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Signature_____

Name_____

Address of guide_____

Name and address of student: **Abdurezak Menza Adem**

Telephone number: **0910381073/ 0913335557**

E-mail - **arezak33@gmail.com**

Arsi Robe, Ethiopia

ID no. **ID1115822**

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Signature of the student_____

Approved /Not approved_____

Date of approval_____

Personal Profile

The Author was born in Oromia Regional state, Arsi Zone Robe district in 1987. He has completed his first cycle and second cycle education at Arsi Robe Elementary & Junior School, and his Secondary school at Dedia Robe Senior Secondary School.

In 2007, he had joined the Faculty of Adult Education and Educational Planning at Adma University graduated with BE Degree in pedagogy in June 2010. Currently the author is serving as a teacher at Nejashi Primary and Secondary School which found in Adama, Ethiopia.

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LIST OF ABBREVIATIONS

AR	Arsi Robe
CSA	Central Statistical Authority
DA	Development Agent
FAO	Food and Agricultural Organization
GAD	Gender and Development
GOs	Government Organizations
Ha	Hectare
Km	kilo meter
mm	milli meter
NGOs	Non Governmental Organizations
NRM	Natural Resource Management
PAs	Peasant Associations
PEDO	Planning and Economic Development Office
TVET	Technical, Vocational and Educational Training
TLU	Tropical Livestock Unit
WID	Women in Development

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ABSTRACT

Access to and utilization of information on improved ways of living is a prerequisite for modernization process of any human being, as 'information is power'. It facilitates the individual to be more rational, increases the decision-making abilities and improve the standards of life. It is a process of self-empowerment. Denial of access to information curtails the chance of utilization of information and in turn the self-empowerment. The purposes of the study were to assess rural women's access to and utilization of development communication, to identify major constraints in access and utilization of available development communication and to identify the personal, socio-psychological and situational factors of rural women influencing access and utilization of development communication. A two stage random sampling procedure was used to constitute the sample. The necessary data was obtained by personal face-to-face interview using a structured interview and focus group discussions. For the data analysis simple descriptive statistics, ranking of obtained score values and Pearson's product moment correlation were used. The results of the study revealed that access to different types of information for rural women was generally minimal. The survey results indicated that, the most accessible information related to reproductive roles, though scarce, were, avoiding unexpected pregnancy (75.6%), vaccine for new born baby (67.5%), care and hygiene of children (62.5%). But for other types of reproductive roles majority of the respondents were not having access to development information. Access to development information on crop production, as well as livestock management was very minimal for rural women as perceived by the respondents. More than half of the respondents were not getting information about their rights and obligations in participating in community issues. The important constraints that inhibit rural women from access to development communication were lack of awareness, work load, low educational level, non availability of nearby institutions, remoteness of the area and cultural influence respectively in that order. Among the different personal, socio-psychological, situational and institutional factors, educational level, social participation, innovation proneness, information-seeking behavior, extension contact, and sharing of information tend to be important factors that contribute to access and utilization of development information

1. INTRODUCTION

1.1 Background and Justification

Today is the era of Information Communication Technology (ICT). Various ICT tools are used to educate and inform the rural people. For generations, rural people have been living in complete isolation without much access to modern media of communication. The development of a society largely depends on the access to information. Even though we live in the modern era, today, in the rural areas, women are suffering from various problems such as less accessibility to modern information sources.

Communication has become widely accepted all over the developing world as a potent tool for rural development. However, this faith in the power of development communication often appears to be misplaced, as development fails to measure up to expectations even after huge resources have been invested in development communication. Many of the failures of development communication projects arise from the application of inappropriate development paradigms and communication strategies which overemphasize the mass media as channels of communication in the development process. Development should be a process which aims at achieving self-reliance and improved living conditions for the under-privileged majority of a population. For such people all over the developing world, and who live predominantly in the rural areas, development is today as urgent, or even more urgent, as it was during the development decade of the 1960s. Development communication has become accepted as an integral part of development planning and as an instrument of policy. This is recognition that communication is a powerful tool for development and should be considered a major development resource (MacBride *et al,* 1981). It is now generally accepted that communication can initiate, stimulate, and sustain the development process when carefully evolved and applied (Menon, 1986).

Communication is no longer seen as a one-way, top down transfer of messages and information through the media; instead, when applied to development, communication is used to promote a two-way process of sharing and participation. The word itself comes from the Latin "communis facere", which means participation and doing things together. A FAO consultation in 1984 defined communication for development as "a social process, designed to seek a common

understanding among all the participants of a development initiative, creating a basis for concerted action". Communication technology and the media are useful tools for facilitating this process, but should not be considered as an end in them. It is the process that is important. Interpersonal and face-to-face forms of communication are essential components in this process, and they are critical for changing attitudes and behavior.

Rural women are a special category of women faced by particular problems and, hence, a category that requires particular attention. Contemporary literature indicates that women constitute the majority of the world's poor and large proportions of the poor women reside in the rural areas. Worldwide, the number of rural women living in poverty has increased by 50% since 1975 (UN, 1994).

More than 60% of Ethiopian population lives in poverty and with high maternal mortality rate. (World Bank, 2002). Women in the rural area wish to have large number of children since having more number of children is associated with high social status in the community and because of high mortality rate. With regard to education, the women who constitute about half of the total population and live in the rural areas do have less access to education than their men counterpart, as indicated in the same report. Relationship between men and women is governed by the not too secretly held thinking that women are inferior to men and, therefore, should be under the control and supervision of men. Such thinking has denied rural women a fair share in the country's rural resources. For instance, rural women's economic status has been historically characterized by their lack of independent access to the means of production like land (Dessalegn, 1985). Recent studies on culture and society in Ethiopia demonstrate that the existing cultural norms and traditions reinforce and intensify social and psychological burdens of women, which are much worse in rural areas (Tesfu, 1996). Women constitute a significant portion of the households' agricultural labor force. Women in rural areas produce over half of the food required by a family, bear most responsibilities for household security, and contribute to the welfare of the household through income generating activities. In short, women shoulder the bulk of both productive and reproductive roles of the rural household and obliged to work for longer hours than men. In addition to traditional activities such as childcare, cooking, fetching water, fuel wood collection, etc, they contribute more than 50% of the total labor in crop

production involving in different tasks such as weeding, harvesting, food processing, and other post harvest operations (FAO, 1996) as well as in livestock production. Women participate in specific farm operations. In spite of these facts, most of the agricultural technologies that can increase productivity in the agricultural sector are not targeting women. Little efforts have been made to improve women's productivity and to reduce their work burden in the household. As a result, the participation of women in the extension activities remained dubious (Hedija and Bezabih, 2003).

It is in view of such problems of rural women that their development has become a source of constant concern to administrators, planners, and policy makers globally. In nations like Ethiopia, where women are more than half of the population and most of them live in the rural part of the country, rural women development will translate directly into improved quality of life and well being for the majority of the households. As a result, development programs, which target women and claim to empower them, have become popular in recent years. This calls for changes in development policies and programs, which create conducive environment for rural women to organize themselves, to have greater self-reliance, to play major roles in economic and social aspects of the household as well as of the community. The required policies include the establishment of micro finance institutions that provide credit for rural women, health centers that provide health services and training in areas of reproductive health and family planning, and other spheres of their activity, offices of women affairs to raise women's awareness about their rights and responsibilities, etc (Hedija and Bezabih, 2003). Despite the attempts made by government and NGOs to address gender issues, the level of empowering rural women in Ethiopia is very low. This is manifested by the suffering of women and girls from poverty, their low social status in the household and/ the community, low participation in the decision making process, having less or no accesses to resources, education and intensive productive as well as reproductive works etc (Hedija and Bezabih, 2003).

1.2. Statement of the Problem

Most studies on gender division of labor in agricultural sector in Ethiopia revealed that up to 40% of farming activities are done by women, especially in food production and processing (Almaz, 1999). In spite of this, extension efforts and technological packages usually address men farmers (Dagnachew, 2002). The low level of women's education and cultural barriers prevent them from the exposure to extension channels by their initiative. The male-dominated extension system also often restrains from contacting and working with women due to the strong taboos and value systems in the rural areas. Moreover, another study by Yeshambel (2002) observed that any sort of empowerment of rural women in Ethiopia would be possible in terms of access to resources, credit, technology, and education only if significant changes are introduced in legal, social, and institutional factors, which create barriers for women. Women being one of the major human resource shareholders and stakeholders in Ethiopian agricultural and rural development, a meaningful and intentional addressing of the gender concerns become inevitable. The insufficiency of female oriented technology generation and extension program is another serious concern of gender discrimination in Ethiopian agricultural development. A major clunk of women's labor force in production systems is invested in weeding, irrigation, harvesting, household chore, animal care, marketing, post harvest handling etc. The traditional methods consume much of the energy and time of rural women, for which due attention is not paid in technology generation process. Generally, sufficient extension packages are also not seen taken up for the dissemination of women friendly, labor, and time saving and drudgery reducing technologies (FAO, 1992). So far no adequate scientific study has been conducted in Ethiopia to fully capture rural women's access to information regarding agricultural production (crop and livestock), family planning, home management, and natural resource management. As a result, these women's contribution to different activities is normally under estimated, and opportunities for self empowerment are not evaluated.

Accesses to and utilization of information on improved ways of living is a prerequisite for modernization process of any human being, as 'information is power'. It facilitates the individual to be more rational, increase the decision making abilities and improved the standards of life. It is a process of self-empowerment. Denial of access to information curtails the chance of utilization of information and in turns the self-empowerment. This is why communication and

information flow is considered to be the main agenda in the development strategies of the third world in the present century. This fact is well applicable to African continent, which is known as 'Dark Continent'. Probably, except a few developed areas in the continent, most of the countries in Africa and their rural areas have very limited or no access to formal information channels. Ethiopia is no exception to this. The empowerment of the rural population in relation to their main occupation for livelihood (agriculture) cannot be expected to be achieved through the institutional efforts of extension by the government or NGOs alone, but it has to be supplemented adequately with access to scientific information by themselves through other means. Ethiopia, being a country with high degree of illiteracy and insufficient mass media channels, obviously faces the problem of lack of access to information for the rural population. However, the grass root level network of development efforts by the governments and NGOs pave the way for access to information on development possibilities at least to a limited scale. Here also the inherent limitations of the women folk by their workload and culture may create limitations. Only a clear understanding on this aspect will throw limelight to the magnitude of the issue enabling serious consideration for redefining and streamlining the development strategies. Hence, this research is designed to look into the development information reaching to the rural women from different agencies such as GOs and NGOs. This is includes the messages related to farming sector (crop and livestock), family planning, home management, and natural resource management. The study shall also explore the utilization of the information by the respondents in respect of productive, reproductive and community roles assumed by them, out of the development messages originated from different agencies. The study also shall identify constraints hindering effective development information flow; particularly addressing the women of the rural areas of Arsi Robe. The study assesses institutional constraints, social system constraints, psychological constraints, and situational constraints.

1.3. Operational Definitions

'Development communication ' is operationally defined as all types of information flow and messages pertaining to development aspects of rural life such as farming, family planning, home management, natural resource management generally considers reproductive, productive and community role information.

'Access' is conceived as the access of rural women to development communication messages relating to their reproductive, productive and community roles.

'Utilization ' relates to the utilization of development communication messages received by the rural women in performing their reproductive, productive and community roles.

'*Constraints'* are those factors which may hinder the access and utilization of development communication by rural women included in the survey were, influence of husband, lack of education, unavailability of nearby institutions, work load, lack of awareness, remoteness of the area, cultural influence and lack of interest.

'*Personal factors '* includes the variables related to the personal traits such as age, educational level, family size, marital status, income and occupation that are assumed to have influence on the access and utilization of development communication by rural women.

'Socio-psychological factors' include the variables of social and psychological dimension of individual respondent such as cosmopolitanisms, innovative proneness, social participation, information-seeking behavior, achievement motivation.

'Situational factors ' included in this study represents the variables of the surrounding in relation of access and utilization of development communication such as availability of organization, distance from town, sharing the information with others and frequency of extension contact.

1.4. Objectives of the Study

1.4.1 General Objective

The general objective of this study is to identify the personal, socio-psychological and situational factors of rural women influencing the access and utilization of development communication

1.4.2. Specific Objective

Based on the problems mentioned in the above section, the study had the following objectives.

1. To assess the rural women's access to development communication.
2. To assess utilization of development communication by the rural women.
3. To identify the constraints in access and utilization of development communication by rural women.

1.5. Research questions

Though the constraints in access and utilization of development information by the rural women might be included in the various personal, socio-psychological, and situational factors that may influence the access and utilization of development information, analysis was done separately to evolve clear delineation for recommendations. The constraints are conceived to be those factors that may hinder the process where as there might be several other factors helping the process, which are to be looked in to in a different angle for making strategic recommendations. Hence, both categories of factors, though with the chance of overlapping of the constraints over the other, where considered as separate domains and included in to two separate objectives.

Therefore, this research was carried out to answer the following research questions.

1. What is the extent of access to development communication or rural women?
2. How far women utilize the available development messages?
3. What are the constraints for effective information flow to address rural women?
4. What are the sources of information for women?
5. How much information those women get through mass media and other formal channels?
6. What are the factors influencing the access and utilization of development communication by rural women?

1.6. Significance of the Study

The results of this study, based on its objectives, might be highly valuable for those who have more concern about gender issues of Ethiopian rural women for their empowerment. The results of this study can also be used as indicators by policy makers, development organizations etc. It will also be helpful to understand the different barriers, which are being faced by rural women in the process of their empowerment so as to design suitable remedial measures.

1.7. Scopes and Limitation of the Study

The study is conceived to cover the issue related to rural women in the locale of the project. It focused on the extent of access and utilization of development communication by rural women folk, specifically in relation to the roles assumed and performed by them (such as farming activities, family planning, home management, natural resource management etc in addition to reproductive, productive and community roles), and not covering the development communication oriented to and addressing the general rural population. Hence, the sample was

confined to rural male-headed household and female headed household women only and not attempting to cover the entire rural population in the area including both men and women. The study had limitations of coverage of area and population, due to the obvious constraints of resource. As it focused on development communication, the study was by no means exhaustive. The main concern of the research was to know only extent of formal information flow from external sources, not considering the local knowledge system of the target groups that is emphasis was given for delivery system not acquisition system. The other limitation of this study is, not focusing on farmer's priority need of information.

2. LITERATURE REVIEW

2.1 Emergence of Gender and Definitions of Concepts

The gender concept emerged from the continued research and critical analysis on the basis and impacts of WID (Women in Development) interventions and the persistent subordination of women in their relationship to men. Gender is a socio cultural construct of society\ embedded in the patriarchal system of relationship, which determines the identity, role, entitlement and deprivation of women and men in society. Unlike the biological difference, which determines the male and female sex, as for all living species, gender difference is a deliberate construction which governs the way in which society meets its physical, material, emotional, economic and spiritual needs and the way it organizes its activities and manages its resources. There is nothing 'natural' about gender difference since it can and is known to change over time and space. Gender identity and division of labor are subjected to socioeconomic, political and cultural changes within a given society and period and are not, therefore, static (Fetenu, 1997).

2.2. Need for Women's Empowerment:

Mass media sources of communication are intended to create mass awareness about new and improved technologies and also create a favorable psychological climate for their widespread adoption in rural areas. Studies aptly indicate that women are suffering from various types of problems due to lack of education and information. Thus, women's empowerment is necessary. Women's empowerment is one of the key factors in determining success of development. Right information given at the right time can empower the rural women and protect them from various problems. Various ICTs, such as radio, television, mobile phone, and internet are used for empowering the rural women via awareness, education, and information. This is an ICT era, but, until today, half of the women are suffering from various types of problems due to the gap between ICT and its use without needs assessments and participation of rural people. Community radio, a participatory medium of communication, can be used for empowerment of rural women.

2.2 Agricultural Development Policies and Women

Though policy makers in underdeveloped countries are more and more conscious of the necessity of integrating women in the development process, but this has yet to be translated in the actual policies pursued. In fact many policy makers are not fully aware of the role of women

in agriculture, and even if they are aware, they are not convinced of the necessity of taking into account the specific needs and the interests of rural women (UN, 1992).

According to UN report of 1992, in developing countries, Agricultural extension programs are generally oriented towards men with the unstated assumption being that men are not only household heads, but also the main producers in the rural areas Likewise, agricultural training programs are men oriented, agricultural schools having almost exclusively young men in their student bodies Women are mostly proposed for programs of home economics, which though very useful, disregard their role in agricultural production (UN, 1992).

As for credit commercial African Banks allocate only 5% of their loans to the agricultural sectors, and these loans are essentially made to men with land as collateral. A development bank set up to promote development (and particularly agricultural development) makes loans to family heads, which are ones more to men. Some original types of credit institutions have been created which are lending both to men and women, but the loans are often at a high interest rate and the institutions have small resources (UN, 1992).

2.3 Prospects and Outlook for Women in the Agricultural Sector

As reported by UN (1992), since the beginning of the United Nations Women's Decade, international organizations have emphasized the crucial role that rural woman can play in national development and have formulated recommendations to governments so that the role of women should be recognized. Their contribution should be taken into account in national statistics and in development plans and that efforts should be made to accelerate the integration of women in the development process. The women can play a vital role in solving the food crisis in Africa, which is one of the priorities identified in the plans. UN report further recommends that governments should take necessary steps to make use of the potentialities of women, reduce their tasks, render their work more productive, and accord a higher priority to training and employment in rural areas. The recognition of the role of women is necessary for the success of rural development planning and the implementation of programs.

Rural women play such an important role in agricultural production particularly in food production. Efforts and all programs aimed at increasing this production and at improving the productivity of women will automatically contribute to rural development and to the solution of

the food crisis. Similarly, all development plans and strategies that neglect the contribution of women may themselves be a failure. Moreover, the output of women is based on nonindustrial products, production is largely free from the fluctuation of world markets and form external influences, its development will result in a net gain, namely an increase in consumption, a reduction on external dependence, and improvement of nutrition and the equality of life and the increase of productive force. In order to increase women's performance in production role while at the same time decreasing their workload and improving their living conditions something which will contribute to the overall development will result in improving also the living conditions of men and children (UN, 1992). It is necessary that government policies in African region take into account at all levels (national and local) and in all areas of economic and social life, the role status, living conditions, needs and problems of women particularly of rural women who constitute the great majority. No development strategy can disregard the fact that the rural women are not only producers of consumable goods but also fulfill the roles of mothers, wives, and homemakers. This diversity of roles calls for a long-term vision and implies in fact a change in attitudes (UN, 1992).

Agricultural production by African women is presently limited to the satisfaction of immediate needs. Their productivity is very low not only because of the various reasons cited above, such as uncertain claims on land, age-old methods of cultivation, primitive implements and limited access to production inputs and credits, but also frequent and close pregnancies and a great number of household chores. If agricultural production and particular food production is to increase a whole set of measures needs to be taken which will contribute to improve women's productivity and on the other hand to ensure a better distribution of tasks among the workers.

These measures should include technological improvement through:

a) Research and diffusion of improved cultivation techniques relying partly on the traditional techniques which have proved efficient and taking account of present knowledge and of the experience of other countries and other regions of the world,

b) The development of improved tools, small and medium size agricultural implements and their distribution on a cooperative base,

c) Making available of high yielding seeds to women producers and

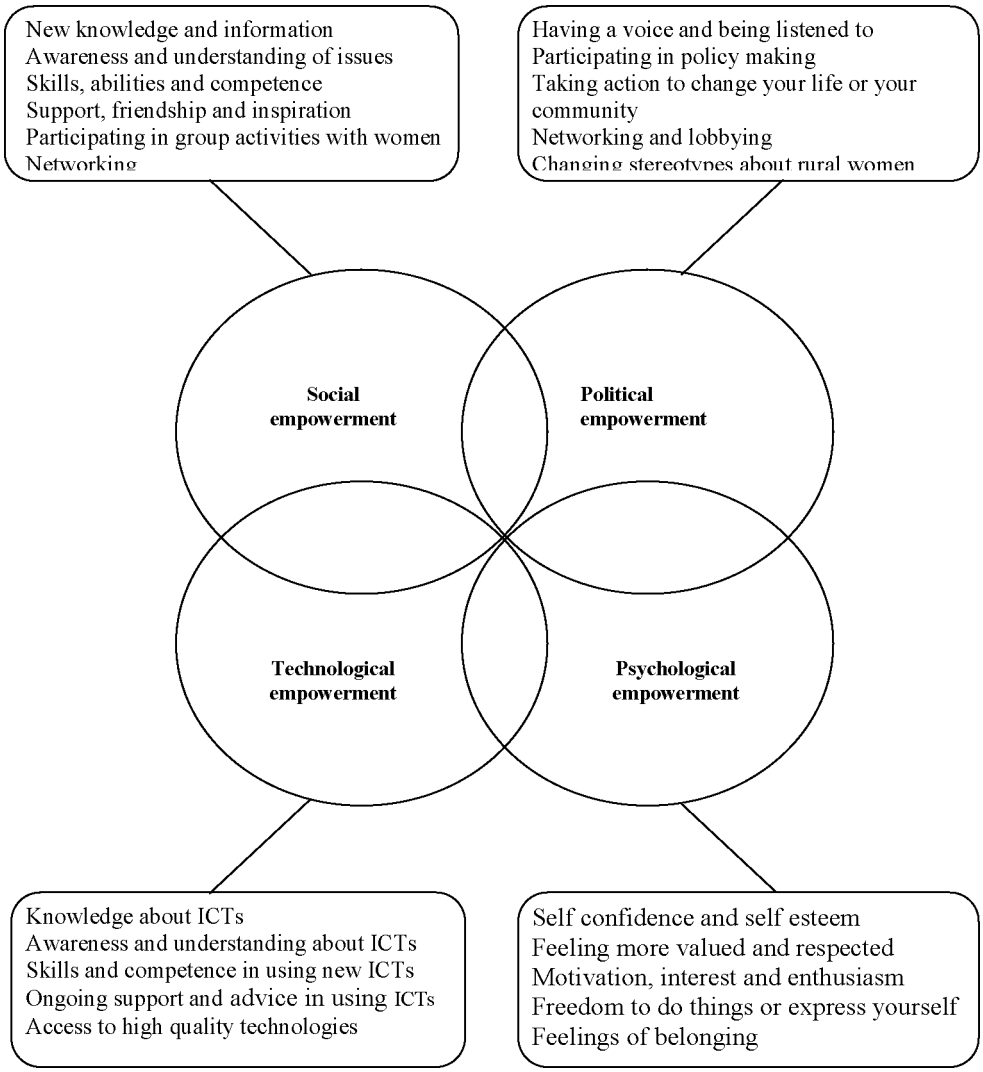
d) The development of improved techniques for the cultivation, processing, and conservation of agricultural products as well as for households' chores (UN, 1992).

For these technological improvements to be translated to reality in application, training programs, a reform of extension service and the development of cooperatives and agricultural credit facilities for rural women are to be streamlined. The reform of rural extension services is necessary for these services to be more oriented towards women producers. This reform should emphasize the re- organization of training of women as leaders and extension agents. Cooperatives should be created, encouraged and if possible financially supported by government, credit institutions, and traditional associations for the benefit of rural women (UN 1992).

2.4. A new model of rural women's empowerment

Drawing on Friedmann's framework and the meanings and indicators of empowerment identified in the analysis, Figure 1 presents the model of rural women's empowerment that was developed. This illustrates the interrelationships between the four forms of empowerment that were identified, and summarizes the key features of each form of empowerment. Although these four forms of empowerment are discussed separately in this paper, there are clearly many interrelationships and overlaps between them.

Figure 1: The key forms and features of rural women's empowerment



source: June Lenni retrieved at http:www.evaluateit.org/resources/empowerment.doc

2.5. Understanding 'disempowerment'

The term 'disempowerment' was used to indicate a state or a sense of powerlessness, oppression, marginalization, exclusion or disadvantage. While the interviewees in my study rarely used the terms 'disempowerment' or 'disempowered', a few used terms such as 'excluded', 'oppression', 'disadvantaged', and 'powerless', or phrases such as 'don't have the power'.

Young's analysis of oppression was considered valuable in defining the concept of disempowerment. Young (1988: 271) labels the 'five faces of oppression': 'exploitation, marginality, powerlessness, cultural imperialism, and violence'. She argues that various groups who are said to be oppressed, such as 'women, blacks ... Native Americans ... and poor people' are not oppressed 'to the same degree or in the same ways' (Young, 1988: 270-271). However, she believes that 'in the most general sense, all oppressed people share some inhibition of their ability to develop and exercise their capacities and express their needs, thoughts, and feelings' (p.271).

Young considers that most people [in North America] lack significant power due to their lack of participation in making decisions affecting their lives. 'Powerlessness' describes the lives of people who have little or no work autonomy, exercise little creative judgment in their work, have no technical expertise or authority, express themselves awkwardly, especially in public or bureaucratic settings, and do not command respect. (Young, 1988: 283)

This analysis is useful because it suggests that, like empowerment, oppression (as a form of disempowerment) has several different facets that affect groups of people in different ways. In addition, because 'different factors or combinations of factors, constitute the oppression of different groups', it is not possible to have one 'essential' definition of this concept (Young, 1988: 276).

Drawing on Young's analysis, the various forms of disempowerment related to participation in the Rural Women and ICTs project were identified. Disempowerment was seen as having various forms that are the binary opposite of the four forms of empowerment, summarized above. They were labeled *social, technological, political* and *psychological disempowerment.* However, using a feminist poststructuralist framework of analysis, my study also showed the intersections between empowerment and disempowerment and challenged various feminist assumptions; such as giving voice to women will lead to empowerment (see Lennie, 2001).

2.6. Rural Women's Access to Extension Services in Africa

Agricultural extension services provide information training and technology to agricultural producers. Extension services have always been regarded as necessary for agricultural

modernization. Given the importance of women's labor to agriculture in most regions, providing women with access to agricultural extension services is essential for current and future productivity. Types of agricultural extension services vary, but in most countries publicly provided services dominant. Evidence suggests that women have not benefited as much as men have from publicly provided extension services (World Bank, 1995).

A review of literature shows that extension agents are most likely to visit male farmers than female farmers (Lisa and Jakob, 1992). The impact of this inequity on female productivity depends in part on whether women and men within households pool information. It is important to ensure that extension services reach women directly; not only to redress gender inequalities but also to maximize productive efficiency. Women play a critical role in production of food and cash crops for the household in post harvest activities and in livestock care. Men and w omen perform different tasks they can substitute for one another only to a limited extent and this limitation creates different demands for extension information also, as men leave farms in search of paid employment in urban areas. Women are increasingly managing and operating farms on a regular and full-time basis. Hence women are becoming a constituency for extension and research services in their own right (World Bank, 1995)

2.7. Women and Natural Resource Management in Sub-Saharan Africa

As reported by Mitchell (1995) for many women in the South, the process of modernization has effectively severed their close ties to the environment. In the name of 'progress', traditional forms of natural resource management continue to be replaced with unsustainable practices. Lacking access or rights to such things as credit, information and land tenure, most women in developing economies are locked into a vicious poverty cycle as both victims of and contributors to environmental degradation. The author also revealed that this reality is particularly acute in sub-Saharan Africa (SSA) where women provide the basic necessities for family survival. To this extent, SSA women are de facto managers of the natural resources surrounding them, including soil, water and forests. The World Bank estimates that women in SSA are responsible for 80% of all agricultural production. This figure not only includes staple food production, but also other agricultural activities, such as food processing, marketing, small-scale cash cropping and animal husbandry. Despite women's large contribution to food production, and water and fuel gathering, they are confronted with rigid socio-cultural barriers and a lack of access to the factors of

production. They are being ignored in most national policies. These omissions contribute to already serious natural resource depletion, which, in turn, affects women by reducing household food supplies, the availability and quality of water, and domestic energy sources. An important socio-cultural barrier faced by many SSA women is the lack of intra-household transfers of agricultural knowledge. Many development planners make the false assumption that husbands will automatically pass on information they receive from extension services to their wives. Related to this is the fact that women have limited political participation in most sub-SahARn African countries. This further hinders their ability to gain access to information services that could improve natural resource management.

Additionally, female illiteracy in SSA is almost twice that of males and gender-based educational discrepancies prevail. In a FAO (1996) study of agriculture extension services received by women farmers in five African countries, the vast majority of the women surveyed were found to be illiterate. This drastically limits their ability to comprehend technical information. In addition, females may speak only the tribal language whereas males are more likely to speak the official national language as well. Although women make up the majority of food producers in SSA, they have little or no access to the factors of production. This imposes severe limits to effective and sustainable management of natural resources. Of primary concern to women farmers is land availability and tenure. The lack of appropriate farm and household technology is a crucial factor for women who face labor-intensive and time-consuming tasks that further marginalize them from participating in sustainable resource management. In many cases, even if new timesaving technologies become available, women cannot afford them - formal credit systems often bypass them because they lack land title and thus collateral. Compounding this is the growing trend towards female-headed households, as men migrate to urban centers in search of work. As remittances from spouses and sons often become less reliable over time, women are left with no access to even the most basic of agricultural services, including inputs, and processing and marketing facilities. The result can be intensification of agricultural practices on already exhausted lands until the ecosystem collapses, forcing women and children to seek refuge in swelling urban slums.

2.8 Do Women Farmers Learn from Their Husbands?

A survey of women farmers in Burkina Faso found that 40 percent had some knowledge of modern crop and livestock production technologies. For most of these women, relatives and friends were the source of information; nearly one-third had acquired their knowledge from the extension service, and only 1 percent had heard of the technologies from their husbands. Men are less likely to pass information on to their wives when crops and tasks are gender specific. In Malawi, women claimed that their husbands rarely passed on advice to them: if their husbands did tell them something the women did not find it relevant to their needs. In

India, women learned from friends, relatives, neighbors and sometimes from their husbands but this second-hand information seldom changed their production patterns (DFID, 2000).

2.9 An Introspection in to Rural Women Empowerment in Ethiopia

As reported by Ranjan and Hedija (2004), the women orientation of the rural development extension programs, as perceived by the respondents were not encouraging and a large majority of the respondents opined that the women participation in the extension programs of government as well as NGOs was quite inadequate though many of them focused on issues related to women centered activities. Extension programs relating to family planning, childcare, reproductive health and home management aspects had adequate women participation. In the case of extension programs relating to crop production, environment and sanitation and livestock management, the women participation was substantially low as revealed by the negative responses of most of the respondents. Studies indicated that role of women in livestock management other than that of bullocks is much significant, but it remains more traditional due this trend. Environmental protection and sanitation are also very important as far as the living surrounding and sustainability are concerned, but the less involvement of women again gives a shaded image in that respect. It could be generally seen that all this activities are necessary demanding active women involvement, but the extension programs orientation is not enough to make the intended clientele participation, probably due to several extraneous factors also such as cultural setting, social norms etc. Therefore a reorientation of extension approaches and messages is necessary to improve the balance of technical messages and communication strategies with the reality of small-scale agriculture where women have major roles in farming. (Katrine and Daphne, 1992).

2.10. An Overview of Rural Women in Ethiopia

Historically, the 1974 socialist revolution is said to have brought some significant gains for Ethiopian women in general and those in rural areas in particular, in social, economic and political spheres. The then established Revolutionary Ethiopian Women's Association (REWA) was believed to have provided the means through which women's interests could be represented and their rights promoted. However, the organization being too close to the then political party, its purpose was the consolidation of the political power, and as such was not promoting the interests of women. As a result, it failed to construct a society in which resource and power are shared equally among men and women (Belay and Etenesh, 1997). Not many extensive studies have been done to fully capture rural women's contributions to agricultural production in Ethiopia. As a result, these women's contribution to agricultural output is normally underestimated. Nevertheless, existing literature reveals that women are either assisting or directly involved in all stages of agricultural production and food processing. Women's activities are mainly focused on hand- clearing, weeding, plant spacing and addition of manure, cutting and threshing, grain processing, food preparation and marketing for home consumption needs (Fellows, 1993). Nevertheless, much of rural women's life in Ethiopia is spent in child- bearing and child rearing for the benefit of the household production. A research finding by Etenesh (1998) reveals that the need of children, to build the household labor force and to perpetuate it has made rural women subscribe to the traditionally high value placed in child- bearing. Children are also the women's only solace. For example, the same research shows close substitutability between the labor of women and children, particularly girls.

Additionally, to enhance the well being of household members, rural women contribute their labor in supportive tasks (like cleaning, fetching water and fuel wood), in which typical absence of men is observed. For instance, the pottage of rainfall is almost nationally a female's task and introduction of girls to this role is initiated at a very young age. According to studies by Fellows (1993), it has been estimated that 3-5 hours daily are required for the pottage of rainfall and rainfall vessels may weigh 20 or more kilos when filled. The same study has reported a case where women carry on average 77% to 95% of their body weight uphill and over long distances.

Nevertheless, rural women's contributions to reproductive activities are often culturally and socially invisible and valued lesser than contribution to agricultural production.

In response to the above-mentioned anomalies, in 1991 the transitional government of Ethiopia established a Women's Affairs Office in the Prime Minister's Office, to encourage women's participation, give them a fair share of the country's resources and promote women's voluntary organization. Subsequently, in March 1993, the national policy on Ethiopian women was adopted. The national policy includes some articles that are devoted to rural women. Article 2 of this policy states the objective of the policy as facilitating the necessary conditions whereby rural women can have access to basic social service and to ways and means of lightening their workload, as reported by Belay and Etenesh (1997). This national policy emphasizes that all policies, plans or laws regarding women should ensure the equality of women and men. Moreover, it underscores the need to give special emphasis to the participation of rural women in programs and projects, to ensure equal access to the decision making process and to the benefits derived from central and regional institutions.

2.11 Education and Literacy Levels in Ethiopia

The literacy campaign launched by the previous government made significant gains in increasing the national literacy rate, but it declines again due to the collapse of the main supporting structures. The formal education sector has been stagnant. In Ethiopia, primary school enrolments fell from 1984 onwards, declining in absolute terms in 1990/91. Access to primary education is lower for girls, among whom there are a great number of dropouts and repeaters when compared to boys. There remains a significant urban bias in the dispensing of educational service in the country. The education sectors suffer from insufficient resources, outdated curricula, inadequate numbers, poor distribution of trained teachers, and lack of appropriate educational structures at different levels. Education is not there for playing a pivotal role in determining the health, nutrition and sanitation practices adopted by communities (UNICEF, 1993).

2.12 Mass Media in Ethiopia

Ethiopia's mass media, with their history of state ownership, remain under developed and under-utilized. They lack resources, trained personnel and the necessary technical capacity. Prior to the May 1991 change of government, all media outlets were state owned or controlled. As a result the mass media were utilized mainly to support the political status quo. Except for an educational

radio system, there was little effort to employ the mass media as a catalyst for or part of strategic social mobilization efforts. Information dissemination in such a government controlled media environment tends to focus attention on government systems. There is little sustained focus on such critically important subjects as oral dehydration therapy, environmental sanitation, nutrition or family planning.

The educational messages that were produced were for the general public, not for specific target audiences. Message design did not incorporate pre-testing, monitoring and evaluation because of limited financial resources and trained manpower (UNICEF, 1993).

2.13 Conceptual Framework of the Study

Access and effective utilization of development communication is important for the development of the entire population found in the world. This access and effective utilization of development communication by people who are living in developing countries have great merit. Especially, for rural women who are living in Third World countries might get advantage or progress on their living standards and of their development with this, which also leads them to empowerment.

Due to external and internal factors, rural women's life is not in progress. To alleviate this problem the solution would be to increase women's access and effective utilization of development communication through identifying and alleviating the problem that affects the extent of access and utilization of development communication, intervening with the personal, socio- psychological and situational factors to increase the possibilities of women's development and empowerment. This study believes that the rural women in Ethiopia are embedded with a lot of responsibilities and roles in productive and reproductive aspects of their life, but the chances to improve or modify them from the tradition bound styles which are carried over from earlier generations seem to be less. This is mainly due to the fact that the exposure to modernize and scientific information on these activities or roles remains to be limited to them with inherent limitations and imposed restrictions. Consequently, the life of the entire family constrain from progress as the women being the major actors in designing the familial life, especially in child care and home management, in addition to their productive roles.

The conceptual framework of this study is based on the assumption that the access and utilization of development communication in relation to all such aspects of life by the rural women are limited and interrelated. They are much influenced by a number of personal, socio-psychological

and situational factors of the rural women, in addition to the constraints preventing or inhibiting the possibilities. The personal, socio-psychological and situational factors have interrelation with constraints, many times with an overlapping relationship.

The attempt would be to explore and analyze these types of relationships after identifying them in the systematic manner.

2.13.1 Definition of variables

Age- is measured in terms of number of years completed by the respondents. Since age is a factor normally makes the rural women confine more to household chores, it was assumed that age would have a negative relationship with access and utilization of development information from external sources.

Family size- is the size of the family of the respondent measured in terms of total number of members in the family including aged persons and children. Since family size is more related to household efforts of rural women, negative relationship was expected between family size and development communication access and utilization.

Marital status- indicated whether respondents are married or not married. It was measured with the yardsticks of single, married, separated or widowed. Since married women will have more roles to be performed, a positive relationship was anticipated between marital status and development communication access and utilization. Education level- was defined in the study as the level of formal education and measured in terms of ability to read and write and enrolment in primary, secondary schools or above. Education level as a variable helping exposure to information, it was assumed that this variable would have positive relationship with the **dependent variables**. Income- income is operationally defined as the value of the products of the household after home consumption and expressed in birr per year. The income level is anticipated to have a positive relationship with the dependent variables since normally it becomes a facilitating factor. Cosmopoliteness- is the degree of orientation of the respondents towards outside the social system to which she belongs. It is measured in terms of frequency of visits to outside her village and the purpose of such visits. Cosmopolitness was expected to have positive relationship with the dependent variables since it provides more chance of exposure to external information. Innovation proneness- was defined in this study as the receptivity of the individual to new ideas related to different roles of life and it was measured in terms of the quickness of accepting more number of new ideas. This variable was assumed to have a positive

relationship since it was obviously a facilitating factor for information access and utilization. **Social participation**- for the purpose of this study was operationalized as the respondents' affiliation and involvement in social activities and it was measured in terms of her membership or official status in any formal or informal organizations, along with the frequency of participation. This variable also was assumed to have a positive relationship with the dependent variables. Information seeking behavior- was defined in this study as the degree to which the respondent was eager to get information from various sources on different roles she performs. This was measured in terms of how much information sought, how frequently and from where the information was sought. Information seeking behavior was assumed to have positive relationship with the dependent variable. Achievement motivation- was defined as the need in an individual to perform different roles with some degree of excellence. This variable was measured using the scale suggested by Pareek and Rao (1974), with slight modifications. Achievement motivation was expected to have positive relationship with the dependent variables.

Extension contact- is operationalized as frequency of contact by the extension functionaries of government and NGOs with the respondents and it was measured as frequency of contact per year. This variable was expected to have positive relationship with access and utilization of development communication by rural women.

Availability of organizations- availability of organization as a variable was operationalized as the existence and functioning of different organizations or institutions in the village or in the nearby areas. This was measured considering the number of such organizations or institutions available. This variable was also assumed to have a positive relationship with the dependent variables.

Distance from town- distance measured in kilometers, for the residence of the respondent from nearby town. This factor was assumed to have a negative relationship with the dependent variables, since it reflects the remoteness of the residence. Sharing of available information- was operationalized as the extent to which the respondent discussed and shared the information, whatever available, with others including family members, friends or neighbors. This was also anticipated to have a positive relationship with access and utilization of development information.

3. RESEARCH METHODOLOGY

3.1 Description of the Study Area

3.1.1 Location and physical situation

Robe is one of the woreda in the Oromia National Regional State, Arsi zone, Ethiopia. It is named after the Robe River, 80 kilometers of which flows through the woreda. As part of the Arsi Zone, Robe is bordered on the south by the Shebelle River which separates it from the Bale Zone, on the southwest by Sherka, on the west by Tena, on the north by Sude , on the northeast by Amigna, and on the east by Seru. The administrative center of the woreda is Robe; other towns in Robe include Habe, and Sedika.

The altitude of this woreda ranges from 1200 to 4000 meters above sea level. The two main rivers flow 45 and 40 kilometers are Hulull River and Wabe River respectively. The gorge of the Wabe River is a local landmark.

A survey conducted by Woreda Agriculture Office on the land use pattern in the woreda indicates that 51.1% is arable or cultivable land, 4.9% pasture land, 16.3% forest, and the remaining 27.7% are considered swampy, mountainous or otherwise unusable.

Robe is one of the major producers of oil seeds in the Zone. (CSA 2005 National Statistics) The main oil crops produced in the area are Flax, Nueg (Niger seed) and Rape Seed. In addition to Oil Crops, Coffee has been a major cash crop in Arsi as early as 1912, when two Belgian companies were granted concessions of 1,464 hectares of land for cultivating coffee in the area of the current Zone. After World War I, these companies encountered financial difficulties and merged, and harvested as much as 613 tons of coffee at their peak (1931-21). (Richard Pankhurst, 1968 p. 203) The Central Statistical Agency (CSA), reported that 2198 tons of coffee were produced in this zone in the year ending in 2005, based on inspection records from the Ethiopian Coffee and Tea authority. This represents 1.9% of the Region's output and 0.97% of Ethiopia's total output. (CSA 2005 National Statistics)

Fig.2 location of Arsi

Industry in the woreda includes 38 small-scale industries employing 93 persons, which include 38 grain mills. Other commercial activity consists of 1160 registered businesses of which 32.8% are wholesalers, 42.2% retailers and 19% service providers. There were 28 Farmers Associations with 15,116 members and 10 Farmers Service Cooperatives with 14,471 members. Robe has 75 kilometers of feeder roads,[3] 36 kilometers of dry-weather and 44 of all-weather road, for an average of road density of 117 kilometers per 1000 square kilometers; 54 kilometers of rural road are under construction. About 19.5% of the total population has access to drinking water; a water supply project is under construction.

3.1.2 Demography

The 2007 national census report reveals that the wereda had a total population of 165,210, out of which 83,129 and 82,081 were men and women respectively. From this census report, 20,680 (12.52%) of the population were urban dwellers. The majority of the inhabitants said they were Muslim, with 61.78% of the population reporting they observed this belief, while 37.77% of the population practiced Ethiopian Orthodox Christianity. *(Population and Housing Census of Ethiopia: Results for Oromia Region 2007),*

The three largest ethnic groups reported in Robe were the Oromo (86.11%), the Amhara (11.25%), and the Soddo Gurage people (1.39%); all other ethnic groups made up 1.25% of the population. Oromiffa was spoken as a first language by 84.15%, and 15.22% spoke Amharic; the remaining 0.63% spoke all other primary languages reported.

Robe has an estimated population density of 127.1 people per square kilometer, which is less than the Zone average of 132.2. (World Bank Project Appraisal Document, published 19 May 2003)

3.1.3 Land use patterns

The land use/cover types of the Arsi Robe comprise of grasslands, shrub lands, cultivated lands, bare lands and urban areas. The extent and percent coverage from the total study area of each of the units are shown in Table 1.

Table 1. Land use patterns of the Arsi Robe

Description	Area (ha)	Percentage coverage
Open grassland	28529.6	22.15
Open shrub land	32741.5	25.42
Dense shrub land	231.8	0.18
Intensively cultivated land	244.7	0.19
Moderately cultivated land	22205.5	17.24
Homesteads	528.1	0.41
Bare lands	1461.4	32.19
Urban area	2859.4	2.22
Total	128802.0	100.00

Source: Arsi Robe Agricultural Development Office (2003)

3.1.4 Crop Production

Bimodal type characteristic of the rain rainfall gives a wide opportunity for the district to produce the crops and use the same land twice a year (for Meher and Belg). However, the land cultivated during the Meher season accounts the largest area of the total cultivated land in the district. The major annual crops growing in the district are cereals, Pulses and Oil Seeds. From cereal crops Barley, Teff, Wheat and Maize are the most widely grown in the district from permanent crops Coffee, and vegetables are also produced for market and food purpose. In 1991/92 and 1994/95 E.C, about 31009 and 33413 hectares of lands were cultivated respectively. The total production obtained was 509628 quintals with 19.66 quintals per hectares (1991/92) and 156532 quintals with 4.68 quintals per hectares (1994/1995E.C). The highest production was

obtained in 1993/94 (653332 quintals), while the lowest was obtained in 1994/95E.C (156532quintals)

3.2. Livestock, Poultry and Bee-keeping

Livestock: Cattle, Sheep, Goats and Pack animals population is about 73%, 15% 07%, 6.6% and 5.79% of the total livestock in Robe district during the year 1994E.C respectively. In 1994 E.C, Robe had the livestock population density of 103 heads per sq km (Cattle 74, Sheep's 15.54, Goats 6.85 & pack animals 5.97 heads per sq km. Robe is one of the districts with large number of livestock from Arsi Zone. The high prevalence of diseases, traditional method of rearing, shortage of the feeds & the like are the major constraints in livestock production in the district. The major types of animal feeds in the district are forage and crop residues, which are limited in nutritional values.

Poultry: Poultry production is one of important source of family income and food in the district. Accordingly, in the year 1994 and 1995E.C, there were 55000 and 55660 poultry populations in the district. However, the prevalence of disease & low productivity due to traditional method of rearing is the major constraints. No data obtained for the year 1991, 1992 and 1995. Equin**es** are another type of animals reared in the district. There were 12447 and 14575 equines in 1991 and 1994 respectively

Bee- Keeping: Bee- Keeping Activities Bee-keeping farming is another source of cash income for farmer family. However, rapid deforestation rate of vegetation and lack of enough moisture due to shortage of rain fall, using of herbicides and insecticides are the main problems in bee farming. No data obtained regarding beekeeping.

Education and health: According to the Planning and Economic Development Office (PEDO, 2001), Arsi Robe has 4 secondary schools and 53 primary school. Out of the primary schools, 28 and 25 were found in the urban and rural part of Arsi Robe respectively. Based on the same source, the percentages of students enrolled in secondary and primary schools in the Arsi Robe were 25 and 62.5, respectively. The enrollment in primary education in the rural and urban areas accounts 31.5% and 75.9% respectively, while the total number of students engaged in the secondary education was 7,251 of this, the number of male and female students was 4,159 and 3,092.

With regard to health related services in the Arsi Robe, there are one hospital, 3 health centers, 19 health stations, 11 health posts, 17 pharmacies and 3 drug distribution centers and 10 drug shops (PEDO, 2001). Out of these, 2 health centers and 10 health posts are situated in the rural areas. Agricultural facilities: the Agricultural Development Office of Arsi Robe assigns agricultural extension workers and the general principle is to have one extension worker serves two or three PAs.

Market facilities: although the major market centers for the Arsi Robe Area is the Arsi Robe town, smaller markets are located everywhere in the PA villages. Both crop and livestock products are the main goods supplied by the farmers to the market centers. In return, the farmers take home consumable goods such as food, oil, salt, kerosene, soap, etc. usually the market places are, in places where farmers and traders meet in a designated open area with wares displayed on the ground.

3.2 Sampling Technique

In principle, accurate information about a given population could be obtained only from a census study. However, due to financial and time constraints, in many cases a complete coverage of the population is not possible. Thus sampling is one of the methods, which allow the researcher to study a relatively small number of units representing the whole population (Sartnakos, 1998). It is also believed that the sampling technique that results in representative samples mirroring the whole population is a random sampling technique (Mantzopoulos, 1995). A random sampling technique, which allows equal chance for all members of the population to be included in the sample, was employed to obtain a representative sample. According to the basic principle, the availability of prior information about the target population in the study area and the overall objective of a given study determine the decision of choosing a specific sampling technique. Considering the objective of the study, and representativeness of the sample, from four direction of Arsi Robe, eight sites were selected Namely, Adamtu, Ataba, Sude, Gasala, Doyo, Dange, Abowali and Chaffe. The selection shall be based on homogeneity in socio-economic and physical characteristics such as availability of GOs, NGOs. Accessibility was also one of the criteria to select different sites.

Thus, a two-stage random sampling technique was employed to select the sample required for the analysis. In the first stage sampling, from the whole project areas (Peasant Associations), four PAs were selected purposively. This was done with the assumption that all the PAs were covered by different development programs of the government through various departments, but all the PAs are not covered by the programs of NGOs. Normally NGOs select the project areas to implement their schemes. In the case of government programs, the coverage of the population may not be complete in reality for obvious reasons. Hence, the areas covered by NGOs as well are assumed to have development schemes in operation by one or the other agency. However, in such areas, it may not be possible to delineate population to have information coverage either from government agencies or from NGOs alone. The purpose of drawing sample from the PAs covered by both category development agencies was to ensure the availability of development information for the community in general. Hence, another four Peasant Associations were also selected randomly from the non-project areas to reduce biased sampling and to give equal chance for the whole PAs. Though separate lists of male headed and female headed were not available in the PAs, in the second stage sampling, list of females in 'edir' in each village was collected and used to select 160 females using simple random sampling (117 females from male headed household and 43 females from female headed household).

3.3 Data Source and Collection

For this study, primary and secondary data were used. The primary data necessary for this study were collected from sample respondents by using pre tested and structured interview schedule. For these purpose six enumerators, who have acquaintance with socio economic. Concepts and knowledge of the culture of the society as well as local language proficiency were selected, trained and employed for the data collection. Secondary data were collected from reports and other unpublished materials.

The dependent variables of the study are access to reproductive, productive, community role information by rural women and utilization of the information by them. Independent variables for the study included the personal, socio-psychological and situational factors of rural women that may influence the dependent variables, which were identified through a systematic procedure. For this purpose, an exhaustive list of possible relevant variables was proposed based

on review of literature and discussion with experts in the field and academicians. This list included items reflecting reproductive, productive and community roles of rural women in the location of the study as well as all relevant personal, socio psychological and situational factors. This list was then subjected to relevancy rating by a panel of 25 judges, constructed by subject experts and senior officials. Based on their rating for relevance of each variable to the topic of the study, Relevancy Quotients (RQ) were worked out using the formula, RQ= obtained score/ potential score and then multiplied by 100. The statement, which could get a Relevancy Quotient value of 85 or more, was included in the study for gathering data. The dependent variables of the study such as access to development communication and utilization of development communication by rural women were measured using structured lists of items selected through the systematic procedure mentioned above, to reflect reproductive, productive and community roles of the respondents, to elicit responses on frequency and extent the face validity of the selected items were ensured from relevancy rating and reliability analysis during pre testing and after collection of the data and the result was the same standardized values (Alpha value), indicating their validity and reliability. The constraints were measured using an exhaustive list of all possible constraints were prepared in relation to literature, experts and respondents of pilot study. The independent variables (personal, scio-psychological and situational variables) were measured using already available inventories with needed modifications and arbitrary scales to suit the purpose of the study. However, their consistencies were ensured with the analysis of the data obtained in the pilot study.

The time intervals used to measure access were the frequency of getting information as ‘frequently’, ‘sometimes’ and ‘never’ with the time bound in the last three years (2001-2003). Even if it is difficult to remember things occurred before six months, in this study to get genuine information different crosscheck questions were used. For those who gets information four times and more than per year could be classified as “frequent” access, and for those who gets information once per year or with unlimited time or if they were uncertain they could classified as “sometimes” having access and those who do not have information access totally classified as “ Never”. An interview schedule was prepared to enable the data collection. The interview schedule was consisting of different types of questions, related to the topic of the research and relevant variables to gather the needed information. Thus, structured and semi- structured interview schedule were developed and used in order to allow the respondents to freely express

their opinion on issues related to the research topic. The semi-structured interview schedule was used during focus group discussions to fill the gap of the structured interview schedule. After formulating the interview schedules, necessary editing was done for its observed consistency and logical sequence with frame of reference of the respondents. Then, it was subjected to a pilot study in a non sample respondent with a minimum and adequate small sample of 43. Based on the nature and extent of responses obtained, necessary modifications and further editing were done in the interview schedules to ensure its clarity and completeness for generating the needed information from the respondents. In addition to the personal interviews of respondents using the structured, pre tested interview schedule, focus group discussion were conducted in four project areas. The semi structured interview schedule was used as a guideline to facilitate the discussion. This discussion was held to elicit further information of qualitative in nature and to ensure completeness of the data gathered.

3.4 Data Analysis

Different types of analytical methods can be used to evaluate different research results and make a sound conclusion for a given survey information. Literature reveals that each and every analytical method has their advantages and limitations; it is always advisable to select the one that can better suit to answer the specific purpose (Hopkins et al, 1996; Duvel, 1999; Pallant, 2001). In this particular study statistical methods such as frequencies and parametric test such as Pearson's product moment correlation were used to analyze the data. Pearson's product moment correlation was selected as appropriate statistical tool for this study rather than using other methods due to melticolinearity effect of the independent variables. The attempt was to describe characteristics of the sample respondents, explore the relationship between independent variables over the other dependent measure and research questions sufficiently. Gomez and Gomez, (1984) have described the use of Pearson's correlation coefficient to describe the relationship between two quantifiable variables, as was applied by Ranjan (1988). The use of this statistical tool in establishing relationship between variables has been further discussed by Warren (1996), and used in the situation similar to the present study by Mercykutty (2003). The Statistical Package for Social Science (SPSS) was used for data analysis.

To assess whether rural women have access to development information or not, different items that indicates reproductive, productive and community role activities were used. The items were

listed through discussion with experts and review of literatures. To make sure whether the selected items were standardized or not reliability analysis was done based on data obtained during pilot study.

4. RESULTS AND DISCUSSION

In this chapter the findings on the four objectives of the study are discussed in detail based on survey results.

4.1 Access to Development Communication by Rural Women

This section covers different information access related to reproductive, productive and community roles of women in addition to information on other activities done by rural women. In order to measure their access to development information different time intervals were used based on the conditions of the study area. In the study area, integrated development activities started before five years. It does not mean that before this time there was no activity in the area, rather more integrated activities /works that leads the society in improving their life standard started before five years. For instance primary schools are established in all the PAs, water points are found in some of the PAs, health centers are established in some of the PAs and the rest PAs the establishment of the centers are going on. TVET (Technical, Vocational and Educational Training) graduates are assigned in each PAs to assist the farming community, different NGOs are working in rural areas of Arsi Robe with joint effort of GOs for the past five years.

4.1.1 Information access related to reproductive roles of rural women

Reproductive roles- are roles like child bearing/ rearing responsibilities and domestic tasks done by women, required to guarantee the maintenance, welfare and reproduction of the family labor force. It includes not only biological reproduction but also the care and maintenance of the human being (male partner and working children) and the future human resource (infants and school going children).

Table 2- Frequency distribution of access to scientific information related to reproductive role of rural women in Arsi Robe. (n= 160)

Items	Frequency of getting information					
	Frequently		Sometimes		Never	
	Number	percent	Number	Percent	Number	Percent
Cooking	-	-	68	42.5	92	57.5
How to feed the whole family	-	-	66	41.3	94	58.8
Vaccine for new born	2	1.3	108	67.5	50	31.3

baby						
Care of sick children	2	1.3	100	62.5	58	36.3
Hygiene of children	2	1.3	100		58	36.3
How to combine nutritious food	-	-	68	42.5	92	57.5
Avoiding unexpected pregnancy			121	75.6	39	24.4
Hygiene of house and the surrounding	-	-	69	43.1	91	56.9

As indicated in Table 2, the items used to assess whether there is access to reproductive role information or not were eight. The frequency distribution in the results revealed that, more than 50% of the respondents were having access for some reproductive role information only 'sometimes'. The most accessible reproductive role information with 'some times' time interval base were, avoiding unexpected pregnancy (75.6%), vaccine for new born baby (67.5%), care of sick children (62.5%), and hygiene of children (62.5%). This result shows that there was somewhat enough information access in health aspects while in aspects of cooking, how to combine nutritious food and feeding the whole family the access trend was not encouraging. More than 55% of the respondents were not having access to these items.

The items contribute more in improving reproductive role activities, if it were supported by scientific information. A study conducted in Eastern Harerghe (Ranjan and Hedija, 2004) indicated that the rural women had access to scientific information only meagerly in all the subject areas explored and among them child care, family planning, reproductive health and home management had better performance in that order; though inadequate.

4.1.1.1 Access to family planning education for rural women

In the study area, the average family size of the sample respondents was found to be 6.74 persons. This was above the national average of five persons (CSA, 1994). The maximum family size was fifteen and the minimum was two. All the respondents were married females and the survey result shows that 8.1% of them were divorced, 2.5% of them were separated and 17.5% were widowed.

Table 3. Family size of respondents (n = 160)

Number of children	Number	Percent	Minimum	Maximum	Mean
1-5	60	37.6	2	15	6.74
6-10	80	50.0			
11-15	20	12.4			
Total	160	100.0			

Source- survey result

As indicated in Table 3, majority of the respondents had six to ten children and this could be related to access to family planning education at the time of their birth delivery, but the recent generation are getting the information as indicated by the respondents. The survey result revealed that 74.4% of the respondents had access to family planning education from home agents, health centers, NGOs like HCS and informally from their neighbors (Table 4) and the rest 25.6% were not get family planning education.

Table 4. Frequency distribution of access to family planning education (n= 160).

Response	Number	Percent
Yes	119	74.4
No	41	25.6

Source of information

Health center	98	61.3
NGOs like HCS	12	7.5
Neighbors	5	3.1
Home agents	4	2.5

Source- survey result

The respondents raised different reasons for why they were not getting family planning education. The main reasons revealed by the respondents were lack of interest, lack of awareness, religious restriction and far distance of health centers. Among these 10%, 7.5%, 7.5% and 0.6% of the respondents have revealed reasons as lack of interest, lack of awareness, religious restriction and far distance of health center respectively (Table 5).

Table 5. Reasons given by respondents for not getting family planning education (n=41).

Reasons	Number	Percent
Lack of interest	16	10
Lack of awareness	12	7.5
Religious	12	7.5
Far distance of health center	1	0.6

Source- survey result

4.1.1.2 Information access to and source of information on home management for rural Women

Home management includes all activities that are helpful to improve home management like house furniture arrangements, using modernized kitchen, using separate houses for human being and animals, managing expenditure pattern judiciously for different needs of the family etc. The survey findings in Table 6 show that 46.2% of the respondents had information access related to home management while 53.8% of the respondents did not have information access for the last three years. In all the study areas, there is no separate home economics department in PA levels. Because of the new government structure of different departments, the department is mixed/ integrated with other departments and it is done by extension agents as indicated by Arsi Robe MOA office experts.

Table 6. Frequency distribution of access to and source of information on home management

Responses	Number	Percent
Yes	74	46.2
No	86	53.8

Source of information

Home economics agents	47	29.1
Health professionals	12	7.5
Extension agents	11	6.9
Neighbors	4	2.5
Total	74	46.2

Source- survey result

4.1.2 **Information access related to productive role of rural women**

This sub section covers, how much scientific information were reaching for rural women, to improve their way of doing productive role activities. Productive roles- is work done by both men and women for returns in cash or kind. For women in agricultural production, this includes work as independent farmers, peasant wives and wage workers. Rural women, in addition to their usual reproductive and domestic roles, also play a crucial role in the production of food for the household by managing both crop and livestock enterprises. Women are expected to have a wider range of tasks, objectives and constraints as compared to men within the same household

Table7. Frequency distribution of access to scientific information related to productive role of rural women in AR (n= 160)

Items Frequency of getting information	Frequently		Sometimes		Never	
	Number	%	Number	%	Number	%
Land preparation	-	-	52	32.5	108	67.5
Seed selection	-	-	66	41.3	94 5	8.8
Sowing on line	-	-	67	41.9	93	58.1
Fertilizer application	1	0.6	61	38.1	98	61.3
Harvesting and threshing	-	-	23	14.4	137	85.6
Storing	-	-	35	21.9	125	78.1
Application of pesticides and spray chemicals	-	-	43	26.9	117	73.1
Irrigation of farm land	2	1.3	48	30.0	110	68.8
Intercropping	-	-	54	33.8	106	66.2
Water harvesting technology	2	1.3	54	33.8	104	65.0
Cattle breeding	-	-	45	28.1	115	71.9
Care of birth animal	-	-	43	26.9	117	73.1
Disease control measures of crops and livestock	-	-	44	27.5	116	72.5
Cultivating vegetables	1	0.6	50	31.3	109	68.1
How to take garden products to market	1	0.6	50	31.3	109	68.1
Fodder preparation		-	34	21.3	126	78.8
Milking procedure	-	-	35	21.9	125	78.1

The items used to measure the rural women's access to productive role information are indicated in Table 7. As it is shown in the Table, more than 65% of the respondents did not have access to productive role information. Among these, the major inaccessible productive role information are about how to harvest and thresh (85.6%), fodder preparation (78.8%), milking procedure (78.1%), care of birth of animals (73.1%), application of pesticides and spray chemicals (73.1%), disease control measures of crop and livestock (72.5%), and cattle breeding (71.9%). Only 41.9% of the respondents had 'some times' (most of them got the information once in a year) information about sowing on line and 41.3% about improved seed. Again 1.3% of the respondents have frequent access for information on irrigation of farmland, and 0.6%water harvesting technology. This is insignificant when it is compared to the overall contribution of women in agricultural activities. A study conducted in Eastern Hararghe (Ranjan and Hedija, 2004) indicated that the access to scientific information on crop production, environment and sanitation as well as livestock management were very insignificant for rural women as perceived by the respondents. Hence it was found that that in most of these life activities, women played vital roles but they were deprived of the needed information for progressive life.

4.1.2.1 Access to agricultural extension service by rural women

According to the information obtained from the respondents (Table 8), the two major sources for obtaining agricultural information were through MOA or extension agents and sharing information with the neighboring and friends. As shown in Table 8, 30% of the respondents had better chance of obtaining first hand information from MOA or from extension workers. In order to measure the access to extension service, respondents were asked about the frequency of contacts they had with the extension workers and their intensity of exposure to listening agricultural programs on media. It is believed that the probability of getting information of new technologies increases as the frequency of contact with extension workers is increased.

Table 8. Respondents source of information in AR (n= 160).

Agricultural information sources	Number	Percent
MOA/extension workers only	48	30
Friends/neighbors only	43	27
From local committees only	25	17
Both MOA/neighbors/market place	19	11
No information source	25	15

Total	160	100.0

Source- survey result

The result of the survey in Table 9 indicates that 48.1% of the respondents had no contact with extension workers. Only 5.6% of them had been visited by extension workers once in three months, 42.5 % of the respondents had been visited by extension workers only once in a year and 3.8% of them had been visited only once more than one year. In Ethiopia the involvement of female farmers in the extension activities is less than 5% in general (CISP, 1997)

Table 9. Distribution of respondents according to their contact with extension agents (n= 160)

Frequency of contact	Number	Percent
None	77	48.1
Once in three months	9	5.6
Once in a year	68	42.5
Once more than a year	6	3.8
Total	160	100.0

Source- survey result

As revealed in Table 10, respondents were asked to reason out why they were not getting extension service, the major points raised by the respondents were, the service is given only for males (51.9%), lack of awareness (11.3%), and 9.4% of the respondents complaining development agents lack of interest to teach the society as a whole including women farmers.

Table 10. Reasons revealed by respondents for inaccessibility of extension service.

Reasons	Number (n=77)	Percent
The service is male oriented	40	51.9
Lack of awareness	18	11.3
Lack of DA's interest	15	9.4
Lack of interest by the Respondents	4	2.6
Total	77	48.1

Source- survey result

4.1.2.2 Access to crop and livestock training for rural women

The Ministry of Agriculture in collaboration with NGOs seldom organizes training for farmers on crop and livestock management, cultivation techniques and other improved technologies. The involvement of female farmers in such trainings was minimal. The respondents were also asked if they had attended any agricultural training organized by the Ministry of Agriculture or by the

nearby NGO. As shown in Table 11, only 33.1% of the respondents received training in both crop and livestock production in the last three years.

Among these 5% were trained in crop production, 3.1% in livestock management, and 25% in both crop and livestock production while 66.9% did not have access to training. As it is shown in both sides with the accessible and inaccessible respondents, the accessibility of the training is found to be not enough or it is not encouraging.

Table 11. Frequency distribution of respondents' access to crop and livestock training (n= 160).

Activities	Number	Percent
Crop production	8	5.0
Livestock management	5	3.1
Both	40	25.0
None	107	66.9
Total	160	100.0

Source- Survey result

4.1.2.3 Information access related to natural resource management for rural women

In the study area, the survey result shows that 38.8% of the respondents had information access related to soil and water conservation, plantation of different types of trees, how to control land degradation and other related natural resource management activities. The respondents got the information from MOA and NGOs like HCS for the last three years.

Table 12. AR rural women's information access to natural resource management

Natural resource management activities	Number	Percent
Soil and water conservation	22	13.8
Plantation of different trees	40	25.0
No information access	98	61.2
Total	160	100.0

Source- survey result

Those who had no information access revealed the reason why they were not having the access about natural resource management (NRM). During the group discussion the group members raised the following points. There is no strong movement in relation with NRM in the study areas by GOs as well as NGOs, sometimes the prevailing activities were not including all people

especially females, and the area is much degraded and not promising to be ameliorated so that GOs and NGOs were not giving special emphasis for natural resource management.

4.1.3 Information access related to community roles of rural women

Community role activities are activities need to be done by men and women at community level. Since the issue involves both the job needs to share by both equally. In real life women continue to do an extension of their domestic or reproductive work at community level (water, health care, fuel wood and processing food). Men do the chairing, judging, decision-making, leading and controlling and ownership of property. The concern here is the men do the status giving economically advantageous jobs at community level. The jobs are unpaid voluntary for both, but women are screened out from exposure, experience, status and power (FAO, 1998).

Table 13. Frequency distribution of access to scientific information related to community role of rural women in AR. (n= 160)

	Frequency of getting information					
Items Frequently Sometimes					Never	
	Number	%	Number	%	Number	%
Decision making in community issues	1	0.6	38	23.8	121	75.6
Participation in committees	3	1.9	37	23.1	120	75.0
Leadership position	1	0.6	31	19.4	128	80.0
Wedding ceremony with available Economy	1	0.6	48	30.0	111	69.4
Organizing informal institutions like idir, ekub, mahiber	3	1.9	62	38.8	106	66.3
Preventing environment pollution	-	-	54	33.8	106	66.3
Planting trees	-	-	60	37.5	100	62.5

Source- Survey result (-): no response

The survey results revealed in Table 13 indicates that almost half of the respondents were not informed about involving in community role activities. As revealed by group members during the group discussion, most of them said, “Community role issues are already given for males by the society so that we are not acceptable even if we want to involve”. In addition to wrong outlook of the society towards women and due to cultural influences, most of them were not having access to information about how to involve or contribute their efforts to community role

activities. Half of the respondents were not getting information about their rights and obligations in participating in community issues. Those who had frequent information access were getting the chance because they were participating in GOs and NGOs group activities while the others accepted the norm of community activities were being given for men by the society and they did not realize themselves as half part the community.

4.1.4 Mass media exposure of rural women

Access to mass media was also considered as one of the important factors to provide different development information. As indicated in Table 14 all the respondents did not have mass media exposure. This is due to inaccessibility of the media, like radio, television, unavailability of electric system in the study areas, low literacy level of respondents to read newspapers, posters and leaflets. Some of them said that, even if they had access to radio, they did not have time to attend the program due to household workload. Sometimes posters are displayed in schools and health centers but they did not read it due to their low educational level because about 85% of the respondents were illiterates.

Table 14. Frequency distribution of respondents' mass media exposure (n= 160).

Medias	Never		Sometimes		Weekly		Daily	
	N	%	N	%	N	%	n	%
Access to radio	120	75	21	13.1		6	3.8	13	8.1
Access to television	158	98.8	2	1 .3			-	-
Access to news Paper	158	98.8	2	1.3			-	
Access to poster	155	96.9	4	2.5	1 .6		-	-
Access to leaflet	155	96.9	5	3.1	-	-	-	-

Source- survey result

4.2 Utilization of accessible development communication by rural women

Access to reproductive, productive, community role information, family planning education, home economics management information and natural resource management information by itself is not enough to secure development of rural women to change or to improve their life situation. They should utilize the accessible information in the proper manner.

In order to measure whether the respondents were utilizing the accessible information or not, information was gathered through interview as well as focus group discussion among the respondents. In order to know their utilization of accessible scientific information, all the items were not considered, because all respondents did not have access to all items. Some of the respondents had access only to one or two items while others had access more than two or three items so that utilization is measured here only by the accessible information given by the respondents.

4.2.1 Utilization of reproductive role information by rural women

Table 15. Frequency distribution of utilization of reproductive role information (n= 160)

Extent of utilization	Number	Percent
Utilized the information	28	17.5
Not utilized the information No access at all	87	54.4
Total	160	100.0

Source- survey result

As the survey result Table 15 indicated among the respondents, 17.5% of them were utilizing the accessible information while 54.4% of the respondents were not utilizing the information they had. The respondents were asked why they were not utilizing the accessible information at hand. Among the total respondents 28.1 % of them did not have any access to reproductive role information, they were living by following what their ancestors or elders did. Those who were not utilizing the information described their reason for non-utilization of the information. As revealed in Table 16, 26.9% of the respondents raised a combination of reasons; the first reason indicated by the respondents was, lack of time to do it like what they learnt which means the information they gained was not supported with practice. It needs its own time to put in to practice and this was difficult for them because of household workload.

The second reason raised by the respondents was shortage of money. This reason seems severe because in addition to the above 26.9% of the respondents, other 8.8% raised this issue as the only constraint for non- utilizing the accessible information. During the focus group discussion,

majority of the group members indicated shortage of money as a limiting factor for them to utilize the accessible information. Almost all respondents were depending on the help of government and NGOs food aid. The income they gained from different activities was not enough to fulfill their needs. In the study areas, the average income of the respondents was 677.40 birr/year with maximum income 10700 birr/year. This income level might not be exact income of respondents because they were hesitating to tell the truth during the interview time because of fear of decrement of food aid from government and NGOs. But maximum efforts were made to increase the reliability by further probing the response. The third reason given by the respondents was shortage of water and during the group discussion majority of the group members said, 'let alone for cleaning of our children, we do not have even sufficient water for drinking'. This indicates how much the problem was severe. The result shows 18.7% of them were suffering by shortage of water. A study conducted two years ago by Belay (2002) in AR reflected the same point. From the climatic point of view, in the AR, water is a limiting factor for both agricultural and domestic purposes.

The fourth reason given by the respondents was influence of culture and religion. This reason was given mainly for family planning method aspects like using birth control, attending advice during pregnancy and the like. About 21.3% of the respondents believed that children are gifts of God so that they did not want to use birth control methods (Table 17). And their husbands did not allow as stated by 3.1% of the respondents. Even if she had the information about birth control methods and values, her husband was not willing to support her. For this, informal crosscheck was made with some of the females' husbands, and the husbands' responses were negative to discuss the issue and even some of them were annoyed and said, 'why you are interfering with the work of God?" Similar assessment by UNICEF (1993) indicated that traditionally, conception/pregnancy is welcomed by the extended family system because children are regarded as God's blessing. Conception enhances the women's security because it ensures her continued married life. Where a woman does not conceive, within a year of marriage, neighbors begin to spread rumors of infertility. If she fails to conceive, the husband is liable to divorce her for being "mule" and to marry again.

Table 16. Frequency distribution of respondent's reason for non-utilization of accessible reproductive role information (n= 160).

Reasons for non utilizing the information	Number	Percent
Shortage of money alone	14	8.8
Shortage of water alone	30	18.7
Combination of lack of time, shortage of money Shortage of water and influence of culture and religion	43	26.9
Total	87	54.4

Source- survey result

Table 17. Respondents' extent of using family planning methods and reasons for no utilization of information (n=160).

Extent of utilization and reasons for not using	Number	Percent
Using birth control method	80	50.0
Not using birth control methods	80	50.0
Reasons		
Because I believe children are gifts of God	34	21.3
Husband's disagreement	5	3.1
Influence of society and culture	2	1.3
During my birth delivery time, education was not given	39	24.4

Source- survey result

4.2.2 Utilization of productive role information by rural women

The analysis of the data presented in Table 18 indicates that the utilization of productive role information was not encouraging. A large majority of the respondents i.e. 53.1% of them were not having access at all to productive role information. Among the accessible respondents, 20% were utilizing the information while 26.9% were not. The reasons revealed by the respondents for why they were not utilizing the accessible information are indicated in Table 19.

Table 18. Frequency distribution of utilizing accessible productive role information (n= 160).

Extent of utilization	Number	Percent
Utilizing the information	32	20.0
Not utilizing the information	43	26.9
No access to the information	85	53.1
Total	160	100.0

Source- survey result

Table 19. Reasons given by respondents for the non-utilization of accessible productive role information (n=43)

Reasons for non utilizing the accessible information	Number	Percent
Agro-ecological condition of the area is not good	39	24.4
Shortage of money to buy inputs	4	2.5

Source- survey result

As indicated in Table 19 the main reason revealed by the respondents for non-utilization of the accessible productive role information was agro- ecological problem of the area. This issue was discussed in detail with group members as well as with key informants during focus group discussion. The agro-ecological condition of the area is dry, highly degraded, there is 53 shortage of rain in the area and most of the areas are not suitable to produce vegetables, fruits because of lack of fertility of the land as revealed by the respondents. In some of the study areas they were using irrigation but it was not as such satisfactory because of decrement or total dryness of the water/river. Most of the respondents said, 'mostly the information we have are about how to produce vegetables, but how could we produce vegetables without enough water and fertile land'.

Access and utilization of productive role information by rural women of AR was minimal or insignificant. As we see from the survey result, most of the time productive role information was given to males. Males were not transferring the message to their wives as indicated by the respondents during the group discussion. But still women are highly involved in productive activities without having scientific information. A survey conducted in Burkina Faso, (DFID, 1999) reflected that, only one percent had heard of the technologies from their husbands. Men are less likely to pass on information to their wives when crops and tasks are gender specific. Similar assessment by FAO (1992) indicated that a serious lacuna observed is the lack of women oriented extension programs. The major chunk of women's labor force in production system was invested in weeding irrigation, harvesting, poultry and animal care, marketing, post harvest handling etc. considerable food materials were being lost in traditional methods of processing and handling such as threshing, winnowing, milling, shelling of seeds and oil extractions. These operations also consumed much women labor and time. The African women perform 80% of storage, 90% of food processing, 60% marketing and more than 50% of domestic animal care, often in traditional ways with much labor and time. This is in addition to their routine reproductive roles of fetching water, firewood collection, cooking, washing and childcare.

Generally sufficient extension packages were not seen taken up for the dissemination of women friendly, labor and time saving and drudgery reducing technologies (FAO, 1992).

4.2.3 Utilization of community role information by rural women

Here, without access, it is not possible to discuss about utilization. As discussed in previous section rural women of AR did not have information access related to community role activities and also they were not participating in community activities. The respondents revealed the reasons why they were not participating in community roles. It could be observed in Table 21 that 51.9% of the respondents were not aware of females' right to participate in community roles, which means they assumed community role activities were only for males/husbands.

The other reason given by the respondents was that even if the respondents were aware about participation in community roles, they were not participating because female's involvement was not supported by the society, the society considered them they are unable to do community activities. Their decision making power is also being considered being less. The survey result indicates there is positive correlation between decisions making power and access to community role activities. (r = .444 at p=. 000). This is justifying the responses of large majority of the respondents, who themselves indicated that they do not have good decision-making power probably due to the culturally imbibed beliefs and values.

Table 20. Relationship between decision making power and access to community role information

Relationship	Decision making Power	Score value of access to community role information
Decision making power		
Pearson correlation	1.000.	444**
Sig (2-tailed)		.000
N	160	160

In the above discussion it does not mean that rural women of AR are not totally involving in community roles. As shown in Table 21, 26.9% of the respondents were involving and had access for community role information. But this number is not enough to say that females are involving in all community role activities.

Table 21. Extent of utilization and reasons for non-utilization of community role information (n= 160).

Extent of utilization and reasons for non utilizing the Information	Number (N= 160)	Percent
Yes I have been involving in community activities	43	26.9
No I did not involve in community activities	34	21.2
I did not have information at all	83	51.9
Reasons		
Even if there is awareness, participation of females is not welcome by the society	17	10.6
Most of the time there is dominance of males and influence of husband	13	8.1
Lack of time to participate in community roles.	4	2.5

4.3 Constraints that Inhibit Rural Women from Access to Development Communication

To identify list of constraints in this study, experts' suggestions and respondents concern or way of responding to indicate the constraints that inhibit them from access to development communication during the pilot study were considered. Respondents were asked to put the list of constraints in rank order by assuming the first rank is considered as the most important constraint. The rank orders of the constraints were identified through using score values of the constraints. The constraint list included nine items and among these, the constraints given by\ the respondents as first constraint was given nine points and the second eight points like this the last constraint had one point. After doing all these, by adding all values, the score value of each constraint was identified and the constraint that got the highest score value was taken as the most important constraint that limits rural women of AR from access to development communication. Among the nine constraints, majority the respondents ranked only six constraints.

Table 22. Rank order of constraints given by sample respondents (n= 160).

Constraints Score	**Rank**	**order**
Lack of awareness	1270	1st
Work load	1077	2nd
Low education level	996	3rd
Unavailability of nearby institutions	917	4th
Remoteness of the area	808	5th
Cultural influence	763	6th

Source-survey result

As indicated in the above Table, lack of awareness was the most important constraint as revealed by the respondents. The respondents described lack of awareness, as 'we are blind for everything'. This means that they did not know anything about how to improve their dayto- day activities using improved ways, probably due to lack of access to enough information Rural women in the study areas were not familiar with the available improved way of doing their activities, totally they did not have the awareness about what was meant by the word scientific information and its value. They are living only by following life styles of their elders.

The second constraint described by the respondents was workload. The respondents did not have sufficient time that could help them to search for information or to attend different training, health education etc. They were not going to health centers or extension offices purposively unless they were sick or to bring fertilizer or food aid. The third constraint indicated by the respondents was their low educational level. This constraint described by the respondents as, ' in our area almost all of us are illiterate, so we could not understand any written material even we are not easily understand posters displayed in schools and health centers. Some of us understand the message by asking those who knows reading and writing and this is not always possible'.

As described from the group members' discussion, their low educational level limited them from many things like how to use the accessible information. For instance, they did not know the proper use of birth control methods, value of sanitation, they had less aspiration, resistant to change, and generally they were bounded with cultural taboos and traditional thinking of ideas. But if they were educated, they would have realize things easily and seen everything in relation with their development.

The fourth constraint revealed by the respondents was unavailability of nearby institutions. In the study areas, the only available institutions were elementary schools and agricultural offices. Regarding the availability of health centers, among the eight locations, only three had health centers. The rest who did not have health center got treatment by going to Arsi Robe town and this was difficult for them because of inaccessibility of transport service whenever they wanted.

In the study areas, extension offices were there, but the number of extension workers was not enough to give education for the whole population. One extension worker was assigned for two or three PAs. The services given by the extension programs did not include women. A study

conducted in Eastern Harerghe by Ranjan and Hedija, (2004) indicated the same result that is agricultural development packages were mainly oriented for men folk, except some especially designed programs for rural women. Generally in the study areas, limited availability of institutions hinders rural women from access to scientific information.

Remoteness of the area was the fifth constraint as described by the respondents. They could not see people's life improvement because everybody in their own area had similar life styles.

They accepted their way of living as good or enough. Somebody would think about change only when the environment is changed first or exposed to changed environment. The last constraint revealed by all the respondents was cultural influence. Cultural influence as described by the respondents, in all areas there is undermining of women in every activity. The society does not believe women performance or ability in accomplishing any work. The society always assumes that women should be always under the control of men. Because of this, everything was given for male, for instance extension service, community issue involvement and the like.

4.4 Constraints of utilization of accessible development information

The respondents revealed constraints that inhibit them in utilizing the accessible reproductive, productive and community role information. Majority of the respondents had the same reason.

To confirm this, there was also a focus group discussion with members out of the sample, and they described the same reason.

Among 115 respondents with access to reproductive role information, 87 of them were not utilizing the information. The constraints for utilization of accessible reproductive role information were lack of time, shortage of money, shortage of water and influence of culture and religion. These constraints were described by 26.9% of the respondents as combined constraint for utilization of accessible reproductive role information. About 19 % of the respondents describe shortage of water alone was the constraint and 9 % of the respondents revealed shortage of money alone was their constraint to utilize the information. From 75 respondents with access to productive role information, 43 of them were not utilizing the information. The major constraints for utilization of accessible productive role information were agro ecological condition of the area and shortage of money to procure inputs. As described by 24.4% of the respondents, agro ecological condition of the area was not good. The information they got was not considering the situations of their area; for instance the respondents said 'we had access to how to apply inorganic fertilizer but our land is very degraded'. They were also face natural

problem that is rainfall in most of the areas were scarce. Shortage of money was another constraint described by 3% of the respondents. Most of them were dependent on food aid.

Among 77 respondents with access to community role information, 34 of them were not utilizing the information. Constraints for utilization of community role information were influence of society, dominance of males and influence of husband, and lack of time to participate in community roles.

4.5 Influence of the Personal, Socio- Psychological and Situational Factors in Access and Utilization of Development Communication

In this section, the results on personal, socio psychological and situational factors influencing access and utilization of information is discussed in detail by looking into the relationships between dependent variables and independent variables.

4.5.1 Relationship between access to development communication with personal, socio-psychological and situational factors.

Table 23. Relationship between access to development communication and personal, sociopsychological and situational factors.

Variables I	Access to reproductive role information		Access to productive Role information		Access to Community role Information	
	R	P	R	p	r	p
Personal factors						
Age	-0.129	0.104	-0.127	0.111	-0.047	0.551
Family size	-0.161	0.052	-0.068	0.394	-0.40	0.620
Marital status	0.108	0.176	0.006	0.941	-0.058	0.465
Education level	0.134	0.091	0.223**	0.005	0.276	.000
Income	0.123	0.123	0.007	0.959	0.105	0.186
Socio–psychological factor						
Cosmo politeness	0.17	0.108	0.109	0.169	0.142	0.073
Innovation Proneness	0.283	0.000	0.247**	0.002	0.342**	0.000
Social	0.298**	0.000	0.275**	0.000	0.416**	0.000

participation						
Information seeking Behavior	0.373**	0.000	0.260**	0.001	0.337**	0.000
Achievement Motivation	0.088	0.269	0.048	0.544	0.017	0.835
Situational factors						
Extension contact	0.613**	0.000	0.493**	0.000	0.414**	0.000
Availability of Organization	0.181	0.066	0.109	0.169	0.128	0.106
Distance from town	0.131	0.053	0.127	0.109	0.127	0.109
Sharing available Information	0.662**	0.000	0.658**	0.000	0.586**	0.000

As indicated in Table 23, the significant variables (0.01 level) in access to reproductive, productive and community role information were educational level, innovation proneness, social participation, information seeking behavior, achievement motivation, extension contact and sharing of available information, while other variables were statistically insignificant.

As shown in Table 23, there was significant and positive relationship between education level and access to productive and community role information. This implies that when respondents' education level increases, their access to productive and community role information also increases. This might be due to the fact that education level increase results in better understanding of respondents' and this leads the individual in searching for different materials that are facilitating exposure to information. In the study areas, as described by key informants, access to community role information is related with education level. Those who are educated had more chance in involving community issues as facilitated by different agencies and this leads them in having exposure to new information. Moreover, the formal education system in the schools contains some discussions on different elements of production process such as crop, livestock, soil, water etc and hence, it is natural to observe that an individual with some level of formal education will have better orientation towards scientific productive role information. Same is the case with community role as well. But the formal education system hardly covers topics related to reproductive roles in the elementary classes, such as health, childcare etc. This justifies the non-significance relationship in the case of reproductive role information access and the level of formal education.

The result of the study revealed that there was significant and positive relationship between innovation proneness and access to reproductive, productive and community role information.

As respondents' innovation proneness increases respondents access to development information also increases. This might be probably because those who had innovation proneness characteristic would have more exposure to information and this individual character facilitates to have information access. Innovation proneness is a basic trait that makes the individual receptive to any form of change message, whether it is given deliberately or casually, that makes the person having more access to development information with his/her initiatives. This might be the probable reason for the finding significant and positive relationship between accesses to development information related to all the three roles and innovation proneness.

The other significant and positive relationship was found between social participation and access to reproductive, productive and community role information. This implies that respondents' social participation increases access to information. The probable reason for the observed relationship between the variables might be the more possibility of exposure for the individuals with higher social participation. When an individual gets involved in formal or informal social interactions through village organizations or otherwise she has more chances to get a variety of information related to all spheres of life which might include all the three roles performed by her.

As result of the study indicated in Table 23, there was significant and positive relationship between information seeking behavior and access to reproductive, productive and community role information. This implies that when information-seeking behavior of the respondents' increases, their access to development information increases. Information seeking behavior is a trait of the individual that makes her desirous of searching for information in all aspects and roles related to her life from any available source. Such sources can be formal or informal, and such individuals will obviously locate and obtain the information needed by them and hence, as indicated in the results a significant positive relationship was observed between the variables.

Table 23 also indicated that, there was a significant and positive relationship between extension contact and access to development information. This implies that the respondents' extension contact increases access to development information. The respondents had formal and informal contact with extension agents through their contact they got advice about home management, crop and livestock and natural resource management. The different extension agencies, government and NGOs, with their different types of functionaries are involved in dissemination

of development information in the villages related to the different roles of the clients to improve their standards of life. Though these agencies and functionaries might not reach all the clients directly, the diffusion of information takes place over a period of time. In this process those who are reached by the extension agencies functionaries formally or informally will have the benefit of more access to the development information compared to the remaining members of the social system. This was evident as indicated by the results of the present study.

The other significant and positive relationship was observed between sharing of available information and access to development communication. This implies that sharing of information among the respondents increases access to information. In the study areas, there is sharing of available information, though limited the one who got new information transfers to the other and this helps in diffusion of the information. As Scarborogh, 1997 pointed out, farmer to farmer communication for innovation has more effectiveness with higher relevance and credibility, with other advantages of literal and cultural homogeneity in communication.

Quite often, this type of information flow is explained as 'peer education' (Backett-Milburn and Wilson, 2000). This substantiates how the sharing of information with others by the respondents could yield in better access to development information.

4.5.2 Relationship between utilization of development communication with personal, socio-Psychological and situational factors.

Variables Utilization of	Utilization of reproductive role Information		Utilization of productive role Information		utilization community role information	
	R	p	R	p	r	p
Personal factors						
1 Age	-0.276**	0.000	-0.068	0.393	-0.008	0.917
2 Family size	-0.263**	0.002	-0.080	0.417	-0.094	0.327
3 Marital status	0.108	0.174	0.060	0.454	0.027	0.733
4 Education level	0.247**	0.003	0.375**	0.000	0.278**	0.000
5 Income	0.172*	0.30	0.185*	0.019	0.175*	0.027
Scio-psychological factors						
6 cosmopoliteness	0.111	0.162	0.030	0.706	0.131	0.099
7 Innovation proneness	0.316**	0.000	0.156*	0.050	0.285**	0.00
8 Social participation	0.303**	0.000	0.400**	0.000	0.465**	0.000
9 Information seeking behavior	0.306**	0 .000	0.239**	0.002	0.261**	0.001
10 Achievement motivation	0.038	0.631	0.028	0.726	0.006	0.939

Situational factors

11 Extension contact	0.355**	0.000	0.349**	0.000	0.372**	0.000
12 Availability of organization	0.151	0.045	0.144	0.069	0.127	0.99
13 Distance from town	0.085	0.284	0.148	0.061	0.115	0.147
14 Sharing available information	0.551**	0.000	0.433**	0.000	0.502**	0.000

** Correlation is significant at 0.0] level (2-tailed)

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

As revealed in Table 24, the significant variables in utilization of reproductive, productive and community role information were age, family size, educational level, innovation proneness, social participation, information seeking behavior, achievement motivation, extension contact and sharing of available information, while other variables were insignificant.

As shown in Table 24, there was significant and negative relationship between age and utilization of reproductive role information. This implies that as age of the respondents increases, utilization of the information decreases. As an individual passes through different stages in life with advancing age, conditioning and habituation in learning occurs with certain levels of reinforcement through experiences and it would not to be easy to make changes in the life styles for different roles she performs. Hence, it is quite natural to assume that change messages from development communication will be less utilized in the life styles as one's age\ increase. This is substantiated by the results of the present study also with a negative and significant relationship between age and utilization of information obtained. This sort of conditioning and reinforcement would be much strong in routine daily life activities involving in reproductive roles rather than off-the-home activities.

Table 24, again revealed that there was significant and negative relationship between family size and utilization of accessible reproductive role information. This implies that when family size increases, utilization of reproductive role information decreases. In the rural situations of the country, large families are common with more number of children in the family. When there are more number of children (like 10-15) it is difficult for a mother to give proper attention and think of the recommended ways of managing household affairs as indicated in the reproductive roles listed earlier. She would not be in a position for proper health care and hygiene of all the children, making nutritious food for the family, hygiene of house and the surrounding even if

such information reaching her. This might be the probable reason for obtaining a negative and significant relationship between the variables implying that then improved practices in reproductive roles would be feasible and utilized more by rural women with smaller family size.

As shown in Table 24, there was significant and positive relationship between education level of the respondent and utilization of the accessible development information. This implies that as respondents' education level increases their utilization of accessible information also increases. This might probably because as education level of the respondents increases their understanding of the information also increases and this paves the way to apply in practice the accessible information. The formal schooling gives some idea about scientific importance and relations of various elements of production process and community life such as soil, climate, water, crop and livestock etc. the basic understanding of this may help further learning from the development information obtained later, leading to decision making for utilization of information. As Leeuwis (2004) indicated, people might form sound opinions and make good decisions through conscious use of communication of information, and this ability would be fostered by formal education.

The results of the study also revealed that there was significant and positive relationship between income and utilization of accessible reproductive, productive and community role information. This implies that as respondents' income increases utilization also increases.

Many of the information in development communication related to different roles of a woman need at least slight expenditure for its utilization. The information such as balanced nutrition; childcare practices, use of inputs in farming, animal feeding and care etc. may necessitate some financial investments. Naturally, those who have such resources would come forward to utilize and other would remain passive even if they were convinced about importance of information they obtained. This is evident from the results obtained in this study also, indicating positive relationship between income and development information utilization.

As shown in Table 24, there was significant and positive relationship between innovation proneness and utilization of accessible development information. This implies that as respondents' innovation proneness characteristic increases, utilization of information also increases. Kolb's (1984) model of experiential learning is widely used as a basis for organizing communication for innovation, which describes how people learn through experience. The type of learning would be 'powerful' and conclusions are drawn by people themselves on the basis of

their own experiences rather than insights formulated by others and this process is also termed as 'discovery learning'. According to the explanation by Kolb (1984), discovery learning demands some level of visualizing phenomena by the individuals themselves and self-clarifying patterns. Only those individuals with receptivity to new ideas can achieve this visualizations and self-clarifying. This theory justifies how the individuals who have higher innovation proneness would have better learning and favorable decision-making leading to better utilization.

The other significant and positive relationship was found between social participation and utilization of accessible development information. This indicated that as respondents' social participation increases, utilization of accessible information also increases. The probable reason for this trend of better utilization of the obtained development information related to different roles by the rural women would be the basic tendency of group dynamics operating in the rural social settings. In such situations where interpersonal bondage is stronger, the people have more preference for learning through mutual discussions in formal or informal groups rather than deriving conclusions independently. The group pressure and information exchange fosters favorable decision-making on the utilization of development information.

This phenomenon has been explained by Leeuwis, (1993).

As shown in Table 24, there was significant and positive relationship between information seeking behavior and utilization of development information. This indicated that as respondents' information seeking behavior increases, their utilization of accessible information also increases. According to Katalaarse and Leeuwis, (2002), depending on the issue related to the life and wider context people may experience an 'internal drive' to learn about something. This urge is a reflection of information seeking behavior. This learning process obviously leads to decision making to translate the idea obtained into practice. Hence, it is not surprising to see the results indicating positive and significant relationship between information seeking behavior and utilization of development information by the respondents.

The result of the study in Table 24 also showed that there was significant and positive relationship between frequency of extension contact and utilization of development information. This indicated that as respondents' extension contact increases, their utilization of information also increases. The present extension strategies adopted by government agencies and NGOs in Ethiopia involve several facilitation mechanisms in addition to advisory services. This

facilitation mechanism may be in the form of supplying inputs to the clients arranging credit facilities etc along with multiple extension methods for convincing them about the utility of the development information. This is particularly relevant in influencing the information utilization because the large majority of the rural clients are resource poor, depending on subsistence agriculture. In the case of rural women as well, the development information relating to reproductive or productive roles are sometimes facilitated for their utilization by the concerned agencies. Hence, it is only natural to see a increasing trend of utilization of information with the increasing extension contact.

As shown in Table 24, there was positive and significant relationship between sharing of available information and utilization of information. This implies that as respondents' sharing of information increases, their utilization of information also increases. In any context informal adult learning through communicative interventions, the coherent innovation decisions are derived through complementary and/or overlapping understandings by multiple actors. This phenomenon is sometimes explained as 'social learning', which is considered to have more desirable results in the context of technology interventions and utilization (Fried man, 1984; Woodhill, 2002). The complementarily or overlapping (or even fully sharing) would take place more evident in a rural social setting due to the lower level of cognition and information gathering about the new ideas by the members of the social system and this is favored by the better levels of bondage and interactions. This sharing of available information leads to conviction and better living, in turn leading to decision to utilize the information. The present result obtained in this study, indicating positive and significant relationship between sharing of information and utilization of accessible information, is also in line with the above context.

5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary and conclusions

The study was conducted in Arsi Robe Area; Robe is a town in southeastern Ethiopia. The research was conducted in eight-Peasant Association and also the area was covered by GO and NGO development schemes.

The objectives of the study were to assess rural women's access to and utilization of development communication, to identify major constraints in access and utilization of development communication and to identify the personal, socio-psychological and situational factors of rural women influencing their access and utilization of development communication.

A two stage random sampling procedure was used to constitute the sample. The necessary information was obtained by personal face-to-face interviews using a structured interview schedule. There were also focus group discussions with respondents. For the data analysis, simple descriptive statistics and Pearson's Product Moment Correlation were used.

The results of the study revealed that access to different types of information by rural women were generally minimal. The survey results indicated that the most accessible information related to reproductive roles with 'sometimes' time interval were, avoiding unexpected pregnancy (75.6%), vaccine for new born baby (67.5%), and care and hygiene of children (62.5%). But for other types of reproductive roles majority of the respondents were not having access to development information.

Access to development information on crop production as well as livestock management was very minimal for rural women as perceived by the respondents. Thus, though women played vital roles in the production roles, they were deprived of the needed information for improved life. More than half of the respondents were not getting information about their rights and obligations in participating in community issues. Those who had frequent information access were getting the chance because they were participating in GOs and NGOs group activities while the others accepted the norm of community activities were being given for men by the society and they did not realize themselves as vital part the community.

Among the accessible reproductive role information, 54.4% of the respondents were not utilizing the information due to lack of time, shortage of money, shortage of water and influence of culture. A large majority of the respondents (53.1%) were not having any access to productive role information. Among the accessible productive role information, 20% of the respondents

were utilizing the information while 26.9% were not. The major reasons for no utilizing of productive role information were agro-ecological condition of the area and lack of money to procure inputs.

The constraints that inhibit rural women from access to development communication were identified through ranking the score values of the constraints obtained from the respondents. These were lack of awareness, workload, low educational level, non-availability of nearby institutions, remoteness of the area and cultural influence respectively in most important constraint order.

Among the different personal, socio-psychological, situational and institutional factors, educational level, social participation, innovation proneness, information seeking behavior, frequency of extension contact and sharing the information tend to be important ones that contribute for access and utilization of reproductive, productive and community role information. Here, age and family size also had relationship with utilization of accessible development information.

The findings of the study brought to limelight certain important revelations significant to the extension strategies and methods being followed by government and NGOs involved in the process of rural development in Ethiopia. Though everyone accepts the fact that rural women constitute nearly half of the working population, having significant roles in reproductive and productive dimension and are ought to have active roles in community affairs in the rural areas, the development information flow oriented to bring about desirable changes in their ways and means of life is not even in the minimum required level. The results have proved that rural women here continue to be a neglected section of the population in terms of development communication efforts. Since large majority of them do not have any access to development information, and if at all they have very little they are constrained with many factors to utilize those information, and hence the translation of the change messages related to reproductive, productive and community roles remain to be skeptical.

This finding calls for urgent attention and strategic changes in the extension methodology and programs of GOs and NGOs working in the field to achieve an equitable and justifiable development effort to serve all sections and members of the community. Realizing the fact that a woman is the strong pillar of the family, shaping the lives of a future generation as well as substantially contributing to the welfare of the family and community, additional efforts, if not

special programs, are warranted to change the situation in a desirable way. Bringing the rural women folk in to the main stream of the community life and making them active participants in the rural life reformation process need serious considerations and strategic amendments.

5.2 RECOMMENDATIONS

The findings of this study do not form an end by itself, but provide sound bases for further detailed related studies. As discussed earlier, rural women's access to development communication though at limited levels, was not containing information relevant to all the roles performed by them. There was not enough information access and utilization of accessible information to bring improved life styles by rural women.

The results of the study in general revealed that, rural women lack information, which reflects adverse effects on the well being of the society as a whole. The problems existed for information access and utilization of the information is found to be interrelated to each other. The observations and inferences obtained in this study call for urgent action at different levels in terms of research and extension efforts. A comprehensive and balanced rural development approach would be possible only if equitable, justifiable and sustainable changes are envisaged among all sections of the community. The following suggestions are proposed to achieve the above objective, on the basis of the findings of this study.

- Socio-cultural and historical factors have resulted in focusing the attention of the development-oriented research manly to the men folk in the farming population, though numerically women constitute half of the population. Their roles and contributions in the development and sustenance were not adequately acknowledged and hence the technology generation and dissemination process had not considered to give due attention to the rural women folk. In-depth studies on the deficiencies accrued so far as well as on the needed interventions among the rural women are to be carried out and remedial measures are to be taken.
- The strategies and methodologies of extension by government and NGOs are to be reoriented to avoid the gender- bias and to ensure equitable participation and meaningful behavioral change among all members of the community.

- To address the existing gap in terms of access to development information, levels of knowledge and skill and the submissive attitude leading to passive performance among the rural women, specialized programs and intensive training efforts are to be designed and executed for them.
- In order to bring about gender sensitive attitude and performance styles among the extension functionaries as well as researchers, special training programs and orientation sessions need be designed and conducted.

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