

## **GENDER CONSIDERATION IN DIFFUSION OF INNOVATIONS: A CASE OF SOME ZONES IN SNNPRS, IN ETHIOPIA**

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### **ABSTRACT**

*Though women are among the most productive sectors of the society, especially in rural areas, they are deprived of access to valuable extension information. The present study investigates farm housewives access to agricultural agents in the process of transfer of innovation information in some zones of 12-South Nations Nationalities and Peoples' Regional State (SNNPRS), in Ethiopia. A structured questionnaire was used to collect data from 284 randomly selected agents in the area. Descriptive statistics and chi-square were used for statistical analysis. The demographic characteristics of the agents show that male agents 214 (75.4%) in the age group of 25-35 years and married 61.6%) were dominant in the sample population. It was also found that majority of them were staying at a distance of 6-10kms from a nearby city, and had diploma level education, while having agricultural experience between 4-7 years. There was significant relation between gender and agents access to farm housewives; however, no significant relation was detected in case of other demographic and socioeconomic variables such as age, marital status, parent background, distance from city, and experience. It was recommended that more female agents should be recruited; priority should be given to candidates from rural background and training should be given to agents on how to provide valuable information to farm housewives.*

**Keywords:** Access, gender, Agents, Innovation, SNNPRS

### **INTRODUCTION**

Throughout the Third World, including Ethiopia, the role played by women in agriculture is tremendous and extremely decisive. In these countries, women are considered to be the major sources of agricultural produce (Tewodaj et al 2010). Rural women in developing countries are producers of about 80% of foods and are responsible for supervising about 30%

of rural families, but their activities are not considered as economical and they are simply removed from agriculture and rural development programs. Based on formal existing statistics, women form about 31% of agriculture active workforce in developing countries (Abedi et al. 2011; Adeola & Ayoade 2011). Ethiopia is predominantly agricultural, with over 85-90% of the population depending on subsistence farming (Mersha 2007). In the economy of Ethiopia, as many of African countries, women are the backbone of food production system (Umata et al 2011). For Umata and his associates, the imbalance in access to resources and opportunities are reflected by gender related constraints. Inequalities are being influenced by ethnicity, poverty, and physical locations and it is this gender factor that makes women experience hardship in life. Despite rural women's contribution in agricultural activities, their involvement has never been recognized in many countries (Tewodaj et al 2010; Cohen & Mamusha 2011; Ponniah et al 2008). Cohen and Mamusha (2011) explain that it takes a short time observation for someone in rural Ethiopia to recognize that women in most parts of the country are deeply involved in every aspect of agricultural activity. These authors indicate that various agricultural activities are considered women's work. These include weeding of crops and vegetables, harvest related activities, preparing of storage facilities, home gardening, poultry related activities, and above all the laborious house chores including fetching of water for home and on farm uses (Ibid). For such a productive section of a community, proper technological support should be made available. Rogers (2003), referring to the case of introduction of grinding machine in Mali, writes that one effect of the innovation has been to free women from their time consuming works. Though it is believed that such innovations help in reducing burden of millions of women, various findings reveal that valuable innovation information is not reaching women. Abedi et al (2011) argue that though rural women play major roles all over the world, they rarely enjoy extension services and have little contact with extension service organizations. Referring to a global survey, Abedi et al add that only about 5% of the total extension resources all over the world are dedicated to programs for female farmers, but women form just 15% of extension personnel in the world. In this regard, Holmes & Jones (2011) argue that despite the tremendous role they play in agricultural sector, women suffer from inequality in access and utilization of agricultural resources and opportunities in capacity building. Some authors also express their dissatisfaction on the way existing extension system functions in the country. Percy (2008), for instance, notes that the lack of provision of support to women emanates from absence of recognition or acknowledgement of their activities in agriculture. He notes that divided gender roles and women's lack of decision making authority in households and the community have affected them in many ways. This is a very important issue that demands immediate and appropriate attention. The actual access of women, especially housewives to extension services need to be properly investigated to find out remedies to existing gender imbalance.

## REVIEW OF LITERATURE

Quite a lot of development can be achieved from the participation of women in several fields of agricultural extension programs. There exists much of literature arguing about women's lack of access to technological innovation in agriculture in developing countries. Some have also tried to point out the basic reasons for such lack of access. Ponniah et al (2008) hold that women in rural areas rarely have the autonomy to decide on any benefit or opportunity they may come across. Daniel (2008) states that despite such potential from women, the

Ethiopian extension system favored men farmers due to various reasons. There is a lot to be done to improve service for rural women in Ethiopian agriculture system by policy makers and administrators. According to Daniel, there exists an assumption among many that women are not legitimate farmers; they are considered as supportive groups merely providing assistance to their husbands (Ibid). Such assumption has resulted in a number of problems in the country so far. Tewodaj et al (2010) condemns Ethiopia's top down service provision in agricultural extension which forced agents to receive hard quotas for recruiting farmers in innovation programs, a practice often used to evaluate agents. The scholars write that as majority of agents have been men, extension services have been provided only to men house heads.

For Holmes and Jones (2011), the assumption that women can get the information directly from their husbands has been found to be the reason why married women are skipped from receiving valuable agricultural technologies. However, research indicates that the main sources of information for the women were relatives and friends and that insignificant amount of knowledge was acquired from husbands and extension services (Daniel 2008). Habtemariam (1996) contend that extension agents are biased against women as the extension service are dominantly run by men who tend to work mainly with male farmers due to the prevailing male dominance in the culture.

The existing bias towards the house heads does not emanate from the shortage of agents as some try to indicate. Holmes and Jones stated that the country is among those having the highest extension staff ratios in the world; however, women were given limited access to the service of extension. They say only 28 percent of female farmers reported getting agent visit on a weekly bases, while one third reported that they had never been visited at all (2011). Women farmers are overlooked because in the "collective psyche they are viewed as family labor, with no decision-making power, rather than as productive economic agents" (FAO 2011). There are a number of suggestions forwarded by scholars in order to involve women in the extension process. For example, Ponniah et al (2008), documenting their experience, state that in some areas agents were instructed to motivate male farmers to bring their wives along whenever there are visits, meetings, and demonstrations and that village leaders were also given the responsibility of identifying women that need extension services. Such process demands agents' devotion of more of their time working with female farmers requesting extension services. There are a number of recommendations forwarded in the literature to give women the chance to use innovation information. Some of these recommendations include:

- Awareness need to be created among male heads in the community to allow them to accept the need for women to access extension services independently, and that extension services given to females need to be responsive to their busy schedules and cultural expectations of the community (Percy 2008).
- Increasing women's income and equipping them with technological information that are timely and relevant are quite important to achieve consistent growth (Adeola & Ayoade 2011; Sadaf et al 2006).
- Women farmers need to be encouraged to participate in agricultural extension package programs by agents, husbands and the community (Umeta et al. 2011).

## Significance of the Present Study

Literature indicates that Ethiopian women contribute the highest ratio of labor in daily activities in rural Ethiopia, but they are very much excluded from the extension system so far. Percy (2008), for instance, writes that despite the fact that women make 40% of the work force in rural areas, they are deprived of access to extension and credit services and basically, this significant proportion of workforce is inaccessible to valuable services and supports. The issue of women is a concern of food security in the country and it is about improving the lives of poor rural community. If such a noble goal has to be attained, this huge percentage of the workforce has to get access to all kinds of extension programs. A Food and Agricultural Organization report states that women make up at least half, and possibly more, of the active farming population; their major role as producers and guarantors of food security is acknowledged. And yet, these women are isolated in multiple ways and majorities are illiterate, excluded from resource management, absent from decision-making positions in farmers' organizations and overlooked by capacity-building initiatives (FAO 2006). Female participation has not been sufficiently targeted in the process of monitoring of agents; as a result, there are limited female agents in the system and training need of married women farmers were ignored (Holmes & Jones 2011). These kind of problems need to be addressed properly. The South Nations, Nationalities and Peoples Regional State (SNNPRS) is one of the most densely populated regions in Ethiopia and proper utilization of all existing small farm landholding is very vital to respond to the ever increasing population. This includes the effective use of women's capacity through providing necessary technological inputs and trainings. There is a need to involve women effectively if proper change is sought. Though there are studies conducted to assess women's access to extension information elsewhere, there are no studies conducted to indicate the situation in the selected zones of the SNNPR State. Thus, the present study assumes significance in this context and the study has been conceived to find out the transfer of technology to the farmers' housewives and the need for such transfer.

## OBJECTIVES OF THE STUDY

The main objective of the study is to investigate farm housewives access to agricultural agents in the process of innovation information dissemination in selected zones of the South Nations, Nationalities and Peoples Regional State (SNNPRS). Therefore, the specific objectives are to:

- Describe agricultural agents' access to farm housewives in the process of transferring farm innovation information.
- Identify demographic and socio-economic factors that affect agricultural agents' access to farm housewives in the process of transferring farm innovation information.

## METHODOLOGY

**Research setting:** The study is conducted in the Southern Nations, Nationalities and People's Region State (SNNPR) which is geographically located between Latitude 4<sup>0</sup>45' – 8<sup>0</sup>58' and Longitudes 34<sup>0</sup>88' -39<sup>0</sup>14'. The total area of the region is 11, 3543 km<sup>2</sup> which is estimated to be 10% of the country area coverage. The region is divided into 14

administrative zones and 5 special districts ('weredas'). The population of the region, according to 2007, Central Statistical Agency census result, amounts to 15,042,531, which accounts for almost 20% of the total population in the country. Out of this, 7, 482,051(49.7) are males while 7, 560,480 (50.3) are females. About 1,545,710 of the population are urban dwellers while 13,496,821 are rural counterparts. Agriculture constitutes around 90% of the region's population main livelihood. The density of population in the region is 142 persons per sq. k. m, making the state one of the most populous and densely inhibited in the country. Information from SNNPR State Government Office indicates that there are about 2,966,382 household currently getting service from 12801 trained extension workers.

**Research tool and data collection:** This study investigates farm housewives access to agents in transfer of innovation information. It was conducted in nine selected districts in the South Nation Nationalities Peoples Regional State (SNNPRS). Data were collected through survey questionnaire. Agricultural agents in the selected districts were sources of the data. A five point Likert scale was used and the questionnaire was pre tested. Multistage probability sampling technique was used to identify subjects for the survey. At first stage, three zones were selected from 13 zones in the state. In the second stage, three districts were identified from each of the selected zones. At the third stage, 36 agricultural agents were selected from each of the districts using systematic probability sampling method. For this, lists of agents were obtained from district agricultural offices. Thus, a total of 318 questionnaires were distributed in 9 selected districts of the three zones. The response of 284 subjects were finally obtained from enumerators and used for analysis. The data collected through self administered questionnaire were edited, coded and entered to the computer for analysis using Statistical Package for Social Sciences (SPSS) software.

## RESULTS

### Respondents' Demographic and Socioeconomic Characteristics

Demographic characteristics of respondents such as gender, age, marital and migration status (rural/urban background) are shown in table 1. Responses indicate that males constituted 75.4% of the sample while females were only 24.5 %. As far as the age composition is concerned, the response indicated that majority of respondents 61.3 % were between the age 25-35 while 24.6% were 24& below. Another 14.1% were at the age category of 36 and above. In case of marital status, 61.6% of respondents were married while 38.4% were unmarried. Result also indicated that 58.5% of respondents were from rural background and that 41.5% of them were from towns or cities.

**Table 1.** Percentage distribution of respondents on selected demographic characteristics

Characteristics	Category	Frequency	Percent	M	SD
Gender	Male	214	75.4		
	Female	70	24.6		
Age	24 & Below	70	24.6	29.7	6.28
	25-35	174	61.3		
	36 & Above	40	14.1		
Marital Status	Married	175	61.6		
	Unmarried	109	38.4		

**Table 1.** Percentage distribution of respondents on selected demographic characteristics (Contd....)

Characteristics	Category	Frequency	Percent	M	SD
Migration Status	City	118	41.5		
	Rural	166	58.5		

**Table 2** depicts respondents' selected socio-economic characteristics. These include workplace distance from city, education status, and experience as an agent. Accordingly, the responses indicated that majority 45.1%, were at a distance between 6-10kms from a nearby town/city. Others, 25.4 % reported the distance to be between 1-5kms. However, 29.6 % of respondents reported that the distance was more than 10kms (Mean= 9.23 SD= 5.197). As far as agents' educational status is concerned, great majority, that is, 93.3% stated that they were diploma holders. Only 6% reported that they were above diploma. In case of their work experience, majority 65.6% reported that they had experience between 4-7 years. Another significant number 26.1% reported that they worked for 8 years and above. Those who worked for 3 years and lower constituted only 8.1% (M= 7.24 SD= 4.85).

**Table 2.** Percentage distribution of respondents by selected socio-economic characteristics

Socio-economic Characteristics	Categories	Frequency	Percent	M	SD
Distance from city	(1-5km)	72	25.4		
	(6-10km)	128	45.1	9.23	5.197
	(above 10km)	84	29.6		
Educational status	Certificate	2	.7		
	Diploma	265	93.3		
	Bachelors & above	17	6.0		
Experience	(1-3 years)	23	8.1	7.24	4.852
	(4-7years )	187	65.8		
	(8 years & above )	74	26.1		

**Note:** N=284

Table 3 indicates percentage distribution of respondents on reported transfer of agriculture information to the farmers' wives at the absence of the farmer. Majority 41.5% said they rarely transferred information to the wives in the absence of the husbands, and another 10.6% said they never transferred information to the wives. Only 14.1% who said they transferred sometimes, and 3.2% who said they transferred always were found reporting positively) (M= 2.51 SD= 1.04).

**Table 3.** Percentage distribution of respondents on reported transfer of agriculture information to the farmers' wives at the absence of the farmer

Item		Categories					Statistics
		1	2	3	4	5	
Frequency of technology transfer to housewives in the absence of the husband (n=284)	Frequency	39	127	65	40	13	M=2.51 Std. D=1.04
	Percent	13.7	44.7	22.9	14.1	4.6	

**Note:** Key: 1-Never, 2-rarely, 3-undecided, 4-sometimes, 5-always

**Source:** own data 2011

When asked why they were not transferring information to housewives, though only 33 agents responded to this item, from those who responded, majority 69.7% said they felt it was against culture to talk to the housewives. Another 21.2% said husbands did not allow it. Some 6% say that the wives were not willing to receive new information. Only one person, 3% stated he/she didn't think it was important.

**Table 4.** Percentage distribution of respondents on reported reason for not transferring agricultural information to the farmers' wives

Item		Categories			
		HNW	HNA	IIAC	IDTI
What are the reasons for not transferring technology to housewives? (n=33)	<b>Frequency</b>	2	7	23	1
	<b>Percent</b>	6.1	21.2	69.7	3

**Source:** own data 2011 Key: HNW=Housewives are not willing, HNA=husbands are not allowing it, IIAC= I feel it is against culture, IDTI=I didn't think it is important,

Table 5 shows cross-tabulation between the agents' access to farm housewives in transfer of information and selected demographic characteristics such as gender, age, and marital status. Result shows majority of males (62.6%) reported having low access to housewives while majority (45.7%) of females also reported having low access to farm housewives ( $X^2 = 9.057$  P= .011). As far age is concerned, majority of those under 25 age 54.3% (n=38), those between 25-35 ages 58.6% and those over 36 age 65% stated that they had low access to the housewives ( $X^2 = 3.746$ ; P= 0.441). In case of marital status, majority of the married 60.65 and majority of the unmarried agents 55% also reported having low access to housewives ( $X^2 = .992$ ; P= 0.609).

**Table 5:** Demographic Characteristics of Respondents and Agents’ Access to Farm Housewives

Variables		Agents Access to Farm Housewives for Information					X <sup>2</sup>	P
			Low	Moderate	High	Total		
Gender	Male	Count	134	48	32	214	9.057	.011
		% within Gender	62.6	22.4	15.0	100		
	Female	Count	32	17	21	70		
		% within Gender	45.7	24.3	30.0	100		
Age category	Under 25	Count	38	14	18	70	3.746	.441
		% within Age Category	54.3	20.0	25.7	100		
	25-35	Count	102	42	30	174		
		% within Age Category	58.6	24.1	17.2	100		
	Over 36	Count	26	9	5	40		
		% within Age Category	65.0	22.5	12.5	100		
Marital Status	Married	Count	106	37	32	175	.992	.609
		% within Marital Status	60.6	21.1	18.3	100		
	Un-married	Count	60	28	21	109		
		% within Marital Status	55.0	25.7	19.3	100		

**Source:** own data 2011; Sig. (2-sided) p<0.05 significant(S); P>0.05not significant (NS) df=2(Gender& marital status), df=4(Age) n=284

Table 6 indicates result of relation between agents’ access to farm housewives and socioeconomic characteristics of respondents. In the case of background, those from city background reported that 57.6%, 25.4% and 16.9% had low, moderate, and high access to housewives respectively. For those from rural background the result was that 45.8% , 24.3% and 30% reported low, moderate and high access to housewives respectively (X<sup>2</sup> = .908; P= 0.635). In case of distance from city, majority from those in a distance between 1-5Kms 55.6 % from those between 6-10kms and 55.7% and from those at distance of above 10kms majority (66.7%) similarly reported having low access to house wives (X<sup>2</sup> = 3.488; P= 0.480). With regard to work experience, majority were 3 years and lower 56.5% (n=13); majority of the 4-7 years 58.3(n=109), and majority of those of 8 years and nearly 60%



reported having low access to farm housewives in transfer of farm technologies ( $X^2 = 3.535$ ;  $P = 0.473$ ).

**Table 6:** Socioeconomic Characteristics of Respondents and Agents Access to Farm Housewives

Variable			Agents Access to Farm Housewives for Information				$X^2$	P
			Low	Moderate	High	Total		
Parental Background	City	Count	68	30	20	118	.908	.635
		% within Background	57.6	25.4	16.9	100		
	Rural	Count	98	35	33	166		
		% within Background	59	21.1	19.9	100		
Distance from City	1-5km	Count	40	17	15	72	3.488	.480
		% within Distance	55.6	23.6	20.8	100		
	6-10km	Count	70	33	25	128		
		% within Distance	54.7	25.8	19.5	100		
	Above 10km	Count	56	15	13	84		
		% within Distance	66.7	17.9	15.5	100		
Work Experience	3 years & lower	Count	13	5	7	25	3.535	.473
		% within experience	56.5	13	30.4	100		
	4-7 years	Count	109	41	35	185		
		% within experience	58.3	23	18.7	100		
	8 years & above	Count	44	19	11	74		
		% within experience	59.5	25.7	14.9	100		

**Source:** own data 2011; Sig. (2-sided)  $p < 0.05$  significant(S);  $P > 0.05$  not significant (NS)  $df = 2$ (parental background),  $df = 4$ (distance from city , work experience)  $n = 284$

## CONCLUSION

The study investigated access of farm housewives to agricultural agents in selected zone of the SNNPR state in Ethiopia. The respondents' demographic characteristics indicated that male agents' number was three fourth of that of female agents. This shows that there were limited female agents in the field and that the sector was dominated by males. This finding is in conformity with Holmes & Jones (2011) and Tewedaj et al (2010). Age wise, majority reported they were between 25-35 years of age which is an indication for existence of more

younger and fresh recruits in the area. More respondents also reported that they were married and that they were from rural background which is advantageous because married agents are settled and their rural background helps in understanding farmers. The fact that majority of the agents were at a distance between 6 to 10 kms from a nearby town/city implies that more agents had lower access to towns or cities. Almost all (93.3%) agents hold diploma level professional training which reflects existence of lower knowledge level in agriculture. Work experience of majority was between 4 to 7 years which indicates that most had worked in the area long enough to acquire sufficient experience. The response also indicated that majority of the agents did not have access to housewives and very rarely or never transferred agricultural information to these women even in the absence of the husbands. The main reason for not transferring information to housewives, according to the respondents, was due to the belief that it is against culture to talk to the housewives, a point which goes in conformity with arguments of Daniel (2008) and Cohen & Mamusha (2011). A cross-tabulation between the agents' access to farm housewives and selected demographic characteristics such as gender, age, and marital status indicated that female agents had relatively better access to housewives. The chi-square indicated the existence of relationship between gender and access to housewives ( $X^2=9.057$ ;  $P=.011$ ). On the contrary, there was no significant relation found in case of other selected demographic and socio-economic variables (age, marital status, family background, distance from city, and work experience). Based on the findings of the study, the researchers would like to recommend that more female agents should be recruited not only to increase access of farm housewives to innovation information but also to respond to the gender inequality in the area. It was also suggested that at the time of recruitment of agricultural agents, priority should be given to candidates who come from rural background. It is also suggested that training on how to help farm housewives should be given to all agents so that they overcome the cultural barriers that found to limit them from transferring valuable information to housewives. Training should also be given to male house heads on the importance of providing housewives with innovation information.

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