

**PARTICIPATION OF RURAL WOMEN IN HOUSEHOLD AND
AGRICULTURAL ACTIVITIES IN SELECTED AREA
OF KISHOREGONJ DISTRICT**

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AGRICULTURAL ACTIVITIES IN SELECTED AREA
OF KISHOREGONJ DISTRICT**

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CERTIFICATE

This is to certify that the thesis entitled ‘**Participation of Rural Women in Household and Agricultural Activities in Selected Area of Kishoregonj District**’ 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 **Tanzila Rahman**, Registration No. **08-02783** under my supervision and guidance. No part of the thesis has been submitted elsewhere 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.

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Dedicated to

*My
Beloved Parents*

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PARTICIPATION OF RURAL WOMEN IN HOUSEHOLD AND AGRICULTURAL ACTIVITIES IN SELECTED AREA OF KISHOREGONJ DISTRICT

ABSTRACT

The main objectives of this study were to determine and describe the participation of rural women in household and agricultural activities and also to explore the relationship between each of the selected characteristics of the rural women and their participation in household and agricultural activities. Data were collected from 110 respondent women of five villages of Pakundia upazila under Kishoreganj district, by using a structured pretested interview schedule. Appropriate scales were developed in order to measure the concerned variables. An overwhelming majority (96.36%) of rural women had very high participation in household and agricultural activities. On the basis of average daily time spent in different household and agricultural activities, women participate more in fooding, which was followed by, crop production activities, other household activities, livestock rearing, children's education, poultry rearing, housing, clothing and fisheries respectively. The findings revealed that level of education, family size and coping capacity to household shock had significant positive relationships with participation of rural women in household and agricultural activities and age showed significant negative correlation. Annual family income, exposure to communication media, husband wife relation, financial contribution to family purchase, participation in social activities, problem faced in household activities and problem faced in agricultural activities had non-significant positive relationships with participation of rural women in household and agricultural activities under the present study.

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CHAPTER I

INTRODUCTION

1.1 Background of the Study

Bangladesh is a thickly populated country with an area of 147,570 km² and the population is 142.3 million with the growth rate of 1.34% and the present population stands as 155 million and 50% of its population is female (BBS, 2013). It is an agro-based country and agriculture accounts for 15.96% of country's GDP (Bangladesh Economic Review, 2015). Agriculture employs about 44.4% of its people (Labour Force Survey, 2010). About 85% of the total population live in rural areas and are directly or indirectly engaged in a wide range of agriculture (World Bank, 2005). People depend upon agriculture for their employment, poverty alleviation, human resource development and food security. Agriculture supplies raw materials for industrial production and food-stuff for human and animal consumption. The overall agro-based economy of the country, the women's participation into the agricultural sector is very promising. Creating job opportunities for unemployed people, alleviating poverty and income generation and improving national status of the country, women's participation is very much important. The role of women's work for gender development and poverty reduction continues to be an important area of investigation in Bangladesh (Faruque, 1997).

Women are considered as untapped national resources and society would have benefited if they were given the opportunity to use their unique talent. They are key operator of the house. They play an important role in domestic duties such as washing utensils, cleaning house compounds, livestock and poultry management and feeding, grain processing and storage, as well as post-harvest activities, fruits and vegetables cultivation, guest entertainment, decision making and technology adoption. In addition, women do some productive activities including agriculture within the homestead (Halim and McCarthy, 1985). Yet women's contribution to agricultural and household production receives less recognition than their domestic and child-rearing chores which are economic tasks in our view (Kabir et al., 1977). Secretary-General, Ban Ki-moon (2009) says that women's unpaid work at household level, including care giving, remains "invisible and unmeasured". Rather they take care of both the children and elderly people of the family

whenever they get time to take little rest. They involved in agricultural activities, cattle and poultry farming, handicrafts, cooking, fetching water, cleaning the house, taking care of family members and many more. Without women's participation household activities cannot be performed perfectly. But it is interested to note that independent decision making by women on all home and family related practices is very marginal (6.9-13.1%) even though family and home is essentially a women's domain (Anon., 2005).

The rural economy of Bangladesh has witnessed remarkable structural changes and diversification during the 1990s. The recent statistics show that the proportion of rural households depending on non-agricultural activities is expanding over time at a faster rate compared to farm households and that in certain areas the extent of involvement in such activities may be quite high. A second type of change indicates a relative decline in importance of agricultural wage labour, which implies a possible rise in the proportion of households dependent on self-employment or non-agricultural wage employment.

Present situation of women are much lower in status than that of men. Women represent a half of the country's human resources and thus a half of its potential. Their literacy rate is only 49.8 percent, much lower than that of men (57.1 percent). Rural woman presents a dismal picture. Socially they do not have individual identity. Women who are struggling hard to earn their livelihood and trying to overcome poverty generally do not get any incentive from the influential people of the locality. In Bangladesh the movement for women's emancipation is going on as a part of the process of social change and not as a revolutionary movement. In the country they worked hard and contributed significantly to agricultural production and family income. Unless the actual and potential contribution of women to the agricultural production process is recognized, efforts to improve the wellbeing of farm household and ensuring food security will be hampered. In today's society, the role of women extends way beyond the home and bringing- up of children. Women have to perform the dual role of housewife and wage earner. In rural areas, women are engaged in farm operation as cultivators, assistants to male cultivators and agricultural laborers. Women are actively involved in pre-sowing, post-sowing, harvesting, post-harvest operation as well as growing vegetables and fruits mostly for family consumption, care for poultry and livestock, supplement families nutrition and incomes through raising kitchen garden and working in cottage industry, handloom weaving etc. Women belonging to low socio-economic strata are actively engaged in

agricultural labour. They also show their involvement in planning, decision making and supervisory activities.

The contributions of rural women at household and agricultural activities in Bangladesh are largely unorganized. About 75% of the rural women are engaged in Agriculture. They are very well contributors of agricultural & economic production along with household activities but generally they remains invisible and unmeasured. Participation of rural women is crying need for the success of most of the farming activities. Through the participation process, women can learn how to change their living status in personal, social and economic domains. Hence women's participation in household and agricultural activities increases their access to and control over resources. Very few empirical researches were conducted on this issue. On the above considerations, the researcher of this study felt necessity to conduct the research on "participation of rural women in household and agricultural activities in selected area of Kishoregonj district".

1.2 Statement of the Problem

Historically the works of women in Bangladesh have mostly been confined to the homestead due to culture, religion, and social restrictions. In a male dominated society like Bangladesh, women have been the victims of religious prejudices, superstitions, oppressions and various kinds of discriminations. However, with the change of the socioeconomic situation of the country, women are breaking through the traditional norms and coming forward to participate in economic and development activities outside their household. The role of women in household and agricultural activities is important in determining their living standard, dependency burden and saving pattern in households. The rural women in Bangladesh have important contributions in agriculture and in almost every aspects of our society. Women constitute about half of the total population in Bangladesh and among them about 45.6% are associated with farming society (Hoque and Itohara, 2008). Presently, due to extreme poverty and a food crisis, social norms and traditions are changing and they are intimately involved in all phases of agricultural activities: from sowing seeds to harvesting and processing of crops. They are also involved in different earning activities like sewing dress, making baskets, making papers, flower vases, rearing of poultry, livestock and in different small scale business. Even women from the poorest households sometimes work outside the home as paid laborers for their family survival. Ahmed *et al.* (2008) observed that the economic status

of respondents' family was developed due to homestead farming by the women. It is hard to walk around a village without seeing hens, goats, cows, and buffalo's etc. Women are responsible for 60 to 80% of the feeding and milking of cattle. They also engaged in various activities related to livestock production like production of animals, sales of animal's products and by products, cleaning, watering and bathing the animals. Poultry rearing is a traditional activity performed by women for income generation. Feeding livestock, cleaning sheds, securing them properly for the night, and health care are the activities performed by women.

The pace of development in any country largely depends upon the people's participation including women. In Bangladesh women constitute almost half of the population and they are the household managers but their work is considered as non-productive, unorganized and un-documented throughout the world. They are deprived of not only in the field of agriculture, but also in all other fields like education, nutrition and health. Under the circumstances, this study has been undertaken to answer the following questions:

1. What are the socio-demographic characteristics of the women which influence them to participate in household and agricultural activities?
2. What is the degree of rural women's participation in household and agricultural activities?
3. What is the relationship between selected characteristics of rural women and their participation in household and agricultural activities?

1.3 Specific Objectives:

The following specific objectives are framed out in order to give proper direction to the research work:

- To determine and describe the participation of rural women in household and agricultural activities;

- To assess the socio-demographic characteristics of the rural women which influence them to participate in household and agricultural activities. The characteristics are :
 - Age
 - Education
 - Family size
 - Annual family income
 - Exposure to communication media
 - Coping capacity to household shock
 - Husband wife relation
 - Financial contribution to family purchase
 - Participation in social activities
 - Problem faced in household activities
 - Problem faced in agricultural activities; and
- To explore the relationship between the selected characteristics of the rural women and their participation in household and agricultural activities

1.4 Assumptions of the Study

An assumption has been defined as the supposition that an apparent fact or principle is true in the light of the available evidence (Goode, 1945). The researcher had the following assumptions in mind while undertaking this study:

- The respondents included in the sample considering they were capable of furnishing proper responses to the questions included in the interview schedule.
- Views and opinions furnished by the respondents were the representative views and opinions of the whole population of the study.
- The responses furnished by the respondents were valid and reliable.
- The researcher was well adjusted to the social and environmental condition of the study area and the community people. So the respondents gave their opinions without any hesitation.
- The data collected from the respondents were free from interviewer bias.

- All the data concerning the dependent and independent variables were normally distributed.
- The findings of the study will have general applications to other parts of the country with similar personal, socio-economic and cultural conditions.
- The findings of the study are expected to be useful for planning and execution of various programs in connection with the development of the country.

1.5 Scope and Limitations of the Study

Findings of the study will be particularly applicable in a selected area of Pakundia Upazilla under Kishoregonj District. But the findings may also be applicable in other areas of Bangladesh where the physical, socio-economic and cultural conditions do not differ much with those of the study areas. Thus, the findings of the study may be profitably utilized by the policy makers, extension personnel, researchers and decision making authority for successful planning and execution of programmes aimed at reducing discrimination towards women and inspiring livelihoods of rural women. However, considering the time, money and other necessary resources available to the researcher and make the research manageable and meaningful from the practical point of view, it become necessary to impose certain limitations as mentioned below:

- i. The study was confined to selected five villages namely, Husaindi Moddhopara, Husaindi Purbapara, Narandi, Kumarpur, Husaindi Nayapara of Husaindi union in Pakundia upazila under Kishoregonj district.
- ii. There were many characteristics of the rural women but only eleven of them were selected for this study.
- iii. There were many rural women in the study area, but only 110 rural women were considered for this study.
- iv. Assessing the extent of participation of the rural women in household and agricultural activities was very difficult and time consuming task. Therefore, in this study participation of the rural women were measured on the basis of their responses through some selected statements.
- v. The respondents for data collection were kept limited within the rural women who were just attached with the household and agricultural activities only.
- vi. For information about the study, the researcher dependent on the data as

furnished by the sampled respondents during the interview. As none of the respondents kept records, they furnished information to the different queries by recall.

- vii. Major information, facts and figure supplied by the respondents were applicable to the situation prevailing in the locality during the year 2015.

1.6 Hypotheses

Null hypothesis were formulated to test the relationship between the selected characteristics of the rural women and their extent of participation in household and agricultural activities. In brief, the null hypotheses were as formulated-

“There is no relationship between each of the selected characteristics of the rural women and their participation in household and agricultural activities”.

1.7 Definition of Terms

A number of key terms have been used throughout the study. These are defined below to avoid confusion and misunderstanding.

Respondents

People who have answered the questions by an interviewer for a social survey are known as respondents. They are the people from whom a social research worker usually gets most data required for research. In this study the respondents are the rural women of Pakundia upazila under Kishoregonj district who participate in the household and agricultural activities.

Variable

A general indication in statistical research or characteristic that occurs in a number of individuals, objects, groups etc. and that can take on various values, for example the age of an individual.

Assumption

An assumption is “the supposition that an apparent fact or principle is true in the light of the available evidence” (Goode and Hatt, 1952).

Hypothesis

Defined by Goode and Hatt (1952), a proposition this can be put to “a test to determine its validity”. It may be true or false, it may seem contrary to or in accord with common sense. However, it leads to an empirical test.

Null hypothesis

The hypothesis which we pick for statistical test is null hypothesis (Ho). In this study the null hypothesis is stated that there is no relationship between the concerned variables.

Age

Age of a respondent is defined as the span of life and is operationally measured by the number of years from her birth to the time of interviewing.

Level of education

Level of education is defined to the development of desirable changes in knowledge, skill and attitude in an individual through reading, writing, walking, observation and other selected activities. It is measured on the basis of classes a respondent passed from a formal educational institution.

Family size

Family size refers to the number of members including the respondent herself, her husband, children and other permanent dependents, who take food and live together in a family unit.

Annual Family income:

It can be defined as the total earning of the respondent women and other members of their family from crop, livestock, poultry, fisheries and other sources (service, business etc.) during the previous year.

Income generating activities:

Income generating activities refer to those activities through which the rural women can earn directly.

Coping capacity to household shock

Coping capacity to household shock refers to a women's ability to face sudden risk, crisis and periodic stresses in the household.

Husband-wife relation

The husband-wife relation refers to the existing harmony between husband and wife in terms of friendliness, cooperation and respects.

Problems/Constraints

Generally problems/constraints refer to some limitations/difficulties in the context of either a theoretical or practical situation, which the researcher wants to identify for the same.

Participation:

Participation refers to the extent of performing various activities related to the household and agriculture for maintaining household and farming operations.

Rural women:

Rural women in this study means the female household head living in the rural areas or villages and participate in household and agricultural activities.

Household activities

Household activities include the activities done by rural women within and outside the household except agricultural production activities. These include taking care of children, cooking, feeding all the members of the house, take care all the family members of the household when any of them got sick etc.

Agricultural Activities

Agricultural activities refer to the works done by the rural women in the households for helping agricultural production directly or indirectly. Agricultural activities of the rural women included both pre harvest and post-harvest activities such as purchasing of agricultural inputs, arrangement of agricultural implements, land preparation and cleaning, sowing seeds, weeding, irrigation, intercultural operation, harvesting of crops, threshing, winnowing, drying and preserving grains, vegetable and fruit production within the homestead area, poultry raising, goat rearing, cattle farming and such other activities related to agricultural production.

CHAPTER II

REVIEW OF LITERATURE

This Chapter deals with the review of past researches related to the participation of rural women in household and agricultural activities. The reviews are conveniently presented based on the major objectives of the study. Available literatures on the participation of rural women in household and agricultural activities are very few in Bangladesh. However, the literatures of available studies have been briefly discussed in the following sections:

2.1 Participation of Rural Women in Household and Agricultural Activities

Huq (1974) mentioned that women play important role in country's economic growth, especially in agricultural production.

Ali and Rahman (1978) reported that women were engaged in both productive and household activities. The production or income generating activities unproved their socio-economic conditions.

Biumberg (1979) reported that women's agricultural work is invisible, under reported and their household production is even more invisible.

Brammer (1983) in a study pointed out that women do a large extent for cultivation of vegetables and fruits.

Mazunder et al. (1983) conducted a study on women participation in agricultural and non-agricultural activities in Bangladesh villages. It portrayed the pattern and nature of activities of the rural women along with their socioeconomic conditions in their study area. The study revealed that no housewife was a sole decision maker in the family affairs. Their study further depicted that rural women on an average spent 19 hours in a day for agricultural and non- agricultural activities.

Schoeffel (1983) reported that productive inputs of women in the total society of Papua New Guinea have been significantly greater than those of men and inclusion of their

contribution to domestic work would prove further that women do carry a heavier work load.

Younus (1984) stated that social attitude to women participation in activities outside the home became more favorable in eighties particularly when women participation was considered as an economic advantage to the family.

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

Dey (1985) mentioned in his paper that women in the households are economically active and played important role in post-harvest operations as well as other activities like kitchen gardening and livestock care.

Ferguson and Nancy (1985) urged the importance of recognizing women's agricultural and household production in the development and introduction of cowpea and bean plants. They indicated that the concern of women as food producers and preparers were often overlooked in male focused main agendas.

Hussain (1985) showed that women were involved in most of the pre and post-harvest operations of vegetables production. They also advocated some measures to be taken by the government, policy makers, planners, development workers and researchers for the effective integration of participation in different homestead production and management activities like vegetables growing, livestock raising, fish cultivation, post-harvest operation like processing and household decision making etc.

Martius and Harder (1985) in a survey found that women in the household perform a number of economic activities viz. post-harvest activities, tree plantation, poultry rising, vegetables gardening, fuel gathering etc. But these contributions of the women are not recognized and remarkable as well. It is observed that when any initiative is taken to treat women as recognized and remunerative labor force, the traditionally 'purdah' norm acts as a barrier.

Quddus and Bose (1985) reported that the kitchen gardening, home gardening and home level food processing was satisfactory and profitable and women's participation was high

with strengthening extension work. They also advocate that with the existing social system homestead gardening may be considered a major area for women which have economic and nutritional implications for the well-being of particularly for the poor unemployment women.

Satter (1985) observed that women participation in the post-harvest operations, vegetables cultivation, livestock care as well as other economic activities which had a great contribution in the family income.

Anonymous (1986) observed that women can perform post-harvest operation such as drying, winnowing and storing paddy, cleaning and drying wheat, storing mustard and pulse, cleaning and storing potatoes, drying and storing of spices and extracting fiber and seed of jute.

Scaffer (1986) opined that the rural women are used to do post-harvest activities, livestock, poultry rearing inside the family compound and they also perform homestead vegetables gardening.

Halim (1985) mentioned that women are potential producer of the homestead agricultural products and participate intensively in homestead production activities. But due to lack of knowledge and utilization of proper technology and manageable practice, the production remains below the accepted level. It may be due to the lack of communication understanding of their beliefs by the change agents. So, it is a crucial need to know the gap between existing beliefs and performances of our rural women regarding homestead production activities.

Gleason (1988) in his report mentioned that women in rural Taiwan often worked with their male counter-parts in almost all aspect of agricultural production. There were tendencies for women to perform certain tasks that men were likely to do and vice versa.

Hossain *et al.* (1988) reported that women constitute about 48% of the total population in Bangladesh. Even then, their role is not adequately reflected in the national census and development activities because of lack of necessary information and documentation on homestead agriculture.

Sofilios and Mahmud (1989) showed that household production was in the hands of women. The major task and decision regarding homestead vegetables and spices are

become an increasing source of income for rural household.

Halim (1990) stated that rural women in Bangladesh were active in productive works in household industry and even in marketing in addition to taking care of children, preparing and serving food to other members of the family.

Shaheed and Mumtaz (1990) reported that women often devote more time and their participation is notably higher in food storage and processing than men. They carry out these tasks in addition to their normal household activities.

Sudharani and Raju (1991) reported that household based subsidiary professional program such as cattle production, poultry rearing, sericulture, mushroom culture and fruit preservation might generate extra employment opportunity for the farm women and gradually few proceed to these operations.

Schulze and Sostres (1991) stated that women's involvement and contribution role in livestock production has often been underestimated or ignored and they also reported that women's work is rarely considered "economically important" for the nation.

Aireen (1992) in her study identified women's contribution in farm family in terms of participation in homestead farming and household activities. She also denoted women's status in decision making process in family affairs. She found that on the average women spent 30% on day time in household activities and 70% on agricultural activities. Women contributed 58-235 labor days per hectare for production of homestead vegetables compared to 50-221 by men. It further revealed that women earned on an average tk. 4359 per year from various income generating activities. In case of decision making men enjoyed overwhelming right to make major decisions.

Vlassak (1993) mentioned that in third world countries, the role of women in agricultural production is extremely important. The tasks in agriculture as well as in food distribution and processing carried out by women show particular pattern. Women like to increase agricultural production, but their activities are being impeded in different ways.

Akanda (1994) in his study revealed that highest proportion of the rural women had high

participation in vegetable cultivation while only 15 percent of them had high participation in the cultivation of fruit trees.

Karim and wee (1996) mentioned that women were involved in seed collection, seed storage, water management, fertilizer application and daily maintenance and harvesting. In case of tribal people, vegetables were growing mostly cared by women. Urban women were also eager to grow vegetables in the homestead.

Savita *et al.* (1998) opined that participation of rural women in agricultural activities was low except for farming, bee keeping and rabbit farming. Along with major role in household activities, rural women engage in different economic activities such as food processing (25%) and participation of detergents supply (15%) supplement family income. The major constraints reported were: marketing problem, procuring raw materials, lack of technical knowledge and no loan facilities.

Abdullah and Zeidenstien (2003) reported that women in rural Bangladesh involve in income generating activities. Women contribute to the financial support of the family for their own future security, which provides them economically motivated and active.

Miah *et al.* (2004) conducted a study to investigate the farming and non-farming activities performed by rural women along their allocation of time in this regard. Finding revealed that the homestead area of the women had significant relationship with their duration of involvement in income generating activities.

Hossain *et al.* (2004) found that participation of tribal women in homestead vegetable production was found low participation to high participation.

Agha (2005) reported that in rural areas women fully involved in domestic labor activities like looking after the children, cleaning the house, cooking, washing and the many other activities.

World bank (2008) study that other than education women's full participation in economic and household activities impeded by cultural and legal constraints, which limits women's participation by women's relative lack of time and mobility due to their workloads and multiple roles.

ADB(2008) conducted a review work and mentioned that women in the household are economically active and played important role in post-harvest operations as well as activities like kitchen gardening and livestock.

2.2 Relationship between Selected Characteristics of the Rural Women and Their Participation in Household and Agricultural Activities

2.2.1 Age and participation

Islam (1991) showed that age of the women was not significantly related their extent of participation in income generating activities.

Dickerson (1992) in his study observed that younger women were concerned almost primarily with productive activities while older women were involved more in decision making within their households and they had to play extra domestic roles.

Faroque's (1997) study on female rural youth in Mymensingh revealed that age had no relationship with their participation in homestead agricultural activities.

Akter (2000) stated that there was positive correlation between age of the women and their participation in both agricultural and non-agricultural activities.

Hafeez and Ahmed (2002) identified that age affect female labor force participation rate positively, which influence the decision of educated married women about participating in the labor market.

Islam (2002) reported that the age of the rural women had no significant relationship with their socio-economic development activities.

Samad (2004) reported that age of the rural women had no significant relationship with their poverty alleviation.

Khan (2006) in his study found that age of the respondents had significant relationship with the impact of Grameen Bank micro credit program.

Farid *et al.* (2009) examined that age of the respondents was negatively associated with the participation of rural women in various agricultural and non- agricultural activities.

Hossain E.M. et al. (2013) found that age of the women had negative significant relationship with the participation of rural women in various farm and non-farm activities.

2.2.2 Education and participation

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.

Becker (1965) and Mincer (1962) consider education as one of the key determinants of women's entering into the labor market. The higher the education level, the greater is women's involvement in the labor market.

Arya (1979) in her study on women's role in decision making in farm credit found that family education had no significant relationship with women's participation in decision making.

Hossain (1985) in his study found that there was no relationship between education of the women with their adoption of improved practices.

Nahar (1996), Akanda (1994) and Kaur (1988) stated that education of the respondents had significant positive relationship with their participation in agricultural practices.

Naher (2000) observed in her study that education of the rural women had no significant relationship with their participation in homestead agriculture.

Hafeez and Ahmed (2002) identified the various socio-economic and demographic factors, which influence the decision of educated married women about participating in the labor market. They found that the females' education level is strong and positive determinant of their participation in labor force.

Farid *et al.* (2009) examined the nature and extent of participation of rural women in various agricultural and non-agricultural activities. The results of correlation coefficient indicated that level of education of the respondents was negatively associated with the participation of rural women in various agricultural and non-agricultural activities.

Faridi *et al.* (2011) found that women who have low level of education are highly tended towards self-employment than women who have high level of education.

2.2.3 Family size and participation

Rao (1994) reported that rural women's participation in agriculture was negatively correlated with the size of their family.

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

Begum (1998) found that family size of the rural women had no significant relationship with their poverty alleviation owing to participation in ASA activities.

Akter (2000) revealed in his study that there was significant association between family size and the extent of participation in decision making role in the family with regard to development activities.

Naher (2000) reported that there was no relationship between family size and participation of women in income generating activities through agricultural practices but she found significant positive relationship between family size and participation in post-harvest practices.

Islam (2002) reported that the number of family members of the respondents had positive significant relationship with their poverty alleviation.

Hafeez and Ahmed (2002) identified that family size affect female labor force participation rate positively, which influence the decision of educated married women about participating in the labor market.

Samad (2004) observed that family size of the rural women had no significant relationship with their socio-economic development activities.

Farid *et al.* (2009) examined the nature and extent of participation of rural women in various agricultural and non-agricultural activities. The results of correlation coefficient indicated that family size were positively associated with the participation of rural women in various agricultural and non- agricultural activities.

2.2.4 Annul family income and participation

Akanda (1994) observed in his study that family income had significant positive relationship with their participation in the cultivation of fruit trees and non- farm household activities but not with homestead vegetable cultivation.

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

Parvin (1998) found that annual income of Grameen Bank (GB) member households increased by 126 percent against the non-Grameen Bank members and income of Grameen Bank household was highly significant at 0.01 levels between the previous Grameen Bank household's income and the current non-Grameen Bank household income. She also observed that monthly savings per family rose from 34.25 Tk. to 293.75 Tk. She further reported that family asset increased by 41 percent after their participation in Grameen Bank.

Akhter (2000) observed that family income had significant positive relationship with their participation in agricultural practices.

Naher (2000) observed in her study that family income of the rural women had no significant relationship with their participation in homestead agriculture.

Farid *et al.* (2009) examined the nature and extent of participation of rural women in various agricultural and non-agricultural activities. The results of correlation coefficient indicated that average annual income level of the respondents was found insignificant with respect to their participation in various economic activities.

2.2.5 Exposure to communication media and participation

Naher (2000), Nahar (1996), Karim (1993), Islam (1991) and Kaur (1988) in their study observed that extension contact and mass media exposure had positively significant relationship with their participation in agricultural practices.

Khan (2007) found that extension contact and exposure to mass media had significant influence upon opinion, level of knowledge, and adaption of selected practices by rural women. He also reported that there was a strong relationship between women's exposure to media and their participation.

Mukta (2011) found that exposure to communication media has highly significant positive relationships with participation in homestead agricultural activities.

2.2.6 Coping capacity to household shock and participation

Roy et al. (2009) found different result in the study on "Farmers Participation of the Effect of IPM towards Sustainable Crop Production". Shock reduction ability had positive significant relationship with the participation in household activities. That means higher the shock reduction ability of the respondents, the higher their participation in household activities.

2.2.7 Husband-wife relation and participation

Ahmed et al. (2009) found that husband wife relation had negative significant relationship with their participation in household activities. It indicates that with the decrease in husband-wife relationship, there is an increase in their participation in household activities.

2.2.8 Financial contribution to the family purchase and participation

Tuli (2011) found that contribution to purchase had positive significant relationship with their participation in household activities. It means that higher contribution to purchase of the respondents, the higher their participation in household activities but contribution to purchase had showed insignificant relationship with their participation in agricultural activities.

2.2.9 Participation in social activities and participation

Tuli (2011) found that participation in social activities had positive significant relationship with their participation in household activities. It means that higher contribution to participation in social activities, the higher their participation in household activities but participation in social activities had showed insignificant relationship with their participation in agricultural activities.

2.3 Conceptual Framework

In scientific research, selection and measurement of variables constitute an important task. The hypothesis of a research while constructed properly contains at least two important elements i.e. "a predicted variable" and "an causal variable". A predicted variable is that factor which appears, disappears or varies as the research introduces, removes or varies the causal variable (Townsend, 1953). A causal variable is that factor which is manipulated by the researcher in his attempt to ascertain its relationship to an observed phenomenon. In view of prime findings of review of literature, the researcher constructed a self-explanatory conceptual model of the study which is presented in Figure 2.1.

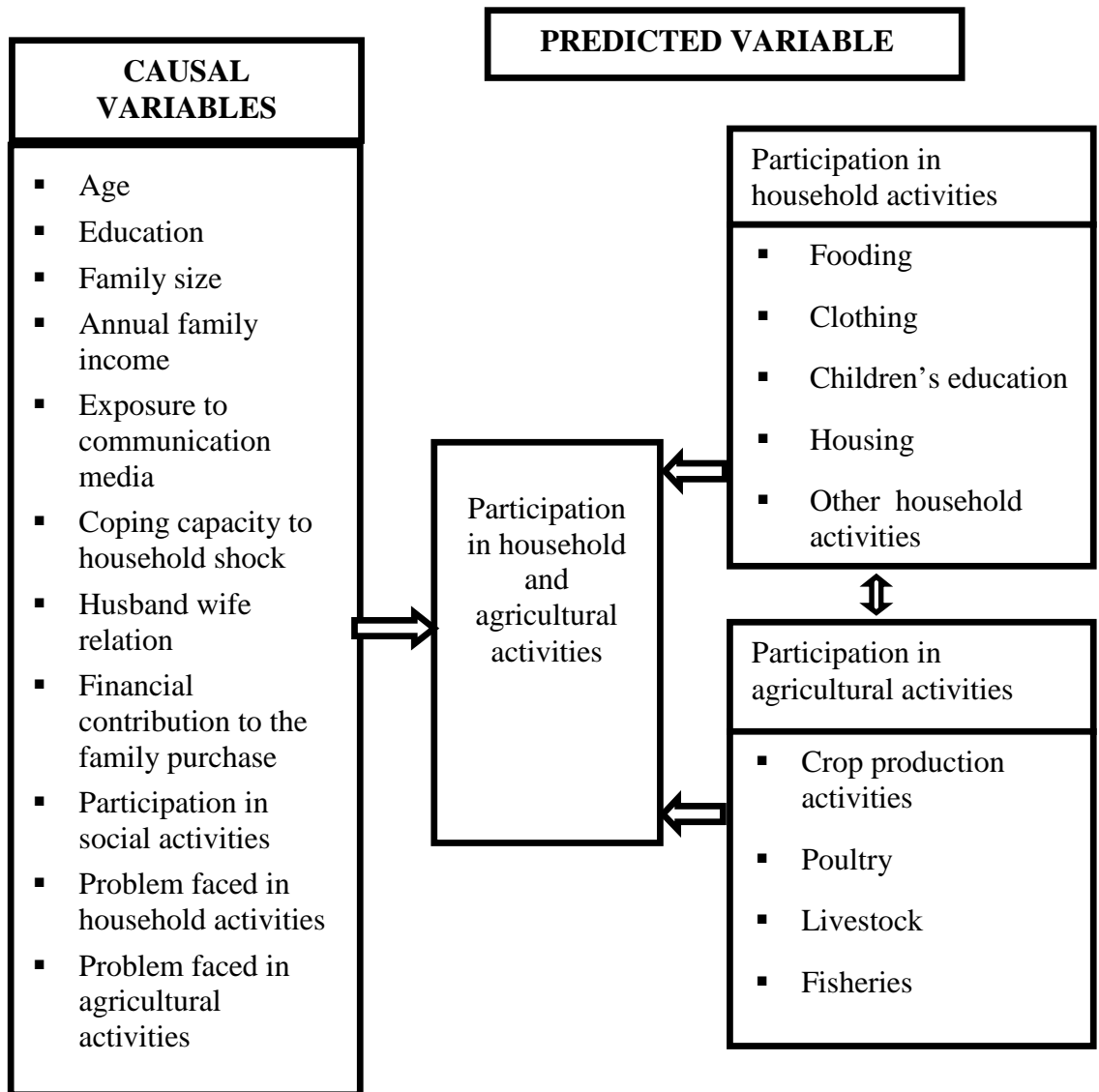


Figure 2.1 The conceptual framework of the study

CHAPTER III

METHODOLOGY

Methodology is the underlying principles and rules of organization of philosophical system or inquiry procedure (Urdong 1968). In other words, “methodology is the systematic and logical study of the principles guiding scientific investigations (Gould and William, 1964). Selection and adoption of appropriate research methodology is related to the nature of the problem to be solved and the study objectives (Abedin, 1996). Thus a befitting methodology leads the researcher to achieve his research objectives in an apposite way through the process of collection of valid and reliable data and analyzing those to arrive at logical conclusions. However, the methods and procedures operationalized in this study have been described below step by step:

3.1 Locale of the Study

Five villages namely, Husaindi Moddhopara, Husaindi Purbapara, Husaindi Charpara, Kumarpur and Husaindi Nayapara of Husaindi union in Pakundia upazila under Kishoregonj district were selected as the locale of the study. Pakundia upazila has 10 unions, out of which Husaindi union was selected purposively. Husaindi union has 9 villages out of which 5 villages were selected randomly. A map of Kishoregonj district showing Pakundia upazila and another one showing the study area (Husaindi union) within the upazila are represented in the figures 3.1 and Figure 3.2 respectively.

3.2 Population and Sample

Five villages were selected randomly from the study area. There were 1522 rural farm families in these five villages. Therefore, 1522 female household heads of these farm families constituted the population of the study. Among them one hundred and ten rural women were selected randomly as sample of the study by using Yamane’s (1967) formula and sample size was determined as 110.

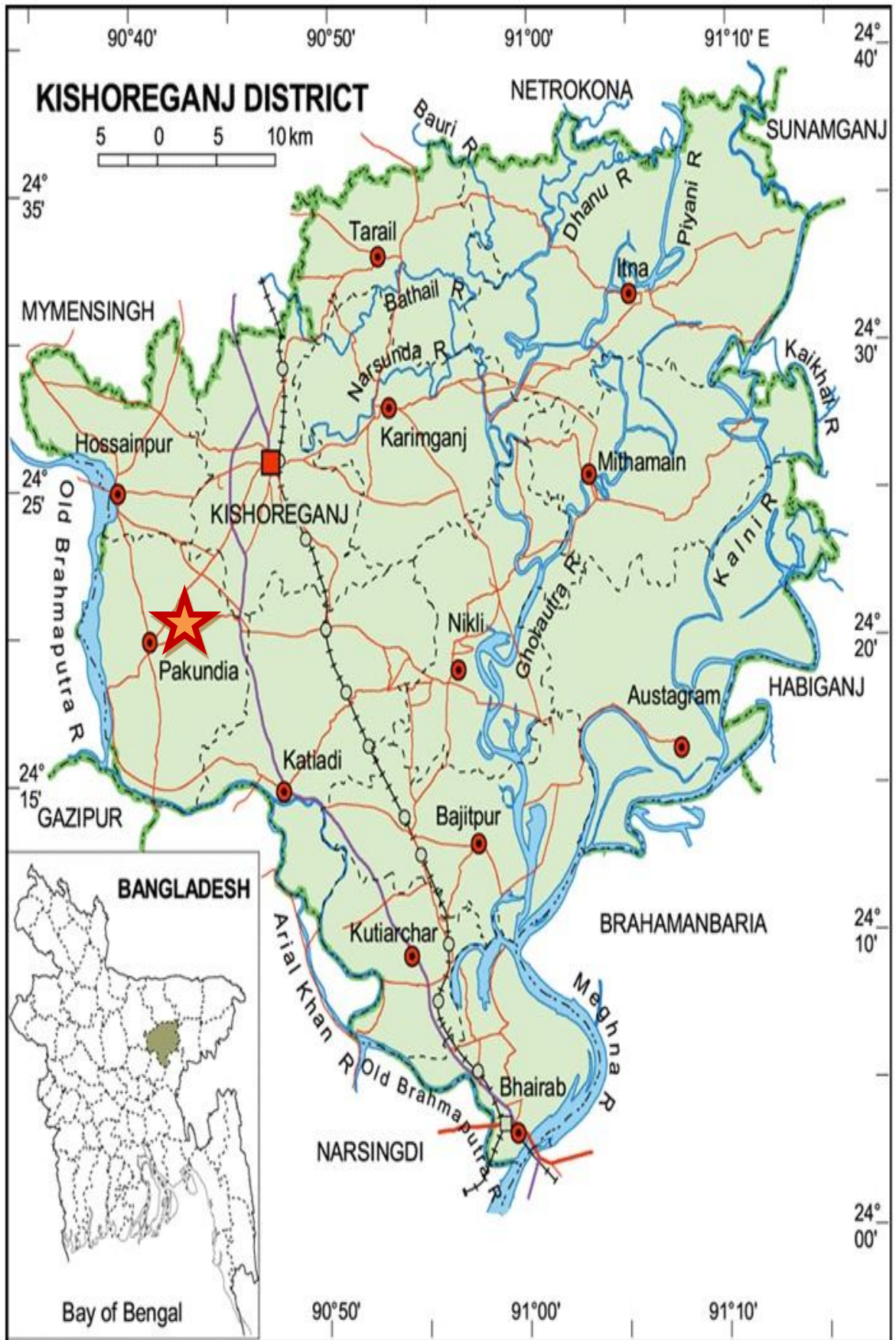


Figure 3.1 A map of Kishoreganj district showing Pakundia upazila

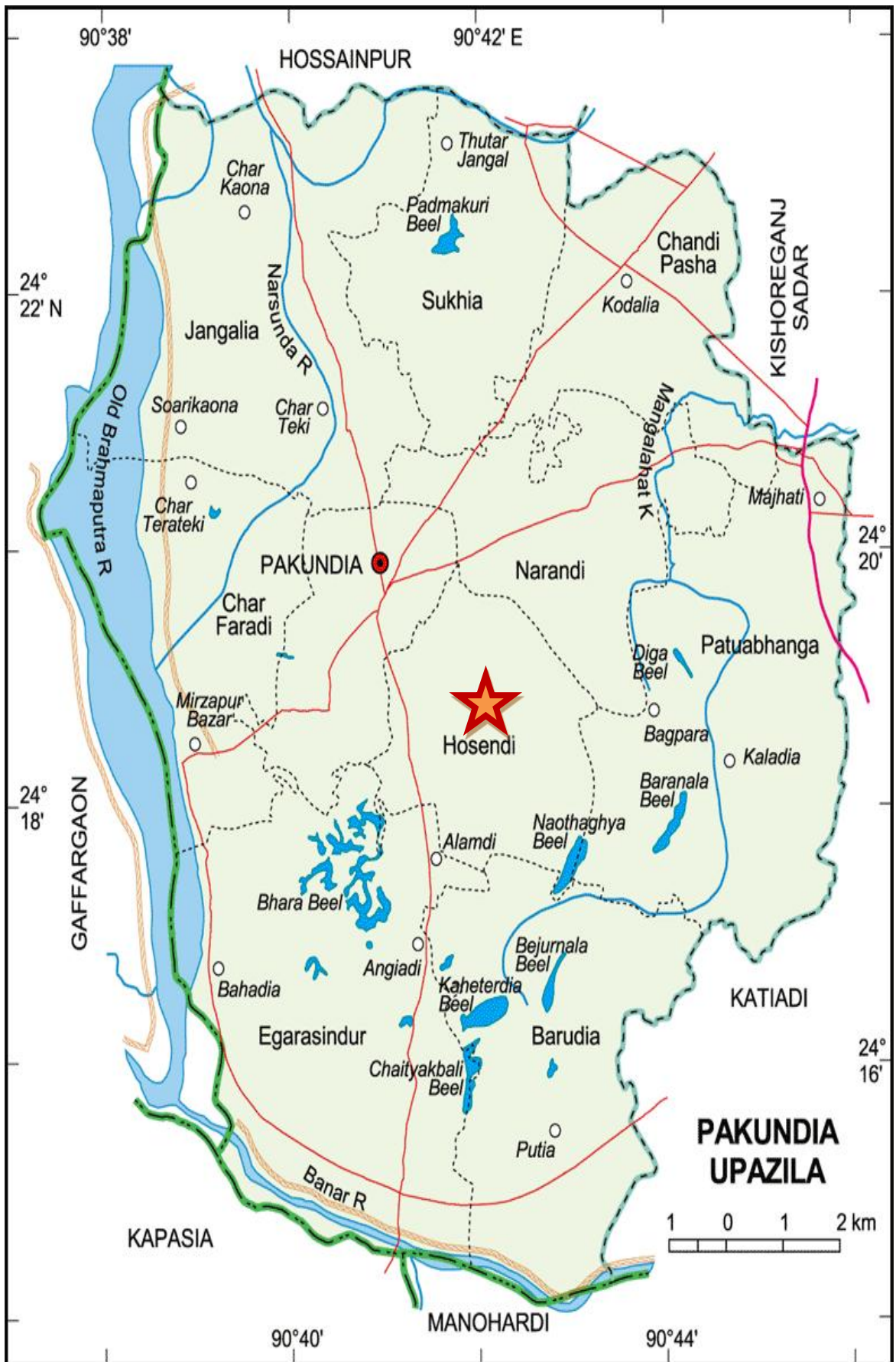


Figure 3.2 A map of Pakundia upazila showing the study area (Husaindi union)

In calculating sample size from the following formula, 9% precision level, 50% degree of variability and value of $Z=1.96$ at 99% confidence level were chosen:

$$n = \frac{Z^2 P(1-P)N}{Z^2 P(1-P) + Ne^2}$$

Where ;

n =Sample size

N =Population size

e =The level of precision

Z =The value of standard normal variable
at the chosen confidence level

P =The proportion or degree of variability

Sample was drawn from the population following proportionate random sampling technique. Besides, 10 percent of the samples i.e. 11 rural women were selected from the population as reserves who were supposed to be interviewed only when respondents in the original list found unavailable during data collection. The distribution of the respondents according to population, sample size, and reserve list is shown in table 3.1.

Table 3.1 Distribution of the respondents according to population, sample size and reserve list

Name of the villages	Population of women household heads	Number of respondent included in the sample	Number of respondent included in the reserve list
Husaindi Moddhopara	157	11	1
Husaindi Purbopara	379	27	3
Husaindi Charpara	122	9	1
Kumarpur	533	39	4
Husaindi Nayapara	331	24	2
Total	1522	110	11

3.3 Instruments for Data Collection

In order to collect relevant information, a structured interview schedule was prepared considering the objectives of the study. The schedule was prepared in both English and Bengali for clear understanding of the respondents. The schedule obtained both closed and open forms of questions. Appropriate scales were developed to measure selected characteristics of the farmers and the dependent variables.

A pre-test survey was undertaken before the actual collection of data. This survey provided an opportunity to examine the effectiveness of the schedule which revealed some unforeseen defects associated with it. Based on the pre-test experience, necessary correction, addition, alteration, rearrangements were made. Thus the interview schedule was prepared for the final use. The Bengali version of the interview schedule was multiplied as per requirement to collect data from the respondents. The English version of the interview schedule was enclosed in Appendix-A.

3.4 Measurement of Variables

A variable is any characteristics which can assume varying or different values in successive individual cases (Ezekiel and Fox, 1959). An organized piece of research usually contains at least two important elements viz. causal and predicted variables. A causal variable is that factor which is manipulated by the researcher in his attempt to ascertain its relationships to an observed phenomenon. A predicted variable is that factor which appears or varies as an effect of the causal variables (Townsend, 1953)

In the scientific research, the selection and measurement of variables constitute a significant task. Following this conception, the researcher reviewed literature to widen this understanding about the natures and scopes of the variables relevant to this research. Author had selected 11 characteristics of the respondent women as the causal variables which includes- age, education, family size, annual family income, exposure to communication media, coping capacity to household shock, husband wife relation, financial contribution to family purchase, participation in social activities, problem faced in household activities and problem faced in agricultural activities. Women's participation in household and agricultural activities was the main focus of the study. The methods and procedures in measuring these variables are presented below:

In order to conduct a study in accordance with the objectives it was necessary to measure the variables. The procedures of measuring the variables have been described below:

3.4.1.1 Age

Age of a respondent was measured by the period of time from her birth to the time of interview and it was measured in terms of complete years on the basis of their response. A score of one (1) was assigned for each year of age.

3.4.1.2 Level of education

Level of education was measured in terms of class passed by respondent. If a respondent received education in the school, their education was assessed in terms of years of schooling, i.e. one (1) score was given for one year of schooling. For example, if the respondent passed the final examination of class III, their education score was taken as 3. If the respondent had education outside school and the level of education was equivalent to that of class III of the school than her education score was taken as 3. Each illiterate person was given a score of zero. The respondent who did not know how to read or write but able to sign only was given a score of 0.5.

3.4.1.3 Family size

The family size of a respondent was measured in terms of actual number of members in his/her family including herself, spouse, children, brothers, sisters, parents and other person who jointly live and take meals together during the period of interviewing.

3.4.1.4 Annual income

Annual income of a respondent was measured in term of taka. Annual family income of a respondent was computed on the basis of total yearly earning from agriculture and other sources (service, business, day labor etc.) by the respondent herself and other family members. The value of all agricultural crops, livestock, Poultry, egg, fisheries, fruits, vegetables etc. were taken into consideration. The income score was assigned as one (1) for each one thousand taka of income. If one had an annual income of Tk 50,000 her income score was assigned as 50.

3.4.1.5 Exposure to communication media

Media exposure refers to the extent of access to different 8 selected media i.e. health worker, NGO workers, SAAO, visiting neighbors, friends, relatives, listening radio and watching television by the participants. To measure frequency of their contact a scale composed of not at all, rarely, occasionally, frequently and regularly against '0', '1', '2', '3', '4' score respectively. Thus, the media exposure score of a respondent could range from 0 to 32, where 0 indicates no contact to communication media and 32 indicates maximum contact to communication media.

3.4.1.6 Coping capacity to household shock

Coping capacity to household shock refers to a women's ability to face sudden risk, crisis and periodic stresses in the household. Nine major risks in various aspects related to household management including crop failure, burning of house, job termination, physical disability of earning members, immature death of children, breach of relationship with neighbors, loosing capital, withdrawal of NGO support, divorce of any family member were considered. Respondents were asked to indicate their agreement on a 5-point rating scale consisted of 'no coping capacity', 'low coping capacity', 'medium coping capacity', 'high coping capacity' and 'very high coping capacity'. Scores of '0' '1', '2', '3' and '4' were assigned against the above items respectively. Thus, household shock coping capacity score of a respondent could range from 0 to 36, where 0 indicates no coping capacity to household shock and 36 indicates maximum coping capacity to household shock.

3.4.1.7 Husband-wife relation

The husband-wife relation of a respondent refers to the extent of relationship between husband and wife. It was computed by using a 5-point rating scale assigning scores from 1 to 5 against six statements. Score 1 to 5 indicates poor to excellent relationship. Thus, husband-wife relation of a respondent could range from 6 to 30.

3.4.1.8 Financial contribution to the family purchase

Contribution to the family purchase refers to the extent of respondent's contribution to purchase different items. To measure this, each respondent was asked to indicate the amount of money spent against nine selected items on a 5-point rating scale: 4 for 'full contribution', 3 for 'more contribution', 2 for 'equal contribution', 1 for 'low contribution' and 0 for 'no contribution at all'. Hence, a respondent's contribution to

purchase could range from 0 to 36 where 0 indicates no contribution and 36 indicates very high contribution.

3.4.1.9 Participation in social activities

Participation in social activities refers to the extent of respondent's participation in various social activities organized by GOs, NGOs or herself. To measure this, each participant was asked to indicate her extent of participation against nine selected items. It was computed using a 5-point rating scale using a score of 4 for 'regular participation', 3 for 'frequent participation', 2 for 'often participation', 1 for 'rare participation' and 0 for 'no participation at all'. Thus, score of a respondent's participation could range from 0 to 36, where 0 indicates no participation and 36 indicates maximum participation in social activities.

3.4.1.10 Problem faced in household activities

The extent of problem faced by the rural women in household activities was measured on different aspects of problem faced in household. The possible problems faced by the respondents were collected from rural women during pretest. The identified five problems were economic limitation, gender discrimination, credit unavailability, family help and communication gap with development workers. Numerical values assigned to the scale were 4, 3, 2, 1 and 0 for the facing of very high, high, medium, low and not at all problems respectively. Then problem faced score of a respondent was determined by summing up her response to all the items. Hence, problem faced in household activities score of a respondent could range from 0 to 20, where 0 indicates no problem and 20 indicates highest problem faced in household activities.

3.4.1.11 Problem faced in agricultural activities

The extent of problem faced by the rural women in agricultural activities was measured on different aspects of problem faced in agriculture. The possible problems faced by the respondents were collected from rural women during pretest. The identified nine problems were lack of good quality seeds, lack of knowledge about improved production technology of vegetable cultivation, high price of agricultural inputs, marketing problems, improper knowledge on post-harvest technology, diseases of cattle and goat, lack of necessary agricultural information, lack of training facilities and unavailability of sufficient credit. Numerical values assigned to the scale were 4, 3, 2, 1 and 0 for the facing of very high, high, medium, low and not at all problem respectively. Then

problems score of a respondent was determined by summing up her response to all the items. Hence, problem faced in agricultural activities score of a respondent could range from 0 to 36 where 0 indicating no problem and 36 indicating highest problem faced in agricultural activities.

3.5 Measurement of Predicted Variable

Participation of rural women in household and agricultural activities was the main focus of the study and it was measured by adding respondent's participation in household activities and participation in agricultural activities in the following way:

3.5.1 Participation of rural women in household activities

Participation of rural women in household activities was measured in terms of their daily time spent in selected activities viz. participation in food preparation, clothing activities, children's education, housing and other household activities. To measure this, each respondent was asked to indicate her daily time spent in hours for each activity which was then added together to get the participation of rural women in household activities.

3.5.2 Participation of rural women in agricultural activities

Participation of rural women in agricultural activities was measured in terms of their daily time spent in selected activities viz. participation in crop production activities (pre-harvest activities, post-harvest activities), rearing poultry, livestock, and fish culture. To measure this, each respondent was asked to indicate her daily time spent in hours for each activity which was then added together to get the participation of rural women in agricultural activities.

Finally participation of rural women in household and agricultural activities was measured by adding participation of rural women in household activities and agricultural activities.

3.6 Hypothesis of the Study

In the present study, the following null hypotheses were formulated:

“There is no relationship between each of the eleven selected characteristics of the rural women and their participation in household and agricultural activities.”

3.7 Data Collection Procedure

The researcher herself collected data from the respondents through personal contact using a pre-tested interview schedule. Pre-test was done from 1-5 January, 2016. Whenever any respondent faced difficulty in understanding questions, more attention was taken to explain the same to answer properly. No serious problem was faced by the investigator during data collection but obtained cooperation from the respondents. Data collection was started in 10 January, 2016 and completed in 22 January, 2016.

3.8 Data Processing

For data processing and analysis the following steps were followed:

3.8.1 Compilation of data

After completion of field survey, the entire interview schedule were compiled, tabulated and analyzed according to the objectives of the study. In this process, all the responses in the interview schedule were given numerical coded values. Questions in the interview schedule were transferred to a master sheet to facilitate tabulation. Tabulation was done on the basis of categories developed by the investigator herself.

3.8.2 Categorization of respondents

For describing the various 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. The procedures have been discussed while describing the variable in the sub-sequent sections of next chapter.

3.8 data Analysis

Collected data were compiled, coded, tabulated and analyzed in accordance with the objectives of the study. Various statistical measures such as frequency counts, percentage distribution, average, and standard deviation was used in describing data. SPSS (version 20) computer program was used for analyzing the data. The categories and tables were used in describing data.

For determining the relationships between selected characteristics of the respondent women and their participation in household and agricultural activities, Pearson's Product Moment Correlation Co-efficient (r) was computed. Five percent (0.05) level of probability was used as the basis for rejecting or accepting any null hypothesis.

CHAPTER IV
RESULTS AND DISCUSSION

In every research report results and discussion section is very important. In this Chapter, the findings and related interpretation are presented in three sections according to the objectives of the study. The first section deals with the selected characteristics of the rural women. The second section deals with participation of the rural women in household and agricultural activities. The third section deals with the relationship between the selected characteristics of the rural women and their participation in household and agricultural activities.

4.1 Selected Characteristics of the Rural Women

Eleven selected characteristics of the rural women such as age, education, family size, annual family income, exposure to communication media, coping capacity to household shock, husband-wife relation, financial contribution to family purchase, participation in social activities, problem faced in household activities and problem faced in agricultural activities or the study were considered

4.1.1 Age

Age of the respondent women ranged from 19 to 66 years with a mean of 40.22 and standard deviation of 12.18. Based on their age, the rural women were classified into three categories as young, middle and old-aged. The distribution of the respondent women according to their age is presented in Table 4.1.

Table 4.1 Distribution of the respondents according to their age

Categories	Respondents		Mean	Sd
	Number	Percent		
Young aged (up to 35 year)	45	40.91	40.22	12.18
Middle aged (36 to 55 years)	56	50.91		
Old aged (>55 years)	9	8.18		
Total	110	100.00		

Data in Table 4.1 reveals that the highest proportion (50.91 percent) of the respondents were middle aged, while 40.91 percent were young and the remaining 8.18 percent were old aged. It appears that an overwhelming majority (91.81%) of the respondents in the study area ranged from young to middle aged. Young and middle aged people generally participate more in household and agricultural activities than the older aged. Similar

4.1.2 Education

Education makes human beings great, wise and honorable. Respondent women as the half of the society have the same human right and have to come forward for education to become an affectionate mother, loving sisters, dutiful wives and above all intelligent social beings. Education is regarded as an instrument of change and transformation of society. Education can be seen in the emancipation of women from the patriarchal society. As women educated, they acquire a base of critical thinking and independent judgment. Educated women are less content to devote themselves exclusively to domestic tasks and interested to outside activities (Blood, 1972). Education is important key to improve health, nutrition, family education and to empower women to participate in decision making process. The education scores of the rural women ranged from 0 to 17 with an average of 6.15 and standard deviation of 4.37. On the basis of the education scores the respondents were categorized into 4 groups as presented in Table 4.2.

Table 4.2. Distribution of the respondents according to their level of education

Categories	Respondents		Mean	Sd
	Number	Percent		
Illiterate (0-0.5)	31	28.18	6.15	4.37
Primary education (1-5)	17	15.45		
Secondary education (6-10)	49	44.55		
Above secondary (Above 11)	13	11.82		
Total	110	100.00		

It is evinced from the Table that about 71.82 percent of the respondents had literacy. About 15.45 percent of the respondents were belonged to the group primary education, 44.55 percent were secondary education while 11.82 percent were belonging to the group of above secondary level of education. Only 28.18 percent of the respondents were illiterate. Paul *et al.* (2001) and Efroymsen *et al.* (2007) found similar types of result.

4.1.3 Family size

The number of family members of the respondents ranged from 01-12 with an average of 4.73 and standard deviation of 1.57. The respondents were classified into the following three categories (Table 4.3) followed by Haider (2010) and Ali *et al.* (2008)

Table 4.3. Distribution of the respondents according to their family size

Categories	Respondents		Mean	Sd
	Number	Percent		
Small (up to 4 members)	50	45.45	4.73	1.57
Medium (5-7 members)	55	50		
Large (above 7 members)	5	04.55		
Total	110	100.00		

Data presented in the Table 4.3 shows that the highest proportion (50%) of the respondents had medium family. Almost equal proportion (45.45%) of the respondents had small family. Only a small portion of the respondents (4.55%) had large family. The average family size (4.73) of the respondents was a little lower than national average of 4.9 (BBS, 2013).

4.1.4. Annual income

The annual income scores of the respondent ranged from 25 to 673 thousand taka with an average of 164.22 and standard deviation of 132.31. On the basis of the annual income scores, the respondents were classified into 3 categories as shown in Table 4.4.

Table 4.4. Distribution of the respondents according to their annual family income

Categories	Respondents		Mean	Sd
	Number	Percent		
Low income (<120)	52	47.27	164.22	132.31
Medium income (120-200)	28	25.46		
High income (>200)	30	27.27		
Total	110	100.00		

Data from the above table reveals that the highest proportion (47.27%) of the respondents had low income, while 25.46 percent had medium income and 27.27 percent had high income. Income of a respondent could be increased if s/he cultivate commercially, if s/he produces consumer demand crops and if s/he gets reasonable market price. Income of a farmer is associated with many economic activities, such as agriculture, business, job etc.

4.1.5 Exposure to communication media

Exposure to communication media scores of the respondents could range from 0 to 32, while the observed scores ranged from 10 to 21. The average was 14.94 with a standard deviation of 2.30. On the basis of communication media exposure scores, the respondents were categorized into three groups as shown in Table 4.5. The Table

4.5 shows that the highest proportion (67.27%) of the respondents had medium exposure to communication media while 25.45 percent had low exposure to communication media.

Table 4.5 Distribution of rural women according to exposure to communication media

Categories	Respondents		Mean	Sd
	Number	Percent		
Low (score <14)	28	25.45	14.94	2.30
Medium (score 14-18)	74	67.27		
High (score >18)	8	7.28		
Total	110	100.00		

Only 7.28% of the respondents had high exposure to communication media. Therefore, a very big mass (92.72%) of the respondents demonstrated low to medium exposure to information media.

4.1.6 Coping capacity to household shocks

Capacity to cope with household shocks by the respondent varied from 8 to 29, with a mean and standard deviation of 16.72 and 3.86 respectively. Considering the coping capacity, the respondents were classified into three categories as shown in Table 4.6.

Table 4.6. Distribution of respondents according to their capacity to cope with household shocks

Categories	Respondents		Mean	Sd
	Number	Percent		
Low (<12)	10	9.09	16.72	3.86
Medium (12-20)	86	78.18		
High (>20)	14	12.73		
Total	110	100.00		

Women under the study were requested to indicate how much they cope with some unexpected household shocks that disrupted their everyday lives. Results shown in Table 4.6 indicate that most (78.18%) of the respondents had medium shock reduction ability, about 12.73% of them had high ability and 9.09% had low shock reduction ability to cope with household shock.

4.1.7 Husband-wife relation

Husband-wife relation scores of the respondents varied from 15 to 30 with a mean of 25.49 and standard deviation of 3.93. Considering the husband-wife relation, the respondents were classified into three categories as shown in Table 4.7

Table 4.7. Distribution of rural women based on husband-wife relationship

Categories	Respondents		Mean	Sd
	Number	Percent		
Not good (18)	9	08.18	25.49	3.93
Respectable (19-22)	13	11.82		
Cooperative (23-26)	34	30.91		
Amiable (>27)	54	49.09		
Total	110	100.00		

It is evident from Table 4.7 that near about half (49.09%) of the respondents had amiable relationship with their husbands, 30.91 percent of the respondents mentioned cooperative relationship with their husbands, 11.82 percent pointed out that, they had respectable relationship with their husbands whereas only 8.18 percent of them indicated that they had not good relationship with their husbands. The respondents felt somewhat hesitated and shy to express this issue. Thus, a large portion of the respondents (80%) indicated amiable to cooperative relationships with their husbands. This result was different from Efroymsen *et al.* (2006).

4.1.8 Financial contribution to the family purchase

Scores of financial contribution to the family purchase of the respondents ranged from 0 to 34 with a mean and standard deviation of 7.68 and 6.51 respectively. On the basis of financial contribution to the family purchase, the respondents were classified into three categories as presented in Table 4.8.

Table 4.8. Distribution of rural women according to their financial contribution to the family purchase

Categories	Respondents		Mean	Sd
	Number	Percent		
Low (11)	87	79.09	7.68	6.51
Medium (12-23)	18	16.36		
High (>23)	5	04.55		
Total	110	100.00		

Findings displayed in Table 4.8 illustrates that more than three fourth (79.09%) of the respondents had low financial contribution followed by 16.36 percent medium contribution and 4.55 percent high contribution in maintaining family cost. Low capital, education, training, technology and inputs; more children, domestic workload and social and household restrictions might hamper in their economic contribution to their families.

4.1.9 Participation in social activities

The participation in social activities scores of the respondents ranged from 0 to 24 with an average of 6.20 and the standard deviation of 4.72. The women of the study area were classified into three categories on the basis of their participation in social activities as shown in the Table 4.9.

Table 4.9. Distribution of the respondents according to their participation in social activities

Categories	Respondents		Mean	Sd
	Number	Percent		
Low (8)	84	76.36	6.20	4.72
Medium (9-16)	20	18.18		
High (>16)	6	5.46		
Total	110	100.00		

Data presented in Table 4.9. indicates that the highest proportion (76.36%) had low participation compared to 18.18 percent medium and 5.46 percent high participation in social activities.

4.1.10 Problem faced in household activities

Scores of problem faced in household activities of the respondents ranged from 9 to 25 with a mean and standard deviation of 13.84 and 2.55 respectively. On the basis of problem faced in household activities, the respondents were classified into three categories, as presented in Table 4.10.

Table 4.10. Distribution of the respondents according to their problem faced in household activities

Categories	Respondents		Mean	Sd
	Number	Percent		
Low problem (14)	63	57.27	13.84	2.55
Medium problem (15-19)	44	40		
High problem (>19)	3	2.73		
Total	110	100.00		

Findings displayed in Table 4.10 illustrates that more than half (57.27%) of the respondents had low problem followed by 40 percent medium problem and 2.73 percent high problem faced in household activities.

4.1.11 Problem faced in agricultural activities

Scores of problem faced in agricultural activities of the respondents ranged from 24 to 34 with a mean and standard deviation of 26.64 and 1.91 respectively. On the basis of problem faced in agricultural activities, the respondents were classified into three categories, as presented in Table 4.11.

Table 4.11. Distribution of the respondents according to their problem faced in agricultural activities

Categories	Respondents		Mean	Sd
	Number	Percent		
Low problem (< 26)	54	49.09	26.64	1.91
Medium problem (27-30)	53	48.18		
High problem (>30)	3	2.73		
Total	110	100.00		

Findings displayed in Table 4.11 illustrates that 49.09 percent of the respondents had low problem followed by 48.18 percent medium problem and 2.73 percent high problem faced in agricultural activities.

4.2 Participation of Rural Women in Household and Agricultural Activities

Participation of rural women in household and agricultural activities was the main focus of this study. It was measured by adding two dimensions viz. participation in household activities and participation in agricultural activities on the basis of daily time spent on those activities. Participation of rural women is presented in subsequent three segments:

4.2.1 Participation in household activities

In Bangladesh, especially in rural society, all women, educated and uneducated alike generally remain involved in their domestic duties. It is a fact that a family without women is not sustainable. Women are responsible for some activities: washing utensils and cleaning house compound, cooking and fuel collection etc. In the case of homestead work, the daughter assisted more than the son. Others like mother in law, grandmother, parents, and sister in law and servants could help in the work. The husband was always busy with outside work. They spent less time on homestead activities.

The participation in household activities of the rural women ranged from 4 to 12.50 with an average of 8.19 and the standard deviation of 1.63. The women of the study area were classified into three categories on the basis of their participation in household activities. Distribution of the rural women according to their daily time spent in household activities has been shown in the Table 4.12.

Table 4.12. Distribution of the respondents according to their participation in household activities

Categories	Respondents		Mean	Sd
	Number	Percent		
Medium participation (6 hours)	11	10.00	8.19	1.63
High participation (>6-9 hours)	72	65.45		
Very high participation (>9 hours)	27	24.55		
Total	110	100.00		

Data presented in table 4.12. indicates that the highest proportion (65.45%) of the respondents had high participation, 24.55 percent had very high and 10 percent had medium participation in household activities.

4.2.2 Participation in agricultural activities

FAO (1999) revealed that women contribution in agricultural labor force in developed countries is 31%, on the other hand in developing countries is 44%. Women agricultural workers are responsible for half of the world production. They are the main producer of staple crops such as rice, maize, and wheat, which account for 60% to 80% of the food intake in most of the developing countries. They are the key players in day to day agricultural tasks, the instigators of activities that generate agricultural and non-agricultural income and the custodians of natural and productive resources. Women workers, who represent more than one-third of the agricultural labor force, are not even mentioned separately in the National Agricultural Policy. They spent much time in post-harvest activities. With some exceptions, women participated very little in land preparation; transportation and marketing of agricultural produce. Despite their routine domestic work, women are very actively involved in agricultural production in Bangladesh. Women in rural Bangladesh are in general responsible for most of the agricultural work in the homestead. They traditionally undertake home gardening. Farm activities in the homesteads, ranging from selection of seed to harvesting and storing of crops, are predominantly managed by women. Despite women's important role in

agriculture, the traditional social norms and customary laws deprive Bangladeshi women of equitable economic opportunities and access to resources.

The participation in agricultural activities of the rural women ranged from 2 to 9 hours with an average of 5.03 hours and the standard deviation of 1.51. The women of the study area were classified into three categories on the basis of their participation in agricultural activities as shown in the table 4.13.

Table 4.13. Distribution of the respondents according to their participation in agricultural activities

Categories	Respondents		Mean	Sd
	Number	Percent		
Low participation (< 4 hours)	28	25.45	5.03	1.51
Medium participation (4-6 hours)	56	50.91		
High participation (>6hours)	26	23.64		
Total	110	100.00		

Data presented in Table 4.13. indicates that the highest proportion (50.91%) of rural women had medium participation in agricultural activities, 25.45 percent had low participation and 23.64 percent had high participation in agricultural activities.

4.2.3. Participation in household and agricultural activities

The participation in household and agricultural activities of the rural women ranged from 8 to 17 hours with an average of 13.19 and the standard deviation of 2.11. The women of the study area were classified into two categories on the basis of their daily time spent in household and agricultural activities as shown in Table 4.14.

Table 4.14. Distribution of the respondents according to their participation in household and agricultural activities

Categories	Respondent		Mean	Sd
	Number	Percent		
High participation (>6-9)	4	3.64	13.19	2.11
Very high participation (>9)	106	96.36		
Total	110	100.00		

Data presented in table 4.14. indicates that the highest proportion (96.36%) of women had high and 3.64 percent had very high daily time spent in household and agricultural activities.

4.2.3.1 Comparison of Participation of Rural Women in Different Household and Agricultural Activities

To compare the participation of rural women in different household and agricultural activities by the rural women, a rank order was prepared on the basis of their average daily time spent in each of the activities which is shown in table 4.15.

Table 4.15. Rank order of participation in different household and agricultural activities by the rural women

Major household and agricultural activities	Average time spent (hours)	Rank
Fooding	3.4	1
Crop production activities	2.62	2
Other household activities	1.63	3
Livestock	1.29	4
Children's education	1.23	5
Poultry	1.05	6
Housing	0.99	7
Clothing	0.94	8
Fisheries	0.09	9

Rank order of average participation in household and agricultural activities in Table 4.3.1 reveals that the respondents spent much time in fooding, which was followed by, crop production activities, other household activities, livestock, children's education, poultry, housing, clothing and fisheries respectively.

4.3 Relationship between the Selected Characteristics of the Rural Women and their Participation in Household and Agricultural Activities

Coefficient of correlation was computed in order to explore the relationship between the selected characteristics of the rural women and their participation in household and agricultural activities. The selected characteristics of the rural women constituted causal variables and participation of the rural women in household and agricultural activities constituted the predicted variable of the study.

Person's Product Moment Co-efficient of Correlation (r) has been used to test the hypothesis concerning the relationship between two variables. Five percent and one

percent level of probability were used as the basis for rejection of a hypothesis. The Table value of 'r' was calculated at $(110-2) = 108$ degrees of freedom. The summary of the results of the co-efficient of correlation indicating the relationships between each of the selected characteristics of the respondents and their participation in household and agricultural activities is shown in Table 4.16.

Table 4.16 Correlation coefficient between each of the selected characteristics of the rural women with their participation in household and agricultural activities

Predicted variable	Selected characteristics of the rural women	Computed value of "r"	Table value of "r" at 108 degrees of freedom	
			At 5% level	At 1% level
Participation of rural women in household and agricultural activities	Age	-0.334**	0.187	0.245
	Education	0.237*		
	Family size	0.209*		
	Annual family income	0.104 ^{NS}		
	Exposure to communication media	0.054 ^{NS}		
	Coping capacity to household shock	0.249**		
	Husband-wife relation	0.015 ^{NS}		
	Financial contribution to the family purchase	0.125 ^{NS}		
	Participation in social activities	0.169 ^{NS}		
	Problem faced in household activities	0.062 ^{NS}		
	Problem faced in agricultural activities	0.073 ^{NS}		

^{NS} = Not significant

* = Significant at 0.05 level of probability

**= Significant at 0.01 level of probability

4.3.1 Age of the rural women and their participation in household and agricultural activities

The relationship between age of the rural women and their participation in household and agricultural activities was examined by testing the following null hypothesis:

“There is no relationship between age of the rural women and their participation in household and agricultural activities”

Computed value of the co-efficient of correlation between age of the rural women and their participation in household and agricultural activities was found to be -0.334 as shown in Table 4.16. The following observations were recorded regarding the relationship between the two variables on the basis of the co-efficient of correlation:

- The relationship showed a negative trend.
- The computed value of 'r' (-0.334) was greater than the table value (0.245) with 108 degrees of freedom at 0.01 level of probability.
- The concerned null hypothesis was rejected.
- The co-efficient of correlation between the concerned variables was negatively significant at 0.01 level of probability.

The findings demonstrate that age of the rural women had significant negative relationship with their participation in household and agricultural activities. It was observed in the study area that the younger rural women had higher participation in household and agricultural activities, than the older. This represent that age of the rural women was a very important factor for their participation in household and agricultural activities.

4.3.2 Level of education of the rural women and their participation in household and agricultural activities

The coefficient of correlation between level of education of rural women and their participation in household and agricultural activities was found to be 0.237 as shown in Table 4.16. The following observations were made on the basis of the value of correlation coefficient between the two variables of the study.

- The relationship showed a positive trend.
- The computed value of 'r' (0.237) was greater than the table value (0.187) with 108 degrees of freedom at 0.05 level of probability.
- The concerned null hypothesis was rejected.
- The co-efficient of correlation between the concerned variables was positively significant at 0.05 level of probability

Based on the above findings, it can be concluded that level of education had positive relationships with their participation in household and agricultural activities. This indicates that level of education of the rural women was an important factor for rural women's participation in household and agricultural activities.

4.3.3 Family size of the rural women and their participation in household and agricultural activities

The coefficient of correlation between family size of rural women and their participation in household and agricultural activities was found to be 0.209 as shown in Table 4.16. The following observations were made on the basis of the value of correlation coefficient between the two variables of the study.

- The relationship showed a positive trend.
- The computed value of 'r' (0.209) was greater than the table value (0.187) with 108 degrees of freedom at 0.05 level of probability.
- The concerned null hypothesis was rejected.
- The co-efficient of correlation between the concerned variables was positively significant at 0.05 level of probability

Based on the above findings, it can be concluded that family size had significant positive relationships with the participation of rural women in household and agricultural activities. This indicates that family size of the rural women was an important factor for their participation in household and agricultural activities and those who had large family, participate more than the small one.

4.3.4 Annual family income of the rural women and their participation in household and agricultural activities

The coefficient of correlation between annual family income of rural women and their participation in household and agricultural activities is presented in Table 4.12. The coefficient of correlation between the concerned variables was found to be 0.104. The following observations were made on the basis of the value of correlation coefficient between the two variables of the study.

- The relationship showed a positive trend.
- The computed value of 'r' (0.104) was smaller than the table value (± 0.187) with 108 degrees of freedom at 0.05 level of probability.
- The concerned null hypothesis could not be rejected.
- The co-efficient of correlation between the concerned variables was non-significant at 0.05 level of probability

Based on the above findings, it can be concluded that annual family income of rural women had non-significant positive relationships with the rural women's participation in

household and agricultural activities. This indicates that annual family income of the rural women was not an important factor for rural women's participation in household and agricultural activities.

4.3.5 Exposure to communication media of the rural women and their participation in household and agricultural activities

The coefficient of correlation between the exposure to communication media of rural women and their participation in household and agricultural activities was found to be 0.054 as shown in Table 4.16. The following observations were made on the basis of the value of correlation coefficient between the two variables of the study.

- The relationship showed a positive trend.
- The computed value of 'r' (0.054) was smaller than the table value (0.187) with 108 degrees of freedom at 0.05 level of probability.
- The concerned null hypothesis could not be rejected.
- The co-efficient of correlation between the concerned variables was non-significant at 0.05 level of probability

Based on the above findings, it can be mentioned that the exposure to communication media had non-significant positive relationships with the participation of rural women in household and agricultural activities. This indicates that the exposure to communication media was not an important factor for rural women's participation in household and agricultural activities.

4.3.6 Coping capacity to the household shock of the rural women and their participation in household and agricultural activities

The coefficient of correlation between the coping capacity to household shock of rural women and their participation in household and agricultural activities was found to be 0.249 as shown in Table 4.16. The following observations were made on the basis of the value of correlation coefficient between the two variables of the study.

- The relationship showed a positive trend.
- The computed value of 'r' (0.249) was greater than the table value (0.245) with

108 degrees of freedom at 0.01 level of probability.

- The concerned null hypothesis could be rejected.
- The co-efficient of correlation between the concerned variables was significant at 0.01 level of probability

Based on the above findings, it can be stated that the coping capacity to household shock had significant positive relationships with the participation of rural women in household and agricultural activities. This indicates that the coping capacity to household shock of the rural women was an important factor for rural women's participation in household and agricultural activities and if women can cope with shock more then they participate more.

4.3.7 Husband-wife relation of the rural women and their participation in household and agricultural activities

The coefficient of correlation between husband wife relation of rural women and their participation in household and agricultural activities was found to be 0.015 as shown in Table 4.16. The following observations were made on the basis of the value of correlation coefficient between the two variables of the study.

- The relationship showed a positive trend.
- The computed value of 'r' (0.015) was smaller than the table value (0.187) with 108 degrees of freedom at 0.05 level of probability.
- The concerned null hypothesis could not be rejected.
- The co-efficient of correlation between the concerned variables was non-significant at 0.05 level of probability

Based on the above findings, it can be concluded that husband wife relation of rural women had non-significant positive relationships with the participation of rural women in household and agricultural activities. This indicates that husband wife relation of the rural women was not an important factor for their participation in household and agricultural activities.

4.3.8 Financial contribution to the family purchase of rural women and their participation in household and agricultural activities

The coefficient of correlation between financial contribution to the family purchase of rural women and their participation in household and agricultural activities was found to

be 0.125 as shown in Table 4.16. The following observations were made on the basis of the value of correlation coefficient between the two concerned variables of the study.

- The relationship showed a positive trend.
- The computed value of 'r' (0.125) was smaller than the table value (0.187) with 108 degrees of freedom at 0.05 level of probability.
- The concerned null hypothesis could not be rejected.
- The co-efficient of correlation between the concerned variables was non-significant at 0.05 level of probability

Based on the above findings, it can be concluded that financial contribution to the family purchase of rural women had no significant relationships with the rural women's participation in household and agricultural activities. This indicates that financial contribution to the family purchase of the rural women was not an important factor for their participation in household and agricultural activities.

4.3.9 Participation in social activities of the rural women and their participation in household and agricultural activities

The coefficient of correlation between participation in social activities of rural women and their participation in household and agricultural activities is presented in Table 4.16. The coefficient of correlation between the concerned variables was found to be 0.169. The following observations were made on the basis of the value of correlation coefficient between the two concerned variables of the study.

- The relationship showed a positive trend.
- The computed value of 'r' (0.169) was smaller than the table value (0.187) with 108 degrees of freedom at 0.05 level of probability.
- The concerned null hypothesis could not be rejected.
- The co-efficient of correlation between the concerned variables was non-significant at 0.05 level of probability.

Based on the above findings, it can be concluded that participation in social activities of rural women had no significant relationships with the participation of rural women in household and agricultural activities. This indicates that participation in social activities

agricultural activities.

4.3.10 Problems faced in household activities by the rural women and their participation in household and agricultural activities

The coefficient of correlation between problem faced in household activities by rural women and their participation in household and agricultural activities is presented in Table 4.16. The coefficient of correlation between the concerned variables was found to be 0.062. The following observations were made on the basis of the value of correlation coefficient between the two concerned variables of the study.

- The relationship showed a positive trend.
- The computed value of 'r' (0.062) was smaller than the table value (0.187) with 108 degrees of freedom at 0.05 level of probability.
- The concerned null hypothesis could not be rejected.
- The co-efficient of correlation between the concerned variables was non-significant at 0.05 level of probability

Based on the above findings it can be concluded that problem faced in household activities by rural women had no significant relationships with the participation of rural women in household and agricultural activities. This indicates that problem faced in household activities by the rural women was not an important factor for their participation in household and agricultural activities.

4.3.11 Problems faced in agricultural activities by the rural women and their participation in household and agricultural activities

The coefficient of correlation between problem faced in agricultural activities by the rural women and their participation in household and agricultural activities is presented in Table 4.16. The coefficient of correlation between the concerned variables was found to be 0.073. The following observations were made on the basis of the value of correlation coefficient between the two concerned variables of the study.

- The relationship showed a positive trend.
- The computed value of 'r' (0.073) was smaller than the table value (0.187) with

108 degrees of freedom at 0.05 level of probability.

- The concerned null hypothesis could not be rejected.
- The co-efficient of correlation between the concerned variables was non-significant at 0.05 level of probability

Based on the above findings it can be concluded that problem faced in agricultural activities by rural women had no significant relationships with the participation of rural women in household and agricultural activities. This indicates that problem faced in agricultural activities by the rural women was not an important factor for their participation in household and agricultural activities.

Thus, Pearson's Product-moment Correlation Co-efficient between dependent and independent variable revealed that level of education, family size and coping capacity to household shock had significant positive relationships with participation of rural women in household and agricultural activities, while age showed significant negative correlation. Annual family income, exposure to communication media, husband wife relation, financial contribution to family purchase, participation in social activities, problem faced in household activities and problem faced in agricultural activities had no significant relationships with participation of rural women in household and agricultural activities under the present study.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The study was conducted in Husaindi union of Pakundia upazila under Kishoregonj district and constituted the population of the study. An update list of 1522 respondent women who participated in household and agricultural activities of these localities were population of the study. The populations were randomly selected from five villages as the sample of the study by using a recommended formula using proportionate random sampling method. Thus, 110 respondent women constituted the sample of the study. A well-structured interview schedule was developed based on objectives of the study for collecting information. The researcher herself collected data through personal contact. The causal variables were: age, education, family size, annual family income, exposure to information media, coping capacity to household shock, husband-wife relation, financial contribution to family purchase, participation in social activities, problem faced in household activities and problem faced in household activities.

The predicted variable of this study was the 'Participation of rural women in household and agricultural activities'. Data collection was started in 10 January, 2016 and completed in 22 January, 2016. Various statistical measures such as frequency counts, percentage distribution, average, and standard deviation were used in describing data. Co-efficient of correlation test was used to explore relationship between the concerned variables. The major findings of the study are summarized below:

5.1 Summary of Findings

5.1.1 Selected characteristics of the respondent women

Age:

The age of the respondent women ranged from 19 to 66 years with an average of 40.22 and standard deviation of 12.18. Among 110 respondents 50.91 percent were middle aged, 40.91 percent were young aged and 8.18 percent were old aged. It appears that an overwhelming majority (91.81%) of the respondents in the study area ranged from young to middle aged.

Education:

The education scores of the respondents ranged from 0 to 17 with an average of 6.15 and standard deviation of 4.37. Among the respondents 44.55 percent had secondary education, 28.18 percent had no education, 15.45 percent had primary education and 11.82 percent had above secondary education.

Family size:

Family size of the respondents ranged from 01 to 12 with an average of 4.73 and standard deviation 1.57. The highest proportion (50 percent) of the respondents had medium family compared to 45.45 percent had small family and 4.55 percent had large family.

Annual income

The annual income scores of the respondents ranged from 25 to 673 thousand taka with an average of 164.22 and the standard deviation 132.31. The highest proportion of the respondents (47.27%) had low income, while 27.27 percent had high income and 25.46 percent had medium income.

Exposure to communication media

Exposure to communication media scores of the respondents could range from 0 to 32, while the observed scores ranged from 10 to 21. The average was 14.94 with a standard deviation of 2.31. A very big mass (92.72%) of the respondents demonstrated low to medium exposure to communication media. Among them the highest proportion (67.27%) of the respondents had medium exposure to communication media while 25.45 percent had low exposure to communication media and 7.27% of the respondents had high exposure to communication media.

Coping capacity to household shocks

Capacity to cope with household shocks scores of the respondent women has been varied from 8 to 29 with a mean and standard deviation of 16.72 and 3.86 respectively. Most of the respondents (78.18%) had medium shock reduction ability, about 9.09% had low shock reduction ability and 12.73% of them had high ability to cope with household shock.

Husband-wife relation

Husband-wife relation scores of the respondents varied from 15 to 30 with a mean of 25.49 and standard deviation of 3.93. About half (49.09%) of the respondents had amiable relationship with their husbands, 30.91 percent of the respondents had co-operative relationship with their husbands, 11.82 percent pointed out that, they had respectable relationship with their husband whereas only 8.18 percent of them indicated that, they had not good relationship with their husbands.

Financial contribution to the family purchase

Scores of financial contribution to the family purchase of the respondents ranged from 0 to 34 with a mean and standard deviation of 7.68 and 6.51 respectively. More than three fourth (79.09%) of the respondents had low financial contribution followed by 16.36 percent medium contribution and 4.55 percent high contribution in maintaining family cost.

Participation in social activities

The participation in social activities scores of the respondents ranged from 0 to 24 with an average of 6.20 and the standard deviation of 4.72. The highest proportion (76.36%) had low participation compared to 18.18 percent medium and 5.46 percent high participation in social activities.

Problem faced in household activities

Scores of problem faced in household activities of the respondents ranged from 9 to 25 with a mean and standard deviation of 13.84 and 2.55 respectively. More than half (57.27%) of the respondents had low problem followed by 40 percent medium problem and 2.73 percent high problem faced in household activities.

Problem faced in agricultural activities

Scores of problem faced in agricultural activities of the respondents ranged from 24 to 34 with a mean and standard deviation of 26.64 and 1.91 respectively. 49.09 percent of the respondents had low problem followed by 48.18 percent medium problem and 2.73 percent had high problem faced in agricultural activities.

5.1.2.1 Participation in household activities

The participation in household activities of the rural women ranged from 4 to 12.50 with an average of 8.19 and the standard deviation of 1.63. Among the respondents the highest proportion of the respondents (65.45%) had high participation, 24.55 percent had very high and 10 percent had medium participation in household activities.

5.1.2.2 Participation in agricultural activities

Scores of problem faced in agricultural activities of the respondents ranged from 24 to 34 with a mean and standard deviation of 26.64 and 1.91 respectively. Among the respondents the highest proportion of rural women (50.91%) had medium participation in agricultural activities, 25.45 percent had low participation and 23.64 percent had high participation in agricultural activities.

5.1.2.3 Participation in household and agricultural activities

The participation in household and agricultural activities of the rural women ranged from 8 to 17 hours with an average of 13.19 and the standard deviation of 2.11. Among the respondents the highest proportion of women (96.36%) had high and 3.64 percent had very high daily time spent in household and agricultural activities.

5.1.3 Relationship between each of the selected characteristics of the Rural Women and their Participation in Household and Agricultural Activities

Pearson's Product-moment Correlation Co-efficient revealed that level of education, family size and coping capacity to household shock had significant positive relationships with participation of rural women in household and agricultural activities, while age showed significant negative correlation. Annual family income, exposure to communication media, husband wife relation, financial contribution to family purchase, participation in social activities, problem faced in household activities and problem faced in agricultural activities had no significant relationships with participation of rural women in household and agricultural activities under the present study.

5.2 Conclusions

It is very important to make logical interpretation of the findings of the study and to draw a meaningful conclusion. The researcher, in her research, studied the women participation in household and agricultural activities attentively and put forward the following conclusions on the basis of following major findings:

1. Overwhelming majority (96.36%) of rural women had high participation in household and agricultural activities and among household and agricultural activities women give more time in fooding and crop production activities. So, it may be concluded that there are opportunities to improve their economic condition by increasing their participation in agricultural activities more through providing proper training.
2. Age of the rural women showed significant negative relationship with their participation in household and agricultural activities. More than four fifths (91.81%) of the respondents in the study area ranged from young to middle aged. Therefore, it may be concluded that there is a prospect to increase young and middle aged rural women's participation in household income generating activities and agricultural activities by providing extension education.
3. Level of education had significant positive relationship with the participation of rural women in household and agricultural activities. 44.55 percent were belonging to the group of secondary level of education and in the study area. Education encourages rural women to participate more in household and agricultural activities. So it is a crying need to increase their education level.
4. Family size had significant positive relationship with the participation of rural women in household and agricultural activities. Therefore, it may be concluded that women having large family participated more than the smaller one.
5. Women under the study were requested to indicate how much they cope with some unexpected household shocks that disrupted their everyday lives and results shown that most (90.91%) of the respondents had medium to high shock reduction ability to cope with household shock and those respondent participate more in household and agricultural activities. So, it may be concluded that, coping capacity to household shock encourages them to participate more and makes them vulnerable to shock.

5.5 Recommendations

Based on the conclusions drawn from the findings, the following recommendations have been put forwarded.

5.5.1 Recommendations for policy formulation

- DAE, local NGOs and other rural advisory service providers can give advisory services to the rural women emphasis on spending more time in crop production activities, modern vegetables and fruit cultivation, poultry and livestock rearing, tailoring etc. activities.
- Arrangement of proper training to the young to middle aged women on income generating activities especially on tailoring, preparation of handicrafts, modern poultry raising and modern vegetable production in the homestead area by GO and NGOs.
- Programs should be taken for increasing women's knowledge on pre harvest and post-harvest activities especially on winnowing, drying, sorting and storing of grains.
- If all the female family members get proper guideline they will participate more in productive works.
- Increasing shock reduction ability among the women encourage them participate more in household and agricultural activities. So, GO, NGOs and other rural development organization can give loan to shocked women for improving their socio-economic condition.

5.5.1 Recommendations for further study

1. The present study was conducted in Pakundia upazila under Kishoregonj district. Similar study may be conducted in other areas of Bangladesh where similar environmental, socio-economic and physical conditions exist to compare and verify the findings.
2. Only eleven independent variables were considered in the present study. Other variables like agricultural knowledge, training experience, cosmopolitaness etc may be considered in further research for measuring women's participation in household and agricultural activities.
3. Findings indicate that annual family income, exposure to communication media, husband wife relation, financial contribution to family purchase, participation in social activities, problem faced in household activities and problem faced in agricultural activities had non-significant positive relationships with participation of rural women in household and agricultural activities under the present study. Further research is necessary to verify such relationships

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APPENDIX I

English version of the interview schedule 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 Household and Agricultural Activities in Selected Area of Kishoregonj District

Date:..... **Respondents No:.....**
 Name of the respondent :
 Village: Union:
 Upazila: District:

Please answer the following questions:

1. Age :

How old are you ?years.

2. Level of Education :

Please mention your level of education :

- a) I do not know how to read and write (.....)
- b) I can sign only (.....)
- c) I studied up to class (.....)

3. Family Size:

Your family have.....members (With self)

- a) Dependent member
- b) Earning member

4. Annual Family Income:

Please mention your last year family income

Sl. No.	Source of income	Total Tk
01	Agricultural crop	
02	Domestic animals and fish resources	
03	Business	
04	Day labour	
05	Services	
	Total	

5. Exposure to Communication Media

Please indicate the extent of your contact with the following information media

Source of information	Extent of contact				
	Not at all	Rarely	Occasional ly	Freque ntly	Regularly
1. Health worker	0	1times/ month	2 times/ month	3 times/ month	>4 times/ month
2. NGO worker	0	1times/ month	2 times/ month	3 times/ month	>4times/ month
3. SAAO	0	1-3 times/ year	4-8 times/ year	9-11 times/ year	>12times/ year
4. Neighbors	0	1times/ week	2 times/ week	3 times/ week	>4 times/ week
5. Friends	0	1times/ week	2 times/ week	3 times/ week	>4 times/ week
6. Relatives	0	1times/ month	2times/mo nth	3 times/ month	>4 times/ month
7. Listening radio	0	1-2 times/ month	3-5 times/ month	6-9 times/ month	>10 times/ month
8. Watching television	0	1-2 times/ month	3-5 times/ month	6-9 times/ month	>10 times/ month

5. Coping Capacity to Household Shock

Do you cope with any household shock? Yes/No

If yes please mention the extent of your shock reduction ability in the following aspects.

Sl. No.	Name of activities	Not at all	Low	Medium	High	Very high
1	Failure of field crops due to natural disaster					

2	Accidental burning of house					
3	Physical disability of earning family members					
4	Immature death of children					
5	Breach of relationship with neighbors					
6	Termination of job					
7	Loss of running capital in business					
8	Withdrawal of NGO support					
9	Divorce case if happen					

7. Husband-Wife Relation

Please indicate the type of your relationship with husband:

Sl. No.	Statements	Extent of relationship				
		1	2	3	4	5
01	My husband treats me as his lifelong family partner					
02	My husband helps me in household activities during my illness					
03	My husband knows that I can take proper care of children and other family members					
04	My husband accept my decision on family issues					
05	My husband does not interferes me on selling pet animals, poultry, eggs etc.					
06	My husband does not influence over the use of my income					

8. Financial Contribution to the Family Purchase

Please indicate how much you contribute financially to your family:

Items of contribution	Not at all	Low	Equal	More	Full
1.Children's education					
2. Children's care					
3.Family healthcare					
4.Purchase of clothes					
5.Purchase of utensils					
6.Entertainment					
7.Purchase of food items					
8.Transportation					
9.Farm production					

9. Participation in Social Activities

Please mention to what extent you participate in the following social development activities:

Items of participation	Extent of participation				
	R	F	O	R	NAA
1.Vaccination campaign					
2.Sanitation campaign					
3.Plantation campaign					
4.Adult literacy program					
5.Mediation of social conflict					
6.Attending social cultural function					
7.Distribution of warm cloth to the destitute					
8.Arranging meals for the destitute					
9.Subscription to any orphanage/welfare organization					

R=Regularly, F=Frequently, O=Often, R=Rare, NAA=Not at all

10. Problem Faced in Household Activities

Please mention the problems that you usually face in various household activities

Sl. No.	Name of problems	Extent of problems faced				
		Not at all	Low	Medium	High	Very high
01	Economic limitation					
02	Gender discrimination					
03	Credit unavailability					
04	Family help					
05	Communication gap with development workers					

11. Problem Faced in Agricultural Activities

Please mention the extent of problem faced in agricultural activities.

Sl. No.	Problems	Extent of problems faced				
		Not at all	Low	Medium	High	Very high
01	Lack of good quality seeds					
02	Lack of knowledge about improved production technology of vegetable cultivation					
03	High price of agricultural inputs (fertilizer, pesticide etc)					
04	Marketing problems of vegetables					
05	Improper knowledge on post-harvest technology					
06	Diseases of cattle & goat					
07	Lack of necessary agricultural information					
08	Lack of training facilities					
09	Unavailability of sufficient credit/ lack of credit facilities					

12. Daily Time Spent in Major Household Activities:

Please mention the daily time use towards the following activities:

Types of activities	Time spent(hours)
a)Fooding	
i)Buying food items	
ii)Cooking food	
iii)Washing dish	
iv)Serving food	
Total	
b)Clothing	
i)Buying and washing cloths of family members	
c)Children's education	
i)Assisting in going school	
ii)Taking care at home	
iii)Others	
Total	
d)Housing	
i)Cleaning of house	
ii)Repairing household essentials	
Total	
e)Other household activities	
i)Collection of water	
ii)Collection of fuel wood	
iii)Selling household product	
iv)Bathing children	
v)Feeding children	
vi)Preparation of handicraft	
vii)Tailoring	
Total	
Grand total	

13. Daily Time Spent in Major Agricultural Activities:

Please mention the extent of time use towards the following activities:

Types of activities	Time spent (hours)
a) Crop production activities	
1)Pre-harvest	
i)Land preparation and cleaning	
ii)Sowing seeds /transplanting seedlings	
iii)Weeding	
iv)Irrigation	
v)Intercultural operation	
vi)Harvesting of crops	
Total	
2)Post harvest	
i)Sorting and grading of products	
ii)Processing of products	
iii)Carrying to market	
iv)Sale of product	
v)Storage of product	
Total	
Total	
b)Poultry	
i) Feeding poultry	
ii) Taking care of poultry	
iii) Sale of eggs	
iv) Sale of poultry	
Total	
c) Livestock	
i) Rearing of goat	
ii) Milking of goat	
iii) Rearing of cow	
iv)Milking of cow	
Total	
d)Fisheries	
i) Collection of fingerling	
ii) Catching fish	
iii)Selling fish	
Total	
Grand total	

Thank you for your painstaking and nice co-operation.

Signature of the Enumerator
Date:

Appendix II. Correlation matrix

**. Correlation is significant at the 0.05 level (2-tailed).

Characteristics	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	X ₁₀	X ₁₁
X ₁	1										
X ₂	-0.610**	1									
X ₃	0.037	-0.030	1								
X ₄	-0.278**	0.423**	0.030	1							
X ₅	-0.184	0.173	0.054	0.194*	1						
X ₆	0.050	0.168	0.013	0.065	0.100	1					
X ₇	0.089	0.024	0.043	-0.044	0.227*	0.135	1				
X ₈	0.202*	-0.008	-0.173	-0.051	-0.179	0.228*	0.044	1			
X ₉	-0.045	0.418**	0.184	0.315**	0.172	0.407**	0.094	0.319**	1		
X ₁₀	0.302**	-0.332**	0.104	-0.325**	-0.199*	0.125	-0.142	0.204*	-0.145	1	
X ₁₁	0.035	-0.100	0.058	-0.130	0.051	0.060	-0.098	0.173	-0.034	0.404**	1
Y	-0.334**	0.237*	0.209*	0.104	0.054	0.249**	0.015	0.125	0.169	0.062	0.073

*. Correlation is significant at the 0.01 level (2-tailed).

X₁=Age

X₂=Education

X₃=Family size

X₄=Annual family income

X₅=Exposure to communication media

X₆=Coping capacity to household shock

X₇=Husband wife relation

X₈=Financial contribution to family purchase

X₉=Participation in social activities

X₁₀=Problem faced in household activities

X₁₁=Problem faced in agricultural activities

Y= Participation of rural women in household and agricultural activities