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Analysis of Gender Role in Agricultural Production and Disparity in Extension Services: A Study in Awbare Woreda, Somali Regional State, Ethiopia

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ABSTRACT

The study analyzed the gender role and disparity in agricultural production and extension services between female- headed and male-headed households in Awbare woreda of Somali regional state. Its specifically aimed 1) To examine the role of gender in agricultural production in Awbare woreda.;2) To assess the access to and control over the agricultural benefits between Men and women in Awbare woreda.;3) To investigate the existing gender disparities on agricultural production and extension services in Awbare woreda. The study was conducted in Awbare woreda in which three kebeles selected purposively. out of 48 agropastoral kebeles in woreda six kebeles were selected purposively, by using systematic random sampling technique 154 respondents were selected (74 male house hold heads and 80 Female house hold heads). The collected data was both quantitative and qualitative, where quantitative data analyzed by descriptive statics (frequency and percentage) and inferential statics (Chi-square and Independent t-test) and qualitative data was analyzed by using content analysis. The analysis investigated that Male respondents participate agricultural extension activities than Female respondents. In the study Males has better access to and control over resources/ benefits than Females. In the result of study Male respondents have higher role of agricultural production activities than female (crop and livestock production activities) while Female respondents have a role on livestock production activities only like, marketing of milk and milk products, selling small animals (goats, sheep, hens, donkey, etc.). Creation awareness trainings towards women farmers and increasing female DA would make extension systems more gender sensitive and can encourage women's role in farm activities.

Key Words: : gender, disparity, agricultural extension.

1. Introduction

1.1. Background of the Study

Despite clear and important country-specific variations, women in Africa often perform a significant portion of agricultural tasks such as sowing, weeding, applying fertilizer and pesticides, harvesting, threshing, processing, transportation, and selling. The clearing and preparation of the fields and plugs is predominantly the responsibility of men in various African civilizations. They might also work more or less closely with women on other projects. In many countries, women are responsible for taking care of the smaller livestock, such as chickens, sheep, and goats, while men are in charge of the larger animals. Additionally, feeding and caring for all livestock is typically handled by women (Seleti and Tlhompho, 2014). It is commonly known that women are essential to the development of agriculture in Sub-Saharan Africa, particularly Ethiopia. Men and women do not always contribute equally to agricultural advancement (Tenaw et al., 2009).

Ethiopian women generally put a long hour working in agriculture. Men, however, make the majority of decisions and have much greater access to technology, credit, and extension support than women. Additionally, women have less control over crucial agricultural resources and advantages (Rahman and Hasan, 2008). The latter has negative repercussions on women's economic security, social status, and empowerment. It also undermines efforts to improve food security at the household level. There is strong evidence that, given the opportunity, women would contribute at least as much to regional or national growth as males do (Alarcón and Bodouroglou, 2014).

As a result of factors including tradition, religion, farming practices, socioeconomic conditions, a nd others, the extent of women's engagement in agricultural operations genuinely varies from location to location. Despite their considerable contribution to the expansion of the economy in general and the agricultural sector in particular, they are nevertheless constrained by a number of problems. The life and work of rural poverty women must therefore be closely observed. Any development measures to increase output that do not take into account the demands and roles of women are unlikely to be successful (Ester, 2013). Extension initiatives

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in the context of rural development should be focused on the needs of the clients in order for services to be accepted and implemented successfully. This could potentially raise agricultural output and rural income by bridging the gap between new technical knowledge and farmers' behaviors (Ester, 2013).

This idea contends that men and women have different roles to play in small-scale farming and different access to resources, including modern technology, education, and health care (Behrman, et.al., 2012). In particular, families headed by women have limited access to and control over resources. Women make up 2/3 of the workforce globally, but they only contribute 1/10 of the workforce's income, and they own less than 1/100 of the world's real estate (Kaliyangile, 2015).

The issue still exists despite repeated concerns about a lack of gender analysis in agricultural extension programs. In the literature on agricultural extension and technology uptake, gender is still "barely discussed" (Diaz and Najjar, 2019). If extension services are to be effective at long-term increases in agricultural output without using up more resources, they must work to counter a few of the behaviors that lead to gender disparity (Tinuke, 2012). The adoption of agricultural innovations by the world's poorest people, according to some authors, is vital for addressing concerns of poverty, hunger, and women's empowerment (Anandajayasekeram et al., 2008).

Women make major contributions to the agricultural and rural economies in all developing countries (Mondal, 2013). Rural women must, however, overcome a number of obstacles to improve agriculture, such as a lack of resources and access to institutional credit, a lack of technical knowledge and access to extension services, and a demanding workload. Due to their lack of access to land, technical advancements, and irrigation, they may be more affected than men (Achandi et al., 2018). These restrictions make it harder for women to take part in the nation's agricultural and rural development, which are described in more detail below. But women still make a considerable contribution to global rural and agricultural economies (Negash, 2012).

Despite these obstacles, Ethiopian women frequently participate in agriculture in a variety of roles (such as sowing, weeding, applying fertilizers and pesticides, harvesting, threshing, processing, transportation, and marketing where extension services may add more values). The key factor contributing to the vulnerability of pastoral and agro-pastoral women in the Somali region is the lack of access to and control of essential productive resources. Even though men possess all the assets that create income and essentially depend on them for their sustenance, women are more prone than men to visualize a future outside of pastoralism. Women may be more receptive to this idea due to the limited ownership of things, which may help to explain why. Women may have therefore had a smaller financial stake in the pastoral economy (Aregu et al., 2010).

Furthermore, there are differences in how households led by women get resources, manage them, and make decisions (Catacutan and Naz, 2015). Additionally, the transfer and acceptance of agricultural technologies are influenced by the ownership of productive resources and the decision-makers who decide what to produce, how to produce it, how much to produce, and when to produce it (Tiruneh et al., 2001). The primary subjects of this study will be the gender roles in agricultural production and the current disparities in agricultural extension services in the research area.

1.2. Statement of the Problem

Female farmers in Ethiopia are not considered in agricultural research, and their agricultural challenges and/or activities have received little attention. They don't have access to programs and extension services that can help them boost their production as a result. The rigorous division of labor between the home and the fields would be lessened if Ethiopia's extension system could overcome the cultural taboo against female farmers laboring in the fields to seed and harvest crops(Hailu et al., 2000). While conducting research to determine the most pressing issues and create extension programs that are suitable for the various stages of the farm family's life cycle, there is a lack of attention paid to the multiple roles played by female farmers (Ogunlela and Mukhtar, 2009).

Due to their neglect of their agricultural extension role and due to their demanding reproductive and community roles, women are frequently excluded from agricultural meetings, training, and discussions. Due to cultural expectations that women should stay at home, cook, and take care of their children; Somali women frequently experience discrimination when attempting to access agriculture extension services. The production levels of female farmers are negatively impacted by their inability to access information and extension services (Thinkii, 2014).

Extension agents are typically men, and, in many parts of Somalia, men are unwilling to take instructions from women. Thus, female extension agents are rarely appointed since they would face resistance. Nevertheless, female extension agents have proven to be very effective in engaging women farmers, and they are often in a better position to help female smallholder farmers adopt innovations.

Generally female farmers are lacking consideration where those agricultural activities concerning to them are putted as last priority and the female extension service is affected by the culture of the society and this resulted that every extension service focus on male farmers and male extensionists and the same is true most of extension agents in the region are men since men farmers are not willing to take guidance from women and there is a great negligence of the role of women in agricultural extension . Awbare woreda is one of the woredas in Somali Regional State in Ethiopia where there is a great need for information regarding to the gender participation in agricultural production activities and agricultural extension services as well in order to reduce the existing disparities.

Awbare is one among the Somali regional state woredas where there is a great gender disparity in agricultural extension service delivery and the agricultural extension services are not delivered equally among male headed households and female headed households and even agricultural input distribution is not fairly done between men and women and the same is true for the other extension services.

2. Materials and Methods

2.1. Research Design

In this research a cross-sectional study design was used. The study was aimed to collect data at one point in time and to describe the gender role in agriculture and the existing disparities on agricultural extension services in the study area. Cross-sectional data collection method was used in this study as part of the research design.

2.2. Source of Data

Both primary and secondary data was used in order to get enough information about the gender roles in agriculture and disparities in agricultural extension services.

2.3. Population, Sample Size and Sampling Technique

2.3.1. Sampling Techniques and Sample Size

Accurate information about a given population could be obtained from a census study. However, due to financial and time constraints in many cases a complete coverage of the population is not possible. A large sample size is preferable because as sample size increases, the sampling distribution of the mean decreases in variability (the standard error decreases) and become more like the normal distribution in shape, even where the population distribution is not normal (Gupta, 2002; Rangaswamy, 1995).

There are several formulas to determine the sample size. However, appropriate sample size depends on various factors relating to the subject under investigations like the time aspect, the cost aspect and the degree of accuracy as noted by (Gupta, 2002). In the process of sample selection, multi-stage sampling procedure was followed in this study. 1st stage, Awbare woreda was selected purposively due to the availability female farmers. At 2nd stage, 58 kebeles of the woreda was stratified into two as pure pastoralist and agropastoral kebeles, 6 kebeles was randomly selected from 48 study Kebeles (agropastoral) of the woreda. At the 3rd stage, sample of respondents was selected by using systematic random sampling technique and probability proportional to size-sampling technique was employed to determine number of households from each kebeles.

To determine the number of sample respondents, Yamane (1967) formula was used.

$$n = N/1 + N(e)^2 \quad (1)$$

Where; n = Sample Size N = Total number of targeted populations e= level of precision (sampling error) at 8% (0.08) significance level, margin of error Level of confidence is 92%; this was convenient method which reduces the possibility of non-response drastically.

Accordingly, sample was firstly determined from total 6 Kebele households out of 48 Kebeles of Awbare Woreda by formula of Yamane as follows:

$n = 11900/1 + 11900 * (0.08)^2 = 154$ consequently, 154 household heads were used as representative sample for the study and this is considered as $3^r d$ stage sampling. To determine sample size from each Kebeles, probability proportional to size is used.

2.4. Method of data analysis

In this study data was analysed by using descriptive statistics (percentage, frequency, mean and standard deviation) which was used to analyse the demographic related information, role of gender in agricultural production and women's participation in the existing extension activities. And also, inferential statistics (independent t-test and chi-square (x^2)) to measure the disparities on agricultural extension services was conducted and thematic or content analysis for qualitative data.

3. Results and Discussion

3.1. Institutional Factors

3.1.1. Social activities

Participation in social activities and involvement of social organizations

In table 1 indicates out of the interviewed 154 HHs only 48(31%) respondents mentioned that they participate social activities where the remaining 106 HHs mentioned that they didn't participate any social activity in their agropastoral area, 44(91.7%) were men respondents and only 4(8.3%) were female respondents. So, the (X2=53.142a) indicates that (p value <0.005) there is strong difference between the female and men in social activities. As the work overload affects women in agropastoral area, so this implies that the work overload affects women's highly as the result shows, even if the women's tries some activities, it may not become effective or continuous because work overload affects their participation in social activities. Al though the FGD stated that there is difference of activities in agropastoral area, women's do the building of traditional houses, local market, attending wedding ceremony, while men's do harvest farm, building mosque, labor for other farm in order to help each other, controlling of land, so in general in social activities there is difference between men and women.

Social organizations are the structure of the society that the society join together to strength the social interaction between the societies. Out of the total respondents the 16 (10.3%) of men respondents mentioned that they involve social organization while 4 (2.6%) of female respondents involve social organization. In the community, social organization in agropastoral areas mostly males are participated (involved).

Table 1: Participation in social activities and involvement of social organizations

Variable	Characteristics	Frequency		Percentage		X^2-value	p-value
		Male		Female			
		N	%	N	%		
Participation in social activities	Yes	44	91.7%	4	8.3%	53.142[a]	0.000***
	NO	30	28.3%	76	71.7%		
Involvement of social organizations	Yes	16	10.3%	4	20.0%	9.398[a]	0.002**
	NO	58	43.3%	76	56.7%		

Table 2: Access to formal credit by the respondents

			Sex			X^2 P	
			Male	Female	To-	value	
Access to formal credit?	Yes	N	42	21	63	17.457[a]	0.000**
		%	27.2%	13.6%	100.0%		
	No	N	28	59	87		
		%	18.1%	38.3%	100.0%		
Total		N	74	70	150		
		%	46.7%	53.3%	100.0%		

The FGD result shows that reason in which men involve social organizations more than women include work overload and social norms, as they mentioned there is a high effect of social norm as their culture limits.

3.2. Access to formal credit

Table 2 focused the Access to credit helps farmers to financial support for both male and female household to be used for the production purpose. The result indicates that of 42 (27.2%) of male respondents and 21 (13.6%) of female respondents has access to credit. Between the respondents 28 (18.1%) of male respondents and 59 (38.3%) of male respondents have no access to credit, this indicates that most of the respondents have no access to credit. And the ones who has access, male respondents have higher percentage than female respondents because males are responsible in the household or they own the land and those females who access the credit are the female's household heads, they can manage the credit. The finding indicates that there is difference between men and women farmers that has access to credit as they get from the NGO'S, and traders and relatives etc. They used to purchase farm implements, agricultural inputs, purchase improved seed, purchase of livestock, etc.

3.3. Access to market

Table 3 indicates the access to market of the area, the frequency of the respondents 154(100%) get access to market, this shows that all the respondents in the study area have access to market. Among the interviewed 154 respondents 128 of them face market problems where only 25 respondents did't face market problem. This means there is no big difference between male and female farmers in terms of access to market both of them get it as the p>0.05 and both male and female farmers in the study area face market problem as 65, 64 of male and female respondent mentioned respectively. The major problems of market in the area the frequency of the respondents 62(40.2%) say low market price, 31(20.1%), say No market nearby 34(22%) say lack of transportation. So, the majority of the respondents state that major market problem exists in the area is low market price.

3.4. Market Distance

Table 4 the average market distance of male respondents is 11.3919 with SD (5.88), the average of female respondents 10.3125 with SD (5.81) as the results indicates (t=1.144 and p value=0. 254) there is no significance difference that exists in market distance of male and female respondents.

3.5. Access to information about new agricultural technologies and Access to extension office

Information is important in agriculture because information is where the farmers get the new technology from researchers. Table 5 shows total 121(78.5%) male and female (both) get agricultural information where as 45(29.22%) do not have extension office in their village.

3.6. DA office distances

Table 6 indicates the distance of DA office, the average DA distance of male respondents is 9.5946 with SD (5.91936) while the average DA distance of female respondents is 13.537 with SD (7.15815). the result of t test (t= -3.708 and p value =0.000). This shows that there is a significant difference exists between male and female respondents, so the DA distance of male respondents is near than the female respondents' distance, this affected female respondents to contact with DA.

3.7. Contact with extension agents

The agricultural extension helps farmers to increase their productivity and their standard of living. The role played in agricultural extension services is availing improved technologies to farmers. the Table 7 indicates about 88(male &female)(57.1%) of the respondents have no contact to agricultural extension agents over the last year. 38 (24.6%) male respondents have contact and 36(23.3%) have no contact with agricultural extension service while most of the female respondents 52(33.7%) have no contact with the agricultural

Table 3: Access to market by the respondents

Variable	Characteristics	Frequency		Percentage		X2-value	p-value
		Male		Female			
		N	%	N	%		
Do you get access market	Yes	74	48.1%	80	51.9%	1.737a	0.188**
Did you face market problem	Yes	65	50.4%	64	49.6%		
	NO	9	36%	16	64%		
If yes, what are the problems in your area?	Low market price	39	62.9%	23	37.1%		
	No market nearby	14	45.2%	17	54.8%		
	Lack of transportation	13	38.2%	21	61.8%		

Table 4: Opined by the respondents about Market distance

Gender of the HHs	Mean	N	Std. Deviation	t-test	P-value
Male	11.3919	74	5.88664	1.144	0.254**
Female	10.3125	80	5.81050		
Total	10.8312	154	5.85311		

Table 5: Access to information about new agricultural technologies and Access to extension office

		Gender of the respondents		Total
		Male	Female	
Did you get information about new agricultural technologies	Yes	55	66	121
	No	19	14	30
Total		74	80	151
Is there extension office in the village/ in this PA?	Yes	52	57	109
	No	22	23	45
Total		74	80	154

extension agents. This implies that females' respondents have no contact with extension agents and only 28 (18.1%) of female respondents have contact with extension agents. This shows that male respondents have more contact with extension agents than female as the result of (X^2=27.023) and the p value <0.05 indicates females have low contact with extension agent service.

3.8. Role of women and participation in agricultural extension activities

Agricultural extension services offer technical advice on agricultural to farmers, and also supplies them with the necessary inputs and service to support their agricultural production. Table 8 indicates 84(54.5%) of the total respondents did't participate agricultural extension services. 42(27.2%) of male respondents have participated in in agricultural extension services while 28(18.1%) female respondents participated. About 32(20.1%) male respondents and 52(33.7%) female respondents are not participated in agricultural extension services. Even though both the farmers invited to participate but the women have low in participation in agricultural extension services, then men. Some of Male respondents have participated in agricultural extension and they attain the training, meetings, but females are not able to participate due work overload. The (p value<0.05) implies that there is significant difference in the participation of agricultural extensions. The FGD participants said that female's respondents did not participate the agricultural extension and the women did not play any role in agricultural extension services, while some male respondents participate. The agricultural extension activities that farmers participate is the training on improved seed, livestock, fertilizers, etc. females are busy with house hold chores so they don't have time to participate, so the activities are given to only male farmers. The problems that females stated that the DA available in the area are only men's which is not good for culture.

3.9. Constraints limiting women's participation in agricultural extension activities (AEA)

Women are important during participation in agricultural extension activities, but there are problems that women face during participation in extension activities that limit participation in agricultural extension activities, like work overload, lack of time, lack of training, lack of extension center, lack of interest topic. Table 9 indicates 33(21.4%) of male respondents said work over load, 41(26.6%) said lack of capital and access to institutional credit, while Female respondents 48(31.1%) said work over load, 14(9%) said lack of capital and access to institutional credit, 18(11.6%) said in accessibility of extension agents. So as the results of the p value <0.005 it indicates that there is significant difference exists between Male and Females. Although the constraints that Females face in attending extension activities almost half of the respondents said that work over load limits women's participation on extension activities so this implies that most of the females in the area faced by the work over load.

As per the discussion of The FGD participants, problems limiting women's participation in agricultural extension is work over load, lack of capital and access to institutional credit, culture discriminate, lack of time, lack of knowledge. Most of the females are not able to participate in agricultural extension because of women are busy of the household responsibilities, like child caring, cooking, cleaning house, fetching water, and collection of firewood. The result of this study in line with (Swanson and Rajalahti, 2010) Some of the obstacles are the lack of financial service access, lack of market and entrepreneurship knowledge, own technical skills and low management, lack of time and work overload especially women face while dealing with household responsibilities.

3.10. Role of gender of on agropastoral activities

3.10.1. Farm activities

In many societies farm tasks are often gender specific. For example, while males plough the land, females may

Table 6: Opined by the respondents about DA office distances

	Gender of the HHs respondents	N	Mean	Std. Deviation	Std. Error Mean	t-test	P-value
How far DA office from your kabale in KM?	Male	74	9.5946	5.91936	.68811	-3.708	0.000**
	Female	80	13.5375	7.15815	.80031		

Table 7: Contacted with extension agents by the respondents

		Gender of the HHs respondent		Total	X2	P-value
		Male	Female			
Do you have contact with extension agents?	Yes	38(24.6%)	28(18.1%)	66(42.6%)	4.197a	0.040***
	No	36(23.3%)	52(33.7%)	88(57.1%)		
Total		74	80	154		

sow, or females may be responsible for water fetching, while males cater for firewood. In farm production the division of labour may be by crop, by field or by task. according to the study result Table 10 indicates 94.1% of the sampled household responded that land cleaning activity were done by male, 2.75 responded female and finally 3.15% of the reveled that land preparing activity were done by both female and male. Regarding to the percentage difference between male and female with respect to land preparation was statistically significant at 5% probability level of significance.

Regarding to the Cultivation , Sowing and Weeding activity 98.05%,62.33 and 42.20 sampled household responded that the role of Cultivation , Sowing and Weeding activity were male household head whereas 1.95%, 5.8% and 14.3% of the respondent reveled respectively that the role of these activities were female household head arguing that Cultivation activity is done by mechanical cultivator, and finally 31.8% and 43.50% of the sampled respondent respectively said that Sowing and Weeding activities were the role of both female and male household head based study result we can conclude that Cultivation and Sowing activities were the role for male household head and Weeding activities was the role for both male and female household head.

As we can understand from table 10 indicates that 68.8%, 83.7% and 23.37% of the sampled household respectively responded Fertilizer application, applying pesticide and Scaring bird activity was the role male household headed whereas 9.74%, 1.94% and 44.15% responded female and finally 21.4%, 14.28% and 32.46% of the reveled that Fertilizer application, applying pesticide and Scaring bird activity was done by both female and male. Regarding to the percentage difference between male and female with respect to Fertilizer application, applying pesticide and Scaring bird activities was statistically significant at 5% probability level of significance. On the same table the study result indicates that 85.06%, 93.5% and 62.3% of the sampled household respectively responded Harvesting, Threshing and Transporting to homestead activities were the role for male household headed whereas 7.1%, 3.25% and 4.54% responded female and finally 7.79%, 3.25% and 33.11% of the reveled that Fertilizer application, Harvesting, Threshing and Transporting to homestead activities were the role of both female and male. Regarding to the percentage difference between male and female with respect to Transporting to home stead activities were statistically significant at 5% probability level of significance.

3.11. Gender Accesses to and Control over the Benefit

As we can understand from table 11, it indicate that 112(72.70%) of the sampled household responded that male household head was only benefited from crop production while 42(27.30%) of the respondent responded female household head regarding to the proportion 48(42.29%) of male household respondent were responded only male household head , 26(61.9%) responded female household Whereas 64(57.10%) of female household responded male household head,16(38.10%) responded female household. Farther more the chi-square (X2= 4.440) indicates that there is statistically significant difference between gender

Table 8: Role of women and participation in agricultural extension activities

		gender of the HHs respondents		Total	X2	p-value
		Male	Female			
Do women's have role and participation in agricultural extension?	Yes	42(27.2%)	28(18.1%)	70(45.5%)	7.339a	0.007**
	No	32(20.1%)	52(33.7%)	84(54.5%)		
Total		74	80	154(100%)		

Table 9: Constraints limiting women's participation in agricultural extension activities (AEA)

Constraints limiting women's participation in agricultural extension services	Gender of the HHs respondents		Total	X2	p-value
	Male	Female			
Work overload	33(21.4%)	48(31.1%)	81(52.5%)	33.850a	0.000**
Lack of capital and access to institutional credit	41(26.6%)	14(9.09%)	55(35.6%)		
In accessibility of extension agents	0	18(11.8%)	18(11.8%)		
Total	74	80	154		

Table 10: Role of gender of on agropastoral activities

Variables	Who does	**Frequency**	**X^2**	**P value**
Land preparation	**Men** **Women** **Both** **Total**	**145** **4** **5** **154**	9.118[a]	0.010**
Cultivation	Men Women **Total**	**151** **3** **154**	2.830[a]	.093***
Sowing	Men Women Both **Total**	96 9 49 **152**	1.445[a]	0.48***
Weeding	Men Women Both **Total**	65 22 67 **15**	2.164[a]	0.33***
Fertilizer application	Men Women Both **Total**	106 15 33 **154**	27.05	0.000***
Applying pesticide	Men Women Both **Total**	129 3 22 **154**	9.418	0.002***
Scaring birds	Men Women Both **Total**	36 68 50154	38.38	0.000***
Harvesting	Men Women Both **Total**	131 11 12 154	0.927	0.629***
Threshing	Men Women Both **Total**	144 5 5 154	5.669	0.05***
Transporting to homestead	Men Women Both **Total**	96 7 51 154	24.790[a]	0.000***
Processing of cereals	Women **Total**	154 154		

Table 11: Accesses the benefits of agropastoral activities by the respondents

		gender of the HHs respondent		**Total**	**X2**	**p-value**
		Male	**Female**			
who access to benefits of crop production	Men	48	64	112	4.440a	0.035***
	Women	26	16	42		
Total		74	80	154		
who access to benefits of Crop stalks for fencing	Men	21	47	68	14.977a	0.001***
	Women	52	33	85		
	Both	1	0	1		
Total		74	80	154		
who access to benefits of Food crops	Men	41	38	79	0.962a	0.327**
	Women	33	42	75		
Total		74	80	154		
who access to benefits of Utilization of land	Men	73	29	102	66.925a	0.000***
	Women	1	51	52		
Total		74	80	154		
who access to benefits of Crop stalks for feeding	Men	41	5	46	44.341a	0.000***
	Women	33	75	108		
Total		74	80	154		
who access to benefits of Stored grain	Men	70	34	104	47.580a	0.000***
	Women	4	46	50		
Total		74	80	154		

Table 12: Opinion by the respondents about the controls the benefits of agropastoral activities

		gender of the HHs respondent		Total	X2	p-value
		Male	Female			
who controls to benefits of Food crops	men	28	19	47	13.605a	0.001
	women	46	49	95		
	both	0	12	12		
Total		74	80	154		
who controls to benefits of Crop stalks for feeding	men	52	25	77	25.406a	0.000***
	women	19	38	57		
	both	3	17	20		
Total		74	80	154		
who controls to benefits of Livestock	men	63	54	117	7.616a	0.022***
	women	5	17	22		
	both	6	9	15		
Total		74	80	154		
who controls to benefits of Off- farm/ non-farm income	Men	68	66	134	12.816a	0.002***
	women	2	18	20		
Total		74	80	154		
who controls to benefits of -Crop stalks for fencing	Men	67	50	117	17.202a	0.000**
	women	7	30	37		
Total		74	80	154		

of the household with regard to access to benefits of crop production at 5% percent of probability.

According table 11 shows 79(51.30%) of the respondents felt that male household head was only benefited from food crops, little less 75(48.70%) of the respondents felt female household head, the chi-square (X2=0.962) indicates that there is no statistically significant difference between gender of the household with regard to access to benefits of food crops at 5% percent probability level of significance.

Again access to utilization of benefits of land shows that 52(33.76%) of the respondents felt female household head and majority 102(66.23%) felt for male Farther more the chi-square (X^2= 66.925) indicates that there is statistically significant difference between gender of the household with regard to access to benefits of Utilization of land at 5% percent probability level of significance.

Regarding to the access to benefits of Crop stalks for feeding the study result show that 46(29.90%) of the respondents felt that male household head was only benefited from Crop stalks for fencing while 108(70.10%) of the respondent responded female household head ,the chi-square (X^2= 44.341) indicates that there is statistically significant difference between gender of the household with regard to access to benefits of Crop stalks for fencing at 5% percent probability level of significance.

Again table 11 indicates that 104(67.53%) of the respondent felt male household heads were only benefited from access to benefits of Stored grain while 50(32.46%) of the respondent felt female household head benefitted, the chi-square (X^2=47.580) indicates that there is statistically significant difference between gender of the household with regard to access to benefits of Stored grain at 5% percent probability level of significance.

Table 12 indicates the control over the benefits/ resources, the respondents felt benefits of food crops 47(30.5%) Men controls the food crops, 95(61.6%) women controls the food crop where 12(7.8%) said both male and female

Table 13: Land resource ownership of the respondents

Owner ship of land resource	gender of the HHs respondents		Total		
	Male	Female			
Men	74	62	136	18.854a	0.000***
Women	0	5	5		
Both	0	13	13		
Total	74	80	154		

controls the food crops, this means that women control the food crop of the HHs. Crop stalk for feeding 77(50%) said that Men controls Crop stalk for feeding, 57(37%) said that women control the benefits of the Crop stalk for feeding, where the remaining 20(12.9%) revealed that both of them control crop stalk for feeding together.

According to the benefits of Livestock 117(76%) Men controls benefits of Livestock, 22(14.2%) said that women control the benefits of Livestock, where the remaining 15(9.7%) revealed that both of them control the benefits of Livestock together.

According to the benefits of Off- farm/ non-farm income 134(87%) Men controls benefits of Off- farm/ non-farm income, 20(13%) said that women control the benefits of Off- farm/ non-farm income, where the remaining as the p-value (0.002) and chi- square (12.816a) result shows there is a significant difference between men and women according to Off- farm/ non-farm income control as men controls more than women. Crop stalks for fencing 117(76%) men controls where the remaining 37(24%) is controlled by women, this means men have more control over women.

Table 13 indicates that respondents 136(88.3%) viewed that the ownership of land resource is only for men , 5(3.2%) viewed that it belongs to women and these are a few who mentioned that they got it from their parent as they were the only child of their parents, only 13(8.4%) mentioned that land resource ownership is for both men and women. This shows that there is a great difference between men

Table 14: Access to land resource

		gender of the HHs respondents		Total	X^2	p-value
		Male	Female			
do you have land	Yes	70(45.4%)	80(51.9%)	150	4.440[a]	0.035***
	No	4(2.5%)	0	4		
Total		74	80	154		
				Frequency	Percent	
Type of land	Own land			83	53.9	
	Rented land			5	3.2	
	Inherit land			66	42.9	
	Total			154	100.0	

Table 15: Access to Agricultural extension services

Variable	Characteristics	Frequency		Percentage		Total		X2-value	p-value
		Male		Female					
		N	%	N	%	N	%		
do you receive agricultural input	Yes	50	67.6%	36	45.0%	86	55.8%	7.940a	0.005**
	NO	24	32.4%	44	55.0%	68	44.1%		
if yes, who receive	Male	52	53.6%	45	46.4%	97	100%		
do you receive agricultural trainings?	Yes	59	50.8%	57	49.2%	116	75.3%		
	No	15	39.5%	23	60.5%	38	100%		
if yes, who get the training?	Male	59	51.8%	55	48.2%	114	74%		
	Female	0	0%	2	100%	2	100%		
is there any field day in your area?	Yes	17	48.6%	18	51.4%	35	100%		
	No	57	47.9%	62	52.1	119	77.2%		
if yes, who participate the field day?	Male	15	44.1%	17	50%	34	94.1%		

and women in terms of land owner ship as most of the respondents responded that land is owned by men.

In the FGD women replied that they don't have any land except few who mentioned that they inherited from their parent as they were the only child of their parents. in my key informant interview a person said that *"even a women that their husband died didn't get any land ownership rather than she will be a responsible of that land until her first son grow up, and as soon as he grow up that son will take the ownership of that land and even if there are sisters of that son they will never be the owners of that land, he mentioned that land is for men only"* .

Land is primary source of livelihood in rural households. in rural areas land is very important asset that the farmers use for farming different crops, and grazing land to standards their life and as shown in Table 14 indicates about land holdings of the respondents .In that 150(97.40%) respondents informed that they have land, remaining only 4(2.59%) informed that they do not have any land. Though female respondents said yes, we have land in the FGD they mentioned that they have the access of that land only if it is own or inherited but not the ownership.

Agricultural extension services include improved seeds, pesticides, information, fertilizers in order to help the farmers to adopt the technology to increase their production. So, the agricultural extension services train the farmers to the agricultural activities.

When we come to access to Agricultural extension services like agricultural input distribution, provision of agricultural trainings and access to field day in the study area, among the interviewed 86 (55.8) of the respondents responded that they have access to agricultural inputs unfortunately none of these farmers was not women even those females that mentioned that they get agricultural inputs tell in the next question that male members of the household receive it as the $X^2 = 7.940$a, p=0.005 there is a significance difference between male and female respondents in term of access to agricultural inputs. Access to agricultural training is also the same with that of input as 116 (75.3%) of the respondents mentioned that they get agricultural trainings and among these 116 respondents only two respondents were female farmers where the remaining 114 (74%) were male farmers this shows that male farmers get agricultural trainings than female farmers. In terms of access to field day in the study area only 35 (22.7) respondents revealed that there is field day in their area where the 119 (77.2%) members said there is no field day in their locality unfortunately none of these were female.

According to the FGD result Table 15 indicates in access to agricultural extension services most of the participants said that female members have less access to agricultural extension services as they said that only male farmers get access to agricultural extension service delivery.

4. Conclusion and Recommendation

Gender roles and disparities in agricultural production and extension activities in Awbare woreda, Ethiopia was explored through this study. Rural women play a significant role in subsistence agriculture, food security, and farm labor. However, female farmers face barriers such as work overload, difficulty reaching extension agents, and lack of time.

Gender disparity exists in access and control over agricultural resources, activities, and extension services, with male respondents having more control over benefits and female household heads having limited control. Women make major contributions to the agricultural and rural economies .Rural women must, however, overcome a number of obstacles to improve agriculture, such as a lack of resources and access to institutional credit, a lack of technical knowledge and access to extension services, and a demanding workload. Due to their lack of access to land, technical advancements, and irrigation, they may be more affected than men. These restrictions make it harder for women to take part in the nation's agricultural and rural development, which are described in more detail below. But women still make a considerable contribution to global rural and agricultural economies.

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Conflict of Interest

Author declares that there is no conflict of interests involve in publishing this research paper.

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