

Obstacles of Development Agents for Gender Equality in Agricultural Extension Services in Finfinnee Surrounding Special Zone and East Shewa Zone, Oromia Region, Ethiopia

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To cite this article:

Truayinet Mekuriaw. Obstacles of Development Agents for Gender Equality in Agricultural Extension Services in Finfinnee Surrounding Special Zone and East Shewa Zone, Oromia Region, Ethiopia. *Humanities and Social Sciences*. Vol. 11, No. 6, 2023, pp. 182-187. doi: 10.11648/j.hss.20231106.11

Received: October 14, 2023; **Accepted:** October 28, 2023; **Published:** November 9, 2023

Abstract: Agriculture comprises of a number of farming activities, where both men and women are involved in multiple diverse nature of field operations. In spite of their high contribution in farm and non-farm activities, there exist gender disparities with reference to agricultural extension, advisory services. The present study was designed to identify the barriers limiting the active participation of both genders (men and women) in agricultural operations and address gender disparities in agricultural extension. The study was conducted in five districts in East Shewa and Finfinnee surrounding special zone, Oromia regional state, Ethiopia. Personal interviews were conducted from male and female development agents, resulting a total sample size of 60 (49 male and 11 female). A structured questionnaire was prepared as the research instrument for data collection. The collected data were coded on SPSS for analysis and interpretation. Results showed that around 87% of male farmers participated at a high rate, whereas the majority (78.3%) of female farmers participated at a medium rate. Female heads of households were more involved in agriculture and livestock production compared to their wives. Notably, women displayed greater engagement in animal production practices compared to crop production. In spite of their participation in crops and livestock activities, male heads of households had superior access to agricultural extension, advisory services, information, and credit facilities compared to female farmers. This is due lack of proper transport facilities for female extension personnel, non-availability of female extension personnel, lack of recognition and appreciation of rural female's work, lack of provision of agricultural credit facilities for women and lack of decision making authority among female workers. The results of the t-test statistics showed that there is highly significant difference in opinion of male and female respondents regarding barriers to gender equality in agricultural extension in Ethiopia. In the light of findings of present research, authors suggest policy guidelines related to enhancement educational as well as skill level of rural women as well as development agents in the community through education and training to narrow the gender gap/inequality in agricultural extension.

Keywords: Development Agent, Extension Service, Gender Equality, Obstacles

1. Introduction

Agriculture is one of the oldest professions in human history and is a substantial source of income, especially in rural areas [10]. A huge number of rural people used to farm, and their livelihoods are heavily reliant on it, either directly or indirectly [7]. Agriculture also plays a crucial role in reducing rural poverty in developing nations [21].

In Ethiopia, the agricultural extension system was started in the imperial regime and has been applied across different

areas of knowledge systems [4]. The extension system is established at different levels in the country. It functions at federal, regional, zonal, district, kebele, development agents, and household members [26].

Agricultural extension services are often concerned with the provision of agricultural technologies or inputs in order to increase agricultural productivity [25]. these services aims to address the challenges of production system sustainability as well as the quality of life and rural livelihoods [20].

Ethiopia's extension system has great potential to support

farmers throughout the country. With approximately 21 development agents (DAs) per 10,000 farmers, and even more in the high-potential areas, Ethiopia has one of the densest agricultural extension systems in the world. The Ethiopian extension system uses Farmers Training Center (FTC)-based agricultural extension approach, coupled with farmer groups such as one-in-five and development units which are considered to be an entry point for the grass-roots extension services and for the bottom up extension approach. FTCs assisted by development agents and farmer groups are expected to give a wide range of agricultural extension services such as farmer training, demonstration of improved farming techniques, market information and advisory services to farmers in their vicinities. Currently the government has established close to 11,000 FTCs which are functionally different and 25 Agricultural Technical and Vocational Education and Training (ATVET) to produce development agents in different fields of specializations [17].

Both men and women farmers work in agricultural and livestock production in Ethiopia. However, there exists a gender imbalance in access to agricultural extension services and control over resources, which negatively impacts production and productivity [13]. The gender productivity gap in Ethiopia is 23%, which can be attributed in part to a lack of access to extension services customized to women's needs [1].

Gender equality is critical for eliminating poverty and enhancing output and productivity. Addressing gender inequalities in access to productive resources and services could result in a 20% to 30% increase in yields on women's farms [9]. This demonstrates that if women were given equal access to productive resources that males now hold and advisory services that are solely available to men, their production would improve by 3-4%. This demonstrates why addressing gender capability limits in agricultural extension is important in Ethiopia. Because women contribute significantly to agricultural productivity, it is critical that agricultural planning and delivery are gender responsive and take into consideration the differing information demands and limits of women and men farmers. Gender responsiveness in extension services can improve women's ability to make educated decisions and use suitable agricultural and animal husbandry techniques.

Because the head of a home is male in most parts of the world, particularly in developing nations, practically all agricultural extension and rural development services are aimed solely at men. According to various research studies, pervasive gender imbalance exists in the provision of agricultural extension and consulting services, just as it does in other fields [5, 12, 23]. With this background, this study was designed to assess development agents' opinion on women and men farmers participation on agriculture, access to extension and advisory services and to identify the major challenges that development agents experience in engaging women farmers in extension activities.

2. Methodologies

2.1. Description of the Study Area

This study was carried out in two randomly selected zones of Finfinnee surrounding special zone and East Shewa zones of Oromia regional state during the 2020/21 main planting season. Five districts were randomly selected as study areas. Thus, Adaa, Lume, Gimbichu, and Bora districts were selected from East Shewa zone while Berek district was selected from Finfinnee surrounding Oromia special zone. A total of 16 kebeles (3-4 kebeles from each district) were selected randomly. Finally 2-3 development agents from each kebele and 2-3 agricultural experts from each district were selected. Personal interviews were conducted from male and female development agents both at village and district level. The study had a total sample size of 60, with 49 male and 11 female respondents. 46 respondents were from Village level and the remaining 14 respondents were from district level.

2.2. Data Collection and Analysis

A well-designed structured questionnaire with both open-ended and closed-ended questions was used for data collection. Development agents are regarded as the most essential stakeholders in agricultural productivity. As a result, face-to-face interviews were conducted using the questionnaire to gather their opinions and inform future policy implications.

The acquired data were coded and analyzed using the Statistical Package for Social Sciences (SPSS). Both descriptive and inferential statistics were used to interpret the data. The t-test was used to assess the difference in opinion between male and female respondents regarding existing gender disparities in the research field.

3. Results and Discussion

3.1. Demographic Profile

Even though demographic profile of respondents holds significant importance in social science research studies, only some selected demographic characteristics (education, age, and working experience) of respondents was collected. The majority (73%) of the respondents held first degree, while the remaining 17% and 9% were second degree holders and college diploma graduates respectively. The respondents were on average 38.75 (SD = 7.02) years old with the youngest and oldest respondent being 26 and 53 years old. The respondents had an average working experience of their current position for a minimum of four years and maximum of 22 years with average of 9.13 (SD = 4.64) years (Table 1).

Table 1. Age and work experience of respondents.

	Age			Work experience		
	Female	Male	Total	Female	Male	Total
Minimum	26.00	27.00	26.00	4.00	4.00	4.00
Maximum	45.00	53.00	53.00	9.00	22.00	22.00
Mean	33.18	39.78	38.57	5.82	9.88	9.13
SD	6.57	6.59	7.02	2.09	4.75	4.64

SD: standard deviation

3.2. Participation Level of Male and Female Farmers in Agricultural Activities

The study tried to collect the opinions of development agents regarding the level of participation of both men and women in crop and livestock activities since they are main extension service provider and they have close contact with farmers. Both men and women are heavily active in various agricultural operations. Male and female participation levels were graded on a three-point Likert scale (1=Low,

2=Medium, and 3=High). Approximately 87% of men farmers participated at a high rate in crop production, whereas the majority (78.3%) of women heads farmers participated at a medium rate. Female heads were found to be more involved than wives in crop and livestock production (Table 2). It is apparent that women's participation in animal production practices is higher than in crop production. In support of these findings, Luqman, M. et al and Shafiq, M. concluded that women are heavily active in livestock-related activities [14, 24].

Table 2. Development agent's response about participation of farmers on crop and livestock production.

Level of participation	Participants on crop production			Participants on livestock production		
	Male household heads (%)	Female household heads (%)	Wives	Male household heads (%)	Female household heads (%)	Wives (%)
High	86.7	13.3	0	63.3	78.3	45.0
Medium	13.3	78.3	38.3	36.7	13.3	41.7
Low	0	8.3	61.7	0	8.3	13.3
Total %	100	100	100	100	100	100

3.3. Access to Agricultural Extension and Rural Advisory Services

It was clear from the data presented above that in the research area women along with men were widely engage in crops and livestock production practices. The major aim of agricultural extension in Ethiopia is to provide agricultural extension and rural advisory services to all the community members without discrimination based on social class, income, gender etc. at their door steps. With this notion, access to agricultural extension and rural advisory services by the respondents (extension agents) were determined and the data in this regard is presented in Table 3. The data indicates that in the research area majority of the agricultural extension and rural advisory services are being targeted to men. In spite of higher participation of female in some cases, they have very limited access to crops and livestock advisory and extension services which limits their productivity level. In rural Ethiopia in general rural women farmers in the study

areas in particular have limited participation in agricultural extension services [22]. Women farmers in Ethiopia are principally disadvantaged since they have limited access to productive assets including irrigation water, credit, extension services, and rural institutions putting them in difficult situations to implement innovations [18].

The study also reveals that women in female headed household has better access to agricultural extension and rural advisory services than wives. Similar study by Mulema et al [18] also reported that FHHs were treated better than married women. Married women were receiving technologies and inputs through their husbands while FHHs did by themselves like that of their male counterparts. Compared to FHHs, only small proportions of married women used agricultural extension services and utilized them less frequently, mainly due to socio-cultural reasons, illiteracy, lack of confidence and self-worth, DAs, and SMSs (experts) biases towards male farmers.

Table 3. Percentage distribution of male and female gender regarding access to agricultural extension services.

Level of access to extension services	Participants on crop production		
	Male household heads (%)	Female household heads (%)	Wives (%)
High access	43.3	23.3	10.0
Medium access	51.7	63.3	53.3
Low access	5.0	13.3	33.3
No access	0	0	3.3
Total %	100	100	100

3.4. Barriers to Gender Equality in Agricultural Extension

As discussed earlier in detail that there is big gap and inequality regarding access to agricultural extension services by rural women. A number of factors/barriers are involved in this practice. The barriers were assessed on three point likert type scale. The data in this regard is presented in Table 3. The data shows that the first barrier to gender equality in agricultural extension as perceived by development agents was Lack of recognition and appreciation of rural women's work. This result is further confirmed by Drucza et al and Mamusha et al that due to their gender bias and/or limited gender capacity, male extension agents often fail to invite women in MHHs to discussions during home visits. Husbands also do not invite their wives to discussions when DAs visit their homes [8, 15].

Culture barriers for female farmers, Low farm wages for rural female, Lack of provision of agricultural credit facilities

for women and lack of social security for rural female were also reported as major barriers that limit women's participation in extension and advisory services. This finding agrees with the results of [6], which states that elsewhere, DAs face cultural barriers in advising women farmers since local customs may prevent married women from interacting with men other than their husbands.

Lack of gender awareness (80%) was found the major barrier of women access of agricultural extension and advisory services from extension agents' side. Male and female development agents and extension officers should be exposed to intensive gender sensitization and training on improving outreach to female farmers which should be supported by comprehensive practical training. The extension agents should develop a mechanism of female contact farmers in order to increase outreach to women farmers. This finding agrees with the results of Azanaw A and A Tassew [2].

Table 4. Perception of Development agents towards barriers to gender equality in agricultural extension.

Barriers from extension agent side	Disagree	Undecided	Agree
Lack of proper transport facilities for female extension staff	38.3	36.7	25.0
Non availability of female extension staff	51.7	23.3	25.0
Lack of social security for female extension staff	73.3	13.3	13.3
Lack of decision making authority among female workers	55.0	6.7	38.3
Lack of awareness on Gender	6.3	13	80.7
Barriers from farmers side			
Lack of recognition and appreciation of rural female's work	20.0	8.3	71.7
Lack of agricultural land rights for rural female	61.7	18.3	20.0
Lack of access to agriculture extension services for rural female	30.0	31.7	38.3
Low farm wages for rural female	11.7	40.0	48.3
Lack of provision of agricultural credit facilities for women	40.0	13.3	46.7
Lack of social security for female farmer	53.3	1.7	45
Culture barriers for female farmers	23.3	21.7	55.0

As data were collected from both the male and female development agents, therefore in order to find out the difference in opinion of both the categories of respondents regarding barriers to gender equality in agricultural extension paired t-test was applied. Results regarding t-test statistics, some barriers (5/12) showed that there is highly significant ($P > 0.05$) difference in opinion of male and female

respondents about barriers to gender equality in agricultural extension. The negative value of t-test statistics in all the cases showed that compared to male development agent, female development agents' agreement level about barriers to gender equality with reference to agricultural extension in the research area was higher.

Table 5. Ranking to barriers to gender equality in agricultural extension.

Barriers from extension agent side	Male		Female		t-test
	Mean	SD	Mean	SD	
Lack of proper transport facilities for female extension staff	1.80	0.84	2.18	0.40	-2.254***
Non availability of female extension staff	1.65	0.78	2.09	1.05	-1.311***
Lack of social security for female farmer	1.88	0.99	2.09	1.05	-.618
Lack of reorganization and appreciation of rural female's work	2.65	0.69	1.91	1.05	2.253***
Lack of agricultural land rights for rural female	1.43	0.79	2.27	0.47	-4.676
Lack of social security for female extension staff	1.25	0.63	2.09	0.70	-3.684
Lack of access to agriculture extension services for rural female	2.00	0.87	2.45	0.52	-2.270
Low farm wages for rural female	2.35	0.72	2.45	0.52	-.571
Lack of provision of agricultural credit facilities for women	2.25	0.93	1.27	0.47	5.034***
Lack of decision making authority among female workers	1.96	1.00	1.27	0.47	3.423***
Culture barriers for female farmers	2.49	0.79	1.55	0.52	4.867

Scale: 1 = Disagree, 2 = Undecided, 3 = Agree $P > 0.05$

3.5. Involvement of Development Agents on Gender Trainings

More than half of respondents have not get and gender training. Even though 48% of the respondents were respond that they participated on gender training the frequency and intensity of training was too low. Only 10% of respondents were participated about 3 and more than 3 times in gender training. Development agents face many constraints and have limited soft skills competency to facilitate demand-driven and gender-responsive knowledge exchange and advisory services for diversified extension users including women and youth [3]. The national extension service has still a narrow livestock focus [16] and livestock and animal health extension services are not yet mainstream services.

Table 5. Involvement of development agents on gender trainings.

		Frequency	Percent
Have you ever participated in gender training?	Yes	29	48.3
	No	31	51.7
	Total	60	100.0
If yes, how many times?	1	11	18.3
	2	12	20.0
	3	3	5.0
	4	3	5.0
	Total	29	48.3

4. Conclusions and Recommendations

Both men and women are heavily active in various agricultural operations. Most of men women farmers participated at high and medium rate. Female heads were found to be more involved than wives in agriculture and livestock production. It is apparent that women's participation in animal production practices is higher than in crop production. In spite of their participation in crops and livestock activities it was found that compared to female respondents, male family heads had access to agricultural extension/advisory & agricultural information services and credit facilities. This is due to the existing social and cultural norms in the society. The results of the t-test statistics showed that there is highly significant difference in opinion of male and female respondents regarding barriers to gender equality in agricultural extension. In the light of findings of present research, authors suggest policy guidelines related to enhancement educational as well as skill level of rural women as well as development agents in the community through education and training to narrow the gender gap/inequality in agricultural extension/information in order to achieve the targets of women empowerment at national level.

Acknowledgments

This study was supported by the program African Women in Agricultural Research and Development (AWARD) Mini fellowship. The authors thanks for support from AWARD Mini fellowship.

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