in livestock rearing.

- Findings revealed that majority (93.6 percent) of the rural women faced low to medium problem in livestock rearing. Problem faced in livestock rearing had negative significant contribution to the participation of rural women in livestock rearing. Therefore, it may be concluded that any arrangement to decrease problems faced in livestock rearing should increase to make favorable participation in livestock rearing.

5.3 Recommendations

5.3.1 Recommendations for policy implications

Recommendation based on findings of the study and conclusions of the study have been presented below:

- Majority (83.6 percent) of the rural women had medium to low participation in income generating activities through livestock rearing. All the sample rural women were more or less involved in livestock rearing. It may be recommended that livestock extension agencies, especially DLS should take steps to increase rural women's participation in livestock rearing through providing necessary training and motivational campaigning.
- Level of education had significant contribution to the participation in livestock rearing. So, it is necessary to increase education level of the rural women by establishing adult learning centers.
- Knowledge about livestock rearing of the rural women had significant contribution to their participation in livestock rearing. So, the rural women need to gather more knowledge to increase participation in livestock rearing. Therefore it may be recommended that it is necessary to take steps to increase livestock rearing knowledge of the rural women by providing training and motivational campaigning.
- Extension media contact of the respondents had positive significant contribution to participation in income generating activities through livestock rearing. It is therefore, recommended that livestock extension organizations should be conscientious to facilitate farmers' livestock production by increasing contact with the rural women to increase their participation. The DLS and other non-governmental organizations should strengthen their extension activities.

- Problem faced in livestock rearing had negative significant contribution to livestock rearing. So, it is necessary to minimize problems of rural women to increase their participation in livestock rearing.

5.3.2 Recommendations for further study

A small and limited research work cannot provide much information related to rural women's participation in income generating activities through livestock rearing. Further studies should be undertaken on this related aspect to cover more information. On the basis of scope and limitations of the present study and observations made by the researcher, the following recommendations are made for further study:

- The study was conducted in only three villages under Jhalakathi Sadar upazila in Jhalakathi district. Similar studies should be conducted in other area of the country to get a clear picture of the whole country which will be helpful for effective policy formulation.

- The study investigated the contributions of the ten selected characteristics of the rural women. It is, therefore, recommended that further study should be conducted to explore contribution of other characteristics of the respondents to their extent of participation in livestock rearing.

- The study was carried out on rural women but rural and urban male and female farmers are equally important. So, a similar study may be carried out with them.

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APPENDIX-1

AN ENGLISH VERSION OF INTERVIEW SCHEUDLE
Department of Agricultural Extension and Information System
Sher-e-Bangla Agricultural University
Dhaka-1207

An interview schedule for a research study entitled

"PARTICIPATION OF RURAL WOMEN IN INCOME GENERATING ACTIVITIES THROUGH LIVESTOCK REARING"

(Please answer the following questions. Your information's will be kept confidential and will be used for research purpose only)

Serial No:……. **Date: ……**

Name of the respondent:…….

Village:……..

Union:……

Upazila:…….

District:……..

1. Age
What is your present age? .....years

2. Level of Education
a) Can't read and write b) Can sign only
c) I have passed…….. class

3. Family Size: _____ members (including yourself)

4. Farm Size

Please indicate the area of land

Sl. No.	**Types of Land Use**	**Area of Land (ha)**
1.	Homestead area (including pond and garden) (A1)	
2.	Own land (A2)	
3.	Land given to others on barge (A3)	
4.	Land taken from others on barge (A4)	
5.	Land taken from others on lease (A5)	

Total= A1+A2+ ½(A3+A4) +A5=…….

5. Annual Family Income

Please mention the amount of annual income from the following sources

SL. NO.	**Sources of Income**	**Total TK**
A) Agricultural Sources		
i.	Poultry Rearing	
ii.	Goat Rearing	
iii.	Cattle Rearing	
iv.	Crops Cultivation	
v.	Fish Culture	
Total (A)		
B) **Non-agricultural Sources**		
i.	Business	
ii.	Services	
iii.	Labor	
iv.	Others (if any)	
Total (B)		
Total (A+B)		

6. Family Member's Support

Please mention the extent of your family member's co-operation towards the following activities.

SL. NO.	Types of Activity	Extent of Support				
		Not at all (0)	**Regularly (4)**	**Often (3)**	**Occasionally (2)**	**Rarely (1)**
1.	Livestock Rearing					
2.	Processing of farm product					
3.	Arrangement of Vaccination					
4.	Grazing in the field					
5.	Looking After the Kids					
6.	Cleaning of homestead					
7.	Selling of farm products					

7. Extension Media Contact

Please indicate the extent of your exposure with the following media

Information sources	Extent of communication				
	Not at all (0)	**Regularly (4)**	**Often (3)**	**Occasionally (2)**	**Rarely (1)**
Neighboring model farmers (per week)		More than 5 times	4-5 times	2-3 times	1 time
Local livestock resources person (per month)		More than 5 times	4-5 times	2-3 times	1 time
Ideal women (per month)		More than 5 times	4-5 times	2-3 times	1 time
Livestock related NGO workers (per month)		More than 5 times	4-5 times	2-3 times	1 time
Livestock field worker (per 3-month)		More than 5 times	4-5 times	2-3 times	1 time
Upazila Livestock Officer (per year)		More than 5 times	4-5 times	2-3 times	1 time
TV program (per month)		More than 5 times	4-5 times	2-3 times	1 time

8. Knowledge about Livestock Rearing

Please reply to the following questions

SL. NO.	Questions	Assigned Score	Obtained Score
A) Remembering			
1.	What are the improve breed of cattle, buffalo, sheep, goat and poultry? a)_____ b)_____	2	
2.	What are the major diseases of cattle, buffalo, sheep, goat and poultry? a)_____ b)_____	2	
B) Understanding			
3.	What are the advantages of vaccination?	2	
4.	At what age a cattle get ready for its first offspring?	2	
5.	How long does it take to hatch a chicken egg?	2	
C) Applying			
6.	What kind of management should be applied for disease free kids/chicks?	2	
7.	Which procedure you follow to select fertile egg?	2	
D) Analyzing			
8.	What are the market demand of milk, meat and egg?	2	
9.	What are the benefits of following the proper withdrawal period of medicine?	2	
E) Evaluating			
10.	How could you detect heat in cow, doe, and ewe?	2	
11.	What are the benefits of feeding colostrum to offspring?	2	
F. Creativity			
12.	What changes would you make to create ration for livestock to increase productivity?	2	
13.	What measures you following to protect your livestock during natural calamities?	2	

9. Problems Faced in Livestock Rearing

Please mention your problem (s) during participation in livestock rearing.

Problems	**Extent of Problem**		
	High(3)	**Moderate(2)**	**Low(1)**
1. Lack of knowledge about livestock rearing			
2. Lower level of milk/egg production			
3. Disease outbreak			
4. Unavailability of vaccine			
5. Unavailability of fodder stuffs			
6. Lower growth rate of livestock species			
7. Repeat breeding			
8. Communication gap with development workers			
9. Lack of proper marketing system			
10. Financial problem			

10. Participation in activities for generating income through livestock rearing

Please mention the extent of participation towards the following activities.

SL. NO.	Types of Activity	Extent of Participation				
		Not at all (0)	**Regularly (4)**	**Often (3)**	**Occasionally (2)**	**Rarely (1)**
1.	Poultry Rearing					
2.	Cattle Rearing					
3.	Goat Rearing					
4.	Income from by product					
5.	Beef Fattening					
6.	Care During Pregnancy/brooding Period					
7.	Looking After the Kids/chicks					
8.	Arrangement of Vaccination					
9.	Selling					

…….

Thanks for your cooperation **Signature of the interviewer**