

**The Role of Women in Agriculture: A Case Study of Village Aliabad, Central  
Hunza**

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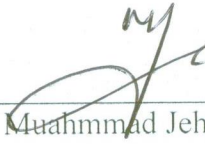
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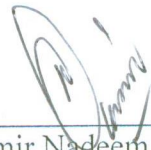
## CERTIFICATE

This is to certify that this thesis entitled: "*The Role of Women in Agriculture: A Case Study of Village Aliabad, Central Hunza*" submitted by Ms. Nida Ali is accepted in its present form by the Department of Development Studies, Pakistan Institute of Development Economics (PIDE), Islamabad as satisfying the requirements for partial fulfillment of the degree in Master of Philosophy in Development Studies.

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## **DEDICATION**

This research is dedicated to my beloved parents for their support and guidance throughout my study.

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### List of Abbreviations

<b>LSO</b>	Local support organization
<b>LDC</b>	Least developing countries
<b>ETI_GB</b>	Economic Transforming Initiative
<b>USAID</b>	United State Agency for International Development

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## ABSTRACT

The aim of this study is to explore “**The Role of Women in Agriculture: A Case Study of Village Aliabad, Central Hunza**”. The main object of the study is to inspect the present status of women’s participation in agriculture. To find the major cause of exit of men from production and women’s increasing role in agriculture. To study the problems and challenges faced by women of Aliabad in agriculture. To examine the role of different organizations in agricultural activities. The data has been collected from the women farmers, heads of household, working women and some employees of organizations who were working there for boosting agricultural production. Semi-structure interviews were conducted for the study and results showed that women play a crucial role in agriculture. Varieties of activities that include pre-harvesting, to post-harvesting, to livestock production, all these activities were being performed by women. The results of the study indicate that women spend most of their time in performing productive activities that support their families economically. Despite all the hard-work the role in decision making was insignificant and faced some major constraints such as time management, water shortage and health condition. The findings show that the contributing factor that leads women to work in farms is their passion to work, to share the burden of their men in terms of money and the importance of land due to which they can’t leave the land barren. And also, in my study there were few supporting organizations that helped women in promoting their role in agriculture through modern tools and techniques to increase the agricultural production. But these organizations didn’t focus on some issues that women farmers faced while performing their duties due to limited budget. It is suggested that Governments should provide funds to Agricultural Department, so they can help farmers regarding the constraints they are facing while perform their agricultural tasks. Since women alongside men work from dawn to dusk to reduce poverty so it is necessary to empower women so that they can work without any hesitation and problem to improve the country’s economy and to reduce poverty.

Keywords: Agriculture, Agriculture organizations, Working women, Household, Agricultural activities

## 1. INTRODUCTION

### 1.1. Background of Study

Agriculture played an important role in the history of human civilization, due to which people settled at a particular space. It is one of the most important and oldest activities of human being. Even after the rapid rising of urbanization and industrialization in the world, around 50% of the working population is still busy in agriculture. It is the backbone of least developing countries (LDC) such as Pakistan and it is a basic part of Pakistan's economy. Pakistan is an agrarian country and 21% of share of GDP with 2.7% annual growth is from agricultural sector (Shamsi, Ali, Bashir, & Ashraf, 2014). Agricultural sector not only provides food but also is a source of employment opportunities. It is estimated that around 44% people got employment from agriculture and around 62% of rural population depend on agriculture for their livelihood. Due to this sector new business innovation and modes of life combined together. Additionally, it plays significant role in the economy of nation such as food security, reducing poverty, economic growth and industrial revolution mostly in developing countries. Agriculture is the sector where economy and basic reproduction are interlinked with each other. Agriculture contributes to economy in the following ways: one is to provide basic necessity of life, food. The second one is to earn foreign exchange rates and the last one is to provide goods and services in both domestic and international market. Pakistan is blessed with natural resources like ecology, climate, land and water. In Pakistan about 22 million acres is cultivated land and 3.2million acres is non-cultivated out of total area of 796,095km. According to federal Bureau of statistic from 2015-16, around 2/3<sup>rd</sup> of population of country is supported by agricultural sector and provides a big amount of foreign earnings (Azam & Shafique, 2017).

Women play an essential role in agriculture. They participate in agriculture due to many reasons; most of them took part in farming in order to prevent themselves from poverty, some for better income and some for food security. The women who participate in agriculture are not completely dependent on agriculture, although they participate because after marriage their husbands have lands, and some took part in farming because their families are in worse condition and in order to take them out from such condition they participate. In some countries the Department of

Agriculture conduct competitions like, “female farmer of the year” through which a lot of women who participate in farming get encourage to work on fields and mostly women start taking interest towards farming. In a city of South Africa, Mutshenzheni a woman got an award for better production of sweet potatoes and won an award of ‘best farmer ‘and this has also inspired other women to work confidently in the agricultural fields. In 2007 a woman at Maraxwe won a competition due to which other women also encouraged to work on the fields. A large number of women were also participating in farming before these schemes has been introduced in South Africa (Sylvia, 2009).

The international development community worked as engine for the growth and reduction of poverty from the country through agricultural practices. In many developing countries the agriculture sector is underperforming because women who represent a vital role in agriculture and in rural economy as a farmer, entrepreneurs and laborers, nearly in all places faced serious barriers than men in accessibility to productive resources. Rural women not only manage household but also perform multiple task which includes; crop production, rearing animals, working on others field for wages, food processing and preparation, collect water and fuel, maintain their houses, look after their family, and also took part in marketing and trade. Women participation in agriculture has increased since 1980 in developing world such as 50% in Africa. Women participation in agriculture is higher in Asia and it is about 35% in south Asia and 50% in east and Southeast Asia. Among Asian countries china dominates where female participation has increased over the last years. In the agriculture female share is 30% and in smaller countries female participation has increased to 50% in Bangladesh. While the participation rate of female in Malaysia has decline. In Africa participation rate range between 40-50% in southern and eastern Africa respectively while in American developing countries the participation of female labor is less than other countries (SOFA & Cheryl, 2011).

The Founder of Pakistan, Quaid-e-Azam Muhammad Ali Jinnah emphasized on the women participation and on 10th March 1944 he stated that:

*“No nation can rise to the height of glory unless your women are side by side with you. This does not mean that we should imitate the evil of the western life. But let us try to*

*raise the status of our women according to our own Islamic ideas and standards”.*  
(Ghazala, 2011)

Gilgit Baltistan is extended over 72,496 square km with a population of around 1 million. Women play an important role in the agricultural production and rising of livestock. They often do more agricultural activities than men. They participate in all agricultural activities such as harvesting, sowing, weeding and transplanting as well as tasks performed after harvest. Despite of the fact that women participation is high in agriculture, but the census and surveys show that their contribution has been under reported. The Labor Force conducted a survey from 1991-92 and they reported that 16% of women have contribution in agriculture, whereas 84% men are involved in labor force. In contrast the 1980 census on agriculture reported 73% women contribution in agriculture. In 1991-92 the Pakistan Integrated Household Survey was conducted which shows that women participation in labor force is 45% in rural areas, whereas their contribution is 17% in urban areas. So, it is estimated that about 30-40% of women has contributed to economic and agricultural production (Dawn, 2005). During last three decades’ women of Gilgit-Baltistan have been working with different organizations to support themselves and their families. They work continuously throughout the year, but their workload increases during summers due to harvest (Samee et al 2015).

## **1.2. Statement of Problem**

Pakistan is an agricultural country and most of its people earn their living through farming and activities related to agriculture. Pakistan has abundant of natural resources in the form of fertile land, fresh and abundant water and most importantly a favorable climate. Women of Pakistan play a vital role in agriculture. There are about 70% of female agricultural workers in Pakistan, out of which 15% are food producers, 15% are food processors and 70 to 80% of women are involved in small scale business. Thus two-third of the agricultural workforce comes from women (Ghandahi, 2016). In rural areas women play an important role in agriculture by working hard in production of food and crops from sowing seeds till harvesting. In addition to agricultural activities they also perform domestic chores. Female work more than men in many activities related to agriculture but most of the time their hard work goes unnoticed at national level. Women as a worker, entrepreneur and as a farmer always face “gender gap” constraints in access to land, market and other resources. This “gender gap” not only stops participation of women in agriculture but also in political and socio-economic constraints. As being a developing country, Pakistan faced a lot of troubles in agriculture sector. Different private and government organizations are working in Pakistan to cope up with the difficulties and challenges faced by Pakistani women. Therefore, the focus of my research is on Agriculture sector of Pakistan. This study explores the role of women participation in agriculture in Hunza. More specifically this study determines what type of difficulties does women of rural area faced in agriculture and how they cope up with these difficulties. This study furthermore investigate that what are the factors that ultimately lead men to withdraw from agriculture and role of women became prominent in agriculture.

## **1.3. Research Questions**

The research will answer following questions:

- 1) What kind of tasks does women of Aliabad performed and what are their duties in respect of decision making and provision of labor?
- 2) What are the main factors behind men’s less participation in agriculture than women?



3) What important role do different organizations play in agricultural field?

## **1.4. Objectives of Study**

The following are the objectives of this study

- 1) To inspect the present status of women's participation in agriculture.
- 2) To find the major cause of exit of men from production and women's increasing role in agriculture.
- 3) To examine the role of organizations in agricultural activities.

## **1.5. Definition of Key terms**

### **1.5.1. Agriculture**

*“The word “Agriculture” is originated from two Latin words “agri” or “ager” which means “soil” and “cultura” which means cultivation. Thus, the word agriculture means the production of crops by cultivating soil for economic purpose” (Hasanuzzaman & Hassan, 2015).*

*“Agriculture is a science and practice, where crops and animals are raised, for the aim of providing food” (Elsen, 2017).*

### **1.5.2. Participation**

*“The word participation has a number of definitions. Some researchers stated that basically participation means engaging with any particular activities” (Zaman, 2010).*

*“Participation means combined efforts of people in setting target, collecting resources together and taking an action to improve their own living condition” (Wali Ullah, 2018).*

### **1.5.3. Decision Making**

*“Decision making is concerned with how people decide between different kinds of action and situation, when there are not any alternative options is best on all attributes are available. These types of decisions are known as decision making process” (Beresford & Sloper, 2008).*

#### **1.5.4. Labor**

*“Labor is defined as a person who has the ability to work in the economy and providing different services to other people or business. Labor is a modifiable resource as labors can be allocated to different places of the economy to produce goods and services for consumers”* (M.Shekhat, 2015).

I have used the above-mentioned definitions in my research.

#### **1.6. Significance of Study**

Women accounts more than half of total population and their role to produce food to the householders of a great importance. Agriculture plays a crucial role in the lives of people and it has a greater impact on their lives. There are number of researches related to women participation in agriculture, but it was found that the majority of researches were conducted in foreign countries and little research has been conducted in developing countries. Pakistan is an agrarian country and women has a crucial role in agriculture sector but less researches has been done related to women participation in agriculture, so this research is of greater importance because its main focus is on the women participation in agriculture and specific emphasis on the village Aliabad Hunza. Thus, this research will give an idea about participation of women in agriculture in Aliabad Hunza. Furthermore, the results of this research can be shared with the educational institutes and other agricultural organizations to further elaboration.

### 2. LITERATURE REVIEW

The literature review shows the originality of research problem. It contains the systematic identification and analysis of documents which include information connected to research problem.

#### 2.1. Agriculture as A Means of Livelihood

Like other developing countries India also depend on agriculture for their livelihood. Livelihood can be explained as, there should be a plenty of flow and stock of food and cash for every individual to meet their basic necessities of life. Rural household achieves livelihood by four ways, firstly through production on small piece of land, secondly through labor, most of landless household by selling their labor get livelihood. Thirdly, through market or exchange base, by selling the surplus product they produced and obtain livelihood. Last, but not the least through transfer base entitlements (Acharya, 2006).

Safdar et al (2015) conducted a study in Kaghan Valley of Khyber Pakhtunkhwa to observe and explore the livelihood strategies of farmers and households. In rural areas, where there is scarcity of resources, land and water instead over past 10 years farming was the only activity through which household achieve their livelihood. With the passage of time due to climatic changes livelihood pattern moved from farming to other works.

Pakistan is an agrarian country and its majority of population is living in rural areas. Poverty is the major problem of rural areas which is slightly more than urban areas of Pakistan. Most of the people in rural areas earned their living by actively participating in agricultural activities. Agricultural sector consists of production, technology and consumption of resources, which has undergone to a major change and it, has also affected the national economy of country. Such changes has also influence the growth, structure of rural society and physical infrastructure for the rural areas (Chaudhry, Mallik, & Ashraf, 2006).

The researchers (Zhang, et al., 2015) conducted a study in three areas of china to examine the dependency of people in agriculture in spite of rapid industrialization and urbanization.

China's 69% area is covered with hills and mountains and 45% contains homes. Mountains play a significant role in the regional development of any country and the rate of poverty is higher in mountainous areas while less in plains due to poor communication between people of hilly areas and plains, fragile ecological environment as well as low social economic development. The main objective of this study was to focus on that factors which determines the dependency of people on agriculture for their livelihood. A survey data obtained a descriptive statistical analysis and regression model which explains that around 56% results showed evidence of low dependency, 19% showed moderate dependency, 7% showed high dependency and 18% showed extreme dependency on agriculture. Households are mostly migrating, and their livelihoods depend on off-farm activities for income. And the other variables that play a vital role on the livelihood are years of education of any household member, number of members in a house, age of head of household, locale of household and informal and formal social networks.

In Iran, 32% of population lives in rural areas. Agriculture is a vital component of sustainable development for most of the poor people of rural areas. Agriculture plays a pivotal role in poor households, through which wellbeing can be accomplished and the basic needs of life can be achieved. Agriculture sector is more beneficial and productive for small farmers' livelihood in many parts of the world (Rosegrant, et al., 2006). Organic agriculture deals with agriculture system to promote socially, environmentally and economically safe and sound production of food and fiber. These types of system take local soil fertility as an important factor in production and by using such natural resources the quantity can be optimize in every type of environment. Organic agriculture reduces external inputs, such type of organic agriculture is environmentally friendly approach and it has been successful in developed countries and now some developing countries like Iran is also using this approach. Traditionally agriculture in Iran is not certified as organic, but the processes and practices used in agriculture compete with organic agriculture. Iran is a country having a vast area of land with an amazing climate and rich in biological diversity. Evidence shows that about 10,000 years ago, evolution of both human and agriculture were settled in this country. Small scale farming for centuries was one the most useful method of food production. Traditionally there agriculture system is almost same as organic agriculture in different ways like the products obtained from mountains are purely organic (Mahmoudi, Sharghi, Vossoughi, & Salamat, 2009).

In Ghana, agriculture is the main sector of economy that provide livelihood to almost 60% of the population. This sector pays a significant contribution to remove poverty from country and food security to all people. According to the report USAID (2010), food insecurity is a serious problem of around 2million people of Ghana. Through their living standard, poverty trends can be easily observed. There is some intra-regional difference in poverty level exists and the reduction of poverty is still an issue which will always remain there. In the three northern-Northern, Upper East and Upper West, poverty level always remains strikingly high (52-88%).

The West African Sahel faced two type of stress one is harsh temperature and the other one is fast-growing population on limited amount of natural resources. Majority of population of this area's main source of livelihood is agriculture. Due to increase in population, the demand for food increases which cause stress on the available limited land and hence environmental degradation occur. In semi-arid zone, the soil is infertile, with low amount of organic matter. The reason of soil degradation is soil mining, i.e. without any substitute all nutrient of soil has been removed (Muchena & Hilhorst, 2000). The rise and fall in temperature and variation in rainfall directly effect on the natural resources on which the whole agriculture depends. The low rainfall and short rainfall season were observed mostly. In order to deal with such type of difficult climatic situation, farm householders present different type of strategies like selling of animals. At regional level, agro-metrological information system was used to aware farmers regarding temperature. Political, financial and institutional efforts both at national and international level are necessary for the sustenance of millions of lives. For development, different types of water management, desertification control and irrigation programs should be organized (Sissoko, Keulen, Verhagen, Tekken, & Battaglini, 2011).

In rural regions agricultural sector is main employer and driver of development. According to the estimation of Food and Agriculture Organization (FAO), around 1.3 billion people are working in agricultural sector, and in developing countries around 97% people are engaged in agricultural sector. In urban areas approximately 30-50% of household income is created all the way through farming (Fechter, 2012).In many developing countries of rural region, agriculture is an important source of income and employment opportunities. Agriculture plays a major role in rural areas for improving employment prospects, either as a provider by providing employment

opportunities or as driver of employment-intensive basic transformational processes (Wobst, & Grandelis,, 2016).

In many developing countries farming is an important activity for providing employment and career opportunities for the young people (Ogbeide, Ele, & Ikheloa, 2015). Young people not only get benefited from agricultural sector by farming but they also can get in marketing, communication, production and processing processes related with agriculture (Havitz, Mannell, Mark, & Roger, 2005).

## **2.2. Women's Contribution in Agriculture**

Illo and Francis (1988) explain about development projects on women through a “The case of Aslong irrigation project (AIP)”. The main aim of this project was to improve the living standard of people, creating employment opportunities and increased food production in the country through farming. At first, it was observed that about 90% men were involved in this project but when the title changed to “household” then the women participation was increased significantly. The authors discovered that women were performing the dual responsibilities along this project like domestic duties and farming due to time constraint they do not perform very well.

According to the survey of Food and Agriculture Organization FAO (1999), women play a very important role in agricultural production and thus they are considered to be producers of food for their families. However, they are exposed to poverty.

Van Koppen (1999) argued that the main plan of governmental and non-governmental agencies in agricultural schemes is to control the poverty. He further mentions that enhanced access to irrigated land and water to control poverty. Poverty can only be controlled if mechanical, economic and organizational support is focused on poor women and men.

A study was conducted with the help of two anthropological concerns. One is cross cultural study of gender role and the second one is cultural intensification. Cross cultural study of gender role is followed by cultural ecological theory and the cultural intensification is followed by Boserup's theory. The findings show that there is a weak effect between sexual division of labor and population density so the researchers Michael et al (2018) introduced two new variables that are domestic animals importance for subsistence and number of dry months to find the strongest

participation level of females in agriculture. Both male and female have specific intervention in agriculture according to time like the long dry season demand high participation of men in agriculture and the increase in dependency on domestic animals cause women to spend a lot of time in rearing and caring animals due to which their participation in agriculture is decrease. The researchers recognize two historical processes that affect the female participation in agriculture. Firstly, the Bantu societies have shown a higher participation of female in agricultural activities and secondly during the past centuries the worldwide migration of male labor cause female to increase their participation in agriculture in the peripheral rural societies where the supply of labor is in abundance.

Agriculture plays a major role in the economy of Philippine about 20% share of GDP is from agriculture sector. Rural women play a significant role in agriculture they performed varieties of farm activities. In Philippine women are mostly active in manufacturing and trade of agricultural products. In many developing countries contribution of women in production of food remains undervalued, due to which women have less access to all resources. The researchers collected a data in 2012 from the Central Luzon Loop Survey, the study examine the role of gender in the production of rice and the result showed that women are producing higher value of rice then men despite of having limited access to resources. There is not any big difference regarding their net income while female have higher fixed costs. Findings of the study show that women are less efficient in farming activities, while more efficient in adopting improved seed varieties and female are better at controlling farming costs (Koirala, K. Mishra, & Mohanty, 2015).

A study was conducted in Western Samoa to examine perception and contribution of women in agriculture. The result showed that the main duties performed by women were the collection of nuts, weeds, taro, weave basket, processing of food, household chores and gardening. And the jobs were performed according to age and fitness. The result confirmed that women play a significant role in agriculture production and plantations. The land was used for residence and cropping for household, plantation zone and coconut growing belt. Around 50 coconut plants were grown in coconut belt by each landholder of Samoan. This means that there is a greater pressure on the land. The main purpose is to supply enough foods for their family as well as around 83% goods are sold to market regularly. They not only generate income from agriculture

but also from non- agricultural activities also and the main constraints faced by women are lack of transportation to market and lack of advanced new technical information (Fairbairn P, 1993).

### **2.3. Agricultural Activities Performed by Men and Women in Earlier Days**

Previously, mostly men were farmers, irrigators and water users because it was their perception that farming is more about physical strength. And men were considered more suitable for farming because of their physical strength (Zwarteveen & Neupane, 1996).

Keegan (1988) explains a sample of four men in 18th and 19th centuries in South Africa who took part in agriculture. These men were pretty good in farming and depended on their family labors for crop production, while women participation rate was low. At that time women helped their fathers or husbands through participating in the harvesting and weeding process. By examining this one can conclude that the role of women was to sit at home and look after her house and occasionally participate in farming and decision-making processes. On the other hand, in developing region women participation rate in farming increased more than men in 20th century.

Olusi (1997) conducted a study to explain the participation of female in agriculture sector. Women play an important role in agriculture sector but they cannot perform their duties due to many socioeconomic constraints like limited resources, water pollution, air pollution, deforestation. The researcher explores the difficulties women are facing in Africa, by using result of research from Nigeria and suggest extending female participation in agriculture. Nigeria is the poorest country of Sub-Saharan Africa where per capita income is \$340. 80% of female population depends on agriculture and women produce around 60% of food. Rural women work more and have few hours of leisure than men. And the ability to work varies with time and among ethnic groups. Even after a great contribution of women in agriculture sector the economic status of women is declining. While in pre-colonial age the division of labor work was equally distributed, the heavy physical activities were done by men while weeding, planting, harvesting, and food processing was done by women. Due to trade of crop production, women have now fully become a part family labor, helping their fathers and husbands in the production and consumption of crops and food for their families respectively. Women are performing a large number of agricultural activities without any reward.



According to Lastarria and Cornhiel (2006) in many countries of Africa agriculture is dominated by female. Due to formal and informal rules women can't perform fully due to which their productivity and income decreases. Due to their traditional rules' women own less land for cultivation that's why they face hurdles in hiring workers and obtaining credits for improvement in production, because the land does not belong to them. Women face restrictions regarding the possession of cattle and the power to control the water. Even after implementation of favorable property system a greater number of women got a little amount of funds, low social status, and low education and still there are fewer chances to enter the market. As a result, women started to depend on men for land and other employment. Developed rural areas provide women with better jobs. At the same time with increase in urbanization mostly areas of Africa are moving towards market-oriented things where agricultural products are made for market. Hence it seems like that women of Africa play an important role in agriculture growth and it is mostly African countries growth

The researchers (Munmun, Sarker, Hoque, & Humayun Kabir, 2015) conducted a research in Bangladesh to study women's participation in agriculture. Agriculture is backbone of many developing countries one of them is Bangladesh roughly 80% which means 170million people depend on agriculture for their survival. Around 20.01% share of GDP is from agriculture. Women are an important asset of a country and around half of population in Bangladesh are women and mostly live in rural areas. Women play a significant role in agriculture but since we are living in traditional society where development activities are ruled by men, women rarely been recognized. Instead of this male dominating society women are more efficient than men, due to limited access to resources they do not perform so well that's why agriculture is underperforming in many developing countries. The researcher after conducting a study explain that 62% women are engaged in agriculture activities when they do not find any alternative work and around 25% are self-inspired to perform different task towards agricultural activities. Agriculture is a profession for many farm families to lead their livelihood and mostly women took part in agriculture activities. Women play a significant role in agriculture activities and earn more income due to which they also improved their socio-economic condition of farm families. Rural women's participation in agricultural production plays an important role in the fulfillment of country's demand. They face different social barriers in production nevertheless they worked hard and fulfill the demand of country.

Agriculture is an important phenomenon all over in the world. According to researchers De Brauw et al (2018) participating role of women in different part of the world like India, America and Africa are increasing. Mostly scholars are concerned about some possible effects of women's participation in agriculture and its effect on their own wellbeing. On the other side continuous increasing participation of female in agriculture shows a great negative impact on productivity over the past 15 years. According to researcher's analysis, in China a large number of participation of women in farms has been observed but their output seems to be half of agricultural labor, their role is increasing slightly in management sector, but their share of labor is still low. The studies show that in China a large number of women are working in farms, due to excess labor supply productivity and income both can increase, and a positive result can be observed. China has started to promote participation of females in agricultural sector and around 30% are women and 40% are young ones. When women will be aware of technology then they can work more efficiently than men.

The researcher Brown (2018) explains the trends in participation of black women in agriculture. He explains that even after the announcement of independence in 1776, most blacks were in slavery. In this period black women worked not only at homes but also in farms to produce cotton, tobacco, rice, and sugarcane with their husband's and brothers without being paid. Black women were considered as precious property in agriculture because they were sold for money. Black women cultivated on farms which created a negative impact on the lives of the black slaves. Even though after facing the problems like pregnancy and childbirth they also played the role of a slave and a breeder whose children were sold and hence their work and their child both served as capital. During this time period black women played an important role in the development of American agriculture. A drastic change was seen after the distribution of black women. In the census of 1969, about 87,439 were black farm operators and 18% are part owners, 61 are full owners and 20% are tenants. In 1972 about 3% were employed which is less than that of 1960 where employment rate was 12.1%. In 1972 the employed working force was about 2.7 million out of which 3% were black women and 11% were black men. In the history of American agriculture black women played an important role in agriculture. The black women faced many social and economic problems due to which they became strong and brave both physically and mentally which helped them in agriculture. This led to new difficulties in their

life, but when overall observed black women played a major role in American agricultural development.

The researchers Dimopoulou et al (2018) conducted a study in Kastoria Greece to observe trends of female participation in agriculture. In four provinces of Greece about 73% rural men had an off-farm occupation and the rest 16% women had only seasonal jobs. In early days the word “feminization” of agriculture means that increased contribution of women in farming, without considering their involvement in agricultural organization or in farm management, in recent time this word is used to explain the increasing number of females who are active farmers. In Germany, China, Latin America, Kenya due to migration of their husbands or due to full-time off-farm employment women have to look after farm work and management. Whatever the reasons behind women work in farm development planners and agricultural professionals do not believe that women can be a farm manager. Furthermore, the overall estimation of “feminization” of agriculture is negative because women have less options of employment and their work is to fulfill the family food security through cultivation. During the last decade, the women who are active farmers have increased. According to census (1999-2000), of Greek agriculture shows that, the number of active farmers of women doubled while men active farmer decreases by 28% from 1987-2000. While the percentage of women participation in farms has increased from 10% in 1987 to 25.1% in 2000. The active farm participation variation is different in all provinces, around 14 provinces shows that a range of 35-50% women are declared as active farmers at the same time in some districts of these provinces around half of women are active participants of farming. In Kastoria about 60% of women depend on rented land while the 37% of women depend on their husbands’ land for cultivation. The data of Kastoria showed a positive result regarding the feminization agriculture which is spreading from farms to market and proved all the negative thoughts of all sociologists and agriculture economist’s wrong, who thought that farming is limited to only small land holders. Not specifically in Kastoria but in all provinces the rate of women participation in agriculture has increased, many of these active farm women played an important role in the history of Greek agriculture.

A study was conducted in Ambo district, Ethiopia, on gender in agriculture between the month of July and September 2007 to observe the role of gender in production and management of crop. The results show that female farmers’ contribution towards production of crops and management is

more than male farmer. Despite of their major contribution towards production and management the triple roles of female farmers didn't get that identity and reward in return in the district. During the working seasons of July and September female farmers, number of working hours on field increases more than male farmers. They perform number of activities from fetching water to collection of fuel wood each and every work is performed by girls. The data from the three surveyed communities show that female participate is higher than male not only in domestic work but also in all agricultural and community developmental activities. The results explain that role of gender in household activities are not sexually determined but it is a socially constructed phenomenon (Ogato, Boon, & Subramani, 2009). Under the supervision of the head of the household, both male and female participate in farming. The main reason behind their participation is that they both have mutual responsibilities on their shoulder to provide basic needs of life and a good level of food security (Abera, Gudeta, Belissa, Shale, Degefe, & Akassa, 2006).

#### **2.4. Constraints Faced by Women in Agriculture**

A research was conducted in Nigeria to study the role of women in agriculture and constraints faced by women in agriculture. The study showed that women participated not only in farm activities but also in harvesting, processing, land clearing and in marketing. They not only grow crops, but also rear animals. And the constraints which were observed by researchers were lack of access to resources and land, lack of basic facilities for farming, costly inputs and their late delivery. Women play a significant role in agriculture and their contribution from production of food, preservation of food to processing of food in agriculture sector can be seen clearly and the study recommended that attention should be given to the constraints faced by women working on farms because they play a significant role in agricultural development of Nigeria (Fabiya et al 2007).

The researchers Chayal et al (2011) conducted a study in Rajasthan India to examine the role of women in agriculture. They found a greater contribution of women towards agricultural activities and also recommended that, 70% of production in farms and women's socio-economic structure can be improved by policy intervention. They also conclude that main challenges that they face

is their family income, land, and age that greatly affect the women participation in agricultural activities.

A study was carried out by Amenu et al (2013) to examine the constraint faced by farmers in Ethiopian Rift Valley area. Data showed that farmers ranked water shortage as the big challenge they are facing for both planting and livestock. Poor quality water was the main challenge they were facing during dry season. Through rainwater the scarcity of water is removed but this water was posing health issues for both people and livestock. Therefore, it is suggested that proper water management system should be made so the farmer use clean water for farming and livestock husbandry. Climate change may cause water shortage, making the situation worse in fulfilling the water requirement of livestock (Malley, Taeb, Matsumoto, & Takeya, 2009)

Rural women in Jammu & Kashmir are extensively involved in different type of agricultural activities. About 20 to 70% of the rural women are involved in agricultural production and post-harvest activities, The agricultural activities in which the women play a very leading role in the state are, transplantation, weeding, threshing, reaping, looking after the farm cattle and other live stock (poultry, goat rearing, sheep rearing etc) collecting fodder, watering fruit plants, preparing and transporting manure and other inputs to the field. They also help in constructing and repairing of irrigation channels and storage facilities. Rural women constitute the most important work force in Indian economy. A good number of economically active women are engaged in Agricultural sector. A study of rural women in different farm activities in Jammu district showed that women are actively engaged in all major agriculture related activities such as ploughing, cleaning and leveling of fields; raising nursery; sowing seeds, transplanting, manure and fertilizer applications, weeding, irrigation etc. Study also shows that majority of the women suffered from minor health problem, management problem, social and financial problem (Aggarwal, Sharma, & Sharma, 2013).

A study was conducted in villages of Dharwad and Gadag district in Karnataka during 2004-05 to study the constraints faced by farmwomen and self-help group members in agriculture. With a sample of 120 workers and self-help group members it was concluded that the main constraint faced by women in agriculture is lack of formal education and they also suggest that improve the literacy of women, improve their ability and skills and provide them different opportunities to

express their capabilities freely by doing so they can perform well in every field of life (Bharathi, & Badiger, 2009)

In rural areas women are taking lead in agricultural activities and making around 60-80% of labor force. But unfortunately, their contribution to agriculture and rural development are rarely noticed. Moreover, they don't play any role in decision-making process related to agricultural activities and agricultural development (Ogunlela & Mukhtar, 2009). Despite of their major role in agriculture, their living standard has not yet improved. They are living a miserable and stressful life. It is shocking that only 10% women own land in Thailand, Nepal and India. Less than 15% women of the world are agricultural extension agent. In Africa and Asia up to 90% of staple crops were grown by women in spite of this own less than 2% of world's assets and faced tremendous hurdles in order to access the resources, trainings, tools and credit. Due to their limited access to markets they are lagging behind in crop production commercially. The obstacles they faced in agricultural activities are that they have either no or little knowledge about management practices. Sustainable agriculture is possible only when we reduce gender discrimination, promote awareness programs and policies regarding equal access to resources to promote agriculture development (Dave, 2014).

Rural women not only in Pakistan but also in other developing nations, instead of their hard work face many constraints. The main dominant constraints they face are gender biasness, socio-economic factors, lack of education and minimum access to resources and opportunities. Moreover, along with household duty they do all agro-based activities except ploughing (Lal & Khurana, 2011). For rapid development, it is important to realize the importance of women in agriculture because majority of population of Pakistan consists of women. Women are more efficient than men. They perform not only agro-based activities but also perform their household responsibilities which are considered as their inborn duty and this work consume a lot of time and effort, but all this effort goes unrecognized. Rural women are more active not only in household activities but also in agricultural activities. Instead of all this, they sacrifice, and all work goes understated which is not good for economy because majority of population of rural areas are female and they mostly depend on agriculture for their income and basic necessities of life. All the work done by female regarding agriculture, crafts and livestock should be recorded and make sure their access to resources, market, banks to borrow money and buy seeds and

fertilizers. The government should give subsidies on fertilizers and seed so that women can buy and pursue their agricultural duties well without any hurdle. Agricultural policies should be made on elimination of gender discrimination, aware them with modern technology, equal education opportunities to both male and female all these are basic need of time to stand with developed countries (Zaheer, Zeb, & Khattak, 2014).

Rural women role in agricultural activities is substantial generally in Pakistan and particularly in the province of Punjab. Despite of their contribution to agricultural and livestock activities their all hard work goes underestimated. This study examines the difficulties faced by women especially rural women during agricultural activities. The study was conducted in district Nankana Sahib by using convenient sampling from 120 respondents. The results of this study show that women were performing diverse agricultural activities like picking, harvesting and sowing. Majority of women were working on fields to increase their family income and the problems which they were facing during this whole process is looking after their home and children. The biggest problem face by them was the negative attitude of landlord and it is suggested that through mass media such negativity about working women in rural areas should be changed (Nazir, Khan, Shahbaz, & Anjum, 2013).

A study was conducted by (A. O. & Afolayan, 2009) in Nigeria to explain the impact of transportation in agricultural productivity Transportation is one of the most crucial and important factors that affect the agricultural productivity. Transportations enhances the lifestyle of people, creates different markets at both regional and national level to communicate with each other for the betterment of the society. The framers and consumer are linked with an efficient transportation for inflow and outflow of goods. Transportation plays a very crucial role in production process. It is a stage of production method that is incomplete until the final product is not in the hand of consumer (Ogunsanya, 1987).

## **2.5. Participation of Women in Agriculture Sector in Pakistan**

The researchers Luquman et al (2006) conducted a study in tehsil Chistian of district Bahawalnagar, Pakistan. The researchers picked out 30 women who took part in household chores and as well as in the agriculture activities from four villages randomly from the whole tehsil. The data shows that women participation rate not only in agriculture but also in livestock

activities is also very high. The overall increase in participation is very much high in cotton picking that is 25.0%, 30% in rice production, 18% in wheat production, 26% in vegetable production and 23% in sugarcane. Not only in farming sector their participation is high also in household chores they performed their duties very well.

In rural area of Pakistan females play a significant role in farming. They perform variety of activities from rearing children to all crop related and livestock management activities. Although women of rural area work from dawn to dusk and perform range of activities such as livestock management and pre and post-harvest activities instead there is no proper data available on the women participation in farming. So, the researchers conduct a study in district Faisalabad Pakistan to observe rural women's participation in farming the result shows that women participation in vegetable harvesting is (Mean=2.58). On the other hand their participation was highest in cereals storage which is (Mean=2.87), and in cleaning of animal's sheds is (Mean=2.9) (Javed, Sadaf, & Luqman, 2006).

Researchers Butt et al (2010) conduct a case study in Depalpur, Okara, Pakistan to observe women's role in agriculture and constraints faced by women. It was observed that women played a vital role in stability and security of food in rural areas in order to keep livestock production, crop production and cottage industry alive. It was also observed that women face a lot of constraints like limited access to land and other resources, education services and technological knowledge. They also recommended that women hold the backbone of agricultural development in every part of the world so; it is needed to eliminate the constraint faced by women in agriculture.

The researchers Chaudhry et al (2018) explain the female participation rate in agriculture in Pakistan. The data shows that in rural area more than 70% of population for their livelihood depends on agriculture and about half of the totals are women. Women's participation plays a vital role in determining the rate of investment, productivity and saving in agriculture. While women work always gain negative review due to men who always suppress down women in this special social set-up of Pakistan. According to the population census of 1961 the female participation rate was 10% while in 1981 the participation rate was 3% only the factors behind this drastic change in women participation was the seasonal effect. During the month of January,



February, May and June the participation rate gets higher due to sowing and harvesting of crops. While other factors which decrease women participation in rural areas are education level, custom and traditions, limitation to work.

A study was conducted in district Peshawar during 2004-05 to explore the role of women in agriculture activities. By conducting interviews from around 80 respondent results showed that female participation in pre and post harvesting activities are not that large but the time spent in post activities is pretty much greater than pre harvesting activities. The total time spent in pre harvesting activities for the production of maize, wheat and sugarcane is 14, 22 and 38 hours while for post harvesting activities the total time spent for these crops is 34,66 and 121 hours respectively per acre for the crops for one season. The main agricultural activities performed by women of Peshawar are sowing, ploughing, harvesting, weeding, crop collection, transportation, threshing and storage. Due to some social norms women participation rate is very low in fields and their involvement is mostly in activities like milking, yogurt preparation, watering, feeding, cleaning animals, chicken feeding and activities related to livestock's. And the average time women spent on livestock management is 6.3 hour daily. Women of Peshawar faced some serious constrains which cause hindrance while working on fields like cultural constraints, financial problems and training. Due to these constraints their productivity decreases Hameed et al (2012).

Pakistan is 13<sup>th</sup> most populated country in the world. The population of Pakistan is increasing day by day at a high speed. Majority of population is concerned either directly or indirectly with agriculture to make income for their family and themselves (Butt, Yousaf, Mehmood, & Muhammad, 2010). In rural areas of Pakistan, the participation of women in agriculture is one of the most important and strong phenomena. And the major activities performed by them are livestock husbandry, crop production and home management but their contribution has for all time remained invisible. A study was conducted in rural union councils of three towns of Lahore, Pakistan namely Wahga Town, Nishtar Town, Iqbal Town. Results showed that a large number of women around 42% started the work at the age of 29 to 39 and majority of them around 86% were illiterate. The rural women during this study sow only rice and wheat and around 56.52% worked 8-10hours on field every day. Women were mostly involved in small activities and they were facing some new technological and socio-economic constraints. Their role in decision

making is negligible, no proper training opportunities were provided to these women. So government and non-government organizations should provide opportunities like educational programs, training regarding crop production and dumping and agricultural extension system to these women to increase their production (Ishaq & Memon, 2016).

In Northern Mountains of Pakistan, women are very passionate about farming they actively participate in numbers of activities ranging from sowing, thinning, weeding, irrigation, transportation of inputs, harvesting and grading. Beside these activities, women are also involved in fruit and plants management. Women devote more time than men in all tasks whether related to farming or domestic chores. In addition to their active participation in all agricultural activities, they also actively deal with the livestock and all its related activities (Muhammad, Ishaq, Arshad, & Farooq, 2006).

## **2.6. Role of Women in Decision Making Process in Agriculture**

Decision making is a fundamental phenomenon. Despite of all work from working on farms to looking after their home and children all these duties are performed by them and yet no recognition is given to her. Their involvement in decision making is low, all important decisions are performed by the head of household or the male member. Majority of females are uneducated due to gender discrimination. Due to their inferior educational status, which keep them isolated in important family matters, as well as in decision making process. So, women got credit neither in family decision nor in agricultural activities. The main objective of this study was to analyses the role of women in decision making. The study was conducted in Fatehabad district of Haryana State. The data was collected from 100 respondents during 2011-12 and 2012-13. The data shows that women's participation indecision making regarding agricultural sector have not recorded up to the mark. The situation has become worse regarding decision making, production, expenditure activities and buying activities. It is suggested that female should get knowledge about their legal rights (Godara, Poonia, & Jyani, 2014).

Rural women play a vital role, both at the household and community level to help their families by engaging themselves in activities that generates income and mostly they are related to agricultural sector of Pakistan. Their valuable contribution is negligible in many parts of the Punjab especially Southern Punjab. They work from dawn to dusk performing a number of

activities including harvesting, taking care of livestock, business work, poultry and handicraft. Despite of all this, it is pathetic that that their hard work goes under noticed. Women of Southern Punjab actively participate in all activities whether it is social work or economic or agricultural related. So, a study was conducted by (Akhtar, Ahmad, Yousaf, Zafr, & Raza, 2018) in Dera Ismael Khan (Southern Punjab) to examine the participation of women in decision making process. The results show that, even after such a hard-work their contribution in decision making process related to education, family matters and agriculture is very low. It is suggested that their participation regarding decision making should be enhance. Women have ability to hold the monthly household budget and their agricultural decisions will show the way towards empowerment. It is also suggested that women should seek knowledge because education is an essential weapon to fight ignorance, unemployment and illiteracy. Both men and women must gain knowledge to enhance their capabilities especially in Punjab province. Education is the only weapon through which women can gain a respectable position in society and in every field of life. This would increase the role of women in household matters and other activities. Furthermore, government should also help rural women through grants, loans to stand on their own feet a run a business. Trainings regarding fertilizers and seeds must be given to women, so that they can increase the production of agriculture. By doing so, women get confidence and courage and make decisions related to agriculture, education, family matters and resources and marriage.

Rural women of India are of the most important productive power of economy. Women are the main contributor of India's economy and around 18% of GDP is from the agricultural sector which is dominated by female. Women work from dawn to dust and do all type of farm activities more than men. Despite of all this, their participation in decision making is low. Their contribution is essential for economic development. A study was conducted in three different villages of Jammu District to examine the role of women in decision making and income generation process. The data showed that in rural families' decision regarding farming, buying and selling of land and machine, income and improvement of livestock and harvesting management were mostly taken by the husband and head of the family (Sharma, Rao, & Sharma, 2013) .

A study was conducted in Chamoli district of Uttarakhand to investigate the role of women in decision making both at home and farm affairs. The study shows that the decision was mostly taken by the head of family and the ratio of head of family is 33.64%, 27.27% were taken by women, 20.91% were taken by men and 18.18% decision were taken by both male and female individually. Study also revealed that women participation in decision making is low at home (13.64%) and slighter higher in farm affairs (28.18%). While the ratio of men is totally opposite of this, their participation is higher in decision making process related to home activities (27.27%) and low at farm affairs (7.27%). Thus, male was dominant in taking decisions related to home while female was dominant in farm affairs decision. A unique situation was observed in Garhwal of Uttarakhand, where around 80% tasks of home and farm were performed by women, but their participation is (20.91%) in decision making process. This shows that there is gender discrimination in society, which explains the status of women and their role in decision making process in society. It is suggested that women of rural area of Uttarakhand must improve their knowledge to stand along with men in every field of life and the gender biasness will be reduce automatically with knowledge (BK & Chandra, 2011).

A study was conducted in Antalya, Turkey to specify and identify the role and task performed by women farmer in vegetable farming system. The results of the study show that, mostly women were providing farm labor and make important decision regarding production of vegetables. Women were largely involved in activities like planting, harvesting and hoeing and their participation in other activities such as spraying, irrigation and fertilization was low. Although they play a significant role in agriculture but their role in decision making related to schooling of child, planting crop, buying inputs such as fertilizers and seeds, buying loan and credits, budget planning is relatively small. They face a lot of difficulties and constraint in production of vegetable like less access to technology, inputs, credits, and information than men. It is suggested that women should highlight their concerns and expectations from government regarding farm affairs and production (Ozkan, Ediz, Ceyhan, & Goldey, 2000) .

## **2.7. Factors contributing withdrawal men from agriculture activities**

Pakistan is an agrarian country and its economy mainly depends on agricultural sector. Agricultural sector is the source of livelihood for about 42.3% households of rural areas. The

main aim of this sector is to provide food and reduce poverty by increasing production. Pakistan is vulnerable to climate change and change in climate threatens the food production. The results demonstrated that increase in temperature badly effect the wheat production, whereas the minimum temperature is suitable for all types of crops. Rainfall adversely affects all the crops badly except wheat. The suggestions given that in order to deal with with climate change, there must be heat-and drought-resistant high yielding varieties to secure food in the country (Ali, et al., 2017).

Deere (2005) Demonstrate that when male migrated and remain absent for a long period of time, women, especially married women starts looking after farms, and perform all the agricultural activities that was defined as, “men’s work” and become farm managers. And the participation of women in agriculture starts increasing and become a trend which is known as “feminization of agriculture”. Also (Adas, 1970) explain that in any area where male migrated in search of any employment opportunity, women look after all the farming tasks behind him.

A study was conducted by in Kyrgyzstan to examine the impact of migration of men on women labor supply and the time spent by women on both farm and non-farm activities. the results showed that Migration of men forces women to look after all farming and domestic activities themselves. The male migration may result in increase in female labor supply, and this leads to women empowerment. While the change in labor supply may not directly lead them to any fruitful job, except to work within the household and farms without any payment.

In Yemen, women’s role in agriculture either at food production and livestock care all the activities vary from region to region in rural areas depending on the available source of irrigation, local attitude and social status. Migration of men has made a considerable impact on rural life in Yemen. The migration of men has changed the rural women’s lives dramatically. A major transformation has been observed by men’s migration. Due to male migration the old tradition of sharing responsibilities within the families has changed into female’s shoulders. On another hand the role of women in both in indoor and outdoor activities has been increased with increase in responsibilities. Women’s authority over in agricultural matters increased and their workload also increased (Adra, 2009).

## **2.8. Role of Different Organizations in Agriculture**

A study was conducted by Urassa and Msuta (2015) in Kasulu district of Tanzania to examine the contribution of Farmers' organization (FOs) on well-being of smallholders' farmers. Farmers Organization (FOs) plays a substantial role in promoting agricultural development through helping farmers. FOs helps farmers by providing technical knowledge regarding inputs, outputs and marketing of the produced item. The main aim of the organization is to improve the farming activities and by providing goods and services to enable them to live a sustainable life. The results of the study showed that FOs contribution towards farmers' development was observed as rising. Extension services of organization and the use of inorganic fertilizers and pesticides has increased the yield production. Therefore, it is suggested that, rural farm household must be encouraged to stick together with such organization as these have such a great power of solving the issues.

A trio of farmers' organization, research institutes and extension and training agencies is required for development. A farmer's voice can't be raised without any farmers' organizations. In the world, there are millions of farmers and it is not easy to connect with every farmer individually so in order to connect with the rest of the society, they need farmers' organizations, structured from grassroots to the international level, as a supporting voice. The International Federation of Agricultural Producers (IFAP), is one of the well know world organization of farmers, representing around 500 million farmers from 57 countries. In 1992, the Mediterranean farmers' organizations have established an IFAP committee of Mediterranean Farmers under the framework of IFAP. The aim of this organization was to provide different opportunities to farmer and to promote agricultural development in Mediterranean regions. Another goal of this committee is to provide information and encourage farmers to in co-operate with organization, regarding the agricultural development of the region. People of Mediterranean region express their desire for agricultural collaboration in the Mediterranean region for both social and economic development (Pertev, 1994) .

A study was conducted by (Enyioko, 2012) in the River state, Nigeria to inspect the role of non-governmental organizations (NGO's) in rural development. Major development programmes handled by such organizations consist of health programmes, community based programmes, human resource development programs, industrial programmes, trade programmes and

agricultural programmes. Majority of people are in favor of such NGOs as they are effective for rural development. The results of the study explained that such NGOs are very effective for implementation of government programmes for sustainable development. These organizations create employment opportunities for youth, reduce poverty and bring out development in all sectors such as in health, agriculture, energy, environment and education.

In Latin America technological changes in agriculture are being demanded and the institutions those concerns with research and technology transfer are changing day by day. In order to attain development modern technology are needed. Old institutes and research centers are equipped with traditional tools of agriculture to meet the challenges. Non-governmental organization (NGOs) in such situation plays a significant role in development. In order to achieve a sustainable development such NGOs must improve their technology and technical skills without affecting their positive traits, such as, a concern for farmer participation, flexibility, social consciousness. A strong coordination between NGOs and research institutes must be established for betterment of the society (Kaimowitz, 1993).

## **2.9. Summary**

The literature review is divided into the 8 main topics that are;

1. Agriculture is the mean of livelihood
2. Women contribution in agriculture
3. Agricultural activities performed by men and women in earlier days
4. Constraints faced by women in agriculture
5. Participation of women in agriculture sector in Pakistan
6. Role of women in decision making process in agriculture
7. Factors contributing withdrawal men from agriculture activities
8. Role of different organizations in agriculture

It is obvious from the above mentioned literature that that agriculture is one of the important mean of livelihoods of many developing countries such as India, Pakistan, South Africa, Ghana and Iran. Not only developing countries but also developed countries depend on agriculture to earn the living even after rapid urbanization and industrialization like China. Agriculture is not

only a source of cultivating crops but also a source of income for a majority of population. When we talk about contribution of women in agricultural field, it has been proved by several researches that they are engaged in agricultural activities both in developing and developed countries, contributing toward the economic progress of their respective countries and this contribution is increasing day by day. But the situation was contrary in ancient days as compared to modern era for agricultural activities were considered to be performed by men only due to the heavy physical tasks. Now, the participation rate of women in agricultural field has increased as it is no longer considered a man oriented activity after invention of modern machinery which is easy to operate. A major shift of duties is being noticed in agricultural area, in olden times men were most active in performing agricultural activities but now women participation is increasing and men participation rate is declining. With the increase of women participation rate issues have also increased, problems regarding transportation, water supply etc. are faced by majority of farmers. Even though women perform both outdoor and indoor activities but still they are not playing any crucial role in decision making at large scale. Apart from this several NGOs are working worldwide for the betterment of farmers and to assist them by training them and giving the awareness about modern technology designed for farming activities.



### Systematic representation of literature review

<b>Author</b>	<b>Year</b>	<b>Title</b>	<b>Aim</b>	<b>Conclusion</b>
Acharya, S.	2006	Sustainable Agriculture and Rural Livelihoods	To examine the dependency of India on agriculture for their livelihood	Like other developing countries, India also achieves their livelihood through agriculture in four different ways such as through production, labor, market exchange, transfer base entitlement.
Safdar, U., Shahbaz, B., Ali, T., & Ali, S.	2015	Livelihood diversification and the role of agriculture in resource scarceregions: a case study of Kaghan valley in northwest Pakistan	To explore the livelihood strategies of farmers.	Due to some constraints such as resources, land and water livelihood pattern moved from farming to small scale business activities
Chaudhry, M. G., Khan, Z., & Abella, M. I. (2018).	2018	Female Labour Force Participation Rates in Rural Pakistan: Some Fundamental Explanations and policy implications	To examine the dependency of rural population in agriculture.	Majority of population in rural areas are completely depends on agriculture for their livelihood.
Rosegrant, M. W., Ringler, C., Benson, T., Diao, X., Resnick, D., Thurlow, J., et al.	2006	Agriculture and Achieving The Millennium Development Goals. Washington	To inspect the dependency of rural population of Iran for their livelihood.	Agriculture plays a pivotal role in poor household, through which wellbeing can be accomplished and the basic needs of life can

				be achieved.
Mahmoudi, H., Sharghi, A., Vossoughi, S., & Salamat, S.	2009	Organic Agriculture as a Strategy for Improving Small Farmers' Livelihood in Iran	To examine the organic agriculture system for safe and sound production of food and fiber.	Organic agriculture system is environmentally friendly approach and it has been successful in developing countries such as Iran.
USAID. (2010).	2010	Feed the Future Initiative: Ghana FY 2010 implementation plan	To study that agriculture is the main sector of economy in Ghana	It was concluded that around 60% of the population were dependent on agriculture sector.
Muchena, F., & Hilhorst, T.	2000	Nutrients on the move: Soil fertility dynamic in African farming systems	To inspect the stress faced by West African Sahel where majority of population were dependent on agriculture.	Due to harsh temperature and fast growing population, food demand has increases, which cause stress on available resources and hence environmental degradation occurs.

Sissoko, K., Keulen, H. v., Verhagen, J., Tekken, V., & Battaglini, A.	2011	Agriculture, livelihoods and climate change in the West African Sahel.	To inspect the climatic effect on agriculture	It was observed that the rise and fall in temperature and variation in rainfall directly effect on the natural resources on which the whole agriculture depends.
		Agriculture and	To inspect the role	Agriculture sector is the

Fechter, D. J. (2012).	2012	Employment	of agriculture in rural areas	main employer and driver of development
Ogbeide, O. A., Ele, I., & Ikheola, E.	2015	Young People and Agricultural Employment: Locality and Interest Factors.	To study the opportunities provide by agriculture sector	Findings shows that in many developing countries farming is an important activity for providing employment and career opportunities for the young people
Havitz, Mannell, M. E., & R. C. (2005).	2005	Enduring Involvement, Situational Involvement, and Flow in Leisure and Non-leisure Activities.	To find the opportunities youth get from agriculture sector	Findings revealed that young people not only get benefited from agricultural sector by farming but they also can get in marketing, communication, production and processing processes related with agriculture
Illo, & Frances, J. (1988).	1988	Irrigation in the Philippines : impact on women and their households : the Aslong Project case. Bangkok, Thailand	To explain the development projects on women through “the case of Aslong irrigation project (AIP).	It was observed that about 90% men were involved in this project but when the title changed to “household” then, the women participation was increased significantly. It was also discovered that women were performing the dual responsibilities along this project like domestic duties and farming due to time constraint they do not perform very well.

Food and Agriculture organization (FAO)	1999	Poverty reduction and irrigated agriculture	To study the women's contribution in agriculture	women play a very important role in agricultural production and thus they are considered to be producers of food for their families
Van Koppen, B. (1999).	1999	Targeting irrigation support to poor women and men	To examine the role of governmental and non-governmental agencies	The main plan of governmental and non-governmental agencies in agricultural schemes is to control the poverty. It was further mentioned that enhanced access to irrigated land and water can control poverty.
Koirala, K. H., K. Mishra, A., & Mohanty, S. (2015).	2015	The Role of Gender in Agricultural Productivity in the Philippines: The Average Treatment Effect.	To examine the role of gender in the production of rice	The result showed that women are producing higher value of rice than men despite of having limited access to resources. There is not any big difference regarding their net income while female have higher fixed costs. Findings of the study show that women are less efficient in farming activities, while more efficient in adopting improved seed varieties and female are better at controlling farming costs

Fairbairn P, D. (1993).	1993	Women and agriculture in Western Samoa	To examine perception and contribution of women in agriculture in Western Samoa	The result showed that the main duties performed by women were the collection of nuts, weeds, taro, weave basket, processing of food, household chores and gardening. The jobs were performed according to age and fitness. The result also confirmed that women play a significant role in agriculture production and plantations
Zwarteveen, M., & Neupane, N.	1996	Free-Riders or Victims: Women's Nonparticipation in Irrigation Management in Nepal's Chhattis Mauja Irrigation Scheme.	To study the activities performed by men and women	Previously, mostly men were farmers, irrigators and water users because it was their perception that farming is more about physical strength. Men were considered more suitable for farming because of their physical strength
Keegan, T. (1988).	1988	Facing the storm, portraits of black lives in rural South Africa	To study the participation of men and women in agriculture	These men were pretty good in farming and depended on their family labors for crop production, while women participation rate was low. It was concluded that the role of women was to sit at home and look after her house and occasionally participate in farming and decision-making processes.

Lastarria, S., & Cornhiel.	2006	Feminization of Agriculture	To examine the role of female in agriculture	In many countries of Africa agriculture is dominated by female. Due to formal and informal rules women can't perform fully due to which their productivity and income decreases.
Munmun, R., Sarker, M. A., Hoque, M. J., & Humayun Kabir, K.	2015	Women's Participation in Agricultural Activities at Forest Land Areas of Bangladesh	To study women's participation in agriculture in Bangladesh	Agriculture is backbone of many developing countries one of them is Bangladesh roughly 80% which means 170million people depends on agriculture for their survival. Women are an important asset of a country.
De Brauw, A., Li, Q., Liu, C., Rozelle, S., & Zhang, L.	2018	Feminization of Agriculture in China? Myths Surrounding Women's Participation in Farming	Participation rate of women in china	The studies show that in China a large number of women are working in farms, due to excess labor supply productivity and income both can increase, and a positive result can be observed. China has started to promote participation of females in agricultural sector and around 30% are women and 40% are young ones.
Brown, M. M. (2018)	2018	Black Women in American Agriculture.	The trends in participation of black women in agriculture.	After the announcement of independence in 1776, most blacks were in slavery. In this period black women worked not only at homes

				but also in farms to produce cotton, tobacco, rice, and sugarcane with their husband's and brothers without being paid. Black women were considered as precious property in agriculture because they were sold for money.
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Dimopoulou, E., Lagiogiann, R., Sotiropoulou, S., Safilou-Rotschild, C., Safilou-Rotschild, C., & Lagogianni, R.	2018	Trends of Agricultural Feminisation in Kastoria, Greece	To observe trends of female participation in agriculture in Kastoria Greece	The data of Kastoria showed a positive result regarding the feminization agriculture which is spreading from farms to market and proved all the negative thoughts of all sociologists and agriculture economist's wrong, who thought that farming is limited to only small land holders. Not specifically in Kastoria but in all provinces the rate of women participation in agriculture has increased, many of these active farm women played an important role in the history of Greek agriculture.
Ogato, G. S., Boon, E. K., & Subramani, J.	2009	Gender Roles in Crop Production and Management Practices: A Case Study of Three Rural Communities in Ambo	To observe the role of gender in production and management of	The results show that female farmers' contribution towards production of crops and management is more than

		District, Ethiopia.	crops.	male farmer. Despite of their major contribution towards production and management  the triple roles of female farmers didn't get that identity and reward in return in the district.
Abera, G., Gudeta, H., Belissa, M., Shale, G., Degefe, A., & Akassa, B.	2006	Gender Based Roles and Resource Use Right in Potato Production and Marketing System: the Case of Some Districts in Oromia, Bthiopia.	To study the participation of women	The main reason behind their participation is that they both have mutual responsibilities on their shoulder to provide basic needs of life and a good level of food security
Fabiyi, E., Danladi, B., Akande, K., & Mahmood, Y.	2007	Role of Women in Agricultural Development and Their Constraints: A Case Study of Biliri Local Government Area, Gombe State, Nigeria.	To study the role of women in agriculture and constraints faced by women in agriculture.	The study showed that women participated not only in farm activities but also in harvesting, processing, land clearing and in marketing.
Chayal, Dhaka, & Suwalka.	2011	Role and status of women cultivators in Rajasthan	To examine the role of women in agriculture in Rajasthan India.	They found a greater contribution of women towards agricultural activities  and also recommended that, 70% of production in farms and women's socio-economic structure can be improved by policy



				intervention.
Amenu, K., Markemann, A., Roessler, R., Schultze, M. S., Abebe, G., & Zárate, A. V.	2013	Constraints and challenges of meeting the water requirements of livestock in Ethiopia: cases of Lumeand Siraro districts	To examine the constraint faced by farmers in Ethiopian Rift Valley area.	Data showed that farmers ranked water shortage as the big challenge they are facing for both planting and livestock. Poor quality water was the main challenge they were facing during dry season.
Aggarwal, H., Sharma, S., & Sharma, R.	2013	A Study of Agricultural Activities Performed by Rural Women and Problems Faced by them in Jammu District of J&K State	Agricultural activities performed by rural women	About 20 to 70% of the rural women are involved in agricultural production and post-harvest activities. The agricultural activities in which the women play a very leading role in the state are, transplantation, weeding, threshing, reaping, looking after the farm cattle and other live-stock (poultry, goat rearing, sheep rearing etc) collecting fodder, watering fruit plants, preparing and transporting manure and other inputs to the field.
B. R., & Badiger, C.	2009	Constraints and suggestions of self help groups under the project empowerment of women in agriculture	To study the constraints faced by farmwomen and self-help group members in agriculture in	it was concluded that the main constraint faced by women in agriculture is lack of formal education and they also

			villages of Dharwad and Gadag district in Karnataka.	suggest that improve the literacy of women, improve their ability and skills and provide them different opportunities to express their capabilities freely buy doing so they can perform well in every field of life
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Ogunlela, Y. I., & Mukhtar, A. A.	2009	Gender Issues in Agriculture and Rural Development in Nigeria: The Role of Women.	To examine the role of women	In rural areas women is taking lead in agricultural activities and making around 60-80% of labor force. But unfortunately, their contribution to agriculture and rural development are rarely noticed.
Dave, D.	2014	Women in agriculture	To examine the status of women in agricultural activities and resources	Despite of their major role in agriculture, their living standard has not yet improved. They are living a miserable and stressful life. It is shocking that only 10% women own land in Thailand, Nepal and India. Less than 15% women of the world are agricultural extension agent. In Africa and Asia up to 90% of staple crops were grown by women in-spite of this own less than 2% of world's assets and faced tremendous hurdles in order to access

				the resources, trainings, tools and credit.
Lal, D. R., & Khurana, D. A.	2011	Gender issues: the role of women in agriculture sector	To inspect the constraints faced by women in Pakistan	The main dominant constraints they face are gender biasness, socio-economic factors, lack of education and minimum access to resources and opportunities.
Zaheer, D., Zeb, A., & Khattak, S. W.	2014	Women participation in Agriculture in Pakistan (An overview of the constraint and problems faced by rural women)	To study the constraints faced by farmwomen and self-help group members in agriculture.	It was concluded that the main constraint faced by women in agriculture is lack of formal education
Nazir, S., Khan, I. A., Shahbaz, B., & Anjum, F.	2013	Rural women's participation and constraints in agricultural activities: A case study of district Nankana Sahib, punjab	To examines the difficulties faced by women especially rural women during agricultural activities.	The results of this study show that women were performing diverse agricultural activities like picking, harvesting and sowing. Majority of women were working on fields to increase their family income and the problems which they were facing during this whole process is looking after their home and children. The biggest problem face by them was the negative attitude of landlord

A. O., A., & Afolayan, O. (2009)	2009	The impact of transportation on agricultural production in a developing country: a case of kolanut production in Nigeria.	To explain the impact of transportation in agricultural productivity	Transportation is one of the most crucial and important factors that affect the agricultural productivity. Transportations enhances the lifestyle of people, creates different markets at both regional and national level to communicate with each other for the betterment of the society.
Luqman, M., Malik, N. H., & Khan, A. S.	2006	Extent of Rural Women's Participation in Agricultural and Household Activities.	To study the participation rate of women in different agricultural activities in tehsil Chistian of district Bahawalnagar, Pakistan.	The data shows that women participation rate not only in agriculture but also in livestock activities is also very high. The overall increase in participation is very much high in cotton picking that is 25.0%, 30% in rice production, 18% in wheat production, 26% in vegetable production and 23% in sugarcane.
Javed, A., Sadaf, S., & Luqman, M.	2006	Rural Women's Participation in Crop and Livestock Production Activities in Faisalabad-Pakistan	To observe rural women's participation in farming	The result shows that women Participation in vegetable harvesting is (Mean=2.58). On the other hand their participation was highest in cereals storage which is (Mean=2.87), and in cleaning of animal's sheds is (Mean=2.9)

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Butt, T. M., Yousaf, Z. H., Mehmood, K., & Muhammad, S.	2010	Role of Rural Women in Agricultural Development and Their Constraints	To observe women's role in agriculture and constraints faced by women in Depalpur, Okara, Pakistan.	It was observed that women played a vital role in stability and security of food in rural areas in order to keep livestock production, crop production and cottage industry alive. Women face a lot of constraints like limited access to land and other resources, education services and technological knowledge.
Chaudhry, M. G., Khan, Z., & Abella, M. I.	2018	Female Labour Force Participation Rates in Rural Pakistan: Some Fundamental Explanations and policy implications.	To examine the female participation rate in agriculture in Pakistan. The	In rural area more than 70% of population for their livelihood depends on agriculture and about half of the totals are women. Women's participation plays a vital role in determining the rate of investment, productivity and saving in agriculture.
Butt, T. M., Hassan, Z. Y., Mehmood, K., & Muhammad, S	2010	Role of Rural Women in Agricultural Development and Their Constraints	To study the involvement of women in agricultural tasks in rural area of Pakistan as well as, the hurdles which they faced while	In rural areas of Pakistan, the participation of women in agriculture is one of the most important and strong phenomena. And the major activities performed by them are livestock husbandry, crop production

			performing their tasks.	and home management but their contribution has for all time remained invisible.
Ishaq, W., & Memon, S. Q.	2016	Roles of women in agriculture: A case study of rural Lahore, Pakistan	A study was conducted in rural union councils of three towns of Lahore, Pakistan namely Wahga Town, Nishtar Town, Iqbal Town to observe the participation of women in agriculture	Results showed that a large number of women around 42% started the work at the age of 29 to 39 and majority of them around 86% were illiterate. The rural women during this study sow only rice and wheat and around 56.52% worked 8-10hours on field every day. Women were mostly involved in small activities and they were facing some new technological and socio-economic constraints.
Muhammad, Ishaq, Arshad, & Farooq.	2006	Farming in the Northern Mountains of Pakistan : role of women.	Tasks performed by women in Northern Mountains of Pakistan	Women actively participate in numbers of activities ranging from sowing, thinning, weeding, irrigation, transportation of inputs, harvesting and grading. Beside these activities, women are also involved in fruit and plants management.
Godara, A. S., Poonia, U., & Jyani, U.	2014	Role of Women in Decision-Making process in Agriculture Sector: A Case Study of District	Role of women in decision making in Fatehabad district of Haryana State.	The data shows that women's participation in decision making regarding agricultural sector have not recorded up to the mark.

		Fatehabad.		The situation has become worse regarding decision making, production, expenditure activities and buying activities.
Akhtar, S., Ahmad, S., Yousaf, H., Zafr, A., & Raza, Q. A	2018	Role of Women in Social and Agricultural Decision-Making in the Rural Areas of Southren Punjab	to examine the participation of women in decision making process in Dera Ismael Khan (Southern Punjab)	The results show that, even after such a hard-work their contribution in decision making process related to education, family matters and agriculture is very low.
Sharma, S., Rao, P. K., & Sharma, R.	2013	Role of Women in Decision-making Related to Farm: A study of Jammu district of J&K State	A study was conducted in three different villages of Jammu District to examine the role of women in decision making and income generation process.	The data showed that in rural families' decision regarding farming, buying and selling of land and machine, income and improvement of livestock and harvesting management were mostly taken by the husband and head of the family

BK, K., & Chandra, D. (2011).	2011	Participation of women in decision making process in rural Garhwal of Uttarakhand.	A study was conducted in Chamoli district of Uttarakhand to investigate the role of women in decision making both at home and farm affairs.	The study shows that the decision was mostly taken by the head of family and the ratio of head of family is 33.64%, 27.27% were taken by women, 20.91% were taken by men and 18.18% decision were taken by both male and female individually. Study
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				also revealed that women participation in decision making is low at home (13.64%) and slighter higher in farm affairs (28.18%). While the ratio of men is totally opposite of this, their participation is higher in decision making process related to home activities (27.27%) and low at farm affairs (7.27%).
Ali, S., Liu, Y., Ishaq, M., Shah, T., Abdullah, Ilyas, A., et al. (2017).	2017	Climate Change and Its Impact on the Yield of Major Food Crops: Evidence from Pakistan	Impact of climate on agricultural production	The results demonstrated that increase in temperature badly effect the wheat production, whereas the minimum temperature is suitable for all types of crops.
Deere, C. D.	2005	The feminization of agriculture?: Economic restructuring in rural Latin America	To observe the less participation of men in agricultural activities	when male migrated and remain absent for a long period of time, women, especially married women starts looking after farms, and perform all the agricultural activities that was defined as, “men’s work” and become farm managers. And the participation of women in agriculture starts increasing and become a trend which is known as “feminization of agriculture”.



Adas, M. (1970).	1970	Woman's Role in Economic Development By Ester Boserup. New York: St. Martin's Press, 1970	Factors that leads women to participate in agriculture	When male migrated in search of any employment opportunity, women look after all the farming tasks behind him.
Adra, N.	2009	The impact of male outmigration on women's role in agriculture in the Yemen arabic republic	Impact of men's migration on agricultural activities  Impact of men's migration on agricultural activities	Migration of men has made a considerable impact on rural life in Yemen. The migration of men has changed the rural women's lives dramatically. A major transformation has been observed by men's migration. Due to male migration the old tradition of sharing responsibilities within the families has changed into female's shoulders. On another hand the role of women in both in indoor and outdoor activities has been increased with increase in responsibilities. Women's authority over in agricultural matters increased and their workload also increased
Pertev, R. (1994).	1994	Pertev, R. (1994). The role of farmers and farmers' organizations	Role of International Federation of Agricultural Producers (IFAP), organization for	The aim of this organization was to provide different opportunities to farmer and to promote agricultural development in Mediterranean regions.

			farmers	Another goal of this committee is to provide information and encourage farmers to in co-operate with organization, regarding the agricultural development of the region.
Enyioko, N. (2012)	2012	Role of Non-Governmental Organizations (NGOs) in Rural Development: A Study of the Six Listed NGOs in Rivers State, Nigeria	To inspect the role of non-governmental organizations (NGO's) in rural development in the River state, Nigeria.	The results of the study explained that such NGOs are very effective for implementation of government programmes for sustainable development. These organizations create employment opportunities for youth, reduce poverty and bring out development in all sectors such as in health, agriculture, energy, environment and education.

Kaimowitz, D. (1993).	1993	The role of nongovernmental organizations in agricultural research and technology transfer in Latin America	Importance of NGOs and demand of technological changes in agriculture in Latin America	Agriculture are being demanded and the institutions those concerns with research and technology transfer are changing day by day. In order to attain development modern technology are needed. Non-governmental organization (NGOs) plays a significant role in development. In order to
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				achieve a sustainable development such NGOs must improve their technology and technical skills without affecting their positive traits, such as, a concern for farmer participation, flexibility, social consciousness.
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Table # 01: A systematic representation of literature review by (Okoli & Schabram, 2010)

## **2.10. Conceptual Framework**

While studying the previous literature related to my study it is found that there were three main themes which support my subject under investigation. On the bases of the literature review I formulated my conceptual framework. Although the main themes that supported my research are participation of women, gender equality and empowerment of women. These themes are described in relation to agricultural activities so as to give brief insight view into the women participation in agriculture. The major themes are as follow

### **2.10.1. Women Participation**

The idea of participation speaks about who were involved in social activities and how they performed. And the activities could be like employment in any formal sector, household work, and legislative work, general and local elections and in agricultural sector. So, the result can be seen by measuring the two types of equality; equality in terms of outcome and opportunity. It is observed that women and men are not equally participating and there is not any equality between them. Women who participate in paid work do not have the power to control or receive income which they earn. So, it represents a condition where women participate in all activities, but they do not receive any equality. Hence, one can imagine their equality without their participation in socio-economic and political process (Akerkar 2001; Duflo 2005; Narayan 2002).

### **2.10.2. Gender Equality**

Gender equality is described as: a society at a certain time can be believed more or less gender equal. Generally, it is needed to differentiate between the two dimensions of equality. First is equality in terms of outcome and secondly equality of opportunities. Equality in terms of outcome means that both men and women enjoy independence, status, same living standard, and other social values. The second one is equality of opportunities means that both men and women have equal rights and access to education, market, goods and services and agricultural inputs. 'Level playing field' is suitable word to describe the term equal opportunity (Roemer, 2005).

### **2.10.3. Empowerment of Women**

The main idea of women empowerment is that gender empowerment is related to the capacity of women to deal with their lives. According to researchers (Kabeer 2005; Duflo 2005; WBI 2007) empowerment of women can be stated as, improvement in women's skills to run their own lives which is achieved by increasing access to resources and activities. The concept of 'women empowerment' is a direct connection between equality of opportunities and empowerment. By empowering them they can easily access to education, access to finance, agricultural inputs, access to employment in formal sector, control over fertility etc. which lead them to get equal opportunities in comparison with men. Thus, empowerment of women in any field will ultimately lead to gender equality in a society.

### **2.10.4. Pictographic Representation of Conceptual Framework**

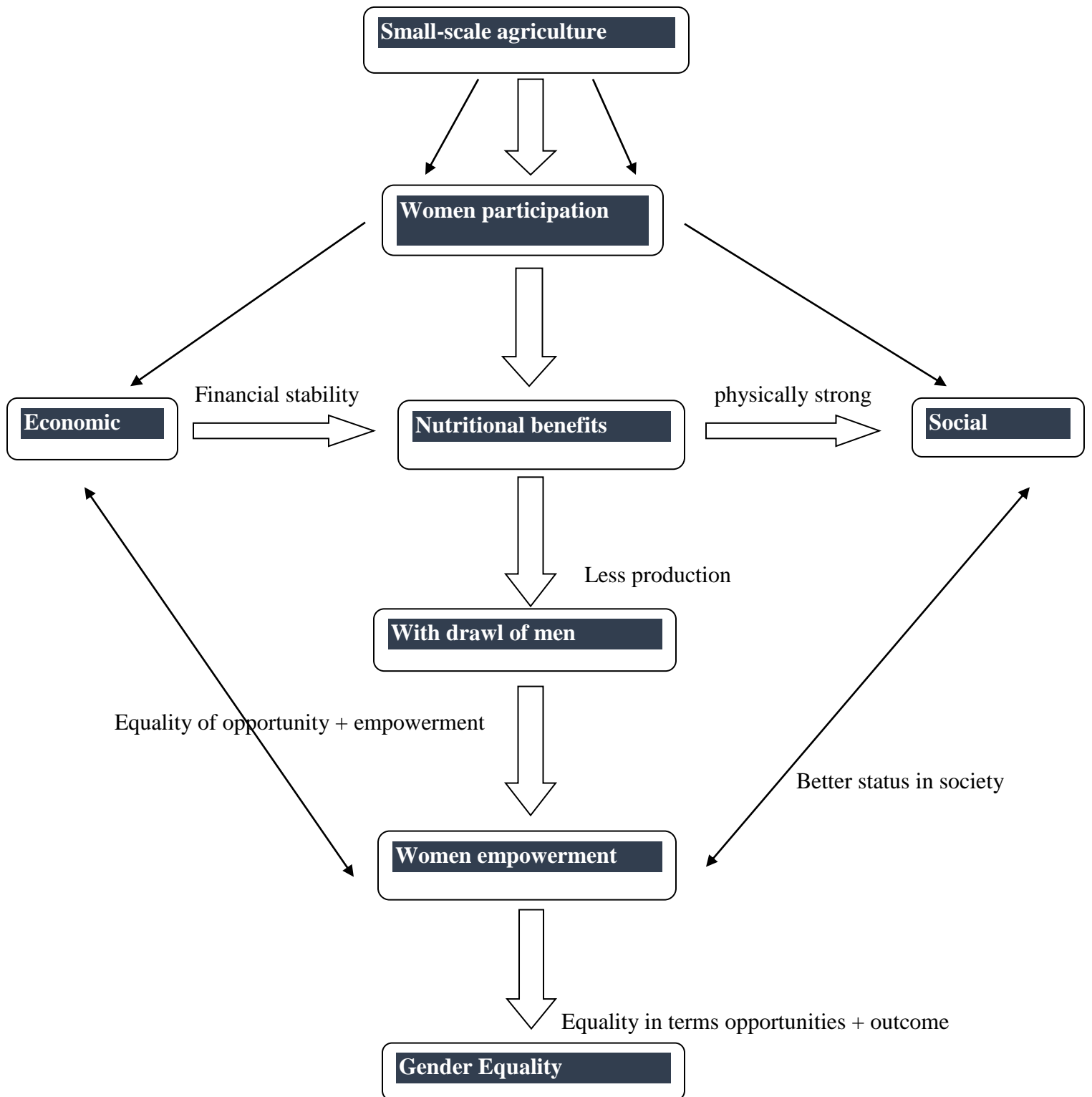


Figure # 01

### **2.10.5.Explanation of Diagram**

Small-scale agriculture refers to, production of crops and livestock on a small piece of land without using any expensive sort of technology. Small scale agriculture is vulnerable in rural economic development due to lack of infrastructure, low production and low market structure (Mbatha & Masuku, 2018). Women participation in agriculture on a small-scale benefits them in many ways. They become economically strong enough to support themselves and their families and this also helps to increase per capita income and economic growth of the country. Increasing participation of women in agricultural activities results in less participation of men. Women working on farms not just play an essential role for the economy but also for their families' wellbeing. Their involvement in farming provides them food and different employment opportunities which will make them both physically and economically strongest. If they became economically stable this will give them a better status in society and they are will be considered important members of society. This recognition of women in society leads to women empowerment and empowerment of women can be determined by two types of equality; equality in terms of opportunity and empowerment. By empowering them they can easily access to agricultural inputs and natural resources, which eventually lead to equal opportunities for both men and women. Thus, by empowering women will ultimately lead to gender equality, by gender equality it means that both men and women enjoy equal status, living standard and equal access to land and other natural resources. Thus, this gender equality then creates a society where both and men work independently in which ever field, they want to work in. This also makes their position strong in society.

## **CHAPTER - III**

### **3. RESEARCH METHODOLOGY**

This section of the research provides information about the research methods which have been used to carry out this research. It is a process which is used to solve the research problems systematically (Kothari, 2004). This section illustrates different steps which will be used in study, which consist of selection of participants, methods of data collection, sample size, sampling techniques and locale description. Thus, the research methods used to investigate the subject matter should be considered as a device to answer the research question. This research intended to explore and understand the meanings made by the participants. This research does not provide the ultimate truth about the subject matter but investigates a detailed and particular way of looking at the topic being investigated.

#### **3.1. Research method/Strategy**

The strategy which I had utilized in conducting this research is a qualitative research. A qualitative approach was selected for this study because it is helpful in understanding the meaning that people give to events that they practice. According to Strauss et al (1998) qualitative research method for the collection of data and its analysis is being increased over the past two decades. A qualitative research is acceptable when the research question needs exploration. Another reason for using qualitative research is that it allows the researcher to discover the thinking and feeling processes of people which is difficult to extract. Qualitative research approach is suitable for mostly small samples size whereas their outcomes neither can be quantify nor measurable. Its main advantage is that it gives a complete explanation and analysis of research topic. I choose this method because this method attempts to offer an in-depth description of the responses of the respondents about the area of my interest. The present research aimed to understand and explore the responses of people on a particular subject matter that is women participation in agriculture.



### **3.2. Research Design**

This research will be based on descriptive survey research design. Descriptive research design is a scientific process which consists of describing an action of a subject without affecting it anyway. Furthermore, this research design attempts to provide an overall description of the participant's experiences. The aim of descriptive research design is to describe a phenomenon and all its traits. In descriptive research design the entire focus is on what type of questions such as what, how, where, when rather than why (Nassaj, 2015).

### **3.3. Unit of Data Collection**

The units of data collection for my study are as follow:

- 1) Female farmers who are working on agricultural farms.
- 2) Head and employees of organizations.
- 3) Working women.
- 4) Head of the household.

### **3.4. Data Collection Method**

The primary data was collected with the help of semi-structured and unstructured interviews. Semi-structure interviews are generally used in qualitative research and can occur either with an individual or in groups. Some set of predetermined open-ended questions are in mind of researcher and the rest of questions arise during conversation between interviewee and interviewer. The semi-structure interviews help to accomplish the objectives of the study. It is one the most useful method because it allows the researcher to gain insight view of participants' perception, beliefs or account of particular topic (F. Crabtree & Dicicco-Bloom, 2006). Whereas unstructured interviews are used in qualitative research which involves asking open-ended questions from participants in order to get the information regarding the subject matter of interest (Lisa, 2008). Unstructured interview is one the most popular tool which is used for making

decisions despite proofs of their invalidity (Dana, M. Dawes, & R. Peterson, 2012). And through such interviews I gain rich information related to my study.

### **3.5. Sampling Technique**

The sampling method used in this research study is purposive and stratified sampling method. Generally purposive sampling is typically used in qualitative research for classification and selection of sample related to subject of matter. It is also known as judgmental sampling because the deliberate choice of participant is due to qualities that the participant owns. This research study has chosen the set of people who are well-informed and experienced along with their willingness to participate. The skills of communication were also needed to gain information regarding the subject matter (Etikan, Musa, & Alkassim, 2016). One UDC (female labor working in fields) and UDC 3 (working women's purposive sampling for the UDC 1) were used in this research. While stratified sampling technique is mostly used when we divide a large population on which sampling is applied is heterogeneous, but we can divide this large population into homogenous sub-population, which is known as strata (Pirzadeh et al 2011). Stratified sampling has been for UDC 2 (head of households) in this research. That is further divided into male and female because in some families the head of household was female whereas some were men. So, for this reason the strata of the UDC 2 have been used. While for, UDC 3 (head and employs of organizations), stratified sampling was also used. Two groups were made head of the organizations and employees.

### **3.6. Sample Size**

The data has been collected from 55 respondents out of which 20 were those women who were working in agricultural farms, 13 were households, 12 were working women's and 10 respondents were from organization

### **3.7. Procedure of Data Collection**

In the initial phase, I started targeting my respondents and prepare some questions. I conducted interview twice. One series of interview was conducted during winter season in January and the other was conducted during harvesting season in May. The purpose of conducting two series was

to observe an interview about the raising of livestock and to observe the overall agricultural activities from sowing to threshing. During winter season the agricultural activities are limited to raising of livestock only. But in summers season activities increase. I started conducting semi-structure and structured interview from all units of data collection. The maximum duration of an interview was 1 hour and 15 minutes which was a focus group discussion from head and employees of agricultural organization. And the minimum duration of interview was 20 minutes from the head of household, some working women and female farmers. Before I started interview, every respondent was informed about the purpose of my study. They were cooperative with me. The main problem that I faced during interviews was language barrier. Most of the women didn't know Urdu. I had to record their statements in order to get them translated by a translator later on. I used to jolt down the statements of those who knew Urdu.

### **3.8. Rapport Building**

Rapport building is a significant and crucial part of qualitative research. It enables the researcher to be a part of a particular society. The researcher, throughout rapport building, converses informally, with the community members and informs them about his/her project. All the procedure is done in a manner which suits to the culture of the community. The researcher also tries not to make his behavior awkward to the community members. I had already built my rapport with some of my participants. My further rapport was built with the help of my friend

### **3.9. Locale Description**

The area of research is Hunza, which is one the most beautiful valley of Gilgit-Baltistan. Hunza was a princely state bordering China and Pamir, which continue to exist until 1974, when it was finally dissolve by Zulfikar Ali Bhutto. About more than 900 years, Hunza was an independent region. In early days, Hunza provide the easiest access to travel to Gandhara and Swat on foot. It is located in the north of Pakistan. It lies in the Gilgit-Baltistan region along China border and Afghan Wakhan Corridor extended at 2500 meter along Hunza River. Hunza is a subdivision of Gilgit district within Gilgit-Baltistan. The size of Hunza is 11,695km around 46500 people live in Hunza valley. It is located at a height of about 2500 meters (8200ft). The valley is surrounded by some stunning mountains higher than 6,000 meters, consist of Hunza Peak(6270m), Rakaposhi (7,788m), Passu Peak (7478m) Ultar Sar (7,388m), Diran Peak (7,266m), and

Bublimotin also known as Ladyfinger Peak (6,000m). It is divided into three parts lower Hunza, upper Hunza and central Hunza. The research was conducted in a village of Hunza, called Aliabad. Aliabad is the central part of hunza district. It is located in Hunza valley, 100 km beyond Gilgit. Aliabad lies in transitional zone between the double cropped and single cropped zone. Wheat, maize, buckwheat and barley are the most cultivated crops of Aliabad.

### **3.9.1. Climate**

Hunza is a mountainous valley of Gilgit-Baltistan, with an area of 7,900 square kilometers. The maximum temperature recorded in May is 27 °C and the minimum is 14 °C. While in October the range of temperature lies between 10 to -10 °C.

### **3.9.2. Soil**

The slopes of the hills usually have a bare surface which results in the form of cracks and crevices. These cracks and crevices have a shallow composition of soil with small's depositions of rack scree. This landscape therefore provides an ideal environment for grass and bushes that are utilized as rangeland and graze land. The soils here are usually calcareous which can be a hint to its sedimentary origin and hence also has stones from parent materials. They have a loamy and sandy-loamy character as well. These soils of Hunza and Gilgit rivers which means the soil formed is alluvial i.e. water deposited soil. These areas are usually deficient organic minerals like nitrogen, sulphur and phosphorus. They farmers when interviewed during survey told that they use manure for wheat and maize with local farmyard manure hence making the nitrogen, phosphorus and sulphur deficiency.

### **3.9.3. Crop Husbandry**

Mostly cereal crops are cultivated in Hunza valley and among them wheat is the one the basic staple food crop. However, in some parts, maize is consumed by most people in place of wheat. Now day's potato is the main cultivated and used crop in Hunza. While on a small-scale daily use perishable goods such as onion, tomato, mint, green veggies etc. are cultivated frequently.

#### **3.9.4. Animal Husbandry**

People of Hunza rear animals, such as, cow, sheep, goat and ox. They rear animals for food, meat, fiber, eggs and other products for daily usage as well as earn money by selling these products. They also use animals for cultivation.



### 3.10. Framework Analysis

Framework analysis is a process that allow user to collect the data either to analyze it later or during the collection of information. During the analysis of stage, the data gathered is shifted, charted or either to generate themes. It is a process which is used in research mostly for the generation of themes (Srivastava & Thomson, 2009). I have also use framework analysis process in my research for the generating themes. Framework analysis consists of few stages and which are given below;

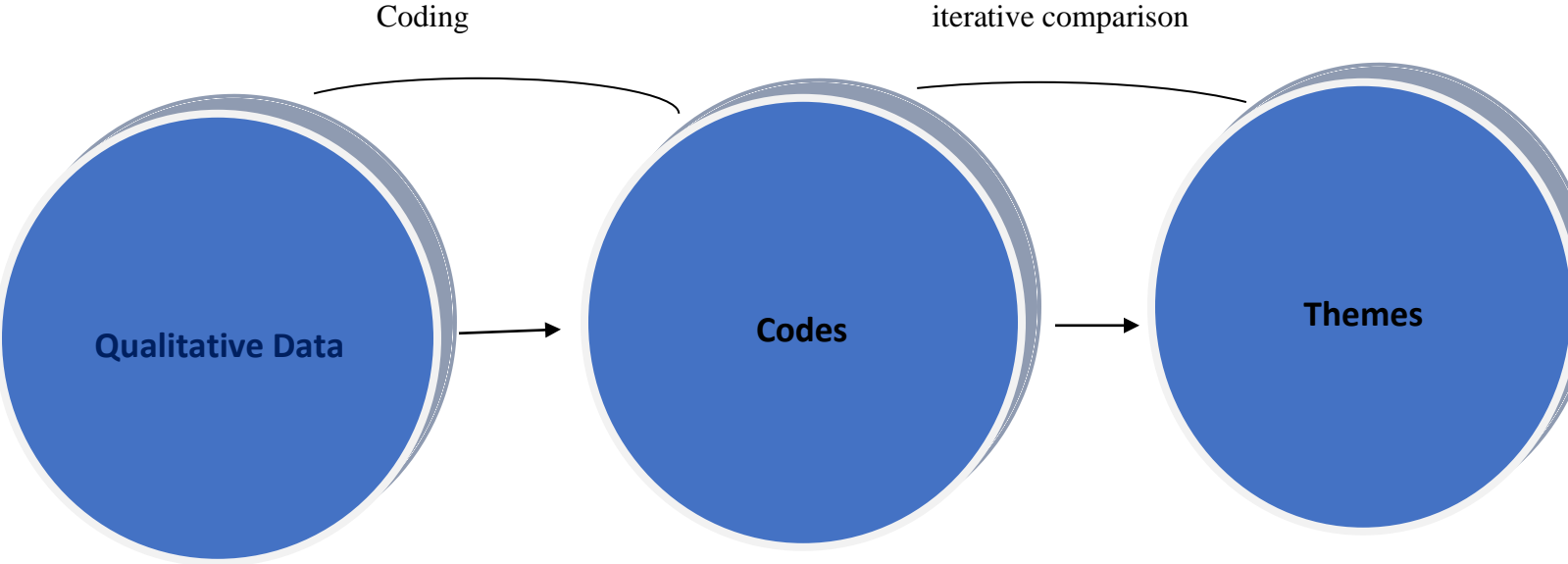


Fig # 02

Thematic Analysis

### **3.11. Thematic Analysis**

For data analysis I have selected thematic analysis. Thematic analysis is a method of identifying, analyzing and reporting of themes within qualitative data (Maguire & Delahunt, 2017). In every field of study every researcher and scholar use thematic analysis mainly in qualitative study. It is a process for writing qualitative information. Thematic analysis is a converter for those who talk about the language of qualitative analysis and it also allow those who use different qualitative methods to talk to each other (E. Boyatzis, 1998). Thematic analysis is suited for the broad research question, because it gives a rich description of broad questions by making them specific through subthemes and coding. Generally, thematic analysis presents the detailed description and analysis of themes that is often related to the literature review (Braun & Clarke, 2006).

In this study I have use inductive approaches to generate themes and subthemes. This approach helps recognizing themes generated from existing body of knowledge and interviews

### **3.12. Transcription**

Transcription is an essential process in the qualitative study of language data (C. Lapadat & C. Lindsay, 1999). Transcription is s a process of transferring the video, audio into written form. It is simply a process of transcription of recorded content into typewriting. Dictations, Interviews and conversations are subject matter of transcription (Dresing, Pehl, & Schmieder, 2015) . Representation of visual and audible data into simple written words by deep observation is the first step of transcribing the data. It takes a long time in listening and transcribing the data (Bailey, 2008).

In this study I have transcribe all my data which I recorded while conducting interviews from my UDCs.

### **3.13. Familiarization**

According to (Jugder, 2016) familiarization with data was through reading and re-reading the transcript and translating the interviews. The data which is presented either in audible or visual form was first listened carefully not once but many times for precise translation and transcription. The benefit of translating interviews as they were firstly transcribed to understand



the meaning of data. As suggested by (Maguire & Delahunt, 2017) before going to study further, you should be familiar with your entire data which is presented in any form. By following this method, I had gone through with the entire data body. Read transcripts and listen audible data not once but thrice, to become familiar with the data. I had read the data many times to be able to understand the meaning of data.

### **3.14. Indexing and Coding**

The next step to chase in framework analysis was to give the basic and most suitable codes to the data. Indexing contains parts and portions of data which depicts a particular theme. The main purpose of indexing is to allow users to place information (Milstead, 1994). The whole qualitative data is being coded while indexing. It doesn't require any mechanical or judgmental process to decide on the most suitable code (Mabuza, Govender, Ogunbanjo, & Mash, 2014). Code is a phrase or short word that summarizes the whole data and coding is important key of data analysis in qualitative study. Coding is considered synonymous with analysis by some researchers. It is a system of moving "from data to idea, and from idea to all the data that belongs to that idea". And code is a phrase or short word that summarizes the whole data (Witt, 2013). The aim of coding is partly to reduce, organize and lastly analyze the data (Cope, 2010). After coding the themes are generated from theory or data. It also depends on whether you want to code the whole content or just a particular part of the data. There are two ways of coding the data, either by using software programme or manually. I have done the process of coding manually. I have used line-by-line coding process. In line-by-line coding method, a single code is given to a sentence or phrase in the data. This method gave a minor detail of each and every line or sentence within the transcript.

### **3.15. Memo Writing**

Another phase of my study was writing memos. Memo writing is mostly used in qualitative research and it enhances the research experience in all qualitative methodologies. Memo performs many functions from extracting the meanings from the data, opening communication to maintaining momentum (Birks, Chapman, & Francis, 2013). Memoing helps the researcher to extract the meaningful data that define research phenomena in the framework in which it is examined. Memos are a specific way of writing records, which consist of the product of our

analysis. Generally, it is recommended to the researchers to jolt down their thoughts as they are coding and describing themes. It is known as free-writing or pre-writing. Memoing consists of taking cluster of codes separately, by dividing them into parts and gave confidence to the researchers to start probing into unsaid, hidden and condensed meaning (Strauss, 1987). From beginning of the procedure of conducting and reading the transcript of interviews to the last step of identifying and describing the themes I had written memos.

### **3.16. Identifying and Characterizing Themes**

According to Tesch and Barbara (1987), theme is generally the main idea of content, statement or topic that expressed the data in a simple word. The phase of identification and characterization starts initially, and this process goes on until the last step. Throughout the process of reading transcript, the possible themes were extracted and noted during the entire coding process for producing the final report/reports. I have practiced codes not only one, but more than one for transcription of interviews. For every code thematic chart was made and each chart consists of the main codes and sub-code. The codes which are generated from the data were arranged into a separate column and parallel to this column the transcription of data was presented. The main objective of creating keywords was to have a clear picture of the data that will lastly lead to themes. Eventually, thematic categories were recognized, and the codes were prepared that describe the theme in best way. In a memo, the identification, coding and classification of themes were explained, which clearly explain the relation of each theme on thematic structure. Through this thematic structure, I have written my themes that are given below and briefly discussed in the finding and discussion section which are given below.

<b>Themes</b>	<b>Sub-themes</b>	<b>Sub-themes</b>	<b>Sub-themes</b>	<b>Sub-themes</b>
<b>Agriculture</b>	Horticulture	Mean of livelihood	An uphill struggle	Career opportunities
<b>Productive role performed by women</b>	Fundamental tasks	Secondary tasks		
<b>Series of task performed by men</b>	physical work			
<b>Factors behind women participation in agriculture</b>	Passion	Habitually	Barren Land	Monetary term
<b>With-drawl of men</b>	Variation in temperature	Female oriented work	Migration	
<b>Limitation faced by women</b>	time management	Transportation	Water shortage	Health condition
<b>Shy to work</b>	Passion	Independence		

<b>Helping hand</b>	Hiring of labor	Organization		
<b>A process of choosing</b>	Insignificant role	Chief role		
<b>Source of bread and butter</b>	Employment possibilities	source of earning money		
<b>Task time</b>	Seasonal work			
<b>Role of organization in agriculture</b>	Trainings	Farmers school	Tools and technique	Tackle with problems

Table # 02: Themes and sub-themes by (Alenezi, Tarhini, Masadeh, & Alalwan, 2017).

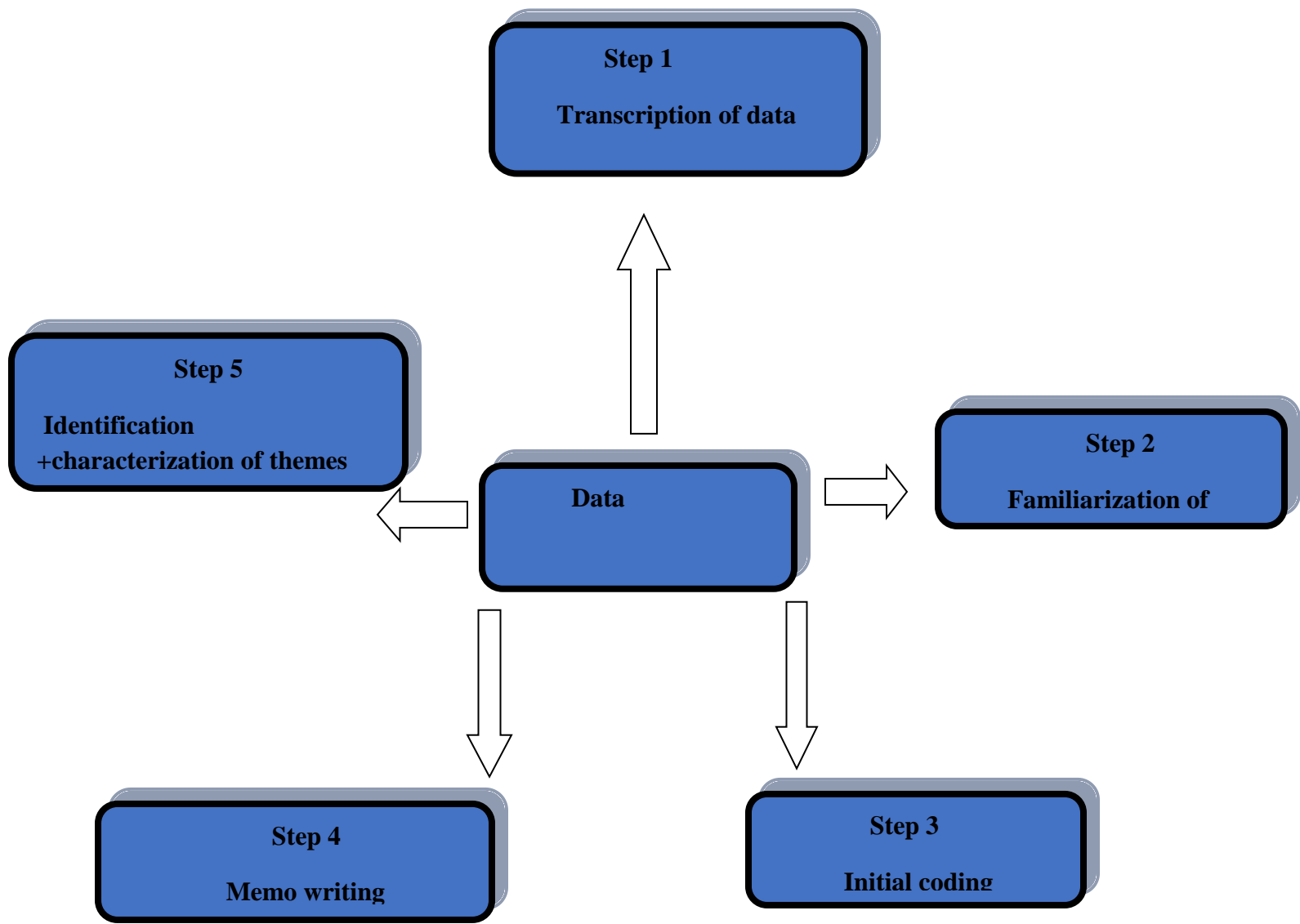


Figure # 03

Steps of Thematic Analysis

# A Visual Model of Coding Process in Qualitative Research

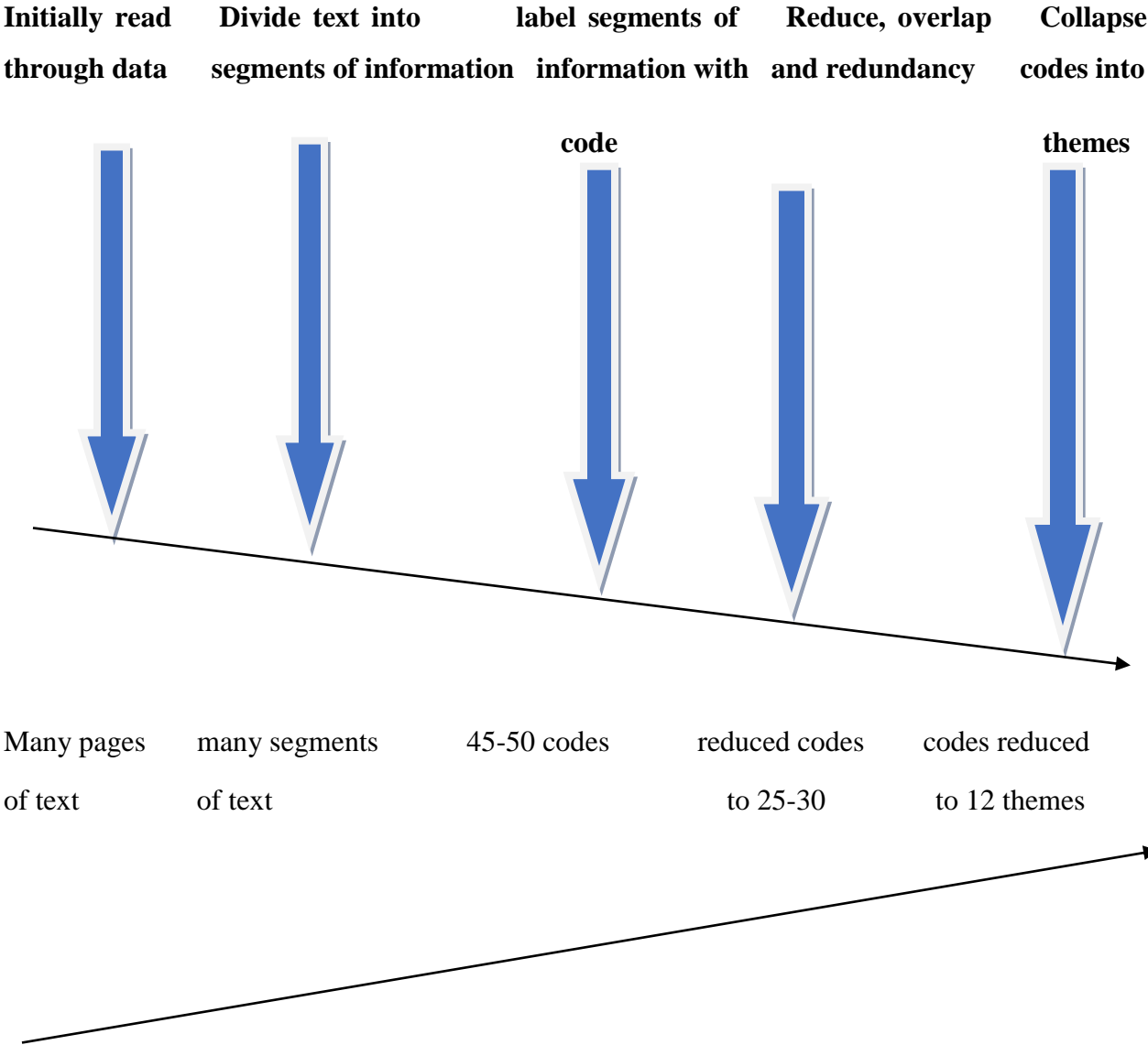


Fig # 04: A Visual model of coding by (Creswell, 2008).

### **3.17. Data Verification**

There are different ways of verification of qualitative data. One of them is triangulation method. Triangulation is a process of gathering and analyzing the data through different techniques that has been collected from different sources to gain the information regarding the subject matter (Lacey & Luff, 2009). I have conducted interviews through which I have collected the data. The data collected through interviews helped me to cross check the data that I have gained from face-to-face interviews. I have collected data from all my UDCs by asking same questions from them and then cross check all my data.

### **3.18. Ethical Consideration**

Ethics are a vital part of research. While conducting any research a number of ethical considerations were taken into account to make sure that the study was carrying out in a suitable way. All participants were provided a verbal consent after that they were agreed to be interviewed and the data were collected. All the respondents were well informed about the aim of the research organizing the interviews. It was declared already that the information they will provide will be kept confidential and shared it with my supervisor only. And their identity will not be revealed without their permission. If any respondent wants to quit at any point during the interview, he/she could do so. To record interviews permission were taken from the entire respondent and except few none of my respondent had any issue with recording their interviews. All my respondents were willingly and happily participated in interview.

### 4. Data Analysis and Discussion

#### 4.1. Introduction

This chapter contains data analysis and discussion. This section is one of the most crucial and challenging part of research. As this section contain a large amount of data that needs to summarize briefly and presented in a clearly and precise fashion. The main aim of this section is to present the key results of the research. The whole data which is collected during field work is analyzed in data analysis section.

#### 4.1. Agriculture

According to the view of majority of my respondent's agriculture plays a vital role in our existence – from what we eat, what we wear, what we use at our homes, classrooms, offices, what we do at any time is connected with agriculture. It is a procedure of cultivation of land for production purpose. Every country has its own economy that, either in a small or big way depends on agriculture. From providing employment opportunities to contribution to GDP, agriculture is an important phenomenon. Agriculture plays an essential role for the development of economy of Pakistan. It is the main source of livelihood and has a most important role in economy. It not only provides food or income but it is also a main source of producing raw material to industrial sector of Pakistan. Agriculture is backbone of our country almost everyone is somewhere connected with agriculture. People of rural area are mostly poor because they don't have much resource like people of urban areas have. Agriculture is one of those resources, through which they can earn their bread. Agriculture plays a major role in their life. Women of Aliabad work from morning till evening in fields performing different tasks to run their houses, help their man and to educate their child.

##### 4.1.1. Horticulture

Respondents stated that it is a method of producing food, feed, fiber and other items of consumption by the cultivating plants and raising domesticated animals. People's opinion regarding agriculture was pretty interesting. Most of the opinions about the word agriculture were that, agriculture is all about cultivation, farming and cattle farming. No matter what type of



land it is, either less or abundant, barren or fertile it is all about cultivation. It includes the preparation of crops and veggies for people for use and to sell them in market. One of my respondents define the word agriculture in a beautiful way,

*“I am an agricultural officer at Agricultural department of hunza. I am working here for five years. In my mind the first word/sentence that comes to mind is horticulture. It is a process of cultivation of plants and cattle rearing/husbandry. And the practice of agriculture is recognized as “farming”. There are many forms of farming like arable farming, pastoral farming, mix farming which includes both arable and pastoral farming, commercial farming, subsistence farming, extensive farming, intensive farming, nomadic farming and lastly sedentary farming. Farming is a long process and a farmer follows some steps from crop selection to harvesting. Firstly, they select crops, then prepare land, after that they select seeds, then sow seeds, after that the process of irrigation starts, then crop starts growing, then the stage of fertilization came, and the last successful step is harvesting. So, it is basically all about cultivation”.*

#### **4.1.2. Mean of Livelihood**

Agriculture is mean of livelihood for majority of people. Some of my respondents explained that both in developed and developing countries it is source of livelihood for all people. Almost everyone tries to fulfill their basic necessities of life through agriculture. Their daily basic needs of life are met through growing their own veggies. Moreover, my participants told me that in rural areas, most of the people are poor. People of rural areas lead simple life due to limited resources their desires are also limited. So, in order to fulfill the needs of life they prefer farming. Agriculture is an important engine for creating income, boosting economic growth and reducing poverty from the country.

#### **4.1.3. An Uphill Struggle**

The findings revealed that nothing is possible without any hard work. They believe in hard work and agriculture is all about hard work. Many participants agreed that from their ancestors till now the story of agriculture is all about hard-work and struggle. Whether you use traditional method or modern methods of farming it is all about hard work. It is one of the difficult and most fruitful sources of livelihood. People throughout the day no matter what the conditions are, whether it's cold or hot they work on fields from dawn to dusk to meet their necessities. People of rural areas

are very passionate about their work. They perform every single task with honesty. If someone doesn't have their own land they borrow or get rented land for cultivation to meet their basic needs and desires of life. One of my respondents said that

*“I work on fields from early morning. I have to look after the home and my family. During the start of cultivation season the workload increases. In addition, our land is far enough where there is no proper transportation so from ploughing till dumping all work is done manually. So, a lot of physical strength is needed for such work.”*

#### **4.1.4. Career Opportunities**

Some of the participants explained that agriculture is not only the source of livelihood but it also provides different types of employment opportunities to people. Through agriculture majority of people get employment opportunities to run their houses. This sector not only provides employment opportunities, but it also reduces poverty from country. From sowing, planting, harvesting till dumping each and every single step of agricultural activities provide jobs to unemployed people. People hire labor to work in their fields which provides employment opportunities. For marketing they also hire labor through which people also find their ways to get employment. Agricultural sector provides different platforms for labors and farmers to perform and improve their methods and techniques of farming through which they earn profit. Through agriculture activities new products are generated like cotton, cloth etc. this also provide people a way of employment by using their skills. One of my interviewees briefly explained that how agriculture sector provides different career opportunities.

*“Agriculture sector provides several career opportunities: salesmen, researchers, lecturers, scientist, veterinarian, managers, representative, government officers and many more. Agriculture Company can employ you as a salesman to advertise and promote their products. You can be a good researcher by providing new information regarding the breeding of plant and animal. You can be a scientist by inventing new breed of plants and animals. You can be lecturer and transfer all the knowledge of scientist and researcher to farmers. You can be an agricultural officer like I am. Hence agricultural sector provides such types of career opportunities for all people through which they can earn money”.*

## **4.2. Productive Role Performed by Women**

Findings indicated that women are more active in farming more than men. There are certain agricultural works where a woman dominates men, but their dominancy retains for some period of time. Women work equally with men, but somehow more than men do. They perform dual job; one is to look after domestic chores and the second one is agricultural activities. Besides this some of them are working women. One of my respondents stated that;

*“I perform all indoor and outdoor activities beside this I am by profession a teacher. I look after my family and farms. From production process to selling it on market I perform all sorts of chores. In spite of all the effort the dominancy of male remains the same”.*

### **4.2.1. Fundamental Tasks**

Findings revealed that mostly respondents explained that agriculture is a multi-activity journey that consists of a number of diverse activities and each activity has its own value. Women are an integral part of these activity and many of them are carried out by women of all age herself. The extent of their contribution in these activities is as: ploughing of land, cleaning of land, raising nurseries, growing vegetables, leveling of field, weeding, irrigation, picking, harvesting, threshing, cleaning of grains, storage and marketing. And every participant response regarding the major tasks as described above are performed by women. They work on fields from sunrise to sundown. They not only perform the above described tasks but also perform domestic chores. The basic day-to-day domestic chores performed by women are, cooking, Baking, Grocery Shopping, stitching, cleaning, child care and repairing of small appliances, beside this they also look after their family matters. These tasks are performed by every woman except few who grow only potatoes and the rest of activities are performed by some other family member.

### **4.2.2. Secondary Tasks**

Majority of opinion were that besides performing major tasks almost every participant was also actively performing the minor tasks side by side. They minor tasks which they performed include growing all sort of veggies like onion, tomato, cabbage, carrot, turnips, spices, spinach, mint and coriander on their lands for daily usage purpose. Beside this, they help in grazing and rising of livestock and they raise livestock for framing purposes. Poultry raising and dairy farming is also

one of the major tasks performed by women in agricultural field. These minor tasks were performed by almost every woman and major tasks like sowing and cutting are performed by only those who have abundant of land or have rented land. Such types of secondary tasks performed by women are so productive. These tasks helped them to earn daily bases money to run their houses or to spend it on their basic use.

### **4.3. Series Of Task Performed By Men**

While interviewing my respondents it is revealed that, men play a significant role in every field of life. They work from morning till evening to run their houses and fulfill the needs and desires of his family. Generally, men not only protect their family or earn money for them, but they also perform some agricultural tasks not as much as women do. But they somehow perform some activities whenever they get some time. To some extent some of them also take part in agricultural tasks. Some of them are farmers by profession. And the numbers of tasks which they performed in agriculture are described as;

#### **4.3.1. Physical Work**

The findings indicated that heavy carrying and lifting is an important part of farming that is to some extent related to some physical strength. And the physical strength is somehow more in men than women. Nowadays most of the men were involved in physical or heavy work. Majority were agreed that men perform only physical activities like dumping of grass, digging of land, driving heavy vehicles like tractors, thresher. One of my participants stated that,

*“In earlier days both male and female worked on fields from early morning till evening and sometime till night. At that time the production was much more than it is today. They worked on fields from april-october and the rest of six months they spent happily without any stress regarding food and other needs of life. They grew enough from their fields so that’s why they didn’t even think of any side job or business except agriculture. If someone thought about doing some sort of business, his business was always in some or another way related to agriculture. But with the passage of time everything has changed; now agriculture is limited to only females. Due to external factors it is limited to only females and has become a female oriented work. While when we compare it with the Punjab and other parts of country the face of agriculture is*

*completely different. In Punjab all type of agricultural activities either it is seeding, sowing, harvesting, threshing, dumping and all type of heavy physical activities are performed by men. The scenario in Aliabad is completely different". Where, almost every activities of agriculture are performed by women, except some physical tasks.*

#### **4.4. Factors Behind Women Participation in Agriculture**

While interviewing my respondents it was stated that in many developing countries of the world, women's participation in agriculture is one of the most important topics of major concern. While there is an adequate amount of evidence are present that supports the fact that women play a significant role in agriculture. A number of evidences explained the reasons behind their fully participation in all agricultural activities. Some of them are described as under,

##### **4.4.1. Passion**

According to the findings it is revealed that passion and work goes hand in hand, when we do our work with passion it not only provides us profit but also gives us mental satisfaction. When we are mentally satisfied, we not only work harder but also work smarter. Same passion was observed in women of Aliabad. They were passionate about their work. Majority of the participants reported that they enjoy doing chores related to agricultural because these agricultural activities do not only help them in monetary terms but also helps them to keep themselves fit and healthy. Sound mental and physical health keeps them fresh and motivates them to work harder.

##### **4.4.2. Habitually**

While interviewing my respondents it was founded that women play a major role in agricultural production at Hunza. There are multiple of reasons behind women participation in agriculture. And one of them is that they work on fields because they are habitual of working on fields. They can't live without working. They love to do agricultural tasks. Some of my respondents were in 80's and they were performing all the indoor and outdoor tasks with same energy because they are found of doing agricultural activities. They can't stick to one place because they love to work. By working on farms, they both physically and mentally remain fit.

### **4.4.3. Barren land**

Most of them look after their lands in order to rent it later on to earn profit as the demand for land goes high during harvesting season. Some of my respondent answered that they don't like to leave their land barren because it is not considered good to leave the land barren. One of my respondents explained that,

*“Apart from all other factors one of the main factors is that we can't keep our land barren. No matter what type of difficulties we faced either it is related to health, financial or something else we always try to keep our land fertile by growing crops. Due to increase in tourism the number of tourists has been increased and people don't leave any land barren. If such type of land is available, they utilize such barren land for hotels and managements by doing so they find new ways of income generation”.*

### **4.4.4. Monetary term**

Some of the participant explained their reason behind their participation in agricultural activities were that they started participating in agricultural activities from early age as to get fresh vegetables and they also sell these vegetables in order to help their men in monetary terms as well. By selling these farm products and dairy they save money for the future use. Due to increase in family size and increase in prices of all goods a single member's income is not sufficient to run a house. So, in order to help their man, they started working on fields.

Some of the interviewee told that they work due to financial pressure as they do not have enough earning hands to bear their expenses as a result they are forced to go out and work in the fields in order to earn for their family. The increase in price of goods, increase in educational expenses push women along with their men to work on field from morning till evening. Some economics pressure breaks away their old traditions of housewives into non-farm and farm labor.

## **4.5. With-Drawl of Men**

Majority of my respondents stated that agriculture is an activity that engages resources from all family members. And the resources consist of labor, land and capital. It is a unique activity in the way that it combines all the factors of production like labor, land and capital and, thus, it is also

unique in the kind of commitment demand from family members because they are the main source of production factors. The role of both men and women in agriculture can be understood through their ownership, time spent on these activities and the right to use such factors of production (land, Labor). This ownership or rights presents a clear picture of their role and importance in agriculture. Men like women also perform agricultural tasks. But the types of tasks they performed are different. The reasons behind their less participation or performing different tasks have some reasons which are given below;

#### **4.5.1. Variation in Temperature**

Majority of interviewee explained that variation that occurs in temperature is also one of the main reasons of the withdrawal of men from agriculture activities. Agriculture and temperature are interlinked. It was reported by the respondents that decrease in crops is taking place due to the change in temperature. Because of rising and falling temperature they are facing a lot of challenges in farming. Unsteady weather behavior is causing shortage of water supply which results in shortage of food production. The winter period goes long, and glaciers are melting which threatens the agricultural land. In early days when the temperature was suitable for crops and the production was good enough, they used to perform more agricultural activities than women. But due to limited production their daily needs and desires of life can't be fulfilled. So, in order to look after their houses, children and to fulfill their basic necessities they withdraw from agriculture and look for other side jobs to run their houses and to earn bread.

#### **4.5.2. Female Oriented Work**

Findings revealed that most of the respondent's stated that agriculture is an important component of the economy of less developed countries. One of my interviewees stated that;

*“Pakistan is one of those countries which largely depend on agriculture for creating employment opportunities and income generation”.*

The biggest portion of population is engaged in agriculture sector. To some extent female overshadow men in many agricultural tasks. Agriculture in Pakistan mainly comprises of female workers who involve themselves in activities ranging from livestock to crop production. Though, their contribution is more than men in all type of agricultural activities. Most of the male

participants explained that it is female oriented work. Like other domestic chores are female oriented such as, activities cooking, washing, cleaning etc. same as agriculture is also female oriented work. And somehow to some extent some of the women also stated that these types of activities suits women than men. Men look good in doing off-farm activities.

### **4.5.3. Migration**

Migration is an essential development agenda and to some extent it is closely connected with agriculture sector in several countries. Hence, one of the leading factors of their less participation in agricultural activities was migration. Some of my participants by profession were carpenter, daily wage workers, driver, woodworkers, farmer, bankers, businessman, who work not only in Hunza but mostly at Skardu and Gilgit. Due to which they migrate for a short period of time like minimum of 3-5 months and maximum of 9-12 months. But their migration period varies according to their job. Some of them migrate to abroad for job and some for higher study and it took a long period of time for them to return. But whenever they are available, they perform some physical tasks. As men migrate but women didn't stop farming. Somehow their role in agriculture has changed. Before migration their role in agriculture was seen as supporting agent but after their migration, they became a primary farmer.

## **4.6. Limitation Faced by Women**

While interviewing my respondent it was revealed that since age's women have engaged themselves in agricultural tasks devoting all her time, energy and hard work. Despite of this, their all hard work has gone unrewarded and under noticed both at national and regional level. Without gender equality, development of a nation can't be achieved. Moreover, not only in agriculture sector but in every field of life everyone faces constraints and difficulties. As women of Aliabad was also facing some severe constraints while performing agricultural activities. Some of the major constraint/ challenges they faced while performing agricultural chores are as under;

### **4.6.1. Time Management**

Majority of interviewee explained that having time to earn money for home and children and care for oneself and family is important for well-being. Women spent twice on domestic and



agricultural tasks than men. And they stated that the main challenges which they faced while performing such agricultural activities is time. Every picture has two sides. If something benefits us, it can also have some negative aspects as well. Many women reported that it is not always easy to perform agricultural activities. They face many problems, including the problem regarding transportation, water shortage, health issues etc. it is sometimes difficult for them to manage time. They have to work in the fields as well as look after their family and do houses chores. When the harvesting season starts, they become busy at agricultural activities and this result in the negligence of their children and home. While these women working at field can help their children learn some skills, at time they can also make their children felt neglected. They have to manage a lot of activities. When the work load increases, they are unable to balance work and family. This sometimes leads to child's poor physical and mental health.

#### **4.6.2. Transportation**

Another constraint they faced was conveyance problem. Transportation is considered as an important factor in agricultural field. My respondents revealed that they sometimes find it difficult to reach their land for farming because their lands are far from their houses. They argued that an improved transportation encourages them to work harder and, improves their productivity but when there is lack of transportation it hampers their productivity. Improved transportation not only increases their productivity but also helps them to move agricultural products as well as to market.

#### **4.6.3. Water Shortage**

Interviewee explained that water is an important and basic component of life. It is important for both plants and livestock. In many developing countries, irrigation is an important component of agricultural production. Rural communities mostly depend on fresh, safe and reliable water supply. Sustainable sources of water are important for the wide range of water's uses --from drinking, to irrigation, to manufacturing. Agriculture is one of those activities which consume a lot of water in all over the world. Farming and food-production are water-intensive industries. People of Aliabad were facing the issue of water from past three years. And the main constraint which they faced the most was shortage of water. Many respondents stated that they face water

shortage in the growing season of crops, and they do not have enough water to irrigate the land and for the livestock as well. As the respondent stated that,

*“The biggest challenge which I faced since last 3 years is the issue of water. We don’t have enough water for our crops. Due to which our production has decreased. Mostly we grew potatoes and wheat, and these are the crops which consume a lot of water. Due to shortage of water their production and yield decreases. Insects destroyed the whole crop of potato last year due to severe water issue. Water is supplied to our field through tube wells. And there turns for water for each area. Sometimes when it is our turn for water, we have to wait till midnight to water our fields”.*

#### **4.6.4. Health Condition**

After interviewing my respondents, it was founded that health is a state of complete physical and mental wellbeing. A good health is necessary because a person with good health can perform any task at any age. Some of the participant also talked about the health issue how poor health proves to be a great hindrance in their work. They work long hours and are exposed to a number of hazards such as sunlight, fatigue, stress, dust and pesticides. Poor physical and mental health results in less participation of these women in agricultural activities. Not only young women perform agricultural activities but also aged old ladies perform every task. One of my aged participants stated that,

*“I am an 84 years old lady which performs all agricultural works except domestic chores. I love working on fields from dawn to dusk. I started doing this work since I was 13-year-old and now I am in my 80’s, still perform every agricultural task with same passion and hard-work. My son owns a business and we are financially stable. My son every time told me that you should stop doing this work because you are getting older, but I told him that I am not getting old, I am getting younger day by day. The day I’ll stop doing this work I’ll be old. I almost participate in all activities but due to some health issue I didn’t perform well. But somehow I do small activities like I grew vegetables and look after them”.*

## **4.7. Role of Organizations**

Organizations play a vital role for guidance. In the study area two organizations were working for farmers in agricultural activities. They were doing their level best for farmers and some of their main functions are described as under;

### **4.7.1. Background**

The aim of organization is to provide information to people regarding modern tools and techniques to live a better life, to aware them regarding new technology of breeding of plants and livestock's, helps people to aware them regarding the problems related to subject matter. Organization provides guidance to people regarding agricultural activities. So, there must be either a government of private organization in every area where agricultural activities are being performed. Recently two government agricultural organizations are working in hunza. One is Local support organization (LSO) and the other one is Agriculture department of Hunza. It is a branch of Agriculture Department of Gilgit Baltistan. Its head office is in Gilgit, itbranches scattered throughout GB. In every district of Gilgit-Baltistan there is one "Agriculture Department" while in village's nurseries and seeds farms are situated to help people regarding the problems and constraints which they are facing and teach them how to cope-up with such difficulties. The following are some ways through which an organization can create awareness to people regarding the subject matter;

### **4.7.2. Trainings**

It works to help farmers by training them to use modern tools and techniques of agriculture for the old farming techniques are more time consuming and tiresome. This training is provided to every farmer during the cultivation and harvesting season. This organization conducts survey to lend lands to those who have no or less land for farming. They form groups; each group has 12 to 15 women in it, and provides them land, seeds and teaches them modern techniques of farming as well, after selling the end product, profit is divided among these women. This organization not only trains farmers but also takes help from foreign organizations in training farmers with modern techniques of farming. One of my interviewees explains the role and importance of an organization in such a way,

*“I am working in this organization past three years. Being a member of this organization I myself learn much enough about the agricultural activities. This organization helps a lot people regarding their issues, challenges, hurdles they faced while farming. Different training, workshops and exhibitions are organized to aware and help people regarding the subject matter. This organization in collaboration with different international organizations teaches people regarding modern methods of farming. As in last year an international organization, Japan International Cooperation Agency (JICA) also collaborated with this organization and 12 farmers, among them 5 were women and the rest were men, were taken to Japan where they were given training regarding different methods of preservation processing and marketing. These farmers after returning trained other farmers and shared their learning with them so that most of the farmers could be benefited from their training and learning. It also makes experiments to check if different seeds are suitable for a particular type of land. This experimentation is done in winter season. As no farming takes place during winters, they make tunnels and use these tunnels to sow seeds to check if the seeds would work in the given land or not”.*

#### **4.7.3. Farmer Field School**

Another big initiative of organization was development of Farmer Field School (FFS). Farmer field school (FFS) is an innovative and interactive learning technique that highlights the issues faced by farmer and discovers new methods of learning. The main aim of this school is to build farmers capacity to inspect their production systems, problems arises during farming, their solutions and ultimately give encourage to the participant to adopt most appropriate farming system. FSS is a time bound activity lasts for only one year or six months, consists of a group of 20-30 farmers. A special topic and issues are being raised every year and group discussions, observation, presentations and decision are being made.

#### **4.7.4. Tools and Technique**

Another organization “Local Support Organization” (LSO) also works for an agricultural sector. LSO develops linkage between agriculture department and farming community. It not only works for agriculture but also works for improvement of education and health. It is affiliated with “Agriculture Department”. This organization also helps farmers in learning new farming

techniques. This organization provides data regarding crop production, improvement in health and system. LSO organize different exhibitions, samples of agricultural products to promote modern methods of cultivation. This origination arranges field trips for farmers within their region to meet with new people educate and aware each other regarding the subject matter.

#### **4.7.5. Tackle with Problems**

The member of this organization visits different areas of Hunza to arrange workshops. These workshops and meetings of farmers help them to collect data regarding problems and challenges faced by the farmers. Then, they guide these farmers accordingly. These days, people of hunza are facing shortage of water. Most of the farmers grow potatoes and they need abundance of water to grow potatoes. This issue was raised in of the meetings of this organization. This organization decided to resolve this issue with the help of “Economic Transforming Initiative” (ETI\_GB). ETI\_GB in collaboration with “Agriculture Department” is constructing water channels in different areas of Hunza. These organizations are going to build tube wells and channels in different areas to overcome the problem of water shortage. This organization holds a meeting at the end of the season as well. In this meeting the estimated production and current production is compared if the production was according to their target or not. If they don’t meet the target, they try to find out the constraints which caused the production process slow. After finding out the reasons of slow process of production, they introduce new ways and techniques to overcome the challenges faced in the previous season.

#### **4.8. Shy to Work**

Findings revealed that some highly educated women also work in the fields. They believe that it is not disgraced to work in fields neither do they feel shy while working in the fields. Every sort of work has its own value. No work is small or big. They love to work in fields and rearing of livestock. One of my respondents stated that: *“I am 24 year old and I am doing MPhil in Literature. I do all activities like grass cutting, seeding, sowing etc. I love to do this work because I think every work has its own norms and values. Although we are financially stable enough, despite of this we grow vegetables, potatoes etc. it is all in your mind that how you perceive this work. In my opinion, agriculture is the first step towards the development of any*

*country. If we focus on our agriculture sector and introduce new tools and techniques, then we can progress like other developed countries”.*

#### **4.8.1. Independence**

Majority of respondents stated that an individual worker experience both empowerment and independence. By empowerment means giving someone the ability to making decisions regarding their life and to control their life themselves. Agriculture is not only source of food for people and animals, but it also produces raw materials to many industries like cotton, textile, sugar, rubber etc. From production to marketing every single step asked for employment opportunities for people. Hence, little by little, agricultural sector provides new platforms for people. Through such platforms both men and women acquire opportunities to prove their skills and became independent. By working on every field of agriculture they became financially independent. Financial independency not only built confidence but also makes their position strong in making decisions related to family matters. Some of my participants stated agriculture from framing till marketing provides different opportunities for people and it is one of those sectors of our country which empower women. By working on fields and dealing with everyone makes her confident and independent. Women participate in every field of agriculture and deal with many people by doing this they feel independent.

#### **4.8.2. Passion**

Interviewee stated that success can't be achieved without being passionate to the work. A work needs passion, hard work, scarifies, devotion, attention, honesty. Without these a work is incomplete. Mostly respondents illustrate that it is their passion that leads them to do these activities. They love to work. It is their passion which forced them to do work on farms. Some of my respondents were financially stable and they didn't even need to work on farms. It is their passion due to which they work on fields no matter what their age is, no matter what the temperature is. They work from early morning till evening because of their passion.

### **4.9. Helping Hands**

Majority of the interviewee acknowledged that more than one billion people are engaged in agriculture all around the world and 43% of them are women. Women play a vital role in feeding

the world undoubtedly. While from rising to falling of temperature, to technological changes, to increase in population growth etc., they faced all the hurdles alone without any external help. Agriculture is not an easy activity it is one of those activities where a farmer through blood and sweat tried to earn money to meet their basic needs of life. Women play a crucial role in agriculture. Their contribution in agricultural activities differs from region to region. Regardless of these variations they laboriously take part in every agricultural task. Most of the women perform their task themselves by working on fields from dawn till dusk. They bear all workloads themselves in order to lead a better life and to educate their children. One of my participants stated that,

*“I am the only member in my family who carries out all the activities whether it is about domestic, livestock or farming. I am a single parent mother having three kids and two of them are getting their higher education. As we all know that educational expenses are so high. A single person’s income is not enough to fulfill basic needs plus education of kid in these days. So, in order to fulfill their needs, I work from morning till evening at fields for my kid’s education. I have kept a lot of livestock through which I earn money. People slaughter cattle and preserve it using salt for the winters. This meat is kept hanged in wooden rooms for several months. It is a tradition which has been followed by generations in Gilgit-Baltistan. So, that’s why I rear many cattle for this purpose. Because the demand for cattle’s increases during winter season. This is another way through which I earn money”.*

#### **4.9.1. Hiring of Labor**

While interviewing the respondents it was found that mostly women did their work themselves but due to some reasons like health issue, time management between home and field or due to some side business they consult with some external factors for help and one of them is through hiring labor. Some people hire labor for work but mostly work themselves it is because, they can’t afford labor and secondly, they think that labors are expensive instead of hiring labor they should spend that money on their child’s education. Few cases were seen who can hire labor for work. One of my participants acknowledged that,

*“I am a working lady. I work at Agricultural Organization I have three kids. And I live in a joint family. I have to look after my mother-in-law and father-in-laws. As well as being the youngest*

*“bahu” of family I have to look after each and everything. Despite of this, I perform somehow some agriculture activities like seeding and grass cutting, and the rest of all work were done by the labor. Due to time constrain I can’t perform all my agricultural activities properly so that’s why we hire labor. We hire labor not just because we don’t have enough time for such activities. But we hire labor because we can’t leave our fertile land barren due to time constraint”.*

## **4.9.2. Organization**

Majority of interviewee stated that organization plays a vital role in the life of people. It guides people regarding issues and challenges which they faced while performing agricultural tasks. And through different ways they tried to help people regarding that phenomenon. Agriculture organization and LSO as a helping hand helps people in agriculture. Some of the participants get help from agriculture. As organization lends land to a group (12-15) of women who worked together from start of the season till end of the season and helped each other in each and every step from sowing till marketing. They attain informative workshop without any cost. They gain information regarding new tools and techniques of agriculture. They provide seeds to female farmers without any cost. Organizations helped them in their own best way. They not only earn money for their family but also get a helping hand that helped them in activities.

## **4.10. A Process of Choosing**

Most of the interviewee demonstrated that decision making process is an essential phenomenon. It is multi-step process. One single decision can either build or destroy the whole thing. It is one and most complicated process. And decision regarding agricultural activities is one of the most difficult tasks. Production can be increased or decreased by a single decision. In farming decision firstly, it is important to examine some goals and family situation and then some strategies are adopted to achieve those goals. Women play a significant role in agriculture they perform a variety of activities either related to agricultural tasks or family matters. The role of Aliabad’s women in decision making process is described as below;

### **4.10.1. Insignificant role**

Most of the respondent stated that women play a crucial role both in agriculture and its allied fields. They perform a number of activities in agriculture such as cleaning of land, sowing of



seeds, field preparation, weeding, cutting, harvesting, cleaning of grains, picking, etc. but unluckily, despite of all this their all hard work remains invisible both at national and regional level. Their involvement in decision making process either related to family matters or decision regarding agricultural chores is negligible. Despite of their entire struggle they faced negligence in decision making process. People think that it is also one of her duty as rearing child and look after their houses. The only decision which she can take is growing vegetables like carrot, onion, spinach, mint, tomato on a small scale. Some of my participant stated that due to lack of knowledge related to marketing issues, beliefs that women are subordinated to male counterpart are the main factors behind their less decision-making process. Majority of the respondent stated that they didn't take part in making decisions regarding selling of dairy products and seasonal vegetables, they don't decide what to sow and what to grow. All the decisions are made either by the head of household or their men regarding crop production and decision related to all agriculture activities. One of my respondents stated that,

*“I am a housewife. We have abundant amount of land through which we earn enough. It has now become a tradition that the decision whether it is about family or agriculture all are made by the head of household which is my mother-in-law and sometimes by my husband. I think my mother-in-law make perfect decisions because she has been working since her teenage and she has better ideas regarding the soil and according to the winter season they made decision regarding crops”.*

#### **4.10.2. Chief Role**

Some of my respondents explained that they take all the decision whether it is about family matters, their child education, or agriculture all are made by themselves. There was some reason behind their full decision-making process. Some of them were single parent mothers living with their children who made their decision themselves. Some of them were not living with their In-laws so that's why they made decision regarding all activities. Some of them told that their husband has been migrated to other city/country so due to which they have to make decisions regarding agriculture. And few of them were stated that they made decision either it is about farm or off-farm activities.

## **4.11. Source of Bread and Butter**

Agriculture is the backbone of our country and it relies strongly on its crops. Agriculture sector not only provides food for people but also provides employment opportunities. Whether on a small-scale production or large-scale production it provides different ways of earning. Agriculture sector is one of the biggest sectors of our country. In rural areas people mostly depend on agriculture because they don't have enough resources through which they can earn income.

### **4.11.1. Employment Possibilities**

Many of my respondents stated that agriculture is a source of income generation. Now days due to costliness basic necessities of life can't be fulfilled properly most of the people live from hand to mouth in such conditions a single person's income is not enough to feed the children and fulfill their needs, so women also come out of their homes to work on farms to meet the daily needs of life. Some families, who have abundance of land, depend on agriculture. From cleaning land till marketing each and every single step of agriculture provides opportunities for people to get benefited from agriculture. In other words, we can say that agriculture is the main source of income generation for most of the people. One of my interviewee stated that, *"I am a social mobilize volunteer at LSO. I have been working here since past three years. We conduct different workshops, meeting to aware people regarding agriculture, health, education. We teach them new techniques of agriculture and livestock through which they can earn money throughout the year. Agriculture sector is not only source of income generating process for farmer, but it also provides opportunities to youth. Different universities have started teaching agriculture as a major subject and research institutes of agriculture are made. So, people have become aware of agriculture and its importance in our lives. Moreover, different private and government organization are made for such students to explore their ideas and teach new tools and techniques to farmers. It is a multidisciplinary subject where science, technology, art each and every subject is connected with it. A chain of people from farmers to teachers to student each and every one is getting benefit from this sector and earning their bread"*.

#### **4.11.2. Source of Earning Money**

Not only crops and vegetables are part of agriculture, livestock is also an important part of agriculture. Some of my respondents told me that they especially rear animals like ox for ploughing purpose. Some people still follow traditional old methods of cultivation because some of their land is located in those areas where they can't use tractors due to lack of roads. For such type of land, they use ox for ploughing. And a lot of land is situated in such areas where there is no proper road that's why mostly people rear livestock through which they can earn money. Some of my respondents told me that they rear animals, now days due to health issue people preferred to use fresh vegetables, milk and meat. They mostly prefer homemade vegetables, milk, yogurt and fresh cream. By observing all this mostly people rear animals and supply fresh milk, cream, meat and vegetable not within in Hunza but also all parts of Gilgit-Baltistan and earn money. These are some ways of agriculture through which they earn much enough to accomplish their desires and needs.

#### **4.12. Task Time**

Time is money. Every single minute has its own importance. Every single minute which we spend on our work is productive and precious. Production of any work depends on the time we spend on that work. Different studies have proved that women spent more time on fields than men. They work from morning till evening in fields to feed their family and help their men in earning income. Time which they spent on fields depends upon the amount of workload. According to workload and crop, time varies from region to region. The amount of time women of Aliabad spent on fields is described as below;

##### **4.12.1. Seasonal Work**

Though, it is a seasonal work and time consuming. No of working hours at field depends on the work in fields. My respondents acknowledged me that minimum 7-8 hours on average on fields during the summer season while in winters they spend 1-2 hours on looking after of livestock. They spend a lot of time on fields along with their children during summer season because the workload increases during this period. All the activities like from sowing, harvesting till dumping occurs during summer season which starts from June and ends at September. In this

period, they prefer to spend a lot of time in fields. They think that if they completely focus on their field then the production will be increases. One of my interviewee stated that: *“I am a working lady. I do stitch and knitting. When the harvesting season starts, I equally give attention to the agricultural activities. I get up early in the morning prepare breakfast for my children and husband. I leave for fields after completing my domestic chores around 9am. Our fields are far from my home so I try to leave early for the fields so that I can do maximum work at field. But sometimes I get late. During harvesting season, I visit my fields daily. Although there is shortage of water, but when there is water, I give water to the fields. I try to spray pesticides once in a week because shortage of water sometimes leads to pest attack. When the cutting of crops starts, I try to reach my fields as early as possible so that I could cut as much grass as I could. After cutting all the grass my husband h in a small helps me to store this grass for the winter to feed the cattle in winter season. Along with these activities I also grow vegetable in a small portion this saves our daily expenses of vegetables. I go to fields daily for work I have to do during summer season. When the winter starts after September my work burden is reduced to only milking cattle and feeding them. It only takes 2-3 hours only and rest of my time I spent in stitching and knitting*

### **4.13. Discussion**

This section includes information regarding present status of women, their role in agriculture, constraints faced by women while performing agricultural activities, role in decision making and role of different organizations in agriculture.

#### **4.13.1. Women’s involvement in agriculture**

This study confirmed a significant increase in women’s participation in agriculture in Aliabad. This increase in their participation can be attributed to the fact that, agriculture is main source of their livelihood, income and employment opportunities. This is an agreement with Michael et al (2018), who indicated that female participation in agricultural activities has been increased. Moreover, while the situation was different in past where women was bound to only domestic activities and the rest of the work was done by male. According to (Zwarteveen & Neupane, 1996), illustrate that men were farmers, water user and irrigator in past. And it was their

perception that agriculture is all about physical strength and men are stronger than female physically.

Back in the day, female participation was low as compared to the present condition, where most of the men left out from the farming and handed it to their wives. Supporting my finding, (Zwarteveen & Neupane, 1996) demonstrate that in the past, men were mostly famers, irrigators and water users and they carry out all the farming activities. It was their perception that farming is all about physical strength and men have more physical strength then women.

Findings exemplify that as agriculture is chief source of livelihood, income and employment opportunity in Aliabad. Consistent to our finding, (Chaudhry, Mallik, & Ashraf, 2006) conducted a study in Pakistan to examine the role of agriculture in their life. The study revealed that majority of population of Pakistan is living in rural areas and being an agrarian country, its population mostly depends on agriculture for livelihood. Another study which was conducted by Safdar et al (2015) in Kaghan Valley of Khyber Pakhtunkhwa to observe and explore the livelihood strategies of farmers and households also supports my finding regarding that agriculture is main source of livelihood for many people. My finding on agriculture is source of income is also supported by (Butt, Yousaf, Mehmood, & Muhammad, 2010), who express in their findings Pakistan being 13<sup>th</sup> most populated country of the world has majority of population is concerned either directly or indirectly with agriculture to make income for their family and themselves. In the literature, (Wobst, & Grandelis,, 2016) expressed that agriculture is main source of employment opportunity for people in most of the developing countries of rural region.

Women play a vital and crucial role not only in agriculture but also in its all related fields. Women almost carry out both indoor and outdoor activities on the top priorities. Despite of their all hard-work their role both at national and regional level is invisible and unluckily unpaid. My research study discloses that women of Aliabad work very hard they performed a variety anactivity such as, Cleaning of land, ploughing, sowing, cutting, digging, weeding, harvesting, threshing, transportation, storage and marketing. Beside all these tasks grow vegetables such as onion, tomato, carrot, chilies, cabbage, mint, coriander etc. They not only perform activities that is related to farming, but they performed all the livestock activities such as, cleaning animals, watering, feeding, churning, yogurt preparation, chick feeding, cutting and bringing of green

fodder and livestock related marketing. As in the literature review, (Javed, Sadaf, & Luqman, 2006), who conducted a study in district Faisalabad Pakistan to observe rural women's participation in farming demonstrated that in rural area of Pakistan females play a significant role in farming. They perform variety of activities from rearing children to all crop related and livestock management activities. Although women of rural area work from dawn to dusk and perform range of activities such as livestock management and pre and post-harvest activities instead there is no proper data available on the women participation in farming.

Time plays a vital role in our life. The number time spent on agricultural activities is directly related to the production of the product. That most of my respondents stated that on average women spent maximum time on fields then men. Though, it is a seasonal work in Northern Areas of Pakistan. Which starts from April and end at September. Findings revealed that a large proportion of women were involved in farming activities. A majority of women approximately spent 7-8 hours in fields during summer season while 2-3 hours in winter season. While men spent 1-2 hours at fields only at some specific events, such as picking of grass from field for storage, watering to crops and threshing. While in winters they did not perform an activity. Coherent with our findings, (Ishaq & Memon, 2016) attempts a study in rural union councils of three towns of Lahore, Pakistan namely Wahga Town, Nishtar Town, Iqbal Town to identify the role of women in agriculture. Their findings demonstrated that women on average spent almost 8 hours in fields during summer season. Another study was conducted by Hameed et al (2012) in district Peshawar during 2004-05 to explore the role of women in agriculture activities. Their findings revealed that women perform both pre and post-harvesting activities and on average they spent almost 38 hours and 121 hours respectively per acre for the crops for one season.

In findings it was concluded that women perform their farming tasks from the core of heart without getting any reward and reorganization. Women of Aliabad play a significant role in decision making process on a small scale such a decision regarding perishable goods while on a large scale because of some constraints such as low education regarding marketing etc. they didn't perform any role in decision making. Supporting my findings (BK & Chandra, 2011) presented that female were dominated in making decision related farm affairs while men were dominated in making family decisions. Another study conducted by Keegan (1988), to some extent support my finding that sometime women take part in decision making. This was a

study of South Africa that in such a pretty way fitted into my study area. In the above literature (Bharathi, & Badiger, 2009) illustrate that barrier that stop women from making big scale decisions is their low education.

These findings revealed that as a ‘female farmer’ the role of women is denied or underplayed, despite performing various activities they didn’t get any acknowledgment in the society. A big gender gap is observed in this study. Despite of all their hard-work, the stereotypical normative theory that ‘female farm’ and ‘men only help women, create a society where we observe gender gap. Gender equality is a fundamental phenomenon for prosperous, peace and sustainable development of the society. Providing equal rights to both men and women in terms of education, health, agriculture, and decision making process will lead to a better society.

#### **4.13.2. Factors That Effects the Participation of Men in Agriculture**

Like women men also play a vital role in agriculture in past but the whole picture has changed now days. Some promising findings revealed that there are some causes that withdraw men from agriculture sector such as; their perception that agriculture is a female oriented work, variation in temperature and migration. These are some basic reasons behind their disengagement from farming. Most of the male respondents agree that agricultural activities must be performed by women because it is female oriented work and that clearly portray gender discrimination in agriculture. In the literature explain the gender discrimination but he never depicts that farming is female oriented work. So, it is new emerging factors which people of Aliabad think that this is one of the leading factors that withdraw men from farming activities. Additionally, respondents reveal that variation in temperature has adversely affected the crop production which leads to minimization of their income. So, in order to maintain their needs of life men are being forced to come out from agricultural activities to meet the needs of their life. Coherent to my study (Ali, et al., 2017) explain that Pakistan is facing variation in temperature due to which production has been changed. In his study he only explains that how change in temperature has affected crop production, but he never linked it with the factor that with-draw men from agriculture. But people of Aliabad consider it one of severe factor that pushes men outside the agricultural activities. And the last important factor that pulls out men from agriculture is migration. In the literature Deere (2005) illustrates that male migration cause women to look after their farms and perform all the duties of agriculture.

### **4.13.3. Challenges That Women Farmer Experience in Relation to Agriculture**

Women participation in agriculture didn't get any recognition yet. Even though knowing the fact, they still carry out all activities with same effort and energy. Despite of their increasing contribution in agricultural production, women of Aliabad faced a number of difficulties, including, time management, transportation, health issues, water shortage and some natural facts.

Time management between their children, home and farm duties are tough to balance. It is difficult to manage time between farm and home. One gets neglected while giving time to the other. And women of Aliabad considered time management as one of the main constraints they faced while performing agricultural tasks.

Secondly, they faced conveyance problem. Their fields are situated far from their residential area. High fares of vehicles prove to be a main constraint in Aliabad. The profit they earn through by selling their products is half spent in fares which they have to pay in order to sell their final product in the market because their fields are quiet far from the market so they have to book tractors to transfer the products to market and go downs. Our findings were in agreement with the previous research study by (A. O. & Afolayan, 2009) who conducted a study in Nigeria to find the impact of transportation on agricultural production. This study was conducted in Nigeria and it also supports my findings that conveyance problem effects the agricultural production.

Thirdly the main constraint is the most essential component of our life, health. Without being healthy we can't perform a single task. Women of Aliabad of every age either young, adults or old perform every farm activity. Some of my respondents were in there 80's and still they were involved in agricultural task. Due to some health issues they somehow can't perform their tasks to some extent. Consistent to my findings, (Aggarwal, Sharma, & Sharma, 2013), in the above literature review illustrated that women mostly faced financial problems, social problems, management problem and some minor health problem while performing agricultural tasks.

Fourthly the most essential part is water, which is important for both agriculture and livestock. My respondents stated that the biggest challenge which they are facing now days is water issue.



Main crops which people of Aliabad mostly grow wheat, potatoes and maize. These are the crops that consume a lot of water. Hence due to water shortage their crops are destroying. My respondents stated that due to less water their crops are eaten by pesticides which results in decrease in production. In the above literature Amenu et al (2013) illustrate that water shortage is the main issue that people are facing for both farming and livestock husbandry.

And last but not the least my respondents stated that they can't leave their land barren. They didn't consider it a good sign to leave a fertile land barren. God has blessed our country especially Northern areas with natural resources, mountains, stone mountains, green mountains, rivers and fertile land. Where, all kinds of fruits and vegetables can grow. It is one of the blessings of God. One should respect his blessings. So, it is our duty to respect and look after his blessings. Though, there wasn't any research done on it yet. But it was observed that women of Aliabad considered it the main factor that leads them to perform agricultural activities.

#### **4.13.4. The Role and Contribution of Organizations in Farming Activities**

According to focus group discussion and key informants, involving head and officers of the department, different development organizations such as, Local support organization (LSO), Agricultural Department of Hunza, were functioning in the territory with an objective of development of rural women by granting credit supports and introducing modern tools and techniques of agriculture, as well as arranges different workshops and trainings. Through creating awareness regarding poultry production, cattle's raising they enable rural women to earn income by using such natural resources. Different training institutes such as Farmer Field School (FFS) are developed where farmers acquire up-to-date information regarding new technology of agriculture that enables women to increase their production of crops.

Farmers participate in all agricultural activities. Findings showed that female farmers faced different challenges and they pointed out that the main challenge which they were facing since last three years is severe issue and the rest of challenges are those challenges which they somehow to some extent can bear. And the main severe issue was of water. Organizations are trying hard to cope-up with such challenges. In collaboration with Economic Transforming Initiative" (ETI\_GB) Agricultural organization is trying to tackle the difficulties which farmers of Aliabad were facing. Different international organizations such as Japan International

Cooperation Agency (JICA) also collaborated with Local support organization (LSO) present opportunities for farmer to visit different countries to explore new tools and techniques of farming method. And train them to tackle the challenges. These organizations guide farmers on the subject of processing, preservation and marketing of product. One of my respondents explained that,

*“Organization teaches farmers different preservation methods for both fresh and slightly damaged products of both vegetables and fruits that can later either used or sold in markets”.*

Supporting my findings, in the above literature Urassa and Msuta (2015) conducted a study in Kasulu district of Tanzania to examine the contribution of Farmers’ organization (FOs) on well-being of smallholders’ farmers. The results demonstrated that organizations play a vivid role in promoting agricultural development through modern tools and techniques. Another study by (Pertev, 1994) illustrate that how agricultural organization raised the voice of farmer by creating a farmers organization to improve their wellbeing.

### 5. Conclusion and recommendations

#### 5.1. Introduction

This section comprises of conclusion, some recommendations and roadmap for future studies. This section brings out the problems, suggests some tips and tricks and concludes the whole idea of subject matter. Some important recommendations related to subject matter and conclusions of the study are given below;

#### 5.2. Conclusion

The main objective of this study was to examine the role of women in agriculture. The findings of the data lead to the understanding that women are the most important working forces of household in the study area. They are engaged in both farm and non-farm activities. Although to some extent men also perform some agricultural activities, but their extent varies to a high level between men and women, therefore it is needed to address the importance of women by giving them appropriate attention. Our findings were in agreement with the previous survey of Food and Agriculture Organization (FAO) (1999), where the results showed that women play a very important role in agricultural production and thus they are considered to be producers of food for their families.

The outcomes of the study demonstrate that, almost every household's women had participated more in agricultural activities but for short period of time they also earn as a secondary income earner. They perform both indoor and outdoor activities despite of all this involvement they can't make decisions of agricultural activities on a big level. Supporting my findings (Javed, Sadaf, & Luqman, 2006), in their study which was conducted in Faisalabad, Pakistan. The results of the study stated that women participate in vegetable production. Their highest participation was in cereals storage and cleaning of animals.

The major factors that affect the women's role in agricultural related matters were their low education, some ethics and rules and heritage. The study found that the woman contribution in decision making process on a large scale was low while on a small scale was high. The study also showed that their contribution in decision making process associated to household income

was limited. In the above literature a study was conducted by (BK & Chandra, 2011) in Chamoli district of Uttarakhand to investigate the role of women in decision making both at home and farm affairs. The study shows that the decision was mostly taken by the head of family. Study also revealed that women participation in decision making was low at home (13.64%) and slighter higher in farm affairs (28.18%). While the ratio of men is totally opposite of this, their participation is higher in decision making process related to home activities (27.27%) and low at farm affairs (7.27%). Thus, male was dominant in taking decisions related to home while female was dominant in farm affairs decision. A unique situation was observed in Garhwal of Uttarakhand, where around 80% tasks of home and farm were performed by women, but their participation is (20.91%) in decision making process. This shows that there is gender discrimination in society, which explains the status of women and their role in decision making process in society.

They work for long 7-8 hours in the farming apart from their obligatory duties at home. The findings revealed that despite the fact that serve their lives, time and abilities in agricultural tasks, still they encounter a number of difficulties discussed above which include transportation issue, water shortage, time management issue and health problems. Due to such constraints not only their family and their kids are being neglected but their production is also decreasing day by day. Therefore, it is needed to solve these problems that are decreasing production gradually. Supporting my research, Amenu et al (2013) conducted a study to examine the constraint faced by farmers in Ethiopian Rift Valley area. Results of the study showed that farmers ranked water shortage as the big challenge which they are facing for both planting and livestock. Poor quality of water was the main challenge they were facing during dry season. Another study which was conducted by (Ogunsanya, 1987), in his study it was describe that transportation plays an important role in agriculture. It directly effects the production of agriculture.

The findings of the study explain the reasons which are responsible for the withdrawal of men from agricultural activities. A number of factors contribute to their with-drawl from agriculture activities. Some of them had the perception that it is a female oriented work. It is believed by both the men and women that agricultural activities are meant to perform by women and men are supposed to do other works to earn a profitable livelihood. When we compare KPK and Punjab with Hunza in terms of the perception regarding agricultural activities; whether these activities

are men oriented or women oriented, we get opposite results. In KPK and Punjab agriculture activities are supposed to be performed by men because these activities involve dealing with heavy machinery, maintenance of machinery, and the land they cultivate is larger as compared to the land that is cultivated in Hunza. The people in these two provinces believe that the physical tasks and dealing with heavy machinery are to be dealt by men.

In the study area a couple of supporting organizations are working for farmers in agricultural activities. Organizations are doing well in their own way to increase the production by conducting different training workshops, organizing several meetings and exhibitions. But most of the locals are not satisfied with the work of these organizations. These people believe that there is a lot of gender discrimination in these organizations, although the female workers are more than male farmers in their area but still these organizations' focus is on male farmers. Whenever it comes to taking farmers to another cities or countries for training purposes these organizations always select male farmers despite the fact that the majority is of female famers. Another complaint they had against these organizations was that they only work in one region in a year and the next year they work for another region. The problems faced in the region where they do not work get neglected and the farmers get no assistance to resolve new issues. The people wanted these organizations to visit their region every year not once in two or three years so the problems that are new to them could be solved timely. According to their opinion organizations had not performed properly in providing the required services. The role of organizations in Aliabad is not up to the mark, which has been reflected in their limited suitable agricultural technology, mainly for women. Consistent to our finding, a study was conducted by Urassa and Msuta (2015) in Kasulu district of Tanzania to examine the contribution of Farmers' organization (FOs) on well-being of smallholders' farmers. Farmers Organization (FOs) plays a substantial role in promoting agricultural development through helping farmers. FOs helps farmers by providing technical knowledge regarding inputs, outputs and marketing of the produced item. The main aim of the organization is to improve the farming activities and by providing goods and services to enable them to live a sustainable life.

### 5.3. Recommendations

- It's necessary to increase women's political participation, to overcome the problems related to equality. Such improvement will diminish the gender discrimination in economic, employment opportunities and decision-making power.
- Women of Aliabad seem to be lacking marketing skills. Hence it is important for Agricultural Department to educate them in the field of marketing, this will help them to make decisions regarding farming.
- Governments should provide funds to Agricultural Department, so they can help farmers regarding the constraints they are facing while perform their agricultural tasks.
- Since women alongside with men work from dawn to dusk to reduce poverty so it is necessary to empower women so that they can work without any hesitation and problem to improve the country's economy and to reduce poverty.
- The organizations should train equally men and women as the majority of farmers are females and it is important to educate them and properly equip them for better production of crops
- Government should introduce modern technologies of farming in these areas to help the farmers and for effective farming.
- Training centers should be built to educate the farmers about modern and effective farming methods.
- Farming machinery should be provided in fewer prices so that it can be afforded by the farmers as most of the farmers were using old methods of farming. It will not only be time consuming but will also be helpful in large production of crops.
- Women should be given equal chance to attend seminars and workshops related to agriculture to polish their abilities and to boost their confidence.
- Infrastructure should be improved as most of the areas lack roads. This hampers the transport of agriculture product from the farm to the market. Improved infrastructure plays an effective role in agriculture.

#### **5.4. Limitations and future direction of the Study**

There were certain limitations which hampered my research while exploring the aim of the research. So it was expected that such shortcomings will help future research to avoid or cope-up with these limitations. The first and foremost constraint was time limit. I wanted to stay there till august to observe the agricultural activities performed by female farmers, but I could not do so because of the deadline of my research submission. I could collect the data only from a small geographical area of Central Hunza. Hunza is covered in a large area but I could not include the whole population of Hunza, therefore in future this study can be carry-out on a broad geographical area by dealing with the same research in different context. I selected the representative sample through random sampling from Aliabad. The sample size is based on some limitation, as being a female student; one can't afford to collect the data from everyone because every individual was somehow engaged with agricultural activities. In order to remove these constraints, one need a lot of time to record agricultural activities, there are abundant of activities during summer season and autumn season which cannot be covered in just three months. So, in future this study can be conducted for a long period of time in order to obtain interview from every individual who were participating in farming.

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## APPENDIX A

### Female Farmers Who Are Working on Agricultural Farms

Name: -----

Education: -----

Occupation: -----

No. of Children: -----

1. What is agriculture in your opinion?
2. What are the activities that women perform?
3. What are the main reasons behind women participation in agricultural activities?
4. What are the factors that lead to withdrawal of men from agricultural activities?
5. Do you feel any embarrassment while performing agricultural tasks?
6. Is there anyone who shares your burden during performing agricultural activities?
7. What is your role in decision making process regarding agricultural activities?
8. What kind of opportunities do people avail from agricultural?
9. How much time you spend on fields?
10. What is the importance of agriculture organizations in your life?

## **APPENDIX B**

### **Head and Employees of Organizations**

Name: -----

Designation: -----

1. Why is agriculture important?
2. What role do different organizations play in agricultural activities?
3. What type of activities do organizations offer for farmers?
4. What kind of role do organizations play in promoting agricultural activities?
5. What is the main aim of organization?
6. Do you believe in gender equality in agricultural activities?
7. What kind of benefit farmers get from organization?
8. What are the future plans of organizations for farmers?

## **APPENDIX C**

### **Working Women's**

Name: -----

Status: -----

Occupation: -----

1. What are the factors that lead women to perform agricultural activities?
2. What sort of challenges you face while performing agricultural activities?
3. What are the main activities you carry out in fields?
4. What kind of opportunities does organization provide to farmers and working women's?
5. How do you manage your time to perform agricultural activities?
6. Do you believe that agricultural pattern and activities have been changed since past?
7. What is your opinion regarding women's increasing participation in agriculture?

## **APPENDIX D**

### **Head of Household's**

Name: -----

Occupation: -----

No. of household: -----

Time: -----

1. What are the main tasks do men perform?
2. How much time a man spent in fields?
3. What are the reasons behind men less participation in agricultural activities?
4. What is the role of head of household in making decisions regarding agricultural matters?
5. What kind of support they get from agricultural organizations?
6. What kind of benefit people avail from organizations?
7. What's your opinion regarding organization performance?
8. Is it necessary to do a side business along agricultural activity?
9. What are the reasons due to which people of Aliabad don't completely depend on agriculture?

**Image I: Agriculture worker standing in front of Green House**



Source: Researcher

**Image II: Women working on field (Pulling up the weeds)**



Source: <http://www.hunza-agriculture-images>

**Image III: Exhibition conducted by Agricultural Organization Department**





Source: <http://www.hunza-agriculture-exhibition-images>

**Images IV: Going home after cutting grass**



Source: <http://www.hunza-agriculture-images>