

**USE OF COMMUNICATION CHANNEL BY THE WOMEN BENEFICIARIES
OF BRAC IN INCOME GENERATING ACTIVITIES**

**A Thesis
By**



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**MASTER OF SCIENCE
IN
AGRICULTURAL EXTENSION**

**Department of Agricultural Extension
Hajee Mohammad Danesh Science and Technology University
Dinajpur**

June 2014

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ABSTRACT

USE OF COMMUNICATION CHANNEL BY THE WOMEN BENEFICIARIES OF BRAC IN INCOME GENERATING ACTIVITIES

The main purpose of this study was to determine the use of communication channel by the women beneficiaries of BRAC in respect of vegetable cultivation, livestock production and fish culture and to explore its relationships with their selected characteristics. Data were collected through personal interviewing by using interview schedule from a sample of 83 women beneficiaries selected by multi-stage random sampling procedure from three unions of sadar upazila under Dinajpur district during 15 March to 16 April 2014. The use of communication channel was determined on three dimensions viz. contact, interaction and application and finally the overall use of communication channel by the women beneficiaries was determined. Overall use of communication channel could range from 15 to 74, against the possible score of 0 to 90. The highest proportion (39.8 percent) of the women had medium use of information channel compared to 37.3 percent had high use and 22.9 percent had low use. The findings revealed that more than three-fourths (77.1 percent) of the farmers had medium to high use of information channel in receiving agriculture, livestock and fisheries related information. Among the ten selected characteristics of the farmers five like educational qualification, daily time use, training received, attitude towards NGOs and participation in income generating activities showed significant positive relationship with their use of communication channel while their age, family size, annual income and credit received had no relationships.

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CHAPTER 1

INTRODUCTION

1.1 General Background

Traditionally and predominantly Bangladesh is agriculture based country and about 25.7 percent of population is engaged in agriculture for their livelihood (BBS, 2012). Bangladesh is the largest deltaic country with a population of 144.04 million with an area of 1, 47,569.06 square kilometers. Population density is 1015 persons per square kilometer. The per capita annual income is about US \$ 923 and its people have a life expectancy of 69 year (BBS, 2013). According to 2012-2013 Fiscal Year, agriculture represents directly and indirectly almost 18.70 percent of the country's gross domestic product (GDP) and 47.3 percent of its employment opportunity.

Bangladeshi like most of the developing countries has been engaged in economic and social development programs, so as to pull the masses of people out of the circle of poverty and ignorance. In the development process, particularly in the less developed countries, rural sector plays a vital role because most of the people in these countries live in rural areas. Women in rural Bangladesh have always been intimately involved in the agricultural production activities. The majority of women in Bangladesh work for long hours and contribute significantly to agricultural production and family income, although this fact is not generally recognized and hence, is not reflected in official statistics (Rashid, 2001). According to some historians, women first initiated agricultural practices. They first domesticated crops and developed the art and sciences of farming. They were pioneers in plant domestication and planned agriculture (Childe, 1971). Thus, the development of agriculture mostly dependent on the use of modern technologies by the farmers. The development of agriculture is also dependent on the use of communication media by the women through receiving modern agricultural technologies. Women constitute almost half of the total population of the country. But it is a matter of regret that rural women are economically dependent and vulnerable, educationally backward as well as politically and socially disadvantaged (Sarker and Rahman, 2007). Though, women are playing very important role in both at home and outside but still disparities exist between men and women in education, health, employment and income opportunities, control over assets, personal security and participation in the political process (Hoque and Itohara, 2008).

Economic independence is one of the means to empower the women. The existence of women in a state of economic, political, social and knowledge disempowerment is known to be a major hindrance to economic development. Income is the most important factor for human well being as well as the living standard, health status, social and political power (Mondal *et al.*, 2009). Therefore, many rural women are presently engaged in income generating activities by the assistance of NGOs in their development activities. Among these activates, microfinance program creates income-earning opportunities for rural poor women

by providing small loans to them. With the loans provided, rural women engage themselves successfully in various incomes generating activities to earn money. Participation of rural women in Bangladesh Rural Advancement Committee (BRAC) activities is expected to bring about positive impact on the lives of the participants (Rashid, 2001).

After the independence of Bangladesh, activities of the Non-Government Organization (NGOs) have been started with relief work in the country. With the passage of time the NGOs have extended their activities in working areas by providing credit to the landless marginal women and so for increasing farm productivity business as well as their living standard. Bangladesh Rural Advancement Committee (BRAC), an international development organization based in Bangladesh is the largest non-governmental development organization in the world. BRAC was initiated in 1972 by Fazle Hasan Abed at Sulla in the district of Sylhet as a small-scale relief and rehabilitation project to help returning war refugees after the Bangladesh Liberation War of 1971. In nine months, 14 thousand homes were rebuilt as part of the relief effort and several hundred boats were built for the fishermen. Medical centers were opened and other essential services were ensured. At the end of 1972, when the first phase of relief work was over, BRAC turned towards long-term development needs and re-organized itself to focus on the empowerment of the poor and landless, particularly women and children. BRAC concentrated on village development programs that included agriculture, fisheries, cooperatives, rural crafts, adult literacy, health and family planning, vocational training for women and construction of community centers.

Income generating activities are considered as those initiatives that affect the economic aspects of people's lives through the use of credit, technology and training, which are being fulfilled by the three programs like agriculture, microfinance and enterprise (Rashid, 2012). BRAC believes that the use of communication media of women beneficiaries is important for improving their livelihood. Accordingly, BRAC organizes the poor women and provide them credit, training and imparts the knowledge of communication media and other necessary support through village organizations (VOs).

1.2 Importance of the Study

In the economic development of Bangladesh the role of women cannot be over looked. Many reports show that women contribute more labour to agriculture than man; women are involved in different income generating activities like *katha* sewing, pre and post harvest of agricultural product etc. Women are heavily represented among the poor and landless families. Limited job opportunity in various sectors, low wages, shortage of capital, lower level of working skill, low level of literacy, contribute to low productivity of the farming families. In Bangladesh, the role of women is strongly affected by social and religious norms. The restrictions constrain women involvement in outside home. A large number of NGOs are now working in the country to improve the position of women in our society and in this connection. BRAC plays an important role in employing and empowering the women and their use of communication channels to get farming IGAs information.

The landless women who are forced to live in and exploited condition in the rural society, are the target group of BRAC. Many sectoral activities like dairy, poultry, fisheries, social forestry, vegetable cultivation, sericulture, carpentry etc. are being attempted by the BRAC in order to build capability of the rural women. All these activities are important income generating programs for the rural women in order to boost up their living status.

The main focal point of the study is to determine the use of communication channels by the women beneficiaries of BRAC in IGAs. The finding of the study may provide valuable guidelines for the policy maker of the BRAC and other government and non-government organizations for improved program management for the upliftment of rural women have implication for other area of the country.

1.3 Statement of the Problem

As women constitute half of the population a country, active participation of them is of crucial importance for the success of any development program Women are the inconvenient class of the society. For many landless families the homestead is the only land resources for production. But due to inadequate knowledge, skill and opportunity, they are unable to participate in IGAs and cannot earn maximum productivity from homestead resources. BRAC mostly deal with landless women, the detrimental class of the society. Many activities like homestead gardening, crop cultivation, livestock rearing, mat making etc. have been considered as IGAs for women in order to receive returns and achieve empowerment. The major objectives of these activities are i) to improve food consumption and nutrition, ii) to generate income and employment for the women, iii) to increase production and vi) to promote decision making ability of the rural women.

Existing social system, illiteracy and limited facilities for improving knowledge and skill of the women beneficiaries along with inadequate employment opportunities have blocked them in the participation of development activities. So, it is necessary to provide them ample knowledge and training in order to provide them to perform their job in better way in the various field of development activities especially IGAs on homestead agricultural production. Very few researchers have so far been conducted on the use of communication channels by women in Bangladesh. Therefore, the researcher undertook the study entitled, "Use of Communication Channel by the Women Beneficiaries of BRAC in Income Generating Activities". However, the purpose of the study was also to have answers to the following research questions:

- Which characteristics of the women beneficiaries of BRAC are related to their use of communication channels in income generating activities?
- At what extent communication channel are used by the women beneficiaries of BRAC in respect of vegetable cultivation, livestock production and fish culture?
- What are the relationship between selected characteristics of women beneficiaries and their use of communication channel in IGAs?

1.4 Objectives of the Study

Keeping in view of the above circumstances, the present study was undertaken the following objectives:

1. To assess the personal selected characteristics of the women beneficiaries of BRAC. The selected characteristics included: age, educational qualification, family size, annual family income, daily time use, credit received, training exposure, attitude towards NGOs, participation in income generating activities and innovativeness.
2. To determine and describe the use of communication channel by the women beneficiaries of BRAC in IGAs.
3. To explore the relationship between the selected characteristics of the women beneficiaries of BRAC with their use of communication channel.

1.5 Assumptions of the Study

According to Goode (1945), "an assumption is the supposition that an apparent fact or principle is true in the light of available evidence". The researcher made the following assumptions while undertaken the study:

1. The rural women included in the sample were capable of furnishing proper responses to the questions included in the interview schedule.
2. The responses furnished by the respondents were reliable and valid.
3. The researcher who acted as interviewer was well adjusted to the social and cultural environment of the study area. Hence, the data collected by the researcher from the respondents furnished their correct opinions without any hesitations or biasness.
4. The items, questions and scales used for measuring the variables were reasonably adequate to reflect the respondents' real queries.
5. The sampling procedures followed for this study, analysis of data and interpretations etc. were free from any biases.

1.6 Limitations of the Study

In order to make the study meaningful and manageable from the point of view of the academic research, it was necessary to impose some limitations:

1. Since the findings were based on the ability of the respondents to recall and on the verbal opinions expressed by them, the study was confined to both their ability to recall and also their sincerity and honesty in providing the needed information.
2. The study was confined to one union under sadar upazila of Dinajpur district.
3. There are several communication sources from which the women beneficiaries may receive their farm information but in the present study only 10 communication sources were taken into consideration.
4. There were many women in the study area but only the women involved in BRAC income generating activities (IGAs) were considered as is ample for this study.

5. There are many characteristics of the women beneficiaries but only ten of them were selected for investigation in this study.
6. The facts and figures collected by the researcher applying to situation perverting during 15 March to 16 April 2014.

1.7 Definition of Important Terms

For the purpose of clarity, certain terms frequently used throughout the entire study are defined and interpreted as follows:

Communication is a process by which two or more people exchange ideas, facts, feelings or impressions in way that each gains a common understanding of the meaning, intent and use of the message.

Communication channel refers to the channel through which various information are diffused to the farmers about selected technologies.

Age is defined as the period of time in years to the time of interview of an individual.

Education refers to the number of years, a women attended in school.

Family size refers to the actual number of members in the family of the farmers including him, his wife spouse children and other dependents that live and eat together in a family unit.

Annual family income is defined as the total earning of an individual and the members of his families both from agriculture and other sources (business, service and other sources).

Daily time use refers how many hours of a day she kept herself involved in selective seven activities. These activities are Agricultural product processing, homestead plantation and vegetable cultivation, childcare and education, livestock management, cooking, cleaning of homestead and cloth washing.

Credit received of a respondent was defines as the degree to which her credit requirement was fulfilled by the amount of credit actually received by her during last year.

Innovativeness is the degree to which an individual is relatively earlier in adopting new ideas than the other members of the social system.

Income generating activities will be considered those initiatives that affect the economic aspects of people's lives through the use of economic tools such as credit.

Training exposure refers to organized instruction aimed at improving knowledge, skill and attitude of an individual so that he/she can perform his/her functions and responsibility more effectively.

Attitude means one's feelings, belief and action towards an object.

Non-Government Organization (NGO) is an organization developed and managed by private initiatives.

BRAC, an international development organization based in Bangladesh, is the largest non-governmental development organization in the world, measured by the number of employees and the number of people it has helped, as of November 2012. Established by Sir Fazle Hasan Abed in 1972 soon after the independence of Bangladesh, BRAC is present in all 64 districts of Bangladesh as well as in Afghanistan, Pakistan, Sri Lanka, Uganda, Tanzania, South Sudan, Sierra Leone, Liberia, Haiti and the Philippines as of 2012. BRAC employs over 100,000 people, roughly 70 percent of who are women, reaching more than 126 million people. BRAC maintains offices in 14 countries throughout the world, including BRAC, USA and BRAC UK. BRAC has organized the isolated poor and learned to understand their needs by finding practical ways to increase their access to resources support their entrepreneurship and empower them to become agents of change. Women and girls have been the focus of BRAC's anti-poverty approach; BRAC recognizes both their vulnerabilities and thirst for change.

CHAPTER 2

REVIEW OF LITERATURE

The study is mainly concerned with the factors contributing to use of communication channel by the women beneficiaries of BRAC. A glance of the literature available revealed that only limited number of studies has been carried out on use of communication channel in home and abroad. However, an attempt has been made to review the literature, which are meaningful and have relevance to this study. The critical review presented in the following three sections.

2.1 General Review on Use of Communication Channel

Sharmin (2013) reported that the majority of the respondents (52 percent) had medium use of communication media and 48 percent having high use of communication media.

Sneha *et al.* (2012) found that, 44 percent of the variation in listening behavior was due to media participation. Media participation and material possession contributed for 54.60 percent variation, media participation, material possession and extension participation together contributed for 60.30 percent of variation. Finally, all the three aforesaid variables and the media utilization together contributed 61.7 percent of variation in listening behavior.

Hossain *et al.* (2011) found that the highest proportion (66.67 percent) of the rice growers were occasional user and 33.33 percent were frequent user of communication media while none was found as a regular user of communication media in receiving information on improved rice production technologies. They also revealed that progressive farmers were used as the communication media to the highest extent and it was closely followed by the neighbor, friend, Sub-Assistant Agriculture Officer, relative, seed dealer, fertilizer dealer and pesticide dealer.

Adam (2011) found that information seeking behavior of the rural women was mainly informal. They align more to information gotten from friends, relatives, husbands, sons and daughters, and market women.

Hossain (2010) reported that the proportion of the farmers having rarely and occasionally use of communication media were 91.11 percent and 8.89 percent respectively.

Deribe (2007) observed that knowledge of dairy farming practice of women farmers was significantly influenced by communication skill, interpersonal trust, social participation, total annual income, extension participation, empathy of respondents and access to credit.

The major constraints identified in agricultural information network of farm women were low participation of women in extension programs; poor access to credit; absence of market information and alternative market for products; extension methods contribute less as source of information.

Okwu *et al.* (2007) in their study observed that 66 percent of the respondents listen to agricultural programs offered on radio Benue and 42 percent of the listeners indicated that the programs were relevant to their agricultural information needs. Majority of the respondents admitted that they gained some new knowledge through listening to the programs.

Prathap and Ponnusamy (2006) found that all of the respondents had gained 'adequate' knowledge after exposure to television, newspaper and Internet, while 97 percent of those exposed to radio had gained adequate knowledge after exposure. Traditional media were found to have a slight edge over new media in terms of influencing knowledge gain. Television was found to be the most effective treatment, followed by newspaper, internet and radio.

Daboral *et al.* (2006) found that personal localite (Peers), personal cosmopolite (formal) and impersonal cosmopolites (mass media) were their order of performed communication sources. Information received was processed with peers, stored in classified notebooks and share with fellow farmers.

Irfan *et al.* (2006) observed in their study that 97.5 percent, 91.7 percent, 64.2 percent and 51.7 percent farmers regarded their fellow farmers, pesticide agencies, television, and extension field staff, respectively as their major sources of agricultural information. Among the mass media, the farmers ranked television, radio and print media as 1st, 2nd, and 3rd, respectively, in terms of effectiveness. Majority of the farmers did not listen/watch agricultural shows on radio/television regularly. It is suggested that majority of the respondents do not get much information through television and radio.

Singh and Dhillon (2006) reported that the majority of the respondents attended training programs, consulted farm literature, attended expert lectures and farmer fairs, and consulted university scientists to obtain the latest agricultural information. Very few respondents frequently listen to farm radio broadcasts and view farm telecasts. Majority of the respondents evaluated the information before dissemination to farmers, compared it against their past experience and discussed it with colleagues and specialists, laid out demonstrations, and considered the socio-economic conditions of the area. The various information transformation methods used by the respondents included translating information into local languages, writing features for newspaper/magazines, preparing leaflets/handouts for distribution among farmers and writing success stories of progressive farmers. In terms of information output, it is revealed that, on the average, one ADO met 305 farmers, attended 65 office calls, organized 32 group meetings, 74 field visits, one exhibition, four method demonstrations, two result demonstrations, and six field days and training camps; and delivered 22 lectures.

Sarker (2005) revealed that majority (62 percent) of the respondents was frequent users and 30 percent were occasional and 8 percent were regular users of communication media.

Islam (2005) in his study concluded that 40.77 percent of the respondents had no use, 35.92 percent had low use, 18.44 percent had medium use and only 4.85 percent had high use of printed materials in receiving farm information.

Orin *et al.* (2005) conducted a study on impact of information and communication technologies on agriculture Estonia and found that 95.8 percent of the farmers use mobile phone in receiving farm information.

Saha *et al.* (2005) in their study observed that 'prani-bandhu' was the most frequently used information source for resource-poor farmers. In case of resource-rich farmers, veterinary officers ranked first. Extensionists stated that direct contact with farmers was the most important method for disseminating information. Some of them used to maintain regular contact with veterinary personnel to get information on improved dairy practices. Dairy researchers indicated their preference for print media in disseminating research results and they found extension programs as the most important source of information on dairying as a base for research.

Alam (2004) in his study concluded that majority (48 percent) of the farmers belonged to moderately effective category, while 37 percent to very effective category and rest 15 percent less effective category in respect of timeliness and scope of application. Thus about 85 percent of the farmers opined that farm information received from printed materials as effective to very effective.

Haque *et al.* (2004) in their study 24 information sources were arranged in rank order on the basis on their Source Use Index (SUI) and observed neighbours were identified as the highest used information source (SUI=524), and it was closely followed by result demonstration, BS, Bangladesh Beter, tea stall, TV, friends, AEO and UAO, relatives, progressive farmers, training and so on. The least use information source was documentary movies (SUI=18). Ullah (1996) also found that BS was the highest use information source and it was followed by radio, neighbours and friends. But, Rahman (1996) reported that friends and relatives were used to the highest extent and it was followed by neighbours, radio and BSs. They also observed in their study that the use of individual sources ranked as first followed by group sources and mass sources.

Farouque (2004) in his study observed that the farmers had the highest contact with the neighbours, friends and relatives, and ideal farmers. Little less than three-fourths (58 percent) of the farmers had medium contact while 32 percent had low and only 10 percent had high contact.

Kamran *et al.* (2004) in their study observed that more than four-fifths (80 percent) of the farmers reported that interpersonal localite sources like feed and other input dealers were the major sources of information for all technical matters. About three-fourths (73.33 percent) of the farmers indicated that personal localite sources like fellow farmers were their information sources. Among the information sources available Brakish water Fish Farmer Development Agency and Marine Product Expert Development Authority were the better utilized sources

(65 percent) of the respondents. More than one-third (36.97 percent) of the respondents revealed that mass media were their sources of information. About one-fifth of the respondents (23 percent and 20 percent) reported that consultants and research institutions were their information sources.

Mortoza *et al.* (2004) in their study found that the highest proportion (51.7 percent) of the group members had low use of information sources. The rest (48.3 percent) of the group member had very low and medium use of information sources. In order to quantify the extent of use of information by the respondents, they have been arranged according to the frequency of their use of selected 15 information source. Most of the respondents used the sources of information from 0 to 2 frequencies except BS or inspector or input dealer. Majority of the group members had very low contact with the upazila agricultural officer, upazila co-operative officer, demonstration meeting, training meeting, TV, newspaper and agricultural bulletins. However, most of them used the fertilizer and pesticide dealers two times per month. They also observed that maximum frequency of use of sources of information by group members was with the fertilizer and pesticide dealers and minimum use of demonstration meeting.

Robert and Dennis (2004) found that modern/exotic models of information transfer based on textual media and ICT exhibit less impact on the entrepreneurs' information needs and use at macro levels because of poverty, illiteracy and poor information infrastructure. It is however noted that most 'elite' models share a platform with information behavior of entrepreneurs at the micro levels. The study concludes that an appropriate model for information behavior for the information poor community must be grounded on oral traditions and indigenous knowledge and be sensitive to poverty, infrastructure and illiteracy. Recognition is also made of the need for information repackaging and the use of appropriate media for information provision.

Prameela and Ravichandran (2004) in their study found that majority of the farm women regularly contacted Assistant Agricultural Officers (75.33 percent) and Agricultural Officers (67.33 percent). They also found that neighbours (78.67 percent), friends (73.33 percent), progressive farmers/farm women (23.33 percent), contact farmers (13.33 percent) and input dealers (13.33 percent) were the popular channels of communication. On the other hand, 28.37 percent of the respondents frequently listen to radio program and 51.34 percent of them had utilized it sometimes. TV was found to be utilized by 28.33 percent of the farm women for getting agricultural information regularly and 44.66 percent of them utilized sometimes only. Printed materials were frequently used among the respondents as a channel of communication which is evident from the fact that nearly one-fifth (19.33 percent) had utilized these frequently and 24.00 and 23.00 percent of the respondents reported their use sometimes and rarely respectively.

Nuruzzaman *et al.* (2003) reported that in respect of using different mass media television securing highest score followed by radio, folk song, agricultural fair, poster, newspaper, and leaflet/bulletin.

Anisuzzaman (2003) in his study concluded that neighbours, friends and relatives, and mass medium was used by 13.64, 15.60 and 16.01 percent of the farmers for getting information about recommended variety of rice, recommended dose of fertilized and plant protection measures respectively. Radio was used as a powerful medium for getting information. Progressive farmers and contact farmers were found as frequently used communication media. TV, result demonstration and printed materials were also use as important media for communicating agricultural information. But the least used media were newspaper and field tour.

Bordoloi *et al.* (2003) in their study observed that farmers in the progressive district perceived the agricultural scientist, radio and television as the most credible information sources; while farmers in the non-progressive district placed highest credibility to the agricultural scientist, demonstration and radio.

Mazher (2003) in a study in Pakistan reported that pamphlet, magazines and newspaper were suitable for dissemination of sugar cane production technologies.

Ponnusamy (2003) observed that personal localite channels such as friends and neighbour farmers (74.47 percent) and input dealers (89.36 percent) were the major source of information.

Anyanwu *et al.* (2002) in their study observed that women farmers preferred getting information through interpersonal sources such as friends, relatives, women cooperative societies and meetings organized for women farmers.

Ekoja (2002) in his study found that agricultural extension agents and contact farmers were the most preferred sources of communication, followed by radio, farmers' field days and extension publications were third and fourth, respectively, in terms of preference, while TV and film shows were the least preferred medium of communication. This low rating could be attributed primarily to the relative unavailability of TV in rural areas. It was predicted that this medium would gain in popularity as a source of communication once farmers were empowered economically and the infrastructure needed to receive television transmissions in their settlements was provided.

Rahman (2002_a) observed that the highest portion (39 percent) of the respondents were medium level viewer as compared to 17 percent high level viewer and 11 percent low level viewer. One-third of the respondents were found as non viewer. The study further revealed that appreciable portion of the farmers (40 percent) watched television program for one to two hours.

Rahman (2002_b) in his study found that among the 15 selected information sources, neighbour, radio, experienced farmers, TV, farm labourer, input dealer, Block Supervisors

were the major sources preferred by majority of the farmers for getting agricultural information. The major reasons of such preferences were competency of information, adequacy of information, timeliness of information, personal liking, attractiveness of source, incentive from source (seed, fertilizer etc.), credibility of source (safety, dynamisms, qualification etc) were opined by the farmers.

Egbule and Njoku (2001) in their study on mass media for adult education in Nigeria found that mass media have performed poorly in disseminating requisite agricultural information to farmers, although there is a positive collection between mass media usage and farm yield.

Thusoo and Sohi (2000) in their study found that a very large portion of the rice growers could not made any contact with extension personnel regarding their farm affairs. Similarly a majority of them was also poorly exposed to some electronic and print media as their source of farm information. There was no significant association of extension contacts and use of improved rice technology of the intended farmers. But exposure of the farmers to mass media was significantly associated to their use of rice technology i.e. seed rate, time of sowing and time of application of nitrogenous fertilizer.

2.2 Relationships between Selected Characteristic of Women and their Use of Communication Media in IGAs

2.2.1 Age and use of communication channel

Sharmin (2013) revealed that age of the respondent had negative significant relationship on the use of communication media by the fish farmers in commercial fish culture.

Akhter (2011) reported that a significant relationship existed between age of the farmers and their extent of use of information sources on small scale pond-fish culture. Young and middle age people are generally more respective to new ideas and practices. They are usually influential partner in making decision regarding farming affairs.

Alam (2004) found that the age of the farmers had negative and significant relationship with their use of communication media.

Miah (2002) found that the age of the respondents had positive and significant relationship with the flow of agricultural information.

The age of the farmers had no significant relationship with (i) communication behaviour (Giri, 2002), (ii) use of different extension media in receiving information for livestock management (Farouque, 2004), and (iii) use of printed materials (Islam, 2005).

2.2.2 Educational qualification and use of communication channel

Sharmin (2013) revealed that level of education of the respondent had significant relationship on the use of communication media by the fish farmers in commercial fish culture.

Akhter (2011) revealed that education of the pond fish farmers had significant positive correlation with their extent of use of information sources. Similar findings were also observed by Kashem and Jones (1988), Khan (1996), Saha (2003), Anisuzzaman (2003), Islam (2004), Alam (2004), Karim (2005), Islam (2009), Das (2009) and Hossain (2010) in their respective studies.

Sarkar (2005) concluded that education of the BRAC woman beneficiaries had no significant relationship with their extent of use of communication media in income generating activities. Similar findings were also observed by Khaton (2004).

The educational qualification of the farmers had negative relationship with impact of communication media (Barik, 2001).

2.2.3 Family size and use of communication channel

Hossain (2010) found that family of the farmers had no significant relationship with their extent of use of communication media. Similar findings were also observed by Sarker (1995), Islam (1998), Anisuzzaman (2003), Saha (2003), Alam (2004), Karim (2005), Sarkar (2005) and Akhter (2011) in their respective studies.

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

2.2.4 Annual family income and use of communication channel

Rashid (2012) found in his study that annual income had significant positive relationship on the use of communication sources.

Sharmin (2013) revealed that annual family income of the respondents had significant relationship on the use of communication media by the fish farmers in commercial fish culture.

Akhter (2011) revealed that there was a strong and highly significant positive relationship between the fish farmer's income from pond fish farmers and their extent of use of information sources. Similar findings were also observed by Uddin (1993), Islam (1998), Sarkar (2005), Das (2009), and Hossain (2010) in their respective studies.

Bhuiyan (1988) in his study observed that income of the farmers had no significant effect on the use of communication media. Similar findings were also observed by Nahar (1996), Anisuzzaman (2003), Nuruzzaman (2003), and Alam (2004), in their respective studies.

2.2.5 Daily time use and use of communication channel

Rashid (2012) found in his study that daily time use had significant positive relationship on the use of communication sources.

2.2.6 Credit received and use of communication channel

Rashid (2012) found in his study that credit received had positive significant relationship on the use of communication sources.

Sarkar (2005) in his study indicates that the credit availability of women beneficiaries had positive significant relationship with their use of communication media.

2.2.7 Training received and use of communication channel

Akhter (2011) revealed that there was no significant relationship between training received by the pond fish farmers and their extent of use of information sources.

Hossain (2010) in his study concluded that there was a significant and positive relationship between training on Rice-Cum-Fish culture and their extent of use of communication media by the farmers.

2.2.8 Attitude towards NGOs and use of communication channel

After through searching of literature, both home and abroad, no findings were found on this aspect. Hence, it was not possible on the part of research to put relationship in this context.

2.2.9 Participation in income generating activities and use of communication channel

Rashid (2012) found in his study that participation in income generating activities had positive significant relationship on the use of communication sources.

2.2.10 Innovativeness and use of communication channel

Islam (2005) in his study concluded that innovativeness of the respondent had positive significant relationship with their use of printed material.

Nuruzzaman (2003) found that innovativeness of the farmers had positive and significant relationship with their use of mass media.

Khan (1996) concluded that there was no significant relationship between innovativeness and use of information by resource poor farmers.

2.3 The Conceptual Framework of the Study

Conceptual framework is the foundation for understanding of the research problem and linkages among different variables. It helps as a guiding principle for analyzing the research problem. In this Chapter presents a brief description on concept of use of communication channel and establishes its cause-effect relationship with the selected characteristics of the respondents.

It is evident from the past studies that every occurrence of phenomenon is the outcome of a number of variables which may or may not be interdependent or interrelated with each other. In other words, no single variable can contribute wholly to a phenomenon.

Variables together are the causes and the resultant is effect and thus, there are cause-effect relationships everywhere in the universe.

The conceptual framework was kept in mind forming the structural arrangement for the dependent and independent variables. This study was concerned with the use of communication channel by the women beneficiaries of BRAC was considered as the dependent variable and the 10 selected characteristics of the women beneficiaries as independent variables. The dependent variable was measured in three dimensions (contact interaction and application), on the other hand, 10 communication channels namely husband, neighbours, relatives, BRAC group meeting, BRAC workers, BRAC officers, inputs dealer, SAAOs, mobile phone, and TV were included in this study. Opinion of an individual may be influenced and affected through interacting forces of many characteristics in her surroundings. It is impossible to deal with all characteristics in a single study. Information received by the women beneficiaries of BRAC is in IGAs. Based on these discussion and review of literature, the conceptual framework of this study has been formulated. (Figure 2.1). The solid one-way arrows indicate the cause-effect relationships which have been investigated and the broken one-way arrows indicate the relationships which have not been investigated in the present research work.

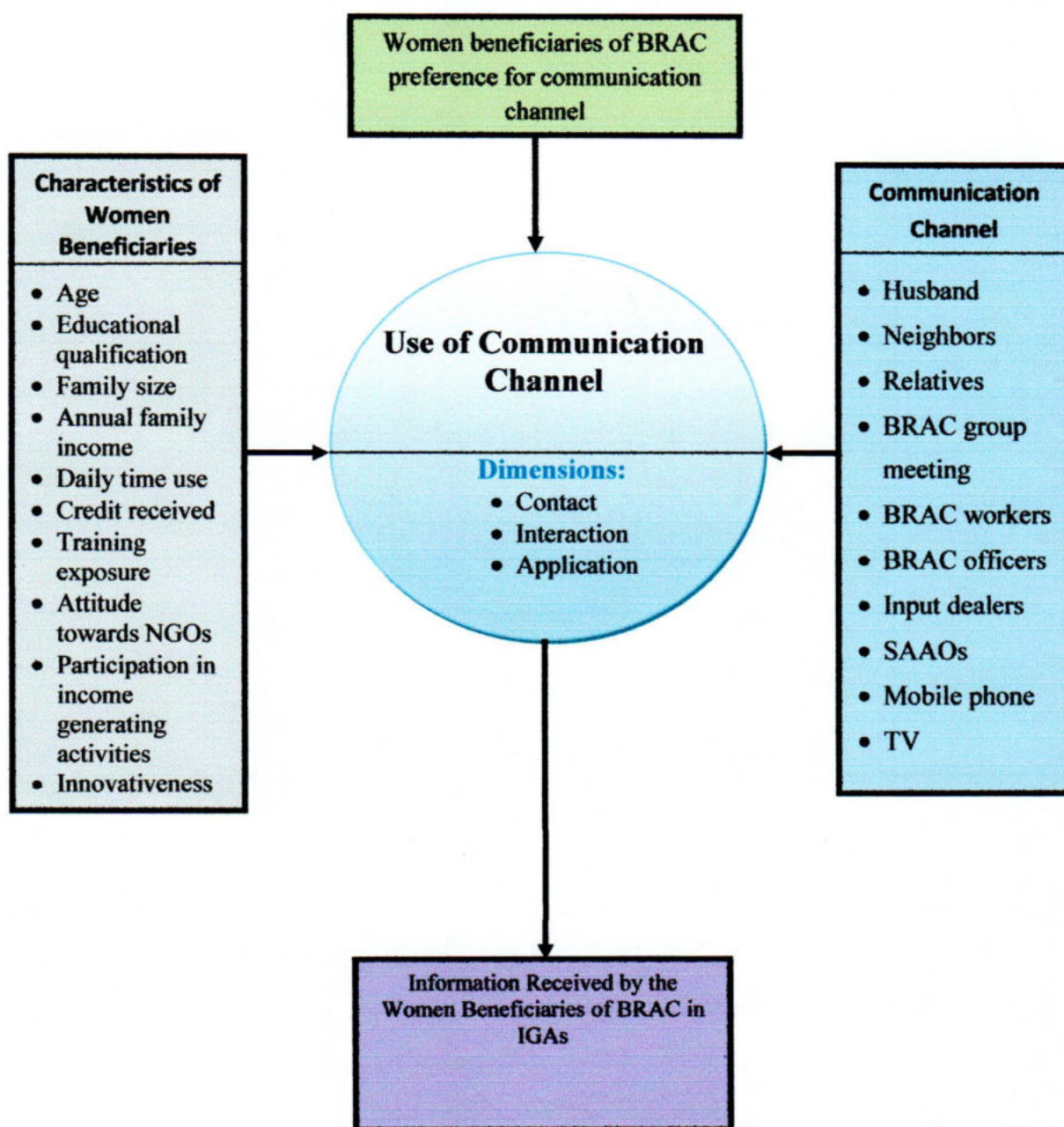


Figure 2.1 Conceptual framework of the study

CHAPTER 3

METHODOLOGY

Methodology deserves a very careful consideration in any scientific research. Importance of methodology in considering any research cannot be neglected. Methodology should be such as would enable and guide the researcher to collect information. Keeping this point in view, the researcher took paramount care for using proper methods in all aspects of this study. This Chapter contains the methods and procedures in the present study in accordance with the objectives.

3.1 Locale of the Study

For conducting this research work, Sadar upazila under Dinajpur district was selected purposively as the study area. Sadar upazila consists of 10 unions in which three unions namely Chehelgazi, Fazilpur and Shekhpura were selected randomly. This research aimed at the population of all the women beneficiaries of BRAC under these three unions. The selected unions are close enough to the sadar upazila and transport facilities are up to the mark. Communication of these unions with the upazila sadar and district is mostly facilitated with main road. A map of Dinajpur district including its upazilas as well as Bangladesh (inset) and a map of Dinajpur sadar upazila showing the sampling area (Figure 3.1 and 3.2 respectively).

3.2 Sampling Procedure

The total number of women beneficiaries (332) under these three unions were considered as the population of the study. A list of women beneficiaries was collected from the respective BRAC office. Out of this population, a sample of 83 women beneficiaries (25 percent) was selected by multi-stage random sampling technique. The union wise distribution of population and sample of the women beneficiaries are presented in Table 3.1

Table 3.1 Sampling plan for the study area

Name of the unions	Distribution of women beneficiaries		
	Population	Sample	Reserve list
Chehelgazi	112	28	3
Fazilpur	112	28	3
Shekhpura	108	27	3
Total	332	83	9

Due to the possibility of unavailability of the selected respondents, a reserve list of nine women (about 10 percent) was made to substitute the missing respondents in the original list (Table 3.1). All possible measures were taken to avoid bias in data collection.



Figure 3.1 Map of Dinajpur district including its upazilas (Bangladesh inset)



Figure 3.2 Map of Dianjpur sadar upazila showing the study area

3.3 Variables of the Study and their Measurement

A well-organized piece of research usually contains at least two important elements, viz. an independent variable and a dependent variable. An independent variable is that factor which is manipulated by the researcher in his attempt to ascertain its relationships to an observed phenomenon. A dependent variable is that factor which appears, disappears or varies as the researcher introduces, removes or varies the independent variable (Townsend, 1953). In any scientific research, the selection and measurement of variables constitutes a significant task. In this connection, the researcher reviewed the literature to widen her understanding about the nature and scope of the variables relevant to this piece of research.

3.3.1 Measurement of independent variables

The ten selected characteristics of the women beneficiaries of BRAC constitute the independent variables have been operationalized as follows.

3.3.1.1 Age

The age of a respondent was measured in terms of actual years from his birth to the time of interview. The respondents were asked to mention their age in terms of completed years. One score was given for one completed year of age (item No. 1, Appendix-A).

3.3.1.2 Educational qualification

Educational qualification was measured in terms of one year of schooling. One score was given for passing each level in an educational institution (Mondol, 2009). For example, if a respondent passed the final examination of class V her level of educational score was taken as five. If a respondent performed her name sign only, her educational score was given as '0.5'. If a respondent did not know how to read and write, her educational score was given as '0' (item No. 2, Appendix-A).

3.3.1.3 Family size

The family size of the respondent was determined on the basis of the number of members in her family including herself, husband, children and other dependents, living in a nuclear family. A unit score was assigned for each member of the family. If a respondent had five members in her family, her family size score was given as 5 (Fakir, 2008). The variable has been presented in item No. 3, Appendix-A.

3.3.1.4 Annual family income

The annual family income of a respondent was measured on the basis of her family's yearly earnings from crop, vegetable, dairy and poultry, tailoring, *katha* sewing, small business, and others. The annual family income was expressed in Taka. In measuring the variable, total earning in Taka of a respondent was converted into unit score. A score of one (1) was assigned for each '1000' Taka of the annual family income (item No. 4, Appendix-A).

3.3.1.5 Daily time use

Time use of a respondent was measured by a 4-point rating scale including the extent of use of time in respect of different activities in a day. Each respondent was asked to indicate the extent of time use by checking only one of the responses. The responses were quantified as 'sufficiently'=3, 'occasionally'=2, 'partially'=1, and 'nil'=0. The score obtained by a woman for all the items were added together to determine her time use in different activities. The daily time use score of a woman could vary from 0 to 21 while 0 indicated no time use and 21 indicated sufficient time use (item No. 5, Appendix-A).

3.3.1.6 Credit received

Credit received by the respondent was measured in terms of the amount of money received by her as loan from BRAC and other organizations under their specific terms and conditions. It was expressed in taka. A score of one (1) was given for one thousand taka (Akter, 2003). This variable appears in the item No. 6 in the interview schedule (Appendix-A).

3.3.1.7 Training received

Training received was determined by total number of days a respondent received training in her entire life. For example, if a respondent received three (3) days training then the score was given 3 and so on. This variable appears in the item No. 7 in the interview schedule (Appendix-A).

3.3.1.8 Attitude towards NGO

According to Thurstone (1946), attitude may be defined as "the degree of positive or negative effect associated with psychological object like symbol, phrase, slogan, person, institution, ideal or ideas towards which people can differ in varying degrees". Attitude towards NGO of the women beneficiaries was measured by using eight different statements. The statements have been selected based on perception about NGO activities by the women beneficiaries. The selected statements had either positive or negative view. The respondents given their opinion against 5-point rating scale as 'strongly agree', 'agree', and 'no opinion', 'disagree' and 'strongly disagree'. The scores were assigned as 5, 4, 3, 2 and 1 respectively for a positive statement and a reverse score was given for all negative statements. Thus, the possible score could range from 0 to 40, where 0 indicated strongly disagree or unfavorable attitude and 40 indicated strongly agree or highly favorable attitude towards NGOs. This variable appears in the item No. 8 in the interview schedule (Appendix-A).

3.3.1.9 Participation in income generating activities

In the study area women beneficiaries of BRAC has been participated in total nine items of two sub-sectors one is agricultural sector and another is non-agricultural sector of income generating activities (IGAs). Each woman had to respond in pattern of her participation in each of nine items of IGAs. It was done by responding to any one of the four responses such as frequently, occasionally, seldom and not at all against each activity. Weights assigned to the score of responses were 3, 2, 1 and 0 for frequently, occasionally, seldom and not at all respectively. The scores obtained by an individual respondent in different IGAs were added together to constitute personal participation score, which could range from 0 to 27, where 0 indicated no participation and 27 indicated high participation in IGAs (Islam, 2011). This variable appears in the item No. 9 in the interview schedule (Appendix-A).

3.3.1.10 Innovativeness

In the study area women beneficiaries of BRAC have been adopted a total 10 items of different technologies. Each woman had to respond in pattern of her adoption in each of 10 items of technologies. It was done by responding to any one of the four responses such as adopted within 1 years, within 1-2 years, above 2 years and do not use against each technology. Weights assigned to the type of responses were 3, 2, 1 and 0 for adopted within 1 years, within 1-2 years, above 2 years of hearing and do not use respectively. The scores obtained by an individual respondent in different technologies were added together to constitute innovativeness score, which could range from 0 to 30, where 0 indicated no innovativeness and 30 indicated high innovativeness. This variable appears in the item No. 10 in the interview schedule (Appendix-A).

3.3.2 Measurement of dependent variable

Use of communication channels by the women beneficiaries of BRAC was the dependent variable of this study. At first 10 communication channels were identified through literature review, frequent visit of the study area, discussion with the BRAC field workers and respective extension personnel, consultation with the supervisor and co-supervisor and finally all of the 10 channels were selected for the study. To measure the use of communication channels by BRAC women beneficiaries' three dimensions were identified first and after consulting with the supervisory committee, all three dimensions were selected for measuring the use of communication channels by the BRAC women beneficiaries. These three dimensions namely, (1) contact with the information sources, (2) Interaction with other channels on the received information and (3) application of the received information constituted the dependent variable. Each of the dimensions was measured separately with four point rating scale against ten selected communication channels.

3.3.2.1 Contact with information sources

In measuring the contact with information sources, scores were separately assigned for each of the information sources on the basis of the response of the women beneficiaries of BRAC in such a way that 0 (zero) was assigned for none, 1 for low, 2 for moderate and 3 for high contact. The contact with the information sources by the women was therefore determined by adding the score against the 10 selected information channels. Thus, the contact score of the women could range from 0 to 30, where 0 indicated no contact and 30 indicated highest contact with the information channels.

3.3.2.2 Interaction with other channels on the received information

In measuring the interaction with the channels on the received information, scores were separately assigned for each of the information channels on the basis of the response of the women beneficiaries of BRAC in such a way that 0 (zero) was assigned for none, 1 for low, 2 for moderate and 3 for high interaction. The interaction with the information channels by the women was therefore determined by adding the score against the 10 selected information channels. Thus, the interaction score of the women beneficiaries could range from 0 to 30, where 0 indicated no interaction and 30 indicated highest interaction with the information channels.

3.3.2.3 Application of received information

It was assumed that the application of information may be less than contact and interact with the information channels. In measuring the application of received information, scores were also separately assigned for each of the 10 information sources on the basis of application of received information in such a way that 0 (zero) was assigned for none, 1 for low (1-33 percent application), 2 for moderate (34-66 percent application) and 3 for high (67-100 percent application).

3.3.2.4 Overall use of communication channel

The overall use of communication channel by the women beneficiaries of BRAC was determined by above mentioned three dimensions. In this purpose assigned score of 10 information channel for each dimension is summated, so overall use of communication channel could range from 0 to 90, where 0 indicate none use of communication channel and 90 indicate highest use of communication channel.

3.4 Instrument for Data Collection

A structured interview schedule originally written in Bengali phonics (English version of the interview schedule is enclosed in Appendix A) was prepared to collect necessary and relevant information in accordance with the objectives of the study. Simple and direct questions were included to ascertain the opinion of the farmers regarding a number of aspects. Though different scales were employed, mainly the rated scale was developed to determine the use of communication channel by the BRAC women beneficiaries. The interview schedule was pre-tested with 20 farmers before the final interview of data collection. Necessary corrections, additions and modifications were made in the interview schedule based on the pre-test results. The modified and corrected interview schedule was finalized for the data collection.

The researcher made all possible efforts to establish rapport with the respondents so that they could feel free to respond to the questions and their answers were recorded sincerely. The respondents did not keep records of annual or daily transaction of many of their activities. Hence, it was very difficult to collect actual data and the researcher had to rely on the memory of the farmers.

3.5 Data Collection

The prime task in fulfillment of the objectives of the study was collecting data interviewing 83 women beneficiaries in the locale of research. Data for this study were collected by the researcher herself. To build rapport and motivation in the interview situations, the researcher endeavored to provide conditions that maximum trust maintained each respondent interest and minimized status differences. Data were collected during 15 March to 16 April 2014.

3.6 Analysis of Data

Data were systematically recorded, edited, compiled, arranged and tabulated for statistical analysis. The soft ware's SPSS were used to analyze the data. Descriptive statistical measures

such as range, mean, standard deviation and percentage were used to categorize the farmers. Pearson's product moment correlation co-efficient was used to examine the relationships of the characteristics (independent variables) of the respondents with their use of communication sources (dependent variables).

3.7 Hypothesis

According to Kerlinger (1973) a hypothesis is a conjectural statement of the relation between or more variables. Hypotheses are always in declarative sentence form and they are related, either generally or specifically from variables to variables. In broad sense hypothesis are divided into two categories: (a) Research hypothesis, and (b) Null-hypothesis.

3.7.1 Research hypothesis

Research hypothesis (H_a) states anticipated relationships between concerned variables. Based on review of literature, the research hypothesis was 'there were relationships between 10 selected characteristics of the BRAC women beneficiaries with their use of communication channel.

3.7.2 Null hypothesis

Null hypothesis (H_o) states that there is no relationship between the concerned variables. Therefore, the null hypothesis developed for this study was 'there were no relationships between 10 selected characteristics of the BRAC women beneficiaries with their use of communication channel.

CHAPTER 4

RESULTS AND DISCUSSION

The results of the study are presented in this Chapter with the help of proper statistical analysis along with their logical interpretations. This study has been conveniently presented in three sections according to the objectives. The first section deals with categories and description of the characteristics of the women beneficiaries of BRAC. The second section deals with determine of the use of communication channels by the women beneficiaries and the third section deals with the relationships between the selected characteristics of the women beneficiaries with their use of communication channels.

4.1 Characteristics of the Women Beneficiaries of BRAC

Women play an important role in the development process. Use of communication channel by an individual woman is determined to a large extent by her characteristics. Many characteristics of women beneficiaries may have influence to their use of communication channels. However, only 10 characteristics namely age, educational qualification, family size, annual income, daily time use, credit received, training received, attitude towards NGOs, participation in income generating activities and innovativeness are included in this study. It was assumed that use of communication channel by the women beneficiaries in IGAs would vary according to their various characteristics. The salient features of the different characteristics have been presented in Table 4.1

4.1.1 Age

An individual's age is one of the most important factors pertaining to his personality makeup, since his need and the way in which she thinks and behaves are all closely related to the number of years she has lived. It is a norm in most traditional (especially Muslim) cultures that people respect the elder people, seek advice from them and obey their decisions. The elders are important in many ways they have long experience in many spheres of life (Smith and Zope, 1970).

The age of the women beneficiaries of BRAC ranged from 19 to 60 years with a mean of 35.07 years and standard deviation of 8.67. For the purpose of analysis, respondents were classified into three categories as shown in Table 4.1.

Data contained in Table 4.1 indicates that the highest proportions (56.6 percent) of the respondents were middle aged compared to 22.9 percent young aged and 20.5 percent were old aged. It was found that functional participation of old women with regard to percentage was lower than the middle or young aged women.

The data indicates that participation in income generating activities with BRAC was mostly in the hands of the young and middle aged women beneficiaries. This is because the young and middle aged women are more active, energetic and eager in performing IGAs and working with group.

Table 4.1 Salient features of the different characteristics of women beneficiaries of BRAC

Characteristics	Scoring method	Range		Categories	Respondents		Mean	SD
		Possible	Observed		No.	%		
Age	No. of year	Unknown	19-60	Young aged (up to 26)	19	22.9	35.07	8.67
				Middle aged (27-44)	47	56.6		
				Old aged (>44)	17	20.5		
Educational qualification	Year of schooling	Unknown	0.5-14	Can sign only (0.5)	12	14.5	6.33	3.84
				Primary level (1-5)	22	26.5		
				Secondary level (6-10)	40	48.2		
				Above secondary (>10)	9	10.8		
Family size	No. of members	Unknown	2-14	Small (up to 3)	14	16.9	5.23	2.27
				Medium (4-8)	62	74.7		
				Large (above 8)	7	8.4		
Annual income	('000' Tk.)	Unknown	11.50-121	Low (up to 32)	17	20.5	55.49	23.29
				Medium (32.1-78)	49	59.0		
				High (above 78)	17	20.5		
Daily time use	Score	0-21	5-18	Short (up to 9)	18	21.7	12.12	3.03
				Medium (10-15)	56	67.5		
				Long (>15)	9	10.8		
Credit received	('000' Tk.)	Unknown	10-69	Low (up to 23)	16	19.3	35.80	13.12
				Medium (23.1-48)	50	60.2		
				High (above 48)	17	20.5		
Training received	No. of days	Unknown	0-10	No training (0)	52	62.7	1.45	2.56
				Short (up to 2)	10	12.0		
				Medium (3-5)	14	16.9		
				Long (above 5)	7	8.4		
Attitude towards NGOs	Score	0-40	8-38	Less favorable (up to 30)	4	4.8	34.25	1.98
				Moderately favorable (31-33)	19	22.9		
				Highly favorable (above 33)	60	72.3		
Participation in IGAs	Score	0-27	0-24	Low (Up to 8)	12	14.5	12.57	5.02
				Medium (9-17)	62	74.7		
				High (>17)	9	10.8		
Innovativeness	Score	0-30	0-25	Low (up to 6)	18	21.7	12.20	6.51
				Medium (7-18)	53	63.9		
				High (above 18)	12	14.5		

4.1.2 Educational qualification

Exposure to formal education is very important for shaping-up the behavior of an individual. Education compels an individual to seek, accumulate as well as assimilate knowledge for appropriate uses. Education always plays an important role for participation in decision-making process (Rahman, 2008). Moreover, educational qualification of the women beneficiaries influences their use of communication channel.

The educational qualification of the respondents ranged from 1 to 14 years of schooling having a mean of 6.33 with a standard deviation of 3.84. On the basis of their educational qualification, women were classified into three categories (Table 4.1).

Data furnished in the Table 4.1 reveal that majority (48.2 percent) of the respondents educational qualification were in secondary level whereas 37.3 percent were primary to above secondary level of education. There was a visible incidence that no one was found illiterate in the study. The reasons behind were that putting signature in weekly meeting register and on loan disbursement sheet was mandatory.

4.1.3 Family size

High population density is a normal feature of Bangladesh. However, the range of family size according to the number of family members of the respondents were found to be 2 to 14, the mean being 5.23 with a standard deviation of 2.27. The women were classified into three categories viz. 'small family' (up to 3), 'medium family' (4 to 8) and 'large family' (above 8) on the basis of family size scores (Table 4.1).

Computed data indicate that about three-fourths (74.7 percent) of the women had medium family size, 16.9 percent of the women had small family size, and only 8.4 of the women had large family size. The findings also indicate that the average family size (5.23 percent) of the women were very close with the national average of 4.4 percent (BBS, 2011).

4.1.4 Annual income

Annual income of the women beneficiaries was measured in 'thousand taka' per year and in the present study the variable ranged from 11.50 to 121 thousand taka with an average of 55.49 and standard deviation of 23.29. The respondents were classified into three categories depending on the annual income (Table 4.1).

Data presented in Table 4.1 indicate that the highest proportion (59.0 percent) of the respondents had medium income, while 20.5 percent had low income and rest of them (20.5 percent) had high income.

The findings indicate that majority of the respondents had medium income. It is due to the fact that all family members are involved in microfinance activities under BRAC. They received credit from BRAC and mostly utilized this amount for different income generating activities.

4.1.5 Daily time use

The daily time use scores of the respondents could range from 0 to 21, while the observed scores being 5 to 18. The average score was 12.12 having standard deviation of 3.03. According to time use scores, the respondents were classified into three categories, such as short (up to 9), medium (10 to 15) and long (>15) (Table 4.1).

Data presented in Table 4.1 shows that the highest portion (67.5 percent) of the respondents was in medium daily time use category and 21.7 percent were in short daily time use category and only 10.8 percent were in long daily time use category. Due to involvement in BRAC, the women not only spent time for performing IGAs, but also they remained engaged in maternal duties, washing, cleaning, cooking and other household activities. Therefore, most of the respondents time use had medium to long. The women really get less opportunity to spend enough time to actively participation in IGAs. Aktaruzzaman (2006) and Fakir (2008) found the same observation in their study.

4.1.6 Credit received

The credit received of the respondents ranged from 10 to 69 thousand taka and average was 35.80 with a standard deviation of 13.12. Based on the credit received, the women beneficiaries were classified into three categories such as low (up to 23), medium (23.1- 48) and high (>48). However, it was observed that the respondents obtained credit from mostly BRAC at 12.50 percent interest.

Data presented in the Table 4.1 indicate that three-fourths (60.2 percent) of the respondents get medium amount of credit, while 19.3 percent get low amount of credit and 20.5 percent get high amount of credit. According to BRAC policy, amount of credit depends on savings, duration of involvement in BRAC and loan repayment performance. In this study, respondents received medium amount of credit because most of the respondents fulfill BRAC policy regarding credit.

4.1.7 Training received

Training refers to the activities imparted by various GOs and NGOs to improve the knowledge and skill of an individual for doing a particular job. The training received score of the respondents ranged from 0 to 10, the average being 1.45 and standard deviation of 2.56. Based on agricultural training received score, the respondents were classified into four categories: no training (0), short (up to 2), medium (3-5) and long (>5) as shown in Table 4.1.

Data contained in Table 4.1 shows that most of the respondent (62.7 percent) had no training, 12.0 percent had short duration training, 16.9 percent had medium duration training and only 8.4 percent had long duration training.

4.1.8 Attitude towards NGOs

The term attitude towards NGO is used to refer the feelings, belief and action tendency of the respondent towards the various aspects of NGOs activities.

The scores of attitude towards NGOs of the respondents could range from 0 to 32, while the observe score ranged from 8 to 32. The average score was 34.25 and standard deviation of 1.98. Based on their score, the respondents were classified into three categories such as less favorable (up to 30), moderately favorable (31-33) and highly favorable (>33) as shown in Table 4.1.

Data presented in Table 4.1 show that highest proportion (72.3 percent) of the respondents had highly favorable attitude, 22.9 percent had moderately favorable and only 4.8 percent had less favorable attitude towards NGOs.

4.1.9 Participation in income generating activities

Participation in income generating activities scores of the respondents ranged from 0 to 24 against the possible range of 0 to 27. The mean and standard deviation were 12.57 and 5.02 respectively. Based on participation in income generating activities, the respondents were classified into three categories namely low (up to 8), medium (9-17) and high (>17) as shown in Table 4.1.

Data contained in Table indicated that the about three-fourth (74.7 percent) of the women had medium participation in income generating activities, 14.5 percent had low participation and only 10.8 had high participation. Similar observation was found by Rahman (2006) and Islam (2011).

4.1.10 Innovativeness

The innovativeness score of the respondents ranged from 0 to 25. The mean and standard deviation were 12.20 and 6.51 respectively. Based on the innovativeness score, the respondents were classified into three categories namely low (up to 6), medium (7-18) and high (>18) as shown in Table 4.1.

The highest proportion (63.9 percent) of the respondents had medium innovativeness, 21.7 percent had low innovativeness and on the other hand, 14.5 percent had high innovativeness. This finding indicates that major proportions of the respondents in the study area did not adopt new idea or technology instantly. May be, the new idea is not suitable to their socio-economic condition. Almost similar findings were found by Islam (2008) and some others.

4.2 Use of Communication Channel by the Women Beneficiaries

The use of communication channel by the women beneficiaries is the dependent variable of this study. An attempt was made to determine the use of communication channel by the women beneficiaries of BRAC in three dimension viz. contact with information sources, interaction with other channels on the received information and application of the information received from the 10 selected information sources.

4.2.1 Contact with the information sources

The women beneficiaries had contacted to 10 selected information sources with varying degrees as a part of their information need. The information received of the farmers on the 10 selected sources varied to a great extent. The contact with the information sources scores of the women beneficiaries ranged from 6 to 28 against the possible range of 0 to 30. The mean and standard deviation were 19.48 and 5.66 respectively. The respondents were classified into three categories such as low (up to 14), medium (15 to 25) and high (above 19) on the basis of their contact score on the selected information sources (Table 4.2).

Table 4.2 Distribution of the respondents according to their overall contact

Categories	Women beneficiaries		Observed range	Mean	SD
	Number	Percent			
Low contact (up to14)	20	24.10	6-28	19.48	5.66
Medium contact (15-25)	53	63.90			
High contact (above 25)	10	12.00			
Total	83	100.00			

Data contained in Table 4.2 indicate that the highest proportion (63.90 percent) of the women beneficiaries had medium contact with information sources, while 24.10 percent had low and 12 percent had high contact with information sources. The finding reveals that slightly more than three-fourths (75.90 percent) of the women had medium to high contact with the information sources for the information related IGAs. This finding implies that the women were considerable amount of contact with the information sources.

4.2.2 Interaction with other channels on the received information

The interaction score of information on the 10 selected information sources by the women of BRAC were also examined. The interaction scores of the women ranged from 5 to 25 against a possible range of 0 to 30, the average being 17.10 and standard deviation 5.12. The women beneficiaries were also classified into three categories namely low interaction (up to 12), medium interaction (13 to 22) and high interaction (above 22) on the basis of their interaction scores (Table 4.3).

Table 4.3 Distribution of the respondents according to their overall interaction

Categories	Women beneficiaries		Observed range	Mean	SD
	Number	Percent			
Low interaction (up to12)	20	24.1	5-25	17.10	5.12
Medium interaction(13-22)	51	61.4			
High interaction (above 22)	12	14.5			
Total	83	100.00			

The findings indicate that the majority (61.40 percent) of the women had medium interaction of information while 24.10 percent had low and 14.50 percent had high interaction of information on the IGAs. The finding reveals that slightly more than three-fourths (75.9 percent) of the women had medium to high interaction of information. This finding implies that women did considerable amount of interaction of information after contact with the information sources.

4.2.3 Application of the information

The women beneficiaries of BRAC applied received information after interact with other sources. The application of information scores of the respondents ranged from 4 to 21 against a possible range of 0 to 30, the average being 14.57 and standard deviation 4.69. The women beneficiaries were classified into three categories namely low application (up to 14), medium application (15 to 25) and high application (>25) on the basis of their information application score (Table 4.4).

Table 4.4 Distribution of the respondents according to their overall application

Categories	Women beneficiaries		Observed range	Mean	SD
	Number	Percent			
Low application (up to14)	20	24.1	4-21	14.57	4.69
Medium application (15-25)	49	59.0			
High application (>25)	14	16.9			
Total	83	100.00			

The findings indicated that the highest proportion (59.00 percent) of the women had medium application of information, while about 24.1 percent had low application and 16.9 percent had high application. The finding implies that four fifths (79.90 percent) of the women had medium to high application of information. This means that the farmers' application of information was satisfactory.

4.2.4 Overall Use of Information Channel

The overall use of communication channel by the women beneficiaries in IGA related information was determined by three dimensions. Thus, the overall observed use of communication channel scores of the women ranged from 15 to 74, against the possible score of 0 to 90. The mean and standard deviation were 51.14 and 15.27 respectively. The respondents were classified into three categories namely low (up to 14), medium (15 to 25) and high (above 45) on the basis of their use of communication channel score (Table 4.5).

Table 4.5 Distribution of the respondents according to their overall use of communication channel

Categories	Women beneficiaries		Observed range	Mean	SD
	Number	Percent			
Low use (up to14)	19	22.9	15-74	51.14	15.27
Medium use (15-25)	33	39.8			
High use (above 25)	31	37.3			
Total	83	100.00			

The highest proportion (39.8 percent) of the women had medium use of information channel compared to 37.3 percent had high and 22.9 percent had low use. The findings revealed that more than three-fourths (77.1 percent) of the respondents had medium to high use of information channel in receiving farm information. Therefore, it can be said that the communication channel play a significant role in diffusion of IGA related information among the women beneficiaries.

4.3 Relationships between Selected Characteristics of the Women Beneficiaries of BRAC and their use of Communication Channel

The purpose of this section is to examine the relationship of 10 selected characteristics of the women beneficiaries with their use of communication channel in receiving information to income generating activities.

Significant relationship as determined by co-efficient of correlation test 'r' have been examined. A null hypothesis was rejected when the observed 'r' value was equal or greater than the table value of 'r' at 0.05 and 0.01 level of probability. The relationship between characteristics of the women beneficiaries of BRAC and their use of communication channel have been presented in Table 4.6.

Table 4.6 Relationships between the dependent and independent variables

Dependent variable	Independent variable	Computed values of 'r' with 81df	Tabulated value of 'r'	
			0.05 level	0.01 level
Use of communication channel	Age	0.047	± 0.219	±0.284
	Educational qualification	0.225*		
	Family size	0.152		
	Annual income	0.013		
	Daily time use	0.265*		
	Credit received	0.062		
	Training received	0.352**		
	Attitude towards NGOs	0.260*		
	Participation in income generating activities	0.396**		
	Innovativeness	0.423**		

4.3.1 Age and use of communication channel by the women beneficiaries

The computed correlation coefficient was found to be 0.047 (Table 4.7), which led to the following observations:

'Firstly, the relationship showed positive trend, and secondly, the value of r (0.047) with 81 degrees of freedom was not significant even at 5 percent level of significance'.

Based on the observations, the null hypothesis could not be rejected and hence the researcher concluded that the age of the respondents had no significant relationship with their use of communication channel. Thus, it can be said that age of the women beneficiaries of BRAC was not important factor in the use of communication channel in income generating activities. Similar findings were reported by Islam (2005) and Farouque (2004).

4.3.2 Educational qualification and use of communication channel by the women beneficiaries

The computed correlation coefficient was found to be 0.225 (Table 4.7), which reflects the following findings:

'Firstly, the relationship showed positive trend, and secondly, the value of r (.225) with 81 degrees of freedom was significant at 5 percent level of significance'.

Based on the above findings, the null hypothesis was rejected and it implies that the educational qualification of the women beneficiaries had significant and positive relationship with their use of communication channels. This indicates that the more educational qualification of women beneficiaries of BRAC the more will be their use of communication channel in income generating activities. The high levels of education induce and facilitate individuals to receive more information for income generating activities which helps them to increase their understanding and awareness on different aspects of agriculture, livestock and fisheries. Similar findings were found by Sharmin (2013) and Rashid (2012) in their respective study.

4.3.3 Family size and use of communication sources by the women beneficiaries

The relationship between family size of women beneficiaries and their use of communication channel shown in Table 4.7, which reflects the following observations:

'Firstly, the relationship showed positive trend, and secondly, the value of r (0.152) with 81 degrees of freedom was not significant even at 5 percent level of significance'.

From the above observations, the null hypothesis could not be rejected and hence, it can be concluded that the family size of the women beneficiaries of BRAC had no significant relationship with their use of communication channel. Thus, it might be said that family size of the respondents was not so important factor for their use of communication channel. Similar findings were reported by Hossain (2010) and Karim (2005).

4.3.4 Annual income and use of communication channel by the women beneficiaries

Following observation were made based on the computed correlation coefficient of 0.013 (Table 4.7).

'Firstly, the relationship showed positive trend, and secondly, the value of r (0.013) with 81 degrees of freedom was not significant even at 5 percent level of significance'.

Based on the observations, the null hypothesis could not be rejected and hence the researcher concluded that the annual income of the women beneficiaries had no significant relationship with their use of communication channel. Thus, it can be said that annual income of the women beneficiaries of BRAC was not important factor in the use of communication channel in income generating activities. Similar results were found by Anisuzzaman (2003), Nuruzzaman (2003), and Alam (2004) in their respective study.

4.3.5 Daily time use and use of communication channel by the women beneficiaries

The computed 'r' value was found 0.265 (Table 4.7) which had to the following findings:

'Firstly, the relationship showed positive trend, and secondly, the value of r (0.265) with 81 degrees of freedom was significant at 5 percent level of significance'.

Therefore, the null hypothesis was rejected and the researcher concluded that daily time use had a positive and significant relationship with their use of communication channel. This indicates that use of communication channel increased with the increase of daily time use. Similar result was found by Rashid (2012) in his study.

4.3.6 Credit received and use of communication sources by the women beneficiaries

The computed correlation coefficient was found 0.062 (Table 4.7), which led to the following observations:

'Firstly, the relationship showed positive trend, and secondly, the value of r (0.062) with 81 degrees of freedom was not significant even at 5 percent level of significance'.

Thus, the null hypothesis was not rejected and it implies that credit received of the respondents had no significant relationship with their use of communication channel. Thus, it can be said that credit received of the women beneficiaries of BRAC was not important factor in the use of communication channel in income generating activities. Similar result was found by Rashid (2012) in his study.

4.3.7 Training received and use of communication channel by the women beneficiaries

The computed correlation coefficient was found 0.352 (Table 4.7), which reflects the following observations:

'Firstly, the relationship showed positive trend, and secondly, the value of r (0.352) with 81 degrees of freedom was significant even at 1 percent level of significance'.

Based on the above findings, the null hypothesis could be rejected and it implies that training received of women beneficiaries had significant relationship with their use of communication channel. The finding indicates that more training received by the women beneficiaries of BRAC more the use of communication channel in income generating activities. Similar findings were found by Hossain (2010) in his study.

4.3.8 Attitude towards NGOs and use of communication channel by the women beneficiaries

The computed correlation coefficient was found 0.260 (Table 4.7), which led to the following findings:

'Firstly, the relationship showed positive trend, and secondly, the value of r (0.260) with 81 degrees of freedom was significant at 5 percent level of significance'.

On the basis of above findings, the null hypothesis was rejected and hence it can be concluded that attitude towards NGOs had a positive significant relationship with their use of communication channel. This implies that as BRAC support women beneficiaries in various ways in their income generating activities thus they showed a positive significant attitude.

4.3.9 Participation in income generating activities and use of communication channel by the women beneficiaries

The computed 'r' value was found to be .396 (Table 4.7), which led to the following findings:

'Firstly, the relationship showed positive trend, and secondly, the value of r (0.396) with 81 degrees of freedom was significant at 1 percent level of significance'.

Therefore, the null hypothesis was rejected and hence it can be concluded that participation in IGAs had a positive significant relationship with their use of communication channel. This finding indicates that women beneficiaries' participation in income generating activities increase the use of communication channel. When women will involve more in IGAs then they will need more information. As a result, her contact, interaction and application of information from communication channel will be increased that will contribute to increase the use of communication channel. Similar result was reported by Rashid (2012) in his study.

4.3.10 Innovativeness and use of communication channel by the women beneficiaries

The computed 'r' value was found to be 0.423 (Table 4.7), which led to the following findings:

'Firstly, the relationship showed positive trend, and secondly, the value of r (0.423) with 81 degrees of freedom was significant at 1 percent level of significance'.

Based on the above findings, the null hypothesis was rejected and hence, the researcher concluded that the innovativeness of the respondents had significant positive relationship with their use of communication channel. This indicated that with the increase of innovativeness, there was an increase in the use of communication channel. Similar results were found by Uddin (1993) and Islam (2005) in their study.

CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This Chapter presents the summary of the findings, conclusions and recommendations of the study.

5.1 Summary of the Findings

5.1.1 Characteristics of the women beneficiaries

The **age** of the women beneficiaries of BRAC ranged from 19 to 60 years with a mean of 35.07 years and standard deviation of 8.67. The highest proportions (56.6 percent) of the respondents were middle aged compared to 22.9 percent young aged and 20.5 percent were old aged. The **educational qualification** of the respondents ranged from 1 to 14 years of schooling having a mean of 6.33 with a standard deviation of 3.84. Majority (48.2 percent) of the respondents educational qualification were in secondary level whereas 26.5 percent in primary level and only 10.8 percent above secondary level. The range of **family size** according to the number of family members of the respondents were found to be 2 to 14, the mean being 5.23 with a standard deviation of 2.27. About three-fourth (74.7 percent) of the women had medium family size, 16.9 percent of the women had small family size, and only 8.4 of the women had large family size.

Annual income of the women beneficiaries was measured in 'thousand taka' per year and in the present study the variable ranged from 11.50 to 121 thousand taka with an average of 55.49 and standard deviation of 23.29. The highest proportion (59.0 percent) of the respondents had medium income, while 20.5 percent had low income and rest of them (20.5 percent) had high income. The **daily time** use scores of the respondents could range from 0 to 21, while the observed scores being 5 to 18. The average score was 12.12 having standard deviation 3.03. the highest portion (67.5 percent) of the respondents was in medium daily time use category and 21.7 percent were in short daily time use category and only 10.8 percent were in short daily time use category. The **credit received** of the respondents ranged from 10 to 69 thousand taka and average was 35.80 with a standard deviation of 13.12. Highest proportion (60.2 percent) of the respondents get medium amount of credit, while 19.3 percent get low amount of credit and 20.5 percent get high amount of credit. The **training received** score of the respondents ranged from 0 to 10, the average being 1.45 and standard deviation of 2.56. Most of the respondent (62.7 percent) had no training, 12.0 percent had short duration training, 16.9 percent had medium duration training and only 8.4 percent had long duration training. The scores of **attitude towards** NGOs of the respondents could range from 1 to 20, while the observe score ranged from 8 to 20. The average score was 34.25 and standard deviation of 1.98. Highest proportion (72.3 percent) of the respondents had highly favorable attitude, 22.9 percent had moderately favorable and only 4.8 percent had less favorable attitude towards NGOs.

Participation in income generating activities scores of the respondents ranged from 0 to 24 against the possible range of 0 to 27. The mean and standard deviation were 12.57 and 5.02 respectively. About three-fourth (74.7 percent) of the women had medium participation in income generating activities, 14.5 percent had low participation and only 10.8 had high participation. The **Innovativeness** score of the respondents ranged from 0 to 25. The mean and standard deviation were 12.20 and 6.51 respectively. The highest proportion (63.9 percent) of the respondents had medium innovativeness, 21.7 percent had low innovativeness and on the other hand, 14.5 percent had high innovativeness.

5.1.2 The use of communication channel by the women beneficiaries

The use of communication channel by the women beneficiaries was determined by three dimensions (contact, interact and application) against the 10 selected information sources. The scores of the women beneficiaries ranged from 15 to 74 with the mean of 51.14 and standard deviation of 15.27. The highest proportion (39.8 percent) of the women had medium use of information channel compared to 37.3 percent had high use and 22.9 percent had low use. The findings revealed that more than three-fourths (77.1 percent) of the farmers had medium to high use of information channel in receiving agriculture, livestock and fisheries related information.

5.1.3 Relationships between the selected characteristics of the women beneficiaries and their use of communication channel

According to the computed correlation coefficient (r) among the ten selected characteristics of the farmers five like educational qualification, daily time use, training received, attitude towards NGOs and participation in income generating activities showed significant positive relationship with their use of communication channel, while their age, family size, annual income and credit received had no relationships.

5.2 Conclusions

It is very much important to have satisfactory clarification about the findings of the research and to draw a meaningful conclusion. The researcher studied the use of communication channel by the women beneficiaries of BRAC in income generating activities and put forward the following conclusions:

1. In contact with the information sources, slightly more than three-fourth (75.90 percent) of the women had medium to high contact to 10 selected information sources for the information related to agriculture, livestock and fisheries. Therefore, it may conclude that more will be the need of the information from the communication channels more will be contact.

Surprisingly, in context with interaction, slightly more than three-fourth (75.90 percent) of the women had also medium to high interaction of information. This finding implies the conclusion that women did considerable amount of interaction of information after contact with the information sources.

Seventy nine point ninety (79.90) percent of the women had medium to high application of information. The finding lead to conclude that more will be the credibility and technical soundness of the communication sources the more will be the application of their delivered information.

More than three-fourths (77.1 percent) of the farmers had medium to high use of information channel in receiving agriculture, livestock and fisheries related information. So, it may be concluding that the communication channel play a significant role in diffusion of IGA related information among the women beneficiaries.

2. Among the ten selected characteristics of the farmers five like educational qualification, daily time use, training received, attitude towards NGOs and participation in income generating activities showed significant positive relationship with their use of communication channel. So, it may be conclude that those are the important determining factors for use of communication channel.

5.3 Recommendations

5.3.1 Recommendations for policy implications

The following recommendations were made on the basis of the findings and their logical interpretations:

1. The women beneficiaries of BRAC had medium exposure with various communication channels, which might result moderate output from income generating activities. Therefore, it may be recommended that the concerned GOs and NGOs especially BRAC engaged in extension activities with the women beneficiaries should make necessary arrangements for improving the use of communication channels.
2. Young to middle aged women beneficiaries were the majority of the study sample and they are the key operators of income generating activities. They can play very useful role in performing the income generating activities for their better living status. It is therefore, recommended that in conducting extension program, the concerned agencies should involve as many as young aged women in their programs.
3. Credit supply and other support activities provided by BRAC should be taken more effective steps for increasing income of the women by creating greater opportunities for IGAs. However, special care should be taken by BRAC at the time of credit supply and proper credit utilization by the borrowers.
4. Need based training program should be developed and implemented intensively to improve the skill of the women in handling different IGAs in increasing income.

5.3.2 Recommendations for further study

The study having conducted in some specific location could not provide all information for proper understanding about use of communication channel by the women beneficiaries in income generating activities. The following recommendations are made for further study:

1. The present study was carried out in a small area of particular district. Similar studies may be conducted in other parts of the country to get a clear picture which will be helpful for effective policy formulation.
2. The study investigated the effects of ten characteristics of the women beneficiaries on their use of communication channel. But there are many other characteristics of the women beneficiaries which may influence them regarding the use of communication channel. Therefore, it is recommended that further study should be conducted involving other variables in these regards.
3. The present study did not reveal the factors that affected the non-use of communication sources. It is therefore, suggested that the factors responsible for non-use of each source be ascertained in further study.
4. In this study the use of communication channel have been studied on three dimensions such as (a) contact (b) interaction and (d) application. But in reality there are some important dimensions of communication channel which should be included for further study.

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APPENDIX-A

An English Version of the Interview Schedule

Department of Agricultural Extension

Hajee Mohammad Danesh Science and Technology University, Dinajpur

Use of Communication Channel by the Women Beneficiaries of BRAC in Income Generating Activities

Name of Respondent - - - - - Husband's Name - - - - -

Group name - - - - - Village: - - - - - Union: - - - - -

(Please answer the following questions)

1.0 Age: How old are you? Years

2.0 Educational qualification: Please mention your educational qualification.

2.1 Cannot read or write ☐

2.2 Can sign name only ☐

2.3 Read up to..... class

2.4 Passed class

3. Family size: Mention the number of your family member. Total No

4. Annual family income: Please mention income of your family has earned last year (2013).

Sl. No.	Source of income	Amount (Tk.)
1.	Crop	
2.	Vegetables	
3.	Dairy and poultry	
4.	Tailoring	
5.	Small business	
6.	Katha sewing	
7.	Others (if any)	
Total		

5. Daily time use: Please mention the extent of time use towards the following activities.

Sl. No.	Types of activity	Extent of time use			
		Nil	Occasionally	Partially	Sufficiently
1.	House work				
2.	Agricultural product processing				
3.	Homestead vegetable cultivation				
4.	Child care and education				
5.	Livestock management				
6.	Making of handicraft				
7.	Other (if any)				

6. **Credit received:** Did you receive credit from different organization for income generating activities? If yes, please mention the sources of receiving your credit with amount.

Sl. No.	Sources of credit	Amount (Tk.)
1.	Relatives	
2.	T.M.S.S.	
3.	ASA	
4.	Grammen Bank	
5.	BRAC	
6.	Others (if any)	

7. **Training received:** Have you received any training during the last three years?
 Yes ☐ No ☐

If yes, please furnish the following information

Sl. No.	Name of Organization(s)	Topics	Duration (Days)
1.			
2.			

8. **Attitude towards NGOs:** Please indicate your opinion about the following statements.

Sl. No.	Statements	Level of agreement				
		SA	A	U	D	SD
- 1.	The NGOs have an evil target behind assisting us. So, we should aware before accepting their help					
+2.	NGOs have made us more conscious about human right as a result now we are making movement to achieve civic privilege					
+ 3.	Few money is deposited to the deprived women of village, as result they are establishing the society					
- 4.	In the disguise of development of NGOs are making as more dependent. So, we should avoid them					
+ 5.	NGO play significant roles in adult literacy					
+ 6.	I am participating in NGO programs because they are better than those of GO					
+ 7.	NGOs play significant roles in rural development.					
- 8.	We are losing our cultural heritage due to the NGOs activities					

SA= Strongly agree, A=Agree, U=Undecided, D=Disagree and SD= Strongly disagree

9. Participation in income generating activities: Mention of your extent of participation in the following income generating activities (IGAs).

Sl. No.	IGAs	Extent of participation			
		Not at all	Occasionally	Seldom	Frequently
A. Agricultural					
1.	Crop production				
2.	Vegetable production				
3.	Poultry rearing				
4.	Goat rearing				
5.	Cow rearing				
B. Non-agricultural					
1	Milk business				
2.	Tailoring				
3.	Katha sewing				
4.	Others (if any)				

10. Innovativeness: If you adopt the following technologies please mention their duration of adoption after you first hearing of the same.

Sl. No.	Name of technology	Do not use	Duration of adoption		
			Within 1 year of hearing	Within 1-2 years of hearing	Above 2 years of hearing
1.	Application of organic manure				
2.	Use of balance fertilizer				
3.	Application of vermin-compost				
4.	Use of hybrid seeds				
5.	Use of IPM				
6.	Raring improved variety of poultry				
7.	Raring improved variety of goat				
8.	Vaccination of poultry				
9.	Vaccination of cattle				
10.	Tree plantation for environment protection				

11.0 Use of Communication Channels by the Women Beneficiaries of BRAC

11.1 Contact with the information sources: Please mention your extent of contact with the following communication channels.

Sl. No.	Communication channels	None	Low	Moderate	High
1.	Husband		1 time/week	2-3 times/week	>3 times/week
2.	Neighbors		do	do	do
3.	Relatives		do	2 times/week	>2times/week
4.	BRAC group meeting		1 time/year	2-3 times/year	>3 times/year
5.	BRAC-worker		1 time/month	2-3 times/month	>3 times/month
6.	BRAC-Officer		1 time/year	2-3 times/year	>3 times/year
7.	Inputs dealer		1 time/season	2-3 times/season	>3 times/season
8.	SAAOs		do	do	do
9.	Mobile phone		1 time/week	2-3 times/week	>2 times/week
10.	Television		1 time/month	2-3 times/month	>3 times/month

11.2 Interaction with channels on the received information: Please mention your nature of interaction with the following communication sources after contact (number/season).

Sl. No.	Communication channels	None	Low	Moderate	High
1.	Husband		1 time/week	2-3 times/week	>3 times/week
2.	Neighbors		do	do	do
3.	Relatives		do	2 times/week	>2times/week
4.	BRAC group meeting		1 time/year	2-3 times/year	>3 times/year
5.	BRAC-worker		1 time/month	2-3 times/month	>3 times/month
6.	BRAC-Officer		1 time/year	2-3 times/year	>3 times/year
7.	Inputs dealer		1 time/season	2-3 times/season	>3 times/season
8.	SAAOs		do	do	do
9.	Mobile phone		1 time/week	2-3 times/week	>2 times/week
10.	Television		1 time/month	2-3 times/month	>3 times/month

11.3 Application of received information: Do you apply the information received from the communication sources? If yes, please indicate the amount of application (in percentage).

Sl. No.	Communication channels	None (0)	Low (1-33)	Moderate (34-66)	High (67-100)
1.	Husband				
2.	Neighbors				
3.	Relatives				
4.	BRAC group meeting				
5.	BRAC-worker				
6.	BRAC-Officer				
7.	Inputs dealer				
8.	SAAOs				
9.	Mobile phone				
10.	Television				

Thanks you for your cooperation.

 Signature of the Enumerator
 Date:.....

APPENDIX B

Correlation matrix of the dependent and independent variables

	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	Y
X1	1										
X2	-.189	1									
X3	.332**	-.135	1								
X4	.159	.140	-.011	1							
X5	.286**	.067	.074	.156	1						
X6	.240*	.116	.065	.013	.025	1					
X7	-.008	.242*	.129	-.033	.196	.171	1				
X8	.024	.243*	-.081	.100	-.021	-.028	.030	1			
X9	.306**	-.008	.255*	.076	.693**	.062	.185	.011	1		
X10	.461**	.012	.238*	.072	.568**	.315**	.150	.090	.690**	1	
Y	.047	.225*	.152	.013	.265*	.062	.352**	.260*	.396**	.423**	1

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

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

X1 = Age

X2 = Educational qualification

X3 = Family size

X4 = Annual income

X5 = Daily time use

X6 = Credit received

X7 = Training received

X8 = Attitude towards NGOs

X9 = Participation in income generating activities

X10 = Innovativeness

Y = Use of communication channel