ISSN: 2224-0616
Int. J. Agril. Res. Innov. Tech. 14(1): 1-9, June 2024
DOI: https://doi.org/10.3329/ijarit.v14i1.74523

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Gender analysis in selected agricultural practices in Gedeo and Halaba zones in Southern Ethiopia

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Received 25 November 2023, Reviewed 17 May 2024, Accepted 20 June 2024, Published 30 June 2024

A B S T R A C T

Identification and recognition of gender-dis aggregated constraints, gender imbalances, differentials in gender roles, and decision-making on agriculture production, technology transfer, and input utilization are essential to the transformation of research output to benefit women and men. This study aimed to assess gender integration in selected agricultural practices and gender division of labor in the Gedeo and Halaba Zones. The study employed a cross-sectional design. The sample respondents were randomly 86 men and 69 women farmers, and a total of 155 farmers were selected to collect the data through triangulation of key informants interviews, focus group discussion, and household survey. The data was analyzed using descriptive statistics. Data analysis results in the frequency of men and women's participation computed. Different gender participation factors evaluated. According to the data analysis result, the effect of community norms was assessed among 155 respondents, men 54 (34.8%), 0 (0%), and 15 (9.7%), responded as yes, no and undecided, respectively. Similarly, women participants believed that 64 (41.9%), 1 (0.6%), and 36 (23.2%), responded as yes, no and undecided, respectively. Decision-making could affect gender participation. Men 66 (42.6%), 1 (0.6%) and 20 (12.9%) responded as yes, no and undecided, respectively. Likewise, women participants believed that 53 (34.2%), 1 (0.6%) and 15 (9.7%), responded as yes, no, and undecided, respectively. Concerning care workmen 65 (41.9%), 0 (0%) and 21 (135%), responded as yes, no and undecided, respectively. Similarly, women participants believed that 54 (34.8%), 0 (0%) and 15 (9.7%), responded yes, no and undecided, respectively. Average task share of the household is 30%, 15%, 43% and 12% for men, boys, women and girls, respectively. Women and men performed a larger share of the gender role in rural households than boys and girls. The reproductive work of women in the household covered 67% of the total household care work. The gender participation index in selected agricultural practices was 0.709. However, the Participation Index of men was found to be 0.55 and that of women was 0.45. According to this statistical result, household members spent agricultural labor hours differently, as converting this labor share into daily labor hours indicated that women, men, boys, and girls are spending 10, 7, 4 and 3 hours per day on average, respectively.

Keywords: Factors, Gender role, Gender participation, Selected agricultural practices, Practices

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Cite this article as: Ayele, T. and Gebretsadik, T. 2024. Gender analysis in selected agricultural practices in Gedeo and Halaba zones in Southern Ethiopia. *Int. J. Agril. Res. Innov. Tech.* 14(1): 1-9. https://doi.org/10.3329/ijarit.v14i1.74523

Introduction

The inclusion of gender dimensions in agricultural programs and projects ensures gender viewpoints and attention to the objectives of gender equality, which are essential to all spheres of development and activities, resource allocation, program and project planning and implementation, monitoring and evaluation (ASARECA, 2011).

The concerns and implications for women and men are an integral part of the design, implementation, monitoring, and evaluation of government policies and programs in all political, economic, and societal spheres (GIZ, 2014). Gender disaggregated constraints, gender imbalances, and differentials in gender roles and decision-making (Oluwafemi *et al.*, 2015).

Therefore, an assessment to observe the gaps in gender integration is essential concerning the differences between the roles that women and men play, the different levels of power they hold, and their conflicting needs, constraints and opportunities (SDC, 2015).

Before and in gender integration and practice, gender assessment is a decisive step to ensure the implication of legislation, policies, programs, and projects in development and in turn in achieving gender equality (UNGEI, 2012). Moreover, as described by Leduc Brittle (2009), it would provide information about how men and women related to, or affected by, the subject of the organizations' development programs and projects. In such view, it takes into account the division of roles and responsibilities between men and women, women and men's access to and control over resources, and the power relations in the workplace and the legal and social status of men and women. The gender analysis research frameworks help in understanding the social and economic conditions, gender gaps and influencing factors (Kumar, 2015).

Gender analysis in agricultural research implies assessing the realities of the role of men and women in the research process, that is, research planning, implementation, and evaluation and reporting of the performances with standard formats with reliable indicators of the participants and beneficiaries (Me-Nsope, 2015).

Hence, this study will be designed to investigate factors that cause differences, government policy implications in projects and programs and the gender integration gap in agriculture.

Methodology

Description of the study area

Halaba zone: it is found 313 km away from Addis Ababa. Its absolute location is between 70 17'19" and 70 19'25"N of latitude and 380 4'10"and 380 6'17"E of longitude and it has an elevation of 1726 meters above the mean sea level. The mean average temperature and rainfall is about 17.6◦C - 22.5◦C and the mean annual rainfall is 601-1200 mm. According to (CSA, 2007), the total population of the Halaba zone is 232,325, of whom 117,291 are men and 115,034 are women. Gedio zone: The exact location of the Gedeo zone lies between 50 5' 26" to 60 12' 48"N Latitude and 380 12' 48" to 380 13'02"E Longitude. The altitude of the zone ranges from 1268 to 2993 m above sea level. The mean annual temperature is between 12.6°C and 30°C. The total population is 1,028,063, of which 513,113 and 514,950 are men and women, respectively.

Design

The study employed a cross-sectional research design.

Sample size determination

A statistical confidence level will be chosen to calculate the sample size. To estimate the sample from the intended population, a considerable proportion would be taken with an approximate 95% confidence level. The study could use the following formula: The formula developed by Cochran (1977) to determine sample size is: $\frac{pqt^2}{d^2}$

The data from quarter reports on gender integration results show that women participants and beneficiaries comprise 27.8 percent of internal and external customers. On the contrary, customers were male participants and beneficiaries of gender mainstreaming activities. Hence as stated by (Cochran, 1977) ample size of the study would be determined through the formula: $n_o = \frac{pqt^2}{d^2}$

Where, P= women participants and beneficiaries were 27 percent of internal and external customers, q=men customers were participants and beneficiaries from gender mainstreaming, t= abscissa of normal curve that cut an area of d= error term. But for finite population correction (corrected sample size), n = $\frac{n_o}{1+(n_o-\frac{1}{N})}$. Where, n_o= initial sample size, n= corrected sample size, N= expected total population from which sample was drawn.

Step 1, $n_o = \frac{pqt^2}{d^2}$ = 302, this sample included the Sidama zone but due to political decision, the Sidama zone became the federal state in Ethiopia. As a result, the net sample size for the Gedeo and Halaba zones was 155.

Data collection methods and sources

The primary and secondary data collection methods were explored to gather the required data in the study area on the target population.

Primary and secondary data sources

The primary data would be collected through structured questionnaires. Key informant interviews and focus group discussions. The secondary data was collected by reviewing annual and quarterly performance reports, proceedings, relevant documents and exploring different websites.

Data analysis

Descriptive Statistics was used to investigate gender gaps, gender roles, participation, and access to and control over agricultural resources. Likert scale responses were analyzed to see the level of participation index (Oluwafemi *et al.*, 2015).

Results and Discussion

Descriptive analysis

The study has three objectives to explore gender analysis in selected agricultural practices. Based on the following objectives, the study was conducted in the Halaba and Gedeio zones of southern Ethiopia. To identify the Gender Mainstreaming gap and influencing factors, the labor division of women and men, girls and boys, and the level of gender participation, access to and control over resources. Furthermore, the data analysis result is depicted in Table 1 below.

Table 1. Socioeconomic characteristics.

Variables	The mean value for each household category	
	Men headed households	Women headed households
Age	30.10	33.80
Educational level	7.00	5.00
Marital status	0.83	0.86
Family size	5.00	4.00
Farmland size (hectare)	0.86	0.96
Annual income (ETB)	12126.10	10774.40
Dependency ratio(percent)	100.10	91.60

Data source: Gender analysis survey (2022).

According to the data analysis, result shown in Table 1 above, the mean age of women-headed households and men-headed households was 33.8 and 30.1, respectively. The average value of educational level and marital status of women and men were 5 and 7, and 0.86 and 0.83, respectively. The mean of family size and farmland size were 4.47 and 4.77, and farmland size was 0.956 and 0.858 hectares, respectively for women and men-headed households. Furthermore, the average annual income and dependency ratio was 10774.42, 12126.09, 91.56, and 100.14% for women-headed households and men-headed households in that order.

Respondent's status

The respondents' status was analyzed. Table 2 shows that there are 7 categories below.

Table 2. Respondents' status.

Respondents occupation	Frequency		Percentage		Total	percent
	Men	Women	Men	Women		
Simply farmer	27	37	17.4	23.9	64	41.3
Agro pastoralists	2	1	1.3	0.6	3	1.9
Model farmers	18	11	11.6	7.1	29	18.7
Council	15	5	9.7	3.2	20	12.9
Religious leader	19	15	12.3	9.7	34	21.9
Recognized elder	4	0	2.6	0	4	2.6
Other	1	0	0.6	0	1	0.6
Total	86	69	55	45	155	100

Data source: Gender analysis survey (2022).

The respondents' status was categorized into 7 sections depending on the statistical analysis result. Most of the farmers were found in the category of simply farmers and religious leaders, followed by model farmers. Among the 155 respondents, 27 (174%) men and 37 (23.9%) women farmers were simply farmers in their occupation. Besides 19 (12.3%) men and 15 (9.7%) women were found as religious leaders. On the other hand 15 (9.7%) and 5 (3.2%) men and women were council members, respectively. 2 (1.3%) and 1 (0.6%); and 4 (2.6%) and 0 (0.0%) men and women found as agro-pastoralists and recognized elders in the study areas, respectively.

Level of awareness of participants

Four Likert scale measurement items were used to understand the level of participants' awareness. Based on the computed data result level of awareness towards gender equality male farmers described as not aware 8 (9.3%), slightly ware 69 (80.23%), somewhat aware 6 (6.98%), and moderately aware 3 (3.49%) (Table 3). Besides, women farmers confirmed this item is not at all 7 (10.14%), slightly aware 48 (69.59%), somewhat aware 13 (18.84%) and moderately aware 1 (1.45%). This shows that most men and women farmers were found at the slightly aware level. Hence, the government should strive to raise the basic awareness level of farmers to transform gender equality in agriculture.

In view of the level of awareness of the importance of gender integration, the response of male farmers delineated as not aware 4 (4.65%), slightly aware 74 (86.05%), somewhat aware 4 (4.65%) and moderately aware 4 (4.65%). Besides, women farmers confirmed as not at all 4 (6.5%), slightly aware 53 (76.81%), somewhat aware 12 (17.39%). This shows that most men and women farmers were found to be slightly aware. Hence, the government should strive to raise the basic awareness level of farmers to transform gender equality in agriculture.

Table 3. Respondents' level of awareness.

Item	Gender	Respondent	Likert scale responses								Total respondents
			Not at all aware		Slightly aware		Somewhat Aware		Moderately aware		
			Freq.	%	Freq.	%	Freq.	%	Freq.	%	
Level of awareness	Men	86	4	4.7	73	86.1	4	4.7	4	4.7	155
	Women	69	4	5.8	53	76.8	12	17.4	0	0.0	
Gender integration	Men	86	8	9.3	69	80.2	6	6.9	3	3.5	155
	Women	69	7	10.1	48	69.6	13	18.8	1	1.5	
Gender equity	Men	86	7	8.1	26	30.2	52	60.5	1	1.2	155
	Women	69	6	8.7	28	40.6	35	50.7	0	0.0	
Agricultural technology	Men	86	1	1.2	23	27.7	3	3.5	59	68.6	155
	Women	69	0	0.0	18	26.1	1	1.5	50	77.5	
Improved technology	Men	86	1	1.2	28	32.6	55	63.9	2	2.3	155
	Women	69	1	1.6	22	31.9	46	66.7	0	0.0	
Traditional norms	Men	86	1	1.2	26	30.6	51	59.3	8	9.3	155
	Women	69	1	1.5	21	30.4	37	53.2	10	14.5	

Data source: Gender analysis survey (2022).

Moreover, the level of awareness (Table 3) towards gender equity in the analyzed data result of male farmers' responses that described as not aware 7 (8.1%), slightly aware 26 (30.2%), somewhat aware 52 (60.5%) and moderately aware 1 (1.2%). Besides, women farmers confirmed this item is not at all 6 (8.7%), slightly aware 28 (40.58%) and somewhat aware 35 (50.7%). In the same way, regarding awareness of benefits from agricultural technology, the item evaluated was “What is your level of awareness on benefit from agricultural technology”. Based on the data analysis result of male farmers response that described as not aware 0 (0%), slightly aware 23 (27.7%), somewhat aware 1 (1.2%), somewhat aware 3 (3.5%) and moderately aware 59 (68.6%). In addition, women farmers' response analysis results indicated not at all 0 (0%), slightly aware 18 (26.1%), somewhat aware 1 (1.5%) and moderately aware 50 (77.5%). This shows that most men and women farmers were found to be moderately aware. Hence, the government should strive to keep up such encouraging practices and awareness of farmers to transform gender equality in agriculture in a short period of years.

Furthermore, the extent of awareness of benefits from improved agricultural technology was evaluated by enquiring the item “Extent of awareness on benefit from improved technology”. Based on this inquiry, the response of male farmers who described as not aware at all was 1 (1.2%), slightly aware 28 (32.6%), somewhat aware 55 (63.9%) and moderately aware 2 (2.3%). Besides, women farmers confirmed this item is not at all 1(1.5%), slightly aware 22 (31.9%), somewhat aware 46 (66.7%) and moderately aware 0 (0.0%).

In sum, the evaluation of awareness of traditional norms influences household participation in selected agricultural practices. Based on the collected and computed data analyzed, the response of male farmers described as not aware at all 1 (1.2%), slightly aware 26 (30.6%), somewhat aware 51 (59.3%) and moderately aware 8 (9.3%). Besides, women farmers confirmed this item is not at all 1 (1.5%), slightly aware 21 (30.4%), somewhat aware 37 (53.2%) and moderately aware 10 (14.5%).

Gender role

The gender roles of men, women, boys and girls were evaluated to estimate the share of work among them. Hence, land preparation, house construction, ploughing and threshing was the main tasks of men and women farmers. However, boys and girls devoted their time and effort to pursuing their academic performance. Besides girls, help their mothers with milk churning, cleaning the house, fetching water, and caring for elders in the household. On the other hand, boys performed additional tasks such as looking after cattle, fetching water, and threshing and transporting harvests from the field to home. Gender within the rural households performs triple work regularly in the study areas. According to this study data analysis results, gender segments such as men, women, boys, and girls have been sharing household work in different ratios as the statistical data analysis result revealed in Table 4 below.

Table 4. Summary of gender triple role in selected agricultural practices.

Triple role	Commodity/community service	Men	Boys	Women	Girls	Total
Productive	Crop	40%	23%	25%	12%	100%
	Poultry	32%	13%	45%	10%	100%
	Shoat	38%	11%	42%	9%	100%
	Large animals(cow, ox, equine)	30%	20%	37%	13%	100%
Reproductive	Reproductive	8%	10%	67%	15%	100%
Community	Community	33%	14%z	43%	10%	100%
Average		30%	15%	43%	12'%	100%

Data source: Gender analysis survey (2022).

Among the selected agricultural practices in the study area, crop production, rearing animals, reproductive work and community service activities of the study were the entire focus areas. Hence, women participated in all activities in significant labor contribution and most of the reproductive role was imposed on women. She has been contributing a large share of labor to maintain the household family and agricultural productivity of the rural household farm.

The average task share of the household is 30%, 15%, 43%, and 12% for men, boys, women and girls, respectively. The table shows that women and men performed a larger share of the gender roles in rural households than boys and girls. The reproductive work of women in the household covered 67% of the total household care work.

Converting this labor share into daily labor hours indicated that women, men, boys, and girls spend 10, 7, 4 and 3 hours per day on average, respectively.

Women's participation in agricultural practices

The participation of women and men increases the benefits and livelihoods of the rural household. However, the participation of women and men was not well addressed in selected agricultural practices in the study areas. Therefore, the statistical analysis result depicts that the participation of women and men farmers was summarized in Table 5 below:

Table 5. Summary Likert scale responses analysis on gender participation.

Gender	Likert Item Responses						Total	
	Rarely		Sometimes		Often			
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Men	26	30.20	12	14.00	48	55.80	86	100
Women	19	27.00	17	24.60	33	47.80	69	100
Total	45	29.03	29	18.71	81	52.26	155	100

Data source: Gender analysis survey (2022).

Based on the data analysis result, the frequency of men and women's participation in selected agricultural practices was computed. According to the responses of the respondents' men and women, 26 (30.20%), 12 (14.00%), 48(55.80%), and 19 (27.00%), 17 (24.60%), 33 (47.8%) participated in selected agricultural activities in the frequency of 'rarely", 'sometimes', 'often' and 'always', respectively.

Furthermore, gender participation was measured by the participation index. As the World Economic Report (WEF, 2021) described Ethiopia attained a gender participation index of 0.691, which is encourageable. Similarly, this study data analysis result summarized that the participation index of gender is 0,709 it approaches the result of the national level, but it is found at a better level of participation. Moreover, the participation index of men and women was 0.55 and 0.45, respectively.

Total annual farm income

The total annual farm income of men and women farmers was evaluated to estimate the income range of participant farmers in selected agricultural activities. The data analysis result revealed that men and women in the four income categories have similar incomes concerning their farm performances.

The annual farm income was evaluated through the exploration of descriptive statistics. Besides, the income levels of men and women farmers were analyzed to understand the income parity of both groups. As the data analysis result was shown in Table 6 below, there are four income levels observed and analyzed.

Table 6. Annual income categories.

Income Category (in ETB)	Sex of Respondents				Total	
	Men		Women			
	Frequency	Percent	Frequency	Percent	Frequency	Percent
< 201	1	1.16	0	0.0	1	0.6
201-21,600	80	93.0	66	95.7	146	94.2
21,601-43,000	3	3.5	0	0.0	3	1.9
43,001-64,400	1	1.2	2	2.8	3	1.9
64,400+	1	1.2	1	1.5	2	1.3

Data source: Data source: Gender analysis survey (2022).

Among 155 respondents, one respondent has an income of ETB 200 per year. But, the majority of the respondents 146 (80 men and 66 women) farmers' annual farm income falls within the income category of ETB (200 – 21,600) and on the other hand 3 male farmers have an annual farm income within the category of ETB (21601 - 43,000) it is the optimum income level according to this study.

Beyond this, three respondents (2 women and 1 man) farmers have an income in the category of ETB (4301 -64400). Finally, a few farmers, 1 man and 1 woman, have an annual income within the category of above 64400 ETB.

Climate Smart Agriculture

To mitigate these changes and hazards, gender in agricultural practices will contribute to its own effort. Due to this concern, the study is evaluated to understand gender practices in agricultural production. According to data analysis results on climate irregularity men and women obtained sustainable yield that men participants responded as disagreed 14 (16.3%), indifference 24 (27.9%), and agree 48 (55.8%) and women respondents confirmed that they disagreed 19 (27.5%), indifference 17 (24.6%) and agreed 33 (47.8%). This indicated that women and men farmers obtained reasonable yields during climate irregularity. Hence, the government should enhance and scale up the existing provision of improved selected practices of climatic change mitigation.

Access to climate change for women and men farmers was found at various levels, as the data analysis result of women participants is shown and presented in Table 7 below.

Table 7. Climate-smart agriculture information.

Item	Gender	#participants	Likert scale responses						
			Disagree		Indifference		Agree		Total participants
			Freq.	%	Freq.	%	Freq.	%	
Men and women's climate irregularity.	Men	86	14	16.3	24	27.9	48	55.8	155
	Women	69	19	27.5	17	24.6	33	47.8	
Men's food self-sufficiency.	Men	86	50	58.1	21	24.4	15	17.4	155
	Women	69	34	49.3	15	21.7	20	29.0	
Women's food self-sufficiency.	Men	86	3	3.5	21	24.4	62	72.1	155
	Women	69	1	1.5	18	26.1	50	72.5	
Men CSA technologies	Men	86	2	2.3	1	1.2	82	95.4	155
	Women	69	0	0.0	0	0.0	69	100.0	
Women CSA technologies.	Men	86	2	2.3	32	37.2	52	60.5	155
	Women	69	1	1.5	33	47.8	3	50.7	
Climate affect women than men	Men	86	10	15.2	2	2.3	74	86.1	155
	Women	69	16	29.6	0	0.0	53	70.4	
Women have access to CSA information	Men	86	11	12.8	25	29.0	49	56.9	155
	Women	69	16	23.2	17	24.6	36	52.2	
Men have access to CSA information	Men	86	16	18.6	0	0.0	70	81.4	155
	Women	69	21	30.4	0	0.0	48	69.6	

Data source: Data source: Gender analysis survey (2022).

Concerning the inquiry that men are working towards making certain food self-sufficiency, the male farmers were evaluated as disagreeing 50 (58.1%), indifference 21 (24.4%) and agree 15 (17.4%). The women participants confirmed that striving men for food self-sufficiency disagreed 34 (49.3%), indifference 15 (21.7%) and agreed 20 (29%) in the same order.

Furthermore, in respect to the enquiry "Women are working towards ensuring food self-sufficiency" was administered to the women, then the male participants confirmed that disagreed 3 (3.5%), indifference 21 (24.4%) and agreed 62 (72.1%), respectively. However, the women themselves evaluated the item as disagree 1 (1.5%), indifferent 18 (26.09%) and agree 50 (72.5%). The result shows that women and men

strive to attain food self-sufficiency which indicates that the government should make available and affordable crop technologies to boost production and productivity beyond consumption.

For CSA technology adoption, the inquiry that 'men are farming to enhance adoption of CSA technology' the male farmers were evaluated as disagree 2 (2.3%), indifferent 1 (1.16%) and agree 82 (95.4%). The women participants confirmed that striving for men for food self-sufficiency was agreed 69 (100%). This indicated that men are highly involved in adopting climate-smart agricultural technologies.

On the other hand, CSA technology adoption by women farmers was evaluated an item was' men are farming to enhance adoption of CSA technology' The men's response result was disagreed 2 (2.3%), indifference 32 (37.2%), agree 51 (59.3%) and strongly agree 1 (1.116%). Similarly, women participants confirmed the issue by their responses as disagreeing 1(1.45%), indifference 33 (47.8%) and agreeing 35 (50.7%). Hence, the government and the Bureau of Agriculture should strengthen the provision of CSA technologies for male farmers.

Regarding the effect of climate on men and men, farmers were evaluated through the administration of an item as "climate change can affect women more than men farmers" as men farmers' responded disagree 10 (15.2%), indifference 2 (2.3%), agree 73 (80..3%) and strongly agree 1 (1.2%).

Besides, women confirmed the item by disagreeing 16 (29.6%) and agreeing 53 (70.5%). This indicated that most of the men and women respondents confirmed that women were more affected by climatic change. Hence, the concerned body should emphasize addressing solutions to reduce the negative effect of climate change on women.

For climate change mitigation of men, the item enquired was "men farmers are access to information climate change". The male farmers replied that disagreed 11 (12.8%), indifference 25 (29.1%) and agreed 49 (56.9%) for the same enquiry women were replied as disagree 16 (23.2%), indifference 17 (24.6%) and agree 36 (52.2%).

Similarly, an item was administered to the respondents to evaluate the effort of women, such as "Women are access to information on climate change". Men farmers responded to this item disagree 16 (18.2%), indifference 0 (0%), agree 70 (81.4%) and women participants responded as disagree 21 (30.4%), indifference 0 (0%) and agree 48 (69.6%). The result shows that women are working in the same direction to mitigate the effect of climate change.

Access to and control over resources

To evaluate the access to and control over household resources 155 (86 men and 69 women) respondents have participated to respond to the designed and structured questionnaires. According to the data analysis result, the access to and control over the farm resources was computed by exploring descriptive statistics. The degree of access to and control over resources was measured in percentage. Nine important variables were considered to evaluate the level of access to and control over them by household members in the study areas. Explore Table 8 below.

Table 8. Access to control over major resource.

Resource	Access to household resources (%)				Control over household resources (%)			
	Men	Women	Boys	Girls	Men	Women	Boys	Girls
Land	52	34	16	0	50	50	0	0
Improved technology	50	30	11	9	50	45	5	0
Forest tree	50	40	8	2	50	50	0	0
Ox	57	40	3	0	50	50	0	0
Cow	30	39	11	20	50	50	0	0
Goat and sheep	34	40	17	9	40	40	12	8
Poultry	28	35	15	12	30	50	13	7
Annual income	50	50	0	0	50	50	0	0

Data source: Gender analysis survey (2022).

As a result, as depicted in Table 8 above access to land was 52%, 34%, 16% and 0% for men, women, boys, and girls, respectively. In addition, control over land was 50%, and 0% for men and women, boys and girls, respectively. In the same way, the mean average access to and control over the improved agricultural technology was 50%, 30%, 11% and 9% for men, women, boys and girls, respectively. Its access to and control over was 50%, 45%, 5% and 0% for men, women, boys, and girls in the same order. Concerning forest trees, access to forest trees was 50%, 40%, 8% and 2% for men, women, boys and girls, respectively. Control over forest trees in households was 50% and 0% for men and women and boys and girls in that order. Besides access to ox was 57%, 40%, 3% and 0% of men, women, boys and girls, respectively. Its control over was 50% and 50% for men and women, equally. Similarly, access to cows was 30%, 39%, 11% and 20% of men, women, boys and girls, respectively.

Its control over was 50% and 50% for men and women, equally.

Furthermore, access to goats and sheep was 34%, 40%, 17% and 9% of men, women, boys and girls, respectively. Its control was 40%, 40%, 12% and 8% for men, women, boys and girls respectively. Household's access to poultry was 28%, 35%, 15%, and 12% for men, women, boys, and girls in that order. In addition, household control was 30%, 50%, 13% and 7%, for men, women, boys and girls, respectively. The access to and control over men and women was 50% equally.

Factors affecting gender participation in selected agricultural practices

Collected data were expressed in frequency and percentages. Data was evaluated in descriptive statistical methods. The data analysis result is described in Table 9 below.

Table 9. Factors Affecting Gender Participation.

Factors	Gender	Response of respondents (n=155),men=86,women=89						Total
		Yes		No		Undecided		
		Freq.	%	Freq.	%	Freq.	%	
Community Norm	Men	54	34.8	0	0.0	15	9.7	155
	Women	64	41.3	1	0.6	21	13.5	
Low recognition	Men	65	41.9	0	0.0	21	24.4	155
	Women	53	34.2	0	0.0	16	10.3	
Decision making	Men	66	42.6	0	0.0	20	12.9	155
	Women	53	34.2	1	0.6	15	9.7	
Care work	Men	65	41.9	0	0.0	21	13.5	155
	Women	54	34.8	0	0.0	15	9.7	

Data source: Gender analysis survey (2022).

Community norm

Among 155 respondents, 118 (76.2%) respondents believed that community norms can affect the participation of gender in agricultural practice and 1 (0.6%) respondent believed that cultural norms cannot affected by community norms however, 36 (23.2%) respondents responded as undecided on the effect of community norm about gender participation in selected agricultural practices in the study area.

Low recognition

Of the 155 male and female respondents 65 (76.6%), 53 (76.8%) and 21 (24.4%), 16 (23.2%) responded 'yes', 'no' and 'undecided' as low recognition of gender participated in agricultural practices can hinder, not hinder and undecided on the effect of low gender in agricultural practices, respectively.

Decision making

In respect to the effect of decision-making 119 (76.8%) respondents believed that decision-making affects gender participation in selected agricultural practices; however, 37 (23.9%) of the respondents chose the response undecided of the effect of institutional factors on gender participation.

Care work

For care work 65 (41.9%), men respondents and 54 (34.9%) women responded as care work affected gender participation in selected agricultural practices and 25 (16.1%) men and 15 (9.7%) women respondents responded as undecided. As the majority of respondents replied care work affected gender participation, hence care work in rural households should be shared among the household members.

Conclusion

This study was conducted on gender analysis in selected agricultural practices of productive, reproductive, and community services in the study area. It was aimed at the identification of gender participation level, identification of influencing factors and gender division of labor. Based on these aims, the data analysis results concluded and observations were summarized.

Data was collected from the randomly selected respondents using different tools and methods. Key informant interviews, focus group discussions and household surveys were explored. A descriptive statistical analysis method was employed to analyze the participation level and its index, gender division of labor among household members. Based on the data analysis result the frequency and percentage of participation by men, women, boys, and girls in selected agricultural practices were evaluated. The task share of the household was found at different levels of gender participation in selected agricultural practices. The productive work of the rural household was performed by men, women, boys and girls; also, they had significantly different shares of labor contributed to agriculture. However, women mainly performed the reproductive and/or/household care work but insignificant reproductive work was carried out by men, boys, and girls. The reproductive work of women in the household covered 67% of the total household care work share. According to statistical results, household members spent agricultural labor hours differently, as converting the labor share in agricultural practices into daily labor hours indicated that women, men, boys, and girls are expending 10, 7, 4, and 3 hours per day on average, respectively.

As descriptive statistical analysis result shows that cultural norms, decision-making and care work were found as factors affecting gender participation in selected agricultural practices. The factors that affect gender participation are cultural norms and decision-making. Men's Access to farm resources indicates the opportunity to use a resource or benefit without limitations to make use of it. Control represents the full authority to decide on the use of resources or their benefits.

Recommendations

- Government should emphasize the reduction of women's workload to increase their participation in income-generating agricultural activities in rural households.
- The government should give awareness creation training to agriculture stakeholders to raise awareness on gender participation in agricultural practices and improve the weak decision level of rural women.
- Even though gender participation is not equal within households, the government organizations' efforts have a better effect on gender participation so they should be strengthened to boost equal participation in agricultural activities. Wereda Agricultural Office and Regional Bureau of Agriculture should keep on and increase encouraging efforts in gender participation in rural households.
- Awareness creation training should be given to rural household youths concerning reproductive activities women's participation in agricultural production.
- The government should encourage rural household heads to equal participation of women and men in decision-making to attain gender equality in access to and control over household resources.
- Provision and delivery of farmers training in respect to enhance the optimum level of women and men farmers; access to and control over agricultural resources in rural households. This is very advantageous in facilitating the harmonized development and equal sharing of benefits in farm community.
- Reproductive work in the rural household should be well shared among the family members to reduce the burden on women and she has to be engaged in income-generating activities. This should be done through enthusiastic commitment to recurrent awareness creation and empower women in adoption of labor saving technology.

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