

**COMMUNICATION EXPOSURE OF RURAL WOMEN
REGARDING HOMESTEAD VEGETABLE CULTIVATION**

By

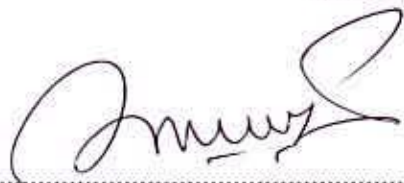
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A Thesis

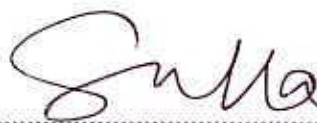
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Dedication
To
My Beloved Parents





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CERTIFICATE

This is to certify that the thesis entitled, "**COMMUNICATION EXPOSURE OF RURAL WOMEN REGARDING HOMESTEAD VEGETABLE CULTIVATION**" 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 **MD.QUAMRUZZAMAN**, Registration No. **04-01334** under my supervision and guidance. No part of this thesis has been submitted for any other degree or diploma.

I further certify that any help or sources of information, as has been availed of during the course of this investigation has been duly acknowledged.

Dated:
Place: Dhaka, Bangladesh


(Prof. Md. Shadat Ulla)
Supervisor

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ABSTRACT

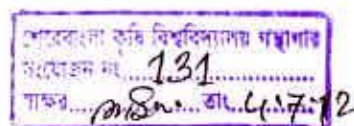
This study was intended to determine the communication exposure of rural women regarding homestead vegetable cultivation and to explore relationship between selected characteristics of the rural women with their communication exposure regarding homestead vegetable cultivation. The selected characteristics of the rural women were age, education, family size, land size, homestead vegetable cultivation area, vegetable cultivation experience, time spent in vegetable cultivation, knowledge on homestead vegetable cultivation and organizational participation. The study was conducted in two villages namely Hesakhal and Uroschol under Hesakhal union in Nanagalkot upazilla of Comilla district. Data were collected from 100 women by using a pre-tested interview schedule during the period from October 15 to November 15, 2009. Appropriate scales were developed to measure the variables of the study. Correlation(s) test was used to ascertain the relationship between the concerned independent and dependent variables of the study. Findings of the study revealed that more than half (63%) of the respondent had medium communication exposure regarding homestead gardening information while 6 percent of them had low exposure and only 31 percent high exposure . Correlation analysis indicates that family size, land size, homestead vegetable cultivation area and time spent in vegetable cultivation of the rural women had no significant relationship with their communication exposure on homestead vegetable cultivation while education, knowledge on homestead vegetable cultivation and organizational participation had significant positive relationship but in case of age and homestead vegetable cultivation experience had negative and highly significant relationship with their communication exposure in receiving information on homestead vegetable cultivation. The thirteen (13) communication media have been arranged in rank order on basis of their Media Use Index (MUI). Experienced Women was used as the communication media to the highest extent (250) and it was closely followed by neighbor (230), Radio (210), television (150), and so on.



CHAPTER 1

INTRODUCTION

1.1. General Background



Bangladesh is an agro-based over-populated country. She inhabits about 123.1 million people in its 147,570 sq.Km of area (BBS, 2007). Every year 1.68 million people have been adding with an annual growth rate of 1.47 percent (BBS, 2007). Development of socio-economic condition of Bangladesh fully depends upon the development of the village. Rural women in Bangladesh are major but largely unrecognized contributors to agricultural and economic productivity. Half of these human resources consist of women and the majority of them live in rural areas (Islam, 1977). Women in Bangladesh are responsible for grain processing and storage. They grown most of the family's fruits and vegetables and participate in post harvest activities. They care for poultry and livestock. 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).

Vegetables are rich source of minerals, vitamins and essential amino acids. Vegetables are considered as one of the most important groups of food crops due to their high nutritive value, labor-intensive production, relatively higher yield and higher return. These are considered as a cheaper source of natural supplementary food and can be grown within short duration. Being labor intensive, vegetable production creates opportunities for employment. In Bangladesh, half of the population are under the poverty line and suffer from various health problems. Severity of malnutrition and iron deficiency (anemia) is the highest among females of all age groups and children. Approximately

one million Bangladeshi children have clinical signs of vitamin A deficiency and more than 900,000 children under 6 years suffer some degree of Exophthalmia and over 30,000 children go blind each year due to severe vitamin A deficiency. Almost 80% of blind children come from landless households. Recent studies have shown that vitamin A is not only important to prevent blindness but also has effect on digestion of food, child morbidity and mortality. It is estimated that about 80% of the population suffers from vitamin C deficiency (HRDP, 2002). For overcome the deficit of vegetable we should give concentration cultivation of vegetable in our homestead area because limited area of land. By giving technical support of rural women we can cultivate vegetable in homestead area all the year round.

In Bangladesh about 50% of our population is women. We can't overlook their contribution in our nation economic development. Most of the women are housewife and the involved in agricultural activities in homestead area. They also contribute family income by vegetable and fruit cultivation in homestead area. Miah and Parveen (1993) found that women spent about one fifth (19.89) of their total time in gardening activities and earn an average amount Tk. 18160 annually from homestead gardening. Halim (1982) reported that women are potential producer of the homestead agricultural products. But due to lack of knowledge, utilization of proper technology and proper communication media the production remains below expected level. Involvement of women in agriculture since time immemorial .they gathered agricultural knowledge involved in different organization like NGOs, GOs and training organizations. They also gather information from different communication media like TV, Radio, and newspaper etc .The Department of Agricultural Extension arranged training programs related to cultivate vegetable in homestead area by rural women. But there is no systematic investigation how the information are obtained and utilized by the rural women regarding the homestead vegetables cultivation. So the researcher becomes interested to conduct a systematic

investigation on communication exposure of rural women regarding homestead vegetable cultivation.

1.2 Statement of the Problem

Agricultural information has been considered as an important input for increased farm productivity. Women usually use various media for obtaining information about vegetables cultivation in homestead area. Various research studies reported that the use of communication media is varied on the basis of social, economic and psychological setting of the women. For identifying the communication exposure of rural Women in receiving information about vegetables cultivation in homestead area, it is necessary to know the answers of the following questions. Moreover, the questions also guide the study towards an appropriate direction.

1. What were the communication media being used by the women regarding homestead vegetables cultivation?
2. What was the extent of communication exposure of rural women?
3. Which of the characteristics of rural women were related with their communication exposure regarding homestead vegetables cultivation?
4. What was the rank order of different communication media according use of rural women?

The various characteristics and situational factors of the rural women might have some kind of relationships with the use of communication media in case of homestead vegetables cultivation which were also taken into consideration during the study. On the basis of the above discussion, the researcher undertook a piece of study, entitled “Communication Exposure of Rural Women Regarding Homestead Vegetables Cultivation”.

1.3 Specific Objectives

The following specific objectives were formulated to give proper direction to the study.

1. To determine and describe some selected characteristics of the women. The selected characteristics are:
 - i) Age
 - ii) Education
 - iii) Family size
 - iv) Land size
 - v) Homestead vegetable cultivation area
 - vi) Vegetable cultivation experience
 - vii) Time spent in vegetable cultivation
 - viii) Knowledge on homestead vegetable cultivation
 - ix) Organizational participation
2. To determine and describe the extent of communication exposure of rural women regarding homestead vegetable cultivation.
3. To explore relationship between selected characteristics of the rural women with their communication exposure regarding homestead vegetable cultivation
4. To examine the rank order of different communication media according to use

1.4 Scope and Limitations of the Study

The findings of the study will be particularly applicable to the Nangalkot upazilla of Comilla district. However, 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 area. Thus, the findings of the study may be profitably utilized by the planners, policy makers,

extension personnel and field workers for successful planning and execution of programmes aimed at effective communication of agricultural information to the farmers in general and vegetable cultivator women in particular.

The purpose of the study was to have an understanding about the use of communication media by the rural women in case of homestead vegetables cultivation. However, in order to conduct the research in a meaningful and manageable way it became necessary to impose certain limitations in regard to certain aspects of the study. Considering the time, money and necessary resources available to the researcher the following limitations have been observed throughout the study.

1. The study was confined to 2 villages of Nangalkot upazilla of Comilla district.
2. Population for the present study was kept confined within the women of the rural families
3. The investigator depends on the data furnished by the selected rural women during their interview.
4. Communication media are used by the women for various purposes such as farming, business, politics, religion etc. This study investigated the use of communication media by the women in receiving information on homestead vegetables cultivation.

1.5 Assumptions

The following assumptions were made in connection with the study:

1. The respondents included in the sample were the actual representatives of the rural women in the study area in respect of the use of communication media.
2. The information provided by the respondents was reliable.

3. The views and opinion furnished by the rural women included in the sample were considered the views of people of the study area.
4. The communication media included in the study were known to the respondents.
5. The findings of the study will have general application to other parts of the country with similar physical, socio-economic and cultural conditions of the study area.
6. The communication media used by the rural women are linearly related with their selected characteristics.

1.6 Statement of Hypothesis

Goode and Hatt (1952) defined hypothesis as "a proposition which can be put to a test to determine its validity. It may seem contrary to or in accord with common sense". In broad sense, hypothesis may be divided into two categories: (a) Research hypothesis (H_i) and (b) null hypothesis (H_o). The following broad hypotheses are formulated to explore the relationship between the dependent and independent variables. The broad Research hypothesis for the study was:

There is a relationship of age, education, family size, land size homestead vegetable cultivation area, vegetable cultivation experience, time spent in vegetable cultivation, knowledge on homestead vegetable cultivation, organizational participation of rural women with their communication exposure regarding homestead vegetable cultivation

For testing the hypothesis statistically, they were transformed into null form as follows:

There is no relationship of age, education, family size, land size, homestead vegetable cultivation area, vegetable cultivation experience, time spent in vegetable cultivation, knowledge on homestead vegetable cultivation,

organizational participation of rural women with their communication exposure regarding homestead vegetable cultivation

1.7 Definition of Terms

For clarity of understanding, certain terms used throughout the study are defined as follows:

Age: Age of a respondent was defined as the period of time from his birth to the time of interview.

Communication: Van den Ban and Hawkins (1988) defined communication as the process of sending and receiving message through channels which establishes common meaning between a source and a receiver.

Education: Referred to the number of years of schooling completed by a respondent.

Garden

An area that raises vegetables or fruit plants or flowers with an intensive care under single ownership is known as garden.

Gardening

Gardening means anything carried out within the premises of a garden. Gardening aims at producing commodities to meet the necessities of daily life with the help of natural resources such as land, humidity, rainfall, temperature etc

Family size: Family size of a farmer was defined as the number of individuals in his family living together including himself, his wife children and other dependent member.

Land size: It referred to the farm area on which a farmer used to do his farming either possessed by him or taken up by borga and lease from others during the year under investigation.

Organizational participation: Organizational participation of a farmer referred to his taking part in different social organizations either as an ordinary member, executive committee member or an officer (President/secretary) along with duration

Rural women: It refers to the women living in villages and is engaged in gardening directly or indirectly.

Homestead area

It refers to the raised land where the household has its entire dwelling units including living house, animal and poultry shed, front yard, courtyard and the area under vegetable, fruit, trees, background bushes, bamboo bushes etc. Generally women are the main supervisor to this portion of the land

Household

It refers to a group of persons living together and eating in one mess with their dependents .it is popularly known as “khana” in Bengali .actually when a group of persons living together to maintain a family or family like relation take meals from the same kitchen is termed as household.

Homestead gardening Knowledge: It is the extent of basic understanding of a rural woman in different aspects of homestead gardening subject matters i.e. vegetable, fruit plants varieties, production, plant protection etc. It also includes the basic understanding of the use of different Homestead gardening inputs and practices

Group media: The extension agent communicates with the people in groups and not as individual persons. Example: group meeting.

Individual media: The extension agent communicates with the people individually, maintaining separate identity of each person. Example: farm and home visit.

Interpersonal channels: Interpersonal channels are those that include peer farmers/neighbors, extension agents, commercial agents, group meeting etc. through which messages are exchanged in a face-to-face situation between communicator and receiver.

Mass media: The extension agent communicates with a mass of people, without taking into consideration their individual or group identity. Example: mass meeting.

Mass media channels: Mass media channels are those that include printing and electronic media such as newspapers, farm magazines, radio, television etc. through which messages are transmitted to the audience.



CHAPTER 2

REVIEW OF LITERATURE

In this chapter the review of literatures related to this investigation is presented. The reviews are conveniently presented based on the major objectives of the study. The chapter is divided into three sections. First section deals with the findings on the communication exposure of the rural women in general and the second section is devoted to a discussion on the findings of studies exploring relationships between the selected characteristics of the respondents and their communication exposure. The third section deals with the conceptual model of the study.

2.1 General review on communication exposure:

Elahi (1977) recommended that personal Contact was an excellent medium for channeling information to rural communities where the mass media could not penetrate because of educational under development.

Allen (1985) found in a study that a greater proportion of rural wives used interpersonal information sources, such as family, friends and neighbors where as a greater proportion of rural husbands use interpersonal extension research based personal information sources.

Bhagat and Mathur (1985) found in a study that mass media like radio (86.60 percent), news paper (40.20 percent) and television (30.30 percent) was utilized by the rural women in Delhi territory.

Hooda (1987) observed that with regard to the utilization of source of communication radio was found to be the most impersonal source of information. In case of personal source, friends and relatives were the most utilized source of information followed by progressive farmers.

Kayemuddin (1988) in an experiment in Comilla found the demonstration method as the best method of communicating information on crops.

Parveen (1993) revealed that individual contact of women in modern village was positively significant with attitude towards homestead agricultural production and it was significant in case of traditional village.

Mallica (1991) emphasized the access of appropriate information for the farmwomen especially for poor, illiterate women. She argued that there should be opportunity for gender based communication system.

Kashem and Halim (1991) in study concluded that interpersonal communication media such as friends, neighbors, seed, fertilizer and pesticide dealers are the most reliable and trustworthy sources of agricultural information to the farmers.

Wahyuni (1990) found that women's communication network and perceptions of themselves as individuals significantly affected women's roles in small hold farming systems.

Miah and Rolls (1990) in their study have identified some of the reasons enhances the flow of agricultural information among the farmers in Bangladesh. They observed that the social, political and economic factors of the farming community play an important role in the flow of extension messages among the farmer.

Kumari (1988) conducted a study as the effectiveness of mix media of rural women for health education. The study revealed that the majority of women were dependent heavily on localite sources of information and did not have urban contact. However they had somewhat favorable attitude towards the messages.

King and Bembridge (1988) found in a study in South Africa that opinion leaders considered the fellow farmers as the most reliable sources for obtaining information.

Kashem and Jones (1988) observed that small farmers had highest contact with individual sources and the lowest contact with group contacts. They had comparatively higher percentage of contact with mass media except for those that need literacy. Among individual contact, small farmers had the highest contact with ideal farmers and seed and fertilizer dealers and relatively little contact with the local extension workers i.e. block supervisor.

Bhuiyan (1988) observed that when single communication media was considered irrespective of categories it was found that the highest proportion of citations in all stages of adoption process was neighbors, friends and relatives.

Van Den Ban (1987) observed that Dutch farmers received a large proportion of their information about new developments of agricultural research through their farm magazine. He also observed that radio and television did not play much bigger role in agricultural extension. He again found that the people might be aware of new ideas from the mass media, but usually waited for confirmation from personal sources of information.

Gura (1986) suggested that rural women need to be recognized as a group with specific extension and training needs, group approaches, compared to methods of extension that are general to individuals. He said that group approach of women rather than individual approach might help to reduce the social and cultural restrictions. The female agricultural extension worker would be helpful to reach rural women.

Samanta (1986) in a study in India found that demonstration is the best credible source of information by- the farmers followed by scientists, block extension agency, progressive farmers, television, radio and printed matters. –

Nataraju and Channegowda (1985) found in a study that respondents used radio (54.00 %), newspaper (46.00%), neighbors (23.30%), demonstrations (10.60%) and group meeting (6.00%) in receiving information on improved dairy management practices.

Patil et al. (1984) found in a study that contact farmers received information on improved agricultural technology from neighbor farmers (59.13%), progressive farmers (56.12%), village extension worker (9 1.84%), agricultural officer (31.63%), group discussion (16.33%), demonstration (14.28%), radio (88.77%) and news paper (60.20%).

Oni (1983) found in a study in Nigeria that the farmers use of method and result demonstration as most influencing their adoption d frining practice. Office visit, farm visits werjldñxt.adio was the least preferred media.

Roy (1981) c ““ctea study on communication behavior of small income farmer receiving infonnation on the use of balanced dose of fertilizer for transplanted Aman cultivation in Agriversity Extension Project area, Mymensingh, Bangladesh. He found that the discussion with friend and neighbors received

the largest number of scores as 136, radio comes next with 104 score. Attending agricultural exhibition by the respondent secured the third position. Lecture at the field training spot also played an important role in the use of balanced dose of fertilizer having a score at 50.

Jange and Patel (1981) found in a study that most of the farmers used radio in receiving information on Groundnut cultivation.

Orojobi (1980) found in a study that the private sources of agricultural information of Nigerian farmers were friends, other farmers, local leaders, traditional meetings, extension agents, radio, demonstrations, television, agricultural shows and printed materials.

Opare (1980) showed in a study that farmer received information for cocoa production from friends, relatives and extension officers.

Sheahan (1979) found in a study that the patronage of radio program by farmers is quite high. Farmers depended on radio for market reports and weather information.

2.2 Review of past studies concerning relationship of selected characteristics of the rural women with their communication exposure

Nine characteristics of the rural women were selected as independent variables of the study. The researcher has studied the relationship of each of the selected characteristics with communication exposure. However, succinct reviews of literature on the relationship of each independent variable with communication exposure are presented in this section.

Age

Bhuiyan (1988) found in his study that age of the farmers had significant negative correlation with the use of communication media in the adoption of selected improved farm practices in rice cultivation.

Kandam and Sabale (1983) observed in a study that age of the farmers had statistically significant association with the extent of use of communication media.

Roy (1981) in his study indicated that the age of the small income farmers had no significant effect in using communication media on the use of balanced dose of fertilizer.

Ahmed (1977) in his study found that age of the farmers had no significant influence on the use of information sources in the adoption of improved farm practices.

Rahman (1974) concluded in his study that the age had no significant influence on the use of information sources.

Karim (1973) studied in adoption of fertilizers in keyotkhali union of Mymensingh district. He found no relationship between the ages of transplanted rice growers and their communication exposure.

Haque (1972) observed in a study that statistically there was no relationship between age and use of information sources.

Latif (1974) observed that there was no relationship between age of the farmers and their communication exposure.

Education

Kashem and Jones (1988) found in their study that education of small farmers reduced significant positive correlation with their contact with information sources.

Bhuiyan (1988) concluded in his study that education and the use of communication media in the adoption of farm practices were positively correlated.

Kadam and Sabale (1983) observed in a study that educational level of sugarcane growers showed statistically significant association with the extent of use of communication media.

Dhande (1982) observed that the education of the respondent was positively and significantly related to information sources utilization score.

Halim (1982) in his study on schooling, extension and agricultural production that increase of education of the farm operators resulted increased per acre production of rice, jute and net farm income of the farm but the positive trend between level of education and increased production tended to fall in those farms where the operators received more the secondary level of education. He found significant regression between levels of formal schooling per farm operator and per acre production of jute and rice, which also resulted significant increase in net farm income.

Roy (1981) in his study indicated that education contributed positive relationship on their communication behavior receiving information on use of balanced doses of fertilizer.

Hossain (1981) in his study found that there was no relationship of education of the farmers with their adoption of improved practices. -

Ahmed (1977) in his study showed that education of farmers has a significant relationship with information sources in the adoption of plant protection measures.

Rahman (1974) observed in his study that the relationship between the education of the Jute growers and their use of communication sources was positively correlated.

Latif (1974) found in his study that there was no relationship between education of rural women and their communication exposure.

Family size

Latif (1974) observed that there was no relationship between family size of the farmers and their communication exposure in receiving agricultural information.

Ahmed's (1977) study showed that family size had significant influence on the use of information sources in the adoption of plant protection measures.

Kadam and Sabale (1983) found in a study that size of family of the farmers had an association with the extent of use of communication media.

Land size

Hooda (1987) found that land holding of the farmers had positive and significant correlation with the communication behavior.

Kadam and Sabale (1983) found in a study that the correlation between land holding of sugarcane growers and the extent of use of communication media was not significant.

Roy (1981) found that there was no significant effect of land ownership of the small income farmers with their communication behavior.

Latif (1974) found in his study that there was a positive relationship between farm size and communication exposure of the rural women.

Homestead vegetable cultivation area

Bhuiyan (1988) found in his study that farm size had significant positive correlation with the use of communication media in the adoption of selected improved farm practices in rice cultivation.

Ahmed (1977) showed in a study that farm size had significant influence on the use of information sources in the adoption of plant protection measures.

Rahman (1974) concluded in his study that a positive correlation was found between the farm size of the farmers and their use of communication sources.

Vegetable cultivation experience

No literature was found as the relationship between gardening experience and communication exposure.

Time spent in vegetable cultivation

No literature was found as the relationship between gardening experience and communication exposure.

Knowledge on homestead vegetable cultivation

Kashem and Halim (1991) showed that the use of communication media in adoption of modern rice technologies had significant positive correlation with agricultural knowledge.

Karim (1973) concluded in a study that lack of awareness and improper knowledge about the fertilizers was the most important barriers to the adoption of fertilizers for transplanted Aman rice by the farmers.

Kashem and Jones (1988) found in their study agricultural knowledge of the rural women rendered significant positive correlation with their contact with information sources.

Organizational participation

Roy (1981) in his study indicated that organizational participation of small income farmers had significant positive effect on their communication behavior receiving information on the use of balanced doses of fertilizer.

Rahman (1974) in his study revealed that organizational participation had significant positive relationship with the use of communication sources by the Jute seed growers.

Latif (1974) concluded that the organizational participation of the rural women had a significant positive relationship with the use of communication media.

Bhuyan (1988) indicated in his study that the relationship between organization participation and the use of communication media was not significant.

Dhande (1982) observed that organization participation of the respondents was positively and significantly related to information source utilization score.

2.3 The conceptual framework of the study

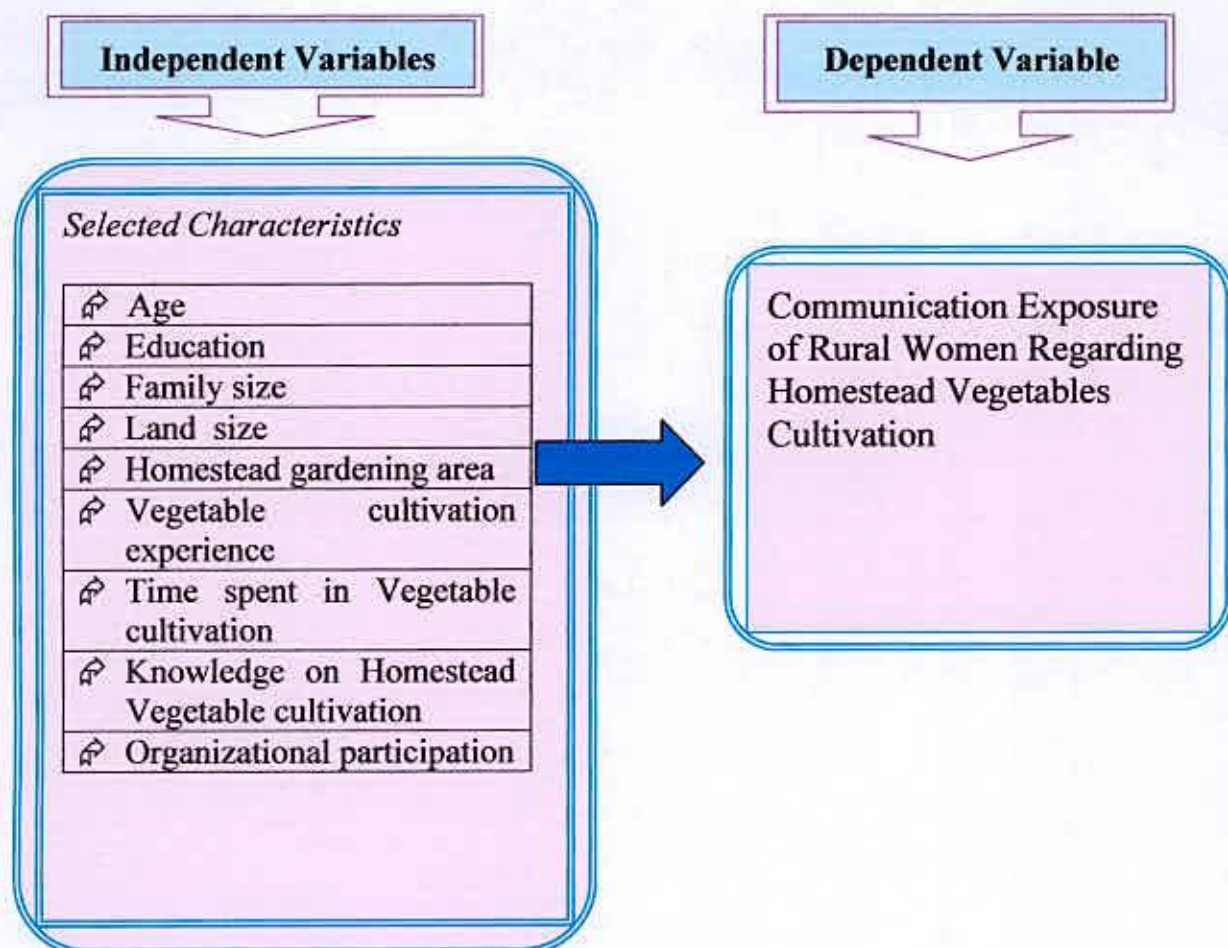


Figure 2.1 The conceptual framework of the study

CHAPTER 3

METHODOLOGY

Importance of methods and procedures in conducting any research can hardly be over emphasized. Methodology should be such as it would enable the researcher to collect valid information and to analyze that properly to arrive at correct decisions. Keeping this in mind the researcher took almost care for using proper methods in all aspects of this investigation.

3.1 The Locale and Population of the Study

Hesakhal union covering two villages namely Hesakhal and Uroschol taking from Nanagalkot upazilla under Comilla district was selected purposively for this study.



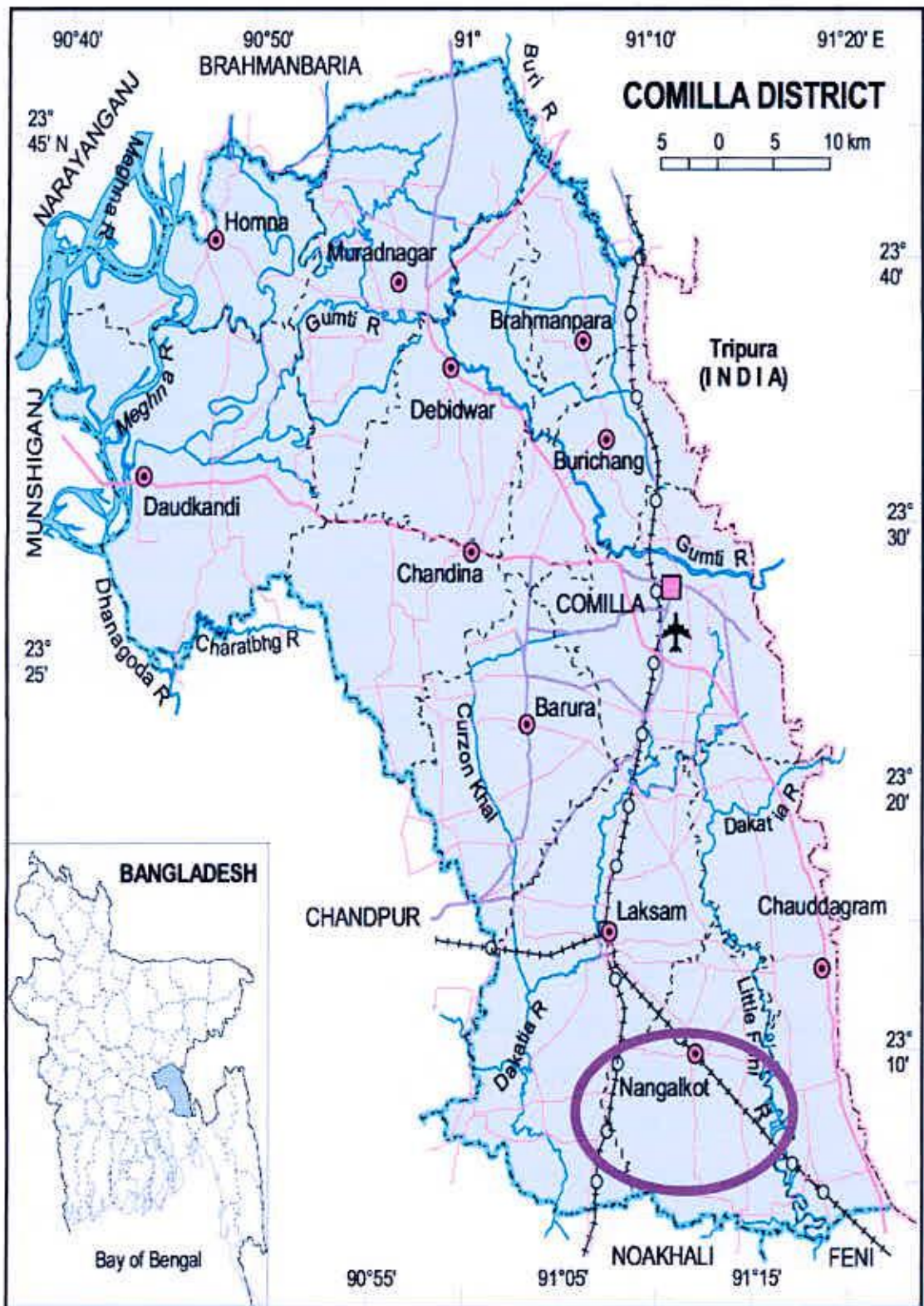


Figure 3.1 A map of Comilla district showing the study area

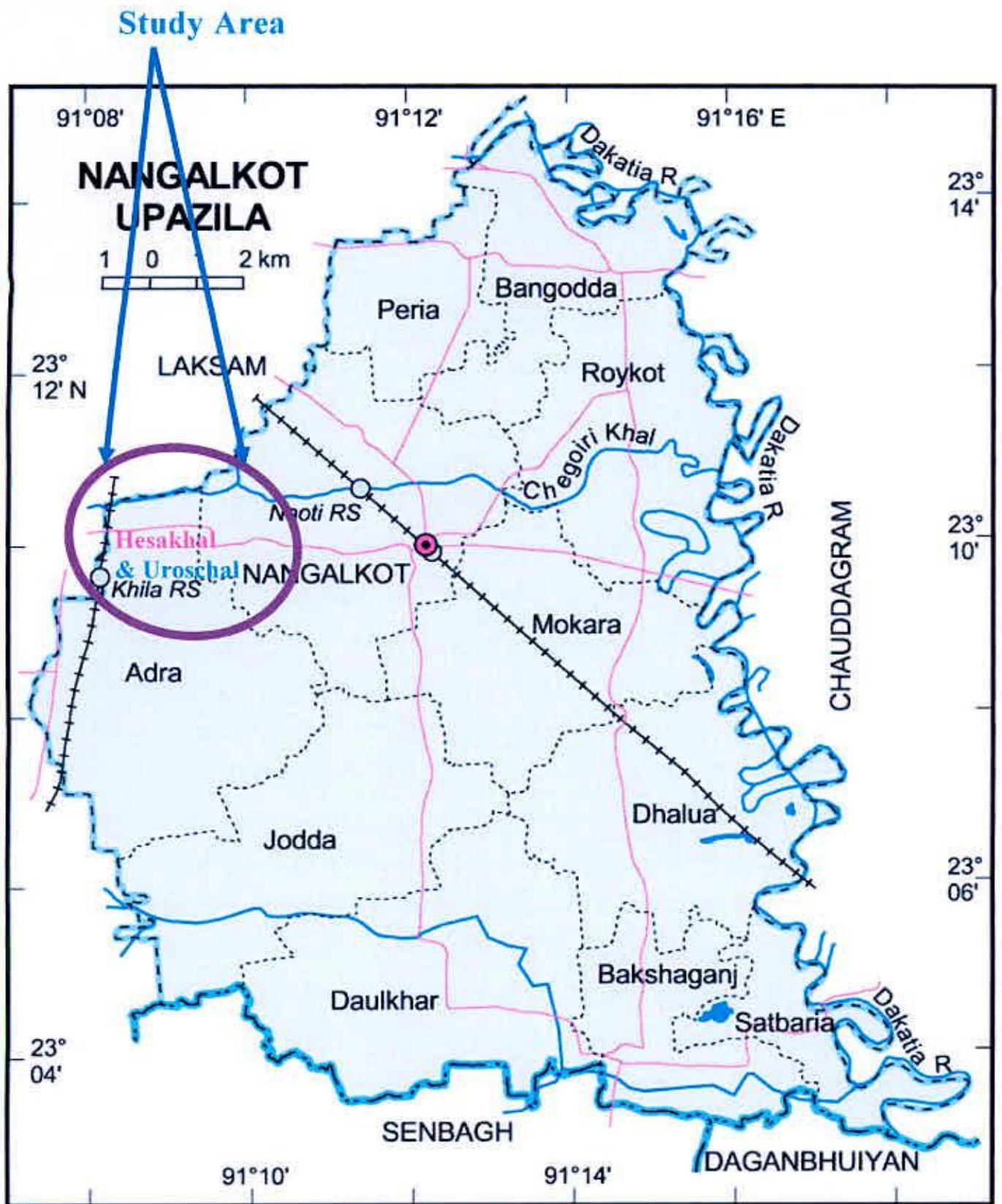


Figure 3.2 A map of Nangalkot upazila showing locale of the study.

3.2 Sampling Design

Nanagalkot upazilla consist of 210 villages. Out of 210 villages, Hesakhal and Uroschol were selected simple random sampling technique. Considering time, money and resources of the researcher, the study was kept confined to these villages

An up-dated list of rural women was prepared with the help of union parishad members, local educated persons, NGO workers and Sub Assistant Agricultural Officers (SAAOs) of these villages. The total number of rural women in the two villages was 890. From this population 100 rural women were selected at random by using Random Numbers which constituted the sample population of 100 for the present study. A reserve list of ten rural women also prepared in case of listed respondents is not available.

Table 3.1 Distribution of population and samples with reserve list

Name of villages	Name of union	Total population	Sample size	Reserve list
Hesakhal	Hesakhal	450	52	6
Uroschol	Hesakhal	440	48	4
Total		890	100	10

3.3 The Research Instrument

In order to collect information, an interview schedule was developed considering the objectives of the study. The schedule was constructed containing direct and simple questions in open form and close form. Bengali version schedule was used for clear understanding both interviewer and interviewee during data collection. Appropriate scales were developed to measure both independent and dependent variables.

The interview schedule was pre-tested with ten rural women in actual field situation before finalizing it for collection of data. Necessary corrections, additions, alternations, rearrangements and adjustments were made in the schedule based on pretest experience. The schedule was then cyclostyled in its

final form. A copy of the English version interview schedule is presented into Appendix-A.

3.4 Data Collection Procedure

Data were collected through face to face survey by the investigator himself. All possible efforts were made to explain the purpose of the study to the respondents. Before going to the respondents for interview, appointments were made earlier so that they could be available at their respective homes on the schedule date and time. While interviewing a rural woman the researcher took all the possible care to establish rapport with the rural women so that they did not hesitate to furnish proper responses to the questions and stated in the schedule. Whenever any respondent faced difficulty in understanding questions, more attention was taken to explain the same with a view to enabling him to answer properly.

No serious problem was faced by the investigator during data collection. He obtained co-operation from the respondents, sub-Assistant Agricultural Officer, NGO workers and others. Data collection was started on October 15, 2009 and completed on November 15, 2009.

3.5 Variables of the Study

Two types of variables such as dependent and independent variables were measured. The procedure followed in measuring dependent and independent variables are discussed below:

3.5.1 Measurement of independent variables

Age

Age of a farmer was measured in terms of years from his birth to the time of interview. The age of a respondent was measured in terms of actual years on the basis of his response.

Education

Education was measured in terms of years of schooling completed by an individual in educational institutions. The education score was computed for each respondent by giving 1 (one) score for each year of successful schooling. If a person acquired education from informal or non-formal sources, his education was assessed in terms of the standard of a normal school. Example, if a respondent did not know how to read and write his literacy was taken as zero (0). A score of 0.5 was given to that respondent who could sign his name only. Besides a respondent got actual score of one for every year of schooling i.e. 1 for class one, 2 for class two and so on.

Family size

Size of the family was measured by the total number of family members of a respondent including himself, his wife, children and others dependent fully or partially on his income. The total number of family members was considered as the family size score of a respondent. For example, if a respondent has 7 members in his family score of his family size was taken as 7.

Land size

Farm size was estimated in terms of full benefit to the respondent. It was measured in terms of hectares by using the following formula-

$$\text{Farm size} = A_1 + A_2 + \frac{1}{2}(A_3 + A_4) + A_5$$

Where,

A_1 = Homestead area (including pond)

A_2 = Own land under cultivation

A_3 = Land taken from others on barga

A_4 = Land given to others as barga

A_5 = Land taken from others as lease

Homestead vegetable cultivation area

Homestead vegetable cultivating area was measured in terms of hectares which were used as gardening area.

Vegetable cultivation experience

It was measured by the number of years she was involved actively with the homestead vegetable cultivation activities. It was expressed in complete year.

Time spent in vegetable cultivation

Time spent in vegetable cultivation of a respondent was measured by the number of hours in a day she had kept herself involved in performing Homestead Vegetable cultivation activities motioned by respondent herself.

Knowledge on homestead vegetable cultivation

Knowledge on Homestead vegetable cultivation of rural women was measured by asking 20 questions related to homestead vegetable cultivation. The total assigned score on all the questions was 40. A respondent obtained 2 from each question for each correct answer, for wrong answer he obtained zero. Partial score was given for partial correct answer. The total score obtained by a respondent was taken as the knowledge on agriculture score of the respondents. The score possible score ranged from 0 to 40.

Organizational participation

The organizational participation score was computed for each respondent on the basis of his membership with different types of organizations. The following scale was used for computing the organizational participation score.

<u>Categories of participation</u>	<u>Score</u>
a. Participation as president or secretary or officer	3
b. Participation as executive committee member	2
c. Participation as ordinary member	1
d. No participation	0

Organizational participation score of a respondent was obtained by multiplying the score of his participation status with the corresponding duration (in year) in all the organizations and then added together.

Therefore, the total score of organizational participation was computed in the following way:

$$\text{Organizational participation score} = \sum O_1 \times D + O_2 \times D + O_3 \times D$$

Where,

O_1 = Participation as ordinary member

O_2 = Participation as executive committee member

O_3 = Participation as president or secretary

D = Duration in year

3.5.2 Measurement of dependent variable

Communication exposure of rural women regarding homestead vegetables cultivation was the dependent variable of the study. The researcher selected three broad types of communication media namely, individual, group and mass media comprising of thirteen media in total. The researcher selected the following media of information for studying their extent of use by the farmers:

Communi- cation media	Name of the source of information	Extent of the communication media			
		Frequently (3)	Occasionally (2)	Rarely (1)	Not at all (0)
Individual	Sub Asst. Agricultural Officer	At least 1 Time/month	At least 1 Time/two month	1-4 Time/ year	0 Time/ year
	Experienced women	5 times/ week	2 times/week	2 times/ month	0
	Relatives	3 times/week	2 times/ two week	2 times/ month	0
	Neighbors	6 times/ week	3-5 times/week	At least 1time/ week	0
	NGO worker	4 or more Times/ month	1-3 Time/ month	At least 1 Time/ year	0
Group	Group discussion	3 or more Times/ year	1-3 Time/ year	At least 1 Time/ year	0
	Training program	3 Times/ year	2 Times/ year	At least 1Time/ year	0
	Result demo. Meeting	3 Times/ year	2 Times/ year	At least 1 Time/ year	0
	Method demo.	3 Times/ year	2 Times/ year	At least 1 Time/ year	0
Mass	Radio	3 times/ week	2 times / week	At least 1 time / week	0
	Agril. printed materials	1 time / month	1 time /two months	At least 1 time /six months	0
	Television	4 or more Times/week	2-3 Times/week	At least 1 Time/ week	0
	Newspaper	6 Times/ week	2-5 Times/week	At least 1Time/ week	0
Total =					

So, Use of communication media score = Individual contact score +
Group contact score + Mass contact score.

The communication exposure score of a respondent was obtained by adding her weights in all the thirteen media .so the communication exposure score of a respondent could range from 0 to 39. Where 0 indicate no exposure and 39 indicate very high exposure.

The communication media used by the rural women were measured on the basis of their opinions regarding the extent of use of the above mentioned media in receiving information on homestead vegetable cultivation during the immediate past year. Hence, the use of each of the thirteen communication media was first ascertained by computing their using score. A four point scale was used to compute the extent of use of communication media. Then the extent of use of communication media score of a respondent for the thirteen media were added together to ascertain his total score in receiving agricultural information on homestead vegetable cultivation. In this regard weight was assigned to each of the four types of responses provided by the farmers in the following manner:

<u>Responses</u>	<u>Weight</u>
Frequently	3
Occasionally	2
Rarely	1
Not at all	0

Thus, the use of communication media score of a respondent could range from 0 to 39 where 0 indicate no use and 39 indicate very high use of communication media in receiving agricultural information.

3.6 Methods of Analysis

Data collected from the respondents were compiled, tabulated and analyzed in accordance with the objectives of the study. Various statistical measures such as number, range, percentage distribution, average, standard deviation rank order were used in describing data. The categories and tables were used in describing data. The categories and tables were also used in presenting data for better understanding.

For determining the relationship of the selected characteristics of the rural women with their communication exposure in receiving agricultural information, Pearson Product Moment Coefficient of Correlation was used. Five percent (0.05) and one percent (0.01) level of probability was used as the basis for rejecting any null hypothesis.

CHAPTER 4

RESULTS AND DISCUSSION

This chapter deals with the findings of the research. The chapter is divided into four (4) sections. The first section deals with the characteristics of the rural women. The second section deals with the communication exposure of the rural women regarding homestead vegetables cultivation. The third one deals with the relationship between individual characteristics of the rural women with their communication exposure regarding homestead vegetables cultivation. The last section deals with the rank order of use of different communication according to use.

4.1 Characteristics of the Rural Women

By the characteristics, behavior of an individual can be largely determined. The major hypothesis of this study was the communication exposure of the rural women regarding homestead gardening would be influenced by the various characteristics. The selected characteristics of the rural women were age, education, family size, land, homestead vegetables cultivation area, vegetables cultivation experience, time spent in vegetables cultivation, knowledge on homestead vegetables cultivation and organizational participation. Characteristic profiles of the rural women may be seen at a glance in Table 4.1.



4.1 Characteristic Profiles of the Rural Women

Sl. No	Name Variables	Scoring Method	Categories	Possible Score	Observed Score	Respondents		Mean	S.D.
						Number	Percent		
1	Age	No. of Years	Young (up to 30)	Unknown	24 -60	32	32	37.59	10.017
			Middle (31-45)			49	49		
			Old (>45)			19	19		
2	Education	Years of Schooling	No education(0)	Unknown	0-12	16	16	4.025	3.2701
			Primary (1-5)			45	45		
			Secondary(6-10)			37	37		
			Above Secondary (11&_above)			2	2		
3	Family Size	No. of Family Member	Small (1-3)	Unknown	2-12	18	18	5.11	1.792
			Medium (4-6)			65	65		
			Large (above 6)			17	17		
4	Land size	Hectare	Small (0 -0.19)	Unknown	0.036-2.113	17	17	0.4456	0.3232
			Medium (0.20 -1.00)			79	79		
			Large (1.01&above)			4	4		
5	Homestead gardening area	Hectare	Small (<0.02)	Unknown	0.008-0.121	27	27	0.0328	0.0189
			Medium (0.021to0.06)			65	65		
			Large (>0.0085)			8	8		
6	Gardening Experience	No. of Years	Low (2-5)	Unknown	3-30	17	17	12.91	7.362
			Medium (6-15)			60	60		
			High(above 15)			23	23		
7	Time spent in Gardening	No. of hours	Low (0-1)	Unknown	0-24	3	3	2.87	0.08
			Medium (2-3)			74	74		
			High(above 3)			23	23		
8	Homestead Gardening Knowledge	Score	Low (10-17)	0-40	17-38	5	5	33.54	2.710
			Medium (18-29)			10	10		
			Very High (30-40)			85	85		
9	Organizational Participation		Low (0-10)	unknown	0-36	37	37	13.62	8.873
			medium (11 -20)			46	46		
			High(21 &above)			17	17		

4.1.1 Age

Age of the rural women ranged from 24 to 60 years, the average being 37.59 years and the standard deviation was 10.017. On the basis of their age, the rural women were classified into three categories: “young” (Up to 30), “middle aged” (31-45) and “old” (>45). The distribution of the rural women according to their age is shown in Table 4.2.

Table 4.2: Distribution of the farmers according to their age

Categories	Farmers		Mean	Standard Deviation
	Number	Percent		
Young (up to 30 years)	32	32	37.59	10.017
Middle aged (30-45 years)	49	49		
Old (above 45 years)	19	19		
Total	100	100		

Data contained in the Table 4.2 indicates that the highest proportion of the rural women (49 percent) fell in the middle age category, while 32 percent of them fell in the young category and only 19 percent in the old category.

4.1.2 Education

The education of the rural women was measured by the level of their education i.e. to the grade (class) passed by them in the educational institutions. Education score ranged from 0 to 12. The average being 4.025 and the standard deviation was 3.27. On the basis of their educational scores, the rural women were classified into four categories, namely illiterate (0), primary (1-5), secondary (6-10) and above secondary (11 or above). The distribution of the rural women according to their education is shown in Table 4.1.

Table 4.3: Distribution of the rural women according to their education

Categories	Respondents		Mean	Standard Deviation
	Number	Percent		
Illiterate (0)	16	16	4.025	3.27
Primary education (1-5)	45	45		
Secondary education (6-10)	37	37		
Above secondary education (above 10)	2	2		
Total	100	100		

The majority (45 percent) of the rural women had primary level of education while 16 percent had illiterate, 37 percent had secondary and only 2 percent had above secondary level of education. Rural women need to have some education in order to use various communication media properly. It is shown that 85 percent of rural women had education of various degrees from primary to above secondary level. It is observed that about one-sixth (16 percent) of rural women had illiterate. For that reason the women having no education may suffer to use the communication media. As a result they could not receive the useful and important homestead vegetable cultivation information.

4.1.3 Family size

The family size of the rural women ranged from 2 to 12 members. The average was 5.11 with a standard deviation of 1.792. On the basis of their family size the rural women were classified into the following three categories: “small family” (1 to 3), “medium family” (4-6) and “large family” (above 6). Table 4.1 contains the distribution of the rural women according to their family size.

Table 4.4: Distribution of Rural women according to their family size

Categories	Rural women		Mean	Standard Deviation
	Number	Percent		
Small family (1-3)	18	18	5.11	1.792
Medium family (4-6)	65	65		
Large family (above 6)	17	17		
Total	100	100		

Data presented in Table 4.1 shows that highest proportion (65 percent) of the rural women had medium families compared to 18 percent having small families and 11 percent had large families. The findings indicate that majority (95 percent) of the rural women had low to medium families and likely to maintain better contact with various communication media for obtaining information.



4.1.4 Land size

Land size of the respondent women in the study area ranged from 0.036 to 2.113 hectare with an average of 0.446 and the standard deviation was 0.323. Based on the scores obtained, the rural women were grouped into three categories and those are “small” (0 to 0.19), “medium” (0.20 to 1.00) and “large” (1.01& above). Table 4.1 contains the distribution of the rural women according to their land size.

Table 4.5: Distribution of Rural women according to their land size

Categories	Rural women		Mean	Standard Deviation
	<i>Number</i>	<i>Percent</i>		
Small farm size (0.0 –0.19 ha)	17	17	0.44563	0.32318
Medium farm size (0.20ha - 1.00 ha)	79	79		
Large farm size (above 1.00 ha)	4	4		
Total	100	100		

Data presented in Table 4.1 indicates that the highest proportion (79 percent) of the rural women had medium land size compared to 17 percent having small land size and 4 percent had large land size. This information indicate that majority (96 percent) of the rural women had low to medium land size.

4.1.5 Homestead vegetables cultivation area

Homestead vegetables cultivation area in the study area ranged from 0.008 to 0.121 hectare with an average of 0.0328 and the standard deviation was 0.01885. Based on the scores obtained, the rural women were grouped into three categories and those are “small” (<0.0045), “medium” (0.0045 to 0.0085) and “large” (>0.0085).

Table 4.6 contains the distribution of the rural women according to their homestead vegetables cultivation area.

Table 4.6: Distribution of Rural women according to their homestead vegetables cultivation area

Categories	Rural women		Mean	Standard Deviation
	<i>Number</i>	<i>Percent</i>		
Small (<0.02 ha)	27	27	0.0328	0.018850
Medium (0.021to0.06ha)	65	65		
Large (>0.0085ha)	8	8		
Total	100	100		

Data presented in Table 4.1 indicates that the highest proportion (65 percent) of the rural women had medium homestead vegetables cultivation area compared to 27 percent having small homestead vegetables cultivation area and 8 percent of rural women had large homestead vegetables cultivation area. This information indicate that majority (65percent) of the rural women had low to medium homestead vegetables cultivation area.

4.1.6. Vegetable cultivation experience

Vegetable cultivation experience of the rural women ranged from 2 to 30 years with an average of 12.91 and the standard deviation was 7.362. Based on the scores obtained, the rural women were grouped into three categories and those are “low” (2 to 5), “medium” (6 to 15) and “high” (16 & above). Table 4.6

contains the distribution of the rural women according to their vegetable cultivation experience.

Table 4.7: Distribution of rural women according to their vegetable cultivation experience

Categories	Rural women		Mean	Standard Deviation
	<i>Number</i>	<i>Percent</i>		
Low (2-5 years)	17	17	12.91	7.362
Medium (6-15 years)	60	60		
High(above)	23	23		
Total	100	100		

Data presented in Table 4.6 indicates that the highest proportion (60 percent) of the rural women had medium gardening experience compared to 17 percent having low vegetable cultivation experience and 23 percent had high vegetable cultivation experience. This information indicate that majority (77 percent) of the rural women had low to medium vegetable cultivation experience. It is expected that more the experience in vegetable cultivation, the better is the performance in gardening activities. Consequently the better performance requires higher communication exposure. The findings indicated a probability of higher communication exposure of the rural women.

4.1.7 Time spent in vegetable cultivation

Time spent in vegetable cultivation by the rural women in the study area ranged from 1 to 5 hours per day with an average of 2.87 and the standard deviation was 0.80. Based on the scores obtained, the rural women were grouped into three categories and those are “low” (0-1), “medium” (2 to 3)” and “high” (>3). Table 4.8 contains the distribution of the rural women according to their time spent in vegetable cultivation.

Table 4.8: Distribution of rural women according to their time spent in vegetable cultivation in homestead area

Categories	Rural women		Mean	Standard Deviation
	Number	Percent		
Low (0-1 hour)	3	3	2.87	0.80
Medium (2-3 hours)	74	74		
High(above 3 hours)	23	23		
Total	100	100		

Data presented in Table 4.8 indicates that the highest proportion (74 percent) of the rural women felt in medium time spent in gardening compared to 3 percent having low time spent in vegetable cultivation and 23 percent in high time spent in vegetable cultivation. This information indicated a possibility of higher communication exposure of the rural women because the rural women spent 2.87 hours per day for gardening activities.

4.1.8 Knowledge on homestead vegetable cultivation

Knowledge on homestead vegetable cultivation of the rural women in the study area ranged from 10 to 36 against the possible range from 0 to 40 with an average of 33.54 and the standard deviation being 2.71. Based on the scores obtained, the rural women were grouped into three categories and those are “low” (10 to 17), “medium” (18 to 29) and “high” (30 to 40). Table 4.9 contains the distribution of the rural women according to their Knowledge on vegetable cultivation in homestead area.

Table 4.9: Distribution of Rural women according to their Knowledge on vegetable cultivation in homestead area

Categories	Rural women		Mean	Standard Deviation
	Number	Percent		
Low (10-17score)	5	5	33.54	2.71
Medium (18-29 score)	10	10		
High(30-40score)	85	85		
Total	100	100		

Data presented in Table 4.9 indicates that the highest proportion (85 percent) of the rural women had high homestead gardening knowledge compared to 5 percent having low homestead gardening knowledge and 10 percent had medium homestead gardening knowledge. This information indicate that majority (95 percent) of the rural women had medium to high homestead vegetable cultivation knowledge meaning a better communication exposure.

4.1.9Organizational Participation

The observed organizational participation scores of the rural women ranged from 3-39 having an average of 13.60with a standard deviation of 8.873 Based on the organizational participation scores, the rural women were classified into three categories: “low organizational participation” (up to 14) and “medium organizational participation” (15-25) and “high organizational participation” (above 25).The distribution of the rural women according to their organizational participation scores is shown in Table 4.10.

Table 4.10: Distribution of Rural women according to their organizational participation on vegetable cultivation in homestead area

Categories	Farmers		Mean	Standard Deviation
	<i>Number</i>	<i>Percent</i>		
Low organizational participation (up to 14)	57	57	13.60	8.873
Medium organizational participation (15-25)	33	33		
High organizational participation (above 25)	10	10		
Total	100	100		

The finding indicates that majority (57percent) of the rural women had low organizational participation compared to 33and 10 percent having medium organizational participation and high organizational participation respectively. Thus, it can be concluded that most of the rural women (90 percent) had low to medium organizational participation. This means that the rural women of the study area are mostly engaged in their farm works and do not participate in other social activities. Social participation was very much important for adopting new technologies through communication media.

4.2 Communication exposure of rural women regarding homestead

Vegetable cultivation

Communication exposure of the rural women was the dependent variable of the study. It was measured by computing a communication exposure score on the basis of their use of thirteen (13) communication media regarding information. The possible range of communication exposure score of a respondent could range from '0' to '39'. But the computed communication exposure of the respondents ranged from 10 to 32 with an average of 22.71 and standard deviation of 5.284. The rural women were classified into three (3) categories on the basis of communication exposure score as shown in the table 4.11.

Table 4.11 Number & percentage distribution of rural women according to their communication exposure

Categories	Respondents		Mean	S.D
	Number	Percentage		
Low exposure (0 to 12) <(Mean - lsd) i.e. 0-12	6	6	22.71	5.284
Medium exposure (13 to 26) (Mean \pm lsd) i.e. 13-26	63	63		
High exposure (above 26) >(Mean + lsd) i.e. 27-39	31	31		
Total	100	100		

Data presented in table 4.11 show that more than half (63%) of the respondent had medium communication exposure regarding homestead vegetable cultivation information while 6 percent of them had low exposure and only 31 percent high exposure.

4.3 Relationship between individual characteristics of the rural women and their communication exposure

The purpose of this section is to examine the relationships of nine selected characteristics of the rural women (the independent variables) with their communication exposure (the dependent variable) regarding homestead vegetable cultivation. The selected characteristics of the rural women include age, education, family size, land size, homestead vegetable cultivation area, homestead vegetable cultivation experience, time spent in vegetable cultivation, knowledge on homestead vegetable cultivation and organizational participation. Each of the above characteristics constituted an independent variable while communication exposure of the rural women regarding homestead vegetable cultivation was the only dependent variable of the study. Pearson's Product Moment Co-efficient of Correlation (r) was used to test the null hypothesis concerning the relation between the dependent and independent variables. Five percent (0.05) level of probability was used as the basis for rejection of a null hypothesis. Summary results of the test of co-efficient of correlation between the independent and dependent variables are shown in Table 4.12.



Table 4.12 Relationship between nine characteristics of the rural women and the communication exposure regarding

Dependent Variable	Independent Variable	Co-efficient of Correlation	Tabulated Value of 'r' with 98 d.f.	
			At 5%level	At 1% level
Communication exposure of the rural women regarding homestead vegetable cultivation	Age	-0.249*	0.196	0.256
	Education	0.598**		
	Family size	-0.163		
	Land size	0.105		
	Homestead vegetable cultivation area	0.100		
	vegetable cultivation experience	-0.325**		
	Time spent in vegetable cultivation	0.077		
	knowledge on homestead vegetable cultivation	0.481**		
	Organizational participation	0.523**		

NS= Not Significant

* = Significant at 5% level

** = Significant at 1% level



4.3.1 Relationship between age of the rural women and dependent variable

The relationship between age of the rural women and their communication exposure in receiving information on homestead vegetable cultivation was examined by testing the following null hypothesis:

“There is no relationship between age of the rural women and their communication exposure in receiving information on homestead vegetable cultivation”

Computed value of the coefficient of correlation between age of the rural women and their communication exposure in receiving information on homestead vegetable cultivation was found to be- 0.249* as shown in Table 4.12. 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.
- A significant relationship was found to exist between the two variables.
- The computed value of 'r' (- 0.249*) was greater than the table value (± 0.196) with 98 degrees of freedom at 0.05 level of probability.
- The concerned null hypothesis was rejected.
- The coefficient of correlation between the concerned variables was significant at 0.05 level of probability.

The findings demonstrate that age of the rural women had a significant but negative relationship with their use of communication media in receiving information on homestead vegetable cultivation.



4.3.2 Relationship between education of the rural women and dependent variable

The relationship between education of the rural women and their communication exposure in receiving information on homestead vegetable cultivation was examined by testing the following null hypothesis:

“There is no relationship between education of the rural women and their communication exposure in receiving information on vegetable cultivation”

The coefficient of correlation between education of the rural women and their communication exposure in receiving information on homestead vegetable cultivation was found to be 0.598** as shown in Table 4.11. 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 positive trend.
- A high relationship was found to exist between the two variables.
- The computed value of ‘r’ (0.598) was greater than the table value (± 0.256) with 98 degrees of freedom at 0.01 level of probability.
- The concerned null hypothesis was rejected.
- The coefficient of correlation between the concerned variables was significant at 0.01 level of probability.

The finding demonstrates that there was a highly significant positive relationship between the education of the rural women and their communication exposure in receiving information on homestead vegetable cultivation.

4.3.3 Relationship between family size of the rural women and dependent variable

The relationship between family size of the rural women and their use of communication media in receiving information on homestead vegetable cultivation was examined by testing the following null hypothesis:

“There is no relationship between family size of the rural women and their communication exposure in receiving information on homestead vegetable cultivation”

Computed value of the coefficient of correlation between family size of the farmers and their communication exposure in receiving information on homestead vegetable cultivation was found to be- 0.163^{NS} as shown in Table 4.12. 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.
- A negligible relationship was found to exist between the two variables.
- The computed value of ‘r’ (0.163) was smaller than the table value (± 0.196) with 98 degrees of freedom at 0.05 level of probability.
- The concerned null hypothesis was accepted.
- The coefficient of correlation between the concerned variables was not significant at 0.05 level of probability.

The finding demonstrates that the family size of the rural women had no significant relationship with their communication exposure in receiving information on homestead vegetable cultivation.

4.3.4 Relationship between land size of the farmers and dependent variable

The relationship between land size of the rural women and their communication exposure in receiving information on homestead vegetable cultivation was examined by testing the following null hypothesis:

“There is no relationship between land size of the rural women and their communication exposure in receiving information on homestead vegetable cultivation”

Computed value of the coefficient of correlation between land size of the rural women and their communication exposure in receiving information on homestead vegetable cultivation was found to be 0.105NS as shown in Table 4.11. 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 positive trend.
- A negligible relationship was found to exist between the two variables.
- The computed value of ‘r’ (0.105) was smaller than the table value (± 0.196 with 98 degrees of freedom at 0.05 level of probability).
- The coefficient of correlation between the concerned variables was no significant at 0.01 level of probability.

The finding demonstrates that the land size of the rural women had a positive but no significant relationship with their communication exposure in receiving information on homestead vegetable cultivation.

4.3.5 Relationship between homestead vegetable cultivating area of the rural women and dependent variable

The relationship between homestead vegetable cultivating area of the rural women and their communication exposure in receiving information on homestead vegetable cultivation was examined by testing the following null hypothesis:

“There is no relationship between homestead vegetable cultivating area of the rural women and their communication exposure in receiving information on homestead vegetable cultivation”

Computed value of the coefficient of correlation between vegetable cultivating area of the rural women and their communication exposure in receiving information on homestead vegetable cultivation was found to be 0.100NS as shown in Table 4.12. 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 positive trend.
- A negligible relationship was found to exist between the two variables.
- The computed value of ‘r’ (0.100) was smaller than the table value (± 0.196) with 98 degrees of freedom at 0.05 level of probability.
- The coefficient of correlation between the concerned variables was no significant at 0.01 level of probability.

The finding demonstrates that the vegetable cultivating area of the rural women had no significant relationship with their communication exposure in receiving information on winter vegetable cultivation.

4.3.6 Relationship between vegetable cultivation experiences of the rural women and dependent variable

The relationship between homestead vegetable cultivation experience of the rural women and their communication exposure in receiving information on homestead vegetable cultivation was examined by testing the following null hypothesis:

“There is no relationship between homestead vegetable cultivation experience of the rural women and their communication exposure in receiving information on homestead vegetable cultivation”

Computed value of the coefficient of correlation between vegetable cultivation experience of the rural women and their communication exposure in receiving information on homestead vegetable cultivation was found to be 0.325** as shown in Table 4.11. 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.
- A significant relationship was found to exist between the two variables.
- The computed value of 'r' (0.325) was greater than the table value (± 0.256) with 98 degrees of freedom at 0.01 level of probability.
- The concerned null hypothesis was rejected.
- The coefficient of correlation between the concerned variables was significant at 0.01 level of probability.

The finding demonstrates that the vegetable cultivation experience of the rural women had a negative but highly significant relationship with their communication exposure in receiving information on homestead vegetable cultivation.

4.3.7 Relationship between times spent on vegetable cultivation of the rural women and dependent variable

The relationship between time spent on vegetable cultivation of the rural women and their communication exposure in receiving information on homestead vegetable cultivation was examined by testing the following null hypothesis:

“There is no relationship between time spent on vegetable cultivation of the rural women and their communication exposure in receiving information on homestead vegetable cultivation”

Computed value of the coefficient of correlation between time spent on vegetable cultivation of the rural women and their communication exposure in receiving information on homestead vegetable cultivation was found to be 0.077 as shown in Table 4.12. 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 positive trend.
- A negligible relationship was found to exist between the two variables.
- The computed value of ‘r’ (0.325) was greater than the table value (± 0.196) with 98 degrees of freedom at 0.05 level of probability.
- The concerned null hypothesis was accepted.
- The coefficient of correlation between the concerned variables was significant at 0.01 level of probability.

The finding demonstrates that the time spent on vegetable cultivation of the rural women had no significant relationship with their communication exposure in receiving information on homestead vegetable cultivation.

4.3.8 Relationship between knowledge on vegetable cultivation of the rural women and dependent variable

The relationship between knowledge on vegetable cultivation of the rural women and their communication exposure in receiving information on homestead vegetable cultivation was examined by testing the following null hypothesis:

“There is no relationship between knowledge on vegetable cultivation of the rural women and their communication exposure in receiving information on homestead vegetable cultivation”

Computed value of the coefficient of correlation between knowledge on vegetable cultivation of the rural women and their communication exposure in receiving information on homestead vegetable cultivation was found to be 0.481** as shown in Table 4.11. 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 positive trend.
- A highly significant relationship was found to exist between the two variables.
- The computed value of 'r' (0. 481) was greater than the table value (± 0.256) with 98 degrees of freedom at 0.01 level of probability.
- The concerned null hypothesis was rejected.
- The coefficient of correlation between the concerned variables was significant at 0.01 level of probability.

The finding demonstrates that the knowledge on vegetable cultivation of the rural women had a positive significant relationship with their communication exposure in receiving information on homestead vegetable cultivation.

4.3.9 Relationship between organizational participation of the rural women and dependent variable

The relationship between organizational participation of the rural women and their communication exposure in receiving information on homestead vegetable cultivation was examined by testing the following null hypothesis:

“There is no relationship between organizational participation of the rural women and their communication exposure in receiving information on homestead vegetable cultivation”

Computed value of the coefficient of correlation organizational participation of the rural women and their communication exposure in receiving information on homestead vegetable cultivation was found to be 0.523**as shown in Table 4.11. 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 positive trend.
- A highly significant relationship was found to exist between the two variables.
- The computed value of ‘r’ (0. 523) was greater than the table value (± 0.256) with 98 degrees of freedom at 0.01 level of probability.
- The concerned null hypothesis was rejected.
- The coefficient of correlation between the concerned variables was significant at 0.01 level of probability.

The finding demonstrates that organizational participation of the rural women had a positive significant relationship with their communication exposure in receiving information on homestead vegetable cultivation.

4.4 Rank order of different communication media according to their used by the rural women regarding homestead vegetable cultivation information

Use of 13-selected communication media was investigated in this study. Extent of different communication media was measured according to the Media Use Index. The thirteen (13) communication media have been arranged in rank order in table 4.14 on basis of their Media Use Index (MUI).

Table 4.13 Rank Order of communication media according to their MUI

Communication Media	Media Use Index (MUI)	Rank Order
Experienced Women	250	1
Neighbor	230	2
Radio	210	3
Television	150	4
Relatives	145	5
Group Discussion	130	6
Sub-Asst. Agriculture officer	95	7
NGO worker	85	8
Result Demonstration	70	9
Method Demonstration	65	10
Training	60	11
Printed Material	50	12
Newspaper	38	13

The information presented in table shows that there were variations in the extent of use of different media. Experienced Women was used as the communication media to the highest extent (250) and it was closely followed by neighbor (230), Radio (210), television (150), and so on.

CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 SUMMARY

5.1.1 INTRODUCTION

Bangladesh is an agro-based over-populated country .Every year 1.68 million people have been adding with an annual growth rate of 1.47percent. Development of socio-economic condition of Bangladesh fully depends upon the development of the village. Rural women in Bangladesh are major but largely unrecognized contributors to agricultural and economic productivity. In Bangladesh about 50% of our population is women. We can't overlook their contribution in our nation economic development. Most of the women are housewife and the involved in agricultural activities in homestead area. They also contribute family income by vegetable and fruit cultivation in homestead area.

Vegetables are rich source of minerals, vitamins and essential amino acids. Vegetables are considered as one of the most important groups of food crops due to their high nutritive value, labor-intensive production, relatively higher yield and higher return. These are considered as a cheaper source of natural supplementary food and can be grown within short duration.

But due to lack of knowledge, utilization of proper technology and proper communication media the production remains below expected level. Involvement of women in agriculture since time immemorial .they gathered agricultural knowledge involved in different organization like NGOs, GOs and training organizations. They also gather information from different communication media like TV, Radio, and newspaper etc .The Department of

agricultural extension arranged training programs related to cultivate vegetable in homestead area by rural women. But there is no systematic investigation how the information are obtained and utilized by the rural women regarding the homestead vegetables cultivation. So the researcher becomes interested to conduct a systematic investigation on communication exposure of rural women regarding homestead vegetable cultivation.

The following specific objectives were formulated to give proper direction to the study.

1. To determine and describe some selected characteristics of the women. The selected characteristics are:
 - i) Age
 - ii) Education
 - iii) Family size
 - iv) Land size
 - v) Homestead vegetable cultivation area
 - vi) Vegetable cultivation experience
 - vii) Time spent in vegetable cultivation
 - viii) Knowledge on homestead vegetable cultivation
 - ix) Organizational participation
2. To determine and describe the extent of communication exposure of rural women regarding homestead vegetable cultivation.
3. To explore relationship between selected characteristics of the rural women with their communication exposure regarding homestead vegetable cultivation.
4. To examine the rank order of different communication media according to use.

5.1.2 Methodology

The rural women of two villages namely Hesakhal and Uroschol in Nangalkot Upazilla of Comilla district constitute the population of this study. One hundred of rural women were randomly selected as the sample of the study from a population of 890 of the study area. The communication exposure of the rural women regarding homestead vegetable cultivation was the dependent variable. The selected characteristics of the rural women were the independent variables. The collected data were coded, compiled, tabulated and analyzed in accordance with the objectives of the study. Various statistical measures were used in describing the variables.

For exploring the relationship between the selected characteristics of the rural women and their communication exposure regarding homestead vegetable cultivation, coefficient of correlation 'r' was used.

5.1.3 Findings



A summary of the findings in respect of the specific objectives of this study is given below:

5.1.3.1 Characteristics of the rural women

Age

The highest proportion of the rural women (49 percent) fell in the “middle age” category, while 32 percent of them fell in the “young age” category and only 19 percent in the “old” category.

Education

The majority (45 percent) of the rural women had primary level of education while 16 percent had no education, 37 percent had secondary and only 2 percent had above secondary level of education.

Family size

The highest proportion (65 percent) of the rural women had medium families compared to 18 percent having small families and 11 percent had large families. The findings indicate that majority (95 percent) of the rural women had low to medium families and likely to maintain better contact with various communication media for obtaining information.

Land size

The highest proportion (79 percent) of the rural women had medium land size compared to 17 percent having small land size and 4 percent had large land possession. This information indicate that majority (96 percent) of the rural women had low to medium land size.

Homestead vegetable cultivation area

The highest proportion (65 percent) of the rural women had medium land possession compared to 27 percent having small garden size and 8 percent of rural women had large garden size. This information indicate that majority (65percent) of the rural women had low to medium homestead vegetable cultivation area.

Vegetable cultivation experience

The highest proportion (60 percent) of the rural women had medium gardening experience compared to 17 percent having low gardening experience and 23 percent had high gardening experience. This information indicate that majority (77 percent) of the rural women had low to medium gardening experience.

Time spent in Vegetable cultivation

The highest proportion (74 percent) of the rural women felt in medium time spent in gardening compared to 3 percent having low time spent in gardening and 23 percent in high time spent in gardening.

Homestead Vegetable cultivation knowledge

The highest proportion (85 percent) of the rural women had high homestead Vegetable cultivation knowledge compared to 5 percent having low homestead gardening knowledge and 10 percent had medium homestead Vegetable cultivation knowledge. This information indicate that majority (95 percent) of the rural women had medium to high homestead vegetable cultivation knowledge meaning a better communication exposure.

Organizational Participation

The finding indicates that majority (57percent) of the rural women had low organizational participation compared to 33and 10 percent having medium organizational participation and high organizational participation respectively. Thus, it can be concluded that most of the rural women (90 percent) had low to medium organizational participation

5.1.3.2 Communication exposure of rural women regarding homestead vegetable cultivation

The possible range of communication exposure score of a respondent could range from '0' to '39'. But the computed communication exposure of the respondents ranged from 10 to 32 with an average of 22 .71 and standard deviation of 5.284. That more than half (63%) of the respondent had medium communication exposure regarding homestead gardening information while 6 percent of them had low exposure and only 31 percent high exposure.

5.1.3.3 Relationship of the selected characteristics of the rural women with their communication exposure

Age of rural women had negative but significant relationship with their communication exposure.

Education of the rural women had positive and highly significant relationship with their communication exposure.

There was no significant relationship between family sizes of the rural women and their communication exposure regarding information on homestead vegetable cultivation.

Land size of the rural women had no significant relationship with their communication exposure regarding homestead vegetable cultivation information.

Homestead vegetable cultivation area of the rural women had no significant relation with their communication exposure.

Vegetable cultivation experience of the rural women had negative but highly significant relationship with their communication exposure regarding information on homestead gardening information.

Time spent in Vegetable cultivation had no significant relationship with communication exposure of the rural women.

Knowledge on homestead vegetable cultivation of the rural women had positive and highly significant relationship with their communication exposure.

Organizational participation of the rural women had a positive and highly significant relationship with their communication exposure regarding homestead Vegetable cultivation information.



5.2 Conclusions

Based on the findings and logical interpretations in the light of other relevant facts of this study the following conclusions were drawn:

1. The research work revealed that majority (69 percent) of the rural women had low to medium communication exposure while only 31 percent of the rural women had high exposure on various communication media. For increasing homestead vegetable production it is necessary to have better communication exposure of the women for successful operation of various farming practices. Therefore, the findings lead to the conclusion that the rural women had no sufficient communication exposure, which might result poor yield from homestead vegetable cultivation.

2. As regards interpersonal communication exposure of the rural women, it was found that individual media such as experienced women and neighbor were mostly used by the rural women. Radio and television from mass media and group discussion from group media were more used by the rural women regarding homestead vegetable cultivation. Therefore, it may be finalized that the women were mostly exposed to localite sources than those of the cosmopolite sources.

3. Findings of this study showed that very few had contact with Newspaper and agricultural printed agricultural materials. This may be due to the reason that the newspaper and printed materials may not be available or if available the women could not afford it or if could afford, no culture has been developed in the rural area for reading newspaper and agricultural printed material by the women. Therefore, it may be concluded that the women had a great lacking of coverage of information on vegetable cultivation activities because of poor exposure of printed media.

4. Education of the rural women had positive and highly significant relationship with their communication exposure. This implies that the increase of level of education of the rural women, their communication exposure regarding homestead vegetable cultivation activities also increased. This means that the more the education of the rural women the more exposure of women towards communication media.

5. Land size of the rural women had positive but no significant relationship with their communication exposure. This implies that with the increase of land size of the rural women, their communication exposure regarding homestead vegetable cultivation activities also increased.

6. Vegetable cultivation experiences the rural women had negative but highly significant relationship with their communication exposure lead to the conclusion that the communication exposure helps the women to be more experienced toward homestead vegetable cultivation activities at young stage but later they had no available time to with media.

7. Homestead vegetable cultivation knowledge of the rural women had not only a positive but also highly significant relationship with their communication exposure regarding homestead vegetable cultivation. This indicates that increase of homestead vegetable cultivation knowledge of the rural women, their communication exposure was also increased. The findings lead to the conclusion that communication exposure of the rural women improves their level of homestead vegetable cultivation knowledge resulting better output from homestead vegetable cultivation.

8. Organizational participation of the rural women had a positive and highly significant relationship with their use of communication media in receiving information on homestead vegetable cultivation. The finding leads to the conclusion that the rural women with more organizational exposure are expected to have more interest in using different communication media related to vegetable homestead cultivation. Therefore organizational participation enables women to broaden their mental make-up as well as decision-making abilities towards the choosing of appropriate communication media for getting useful information.

9. The statistical analysis revealed that the characteristics such as family size, land size homestead gardening area and time spent in gardening activities of the rural women had no significant relation with their communication exposure. This means that the characteristics were independent of the communication exposure of the rural women.

5.3 Recommendations

5.3.1 Recommendations for policy implications

On the basis of the findings and conclusions of the study, the following recommendations for policy implication are made:

1. The study reveals that the rural women with better organizational participation having opportunity to expose themselves with various communication media. Therefore, group approach of extension could effectively be used by different extension agencies in disseminating information. Extension agent has an example such to farm listening class of radio, TV etc.

2. The knowledge of the rural women on agriculture showed a positive significant relationship with their use of communication media. Extension agents should select those people considering the aforesaid characteristics as far as possible while conducting extension activities in the field.

3. Considering the entire situation it is recommended that care should be taken by the Department of Agricultural Extension (DAE) and other development agencies in handling communication media with the rural women. It should be remembered that failure of one effort may lead to reduce credibility of that communication media which may take long time to overcome psychological barriers to use of that communication media.

5.3.2 Recommendations for further study

1. It is strongly felt that study of this nature be replicated in other parts of Bangladesh. This recommendation is made because the study area at Nangalkot upazilla in comilla district is not typical of the situation in the entire country.

2. This study investigated the effects of nine characteristics of the rural women on their use of communications media in receiving information on homestead vegetable cultivation. Therefore, it is recommended that further study should be conducted involving other characteristics of the rural women which influence the communications exposure of the rural women regarding homestead vegetable cultivation

3. Similar study may also be replicated in future for studying any change in case of communications exposure of the rural women regarding homestead vegetable cultivation

CHAPTER 6

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APPENDIX-A

**Department of Agricultural Extension & Information System
Sher-e-Bangla Agricultural University
Sher-e-Bangla Nagar, Dhaka-1207**

An English version of interview schedule on “Communication Exposure of Rural Women Regarding Homestead Vegetable Cultivation.”

Sl. No. :

Name of respondent:

Husband's Name :

Village :

Union :

Upazilla :

District. :



(Please furnish the following the information)

1. Age

How old are you? : Years

2. Education

What is your level of education?

a) Can't read and write.....

b) Can sign only.....

c) I studied up to..... Class

3. Family Size

Please mention the total number of your family members.

Male : nos.

Female nos.

Total nos.

4. Land size

Please indicate the area of land in your size.

Sl. no.	Type of land	Land area	
		Local unit	Hectare (ha)
1.	Homestead area (including ponds)		
2.	Own land under cultivation		
3.	Land taken from others on borga		
4.	Land given to others as borga		
5.	Land taken from others as lease		
6.	others		
Total			

5. Homestead vegetable cultivation area :.....(acre)

6. Vegetable cultivation experience

Please indicate how many years you are actively involved with homestead vegetable cultivation activities? ----- Years.

7. Time spent in vegetable cultivation

How many hours in a day (24 hours) you have spent for gardening activities?
----- Hours.

8. Knowledge on Homestead Vegetable cultivation

Please answer the following questions:

Sl.No.	Question	Score assigned	Score obtained
1.	Name two very nutritious vegetable.	2	
2.	Name two summer vegetable.	2	
3	Name two fruit used as vegetable.	2	
4.	Name two winter vegetable.	2	
5.	Mention is the time for preparing land for winter vegetable.	2	
6.	Indicate two symptoms of mosaic disease of bean.	2	
7.	Name two variety of Brinjal.	2	
8.	Name two important disease of chilli.	2	
9	Mention the symptom of attack by aphid.	2	
10.	Name two disease of cucumber.	2	
11.	Name two IPM technique for controlling insect pest of vegetables.	2	
12.	Indicate one symptom of attack by fruit and shoot borer of brinjal.	2	
13.	Mention two advantages of applying organic manure to land.	2	
14.	Name two chemical fertilizers	2	
15.	Name two green manuring plants.	2	
16.	Indicate two major elements for compost preparation.	2	
17.	Name two symptoms of mosaic disease of lady's finger.	2	
18.	Name two years round vegetable	2	
19.	Name disease of cabbage.	2	
20.	What is the time for preparing land for red amaranth?	2	
	Total		

9. Organizational Participation

Please mention the extent of participation in the following institution

Sl. No.	Name of Organization	Duration (years)	Participation			
			officer	Executive committee member	Ordinary member	No participation
1.	NGO organized society					
2.	Women society					
3.	Union Perished					
4.	Others					



10. Please indicate your extent of use of the following communication media in receiving information on vegetable cultivation (put tick mark) in homestead area:

Communication media	Name of the source of information	Extent of use of the communication media			
		Frequently (3)	Occasionally (2)	Rarely (1)	Not at all (0)
Individual	Sub Asst. Agricultural Officer	At least 1 Time/month	At least 1 Time/two month	1-4 Time/year	0 Time/year
	Experienced women	5 times/week	2 times/week	2 times/month	0
	Relatives	3 times/week	2 times/two week	2 times/month	0
	Neighbors	6 times/week	3-5 times/week	At least 1time/week	0
	NGO worker	4 or more Times/month	1-3 Time/month	At least 1 Time/year	0
Group	Group discussion	3 or more Times/year	1-3 Time/year	At least 1 Time/year	0
	Training program	3 Times/year	2 Times/year	At least 1Time/year	0
	Result demo. Meeting	3 Times/year	2 Times/year	At least 1 Time/year	0
	Method demo.	3 Times/year	2 Times/year	At least 1 Time/year	0
Mass	Radio	3 times/week	2 times / week	At least 1 time / week	0
	Agril. printed materials	1 time / month	1 time /two months	At least 1 time /six months	0
	Television	4 or more Times/week	2-3 Times/week	At least 1 Time/week	0
	Newspaper	6 Times/week	2-5 Times/week	At least 1Time/week	0
Total =					

Signature of investigator

Date:

APPENDIX-B

	X ¹	X ²	X ³	X ⁴	X ⁵	X ⁶	X ⁷	X ⁸	X ⁹	Y
X ¹	1									
X ²	-0.483**	1								
X ³	0.625**	-0.263**	1							
X ⁴	0.199*	-0.048	0.083	1						
X ⁵	-0.013	0.005	-0.123	0.660**	1					
X ⁶	0.896**	-0.425**	0.584**	0.170	0.005	1				
X ⁷	0.155	-0.039	0.278**	-0.088	-0.200*	0.089	1			
X ⁸	-0.234*	0.376**	-0.256*	-0.051	0.170	-0.357**	-0.051	1		
X ⁹	-0.131	0.428**	0.044	-0.051	-0.025	-0.227*	0.216*	0.428**	1	
Y	-0.249*	0.598**	-0.163	0.105	0.100	-0.325**	0.077	0.481**	0.523**	1

NS = Non-Significant

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

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

X ¹ =	Age	X ⁶ =	Vegetable cultivation experience
X ² =	Education	X ⁷ =	Time spent in vegetable cultivation
X ³ =	Family Size	X ⁸ =	Knowledge on homestead vegetable cultivation
X ⁴ =	Farm Size	X ⁹ =	Organizational participation
X ⁵ =	Home stated gardening area	Y =	Communication exposure of rural women regarding homestead Vegetable cultivation

APPENDIX-C

Communication media	Expression of respondents				Media Use Index (MUI) MUI = \sum Expression of respondents \times No. respondents	Rank Order
	No. respondents	Frequently (3)	Occasionally(2)	Rarely (1)		
Experienced women	60	30	10	-	250	1
Neighbors	50	30	20	-	230	2
Radio	40	30	30		210	3
Television	25	30	15	30	150	4
Relatives	40	10	5	45	145	5
Group discussion	15	20	45	20	130	6
Sub Asst. Agricultural Officer	10	20	25	45	95	7
NGO worker	10	15	25	50	85	8
Result demonstration	7	14	21	48	70	9
Method demonstration	5	15	20	60	65	10
Training program	5	14	17	64	60	11
Printed materials	4	12	14	70	50	12
Newspaper	2	10	12	74	38	13

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Sign: *[Signature]* 28/01/14