Scientific Papers. Series A. Agronomy, Vol. LVI, 2013
ISSN 2285-5785; ISSN CD-ROM 2285-5793; ISSN Online 2285-5807; ISSN-L 2285-5785

A COMPARATIVE STUDY OF GENDER PARTICIPATION IN DECISION MAKING REGARDING CROP MANAGEMENT

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Abstract

The present study was conducted during 2011 to compare the gender participation in decision making regarding crop management in district Swabi of Khyber Pakhtunkhwa province, Pakistan. For this purpose, six union councils i.e Ganduf, Kabgani, Ganichatra, Gabasni, Nara Amazi and Menai were selected. Data were collected from 240 male and 240 female respondents randomly selected for the purpose and analyzed using a paired t-test for comparison of gender participation in decision making regarding crop management. The results indicate that overall level of women participation in decision making was lower as compare to men in the study area.This situation reflects a male dominated society. However, the highest difference of gender participation was recorded in decision making regarding land preparation which ranked 1st with mean difference 0.71 followed by purchase of inputs and marketing of produce which ranked 2nd and 3rd with mean difference 0.60 and 0.56, respectively. Likewise, there existed a highly significant difference in the aspects of insect/ pests' identification followed by controlling insect/ pests with local recipes and manually which ranked 1st, 2nd and 3rd with mean difference 0.55, 0.50 and 0.49, respectively. Similarly, there was a highly significant difference between gender decision making in all weed control measures. However, the highest difference was found in the chemical weed control closely followed by manual and cultural weed control measures which were ranked 1st, 2nd and 3rd with mean difference 0.51, 0.50 and 0.47, respectively.However, women enjoyed sufficient authority in decision making regarding some of the farm activities like harvesting of crops, bringing produce to one place, its threshing and storing grain in domestic godowns. The study concludes that overall women participation in decision making regarding crop management was lower than men which may be enhanced by launching development projects to increase agricultural productivity through exploiting available resources by both genders of the society.

Key words: *Gender participation, Decision making, Crop management, gender empowerment.*

INTRODUCTION

The economy of Pakistan is based on agriculture. It had a population of 13.24 million (Census, 1998; Govt. of Pakistan, 2007), whereas, the present estimated figure has reached to 17.71 million persons. Among this huge populace, women shares over 50% of the total count and perform vital roles in the domestic and economic life of the society. Rural and national development can hardly be achieved if this important segment of the society is neglected (Kishor et al. 1999). In acknowledgment of the important role of women in the national development, the Government of Pakistan has made a separate federal ministry at Islamabad for dealing women affairs and thus focus is laid on bringing about planned and desirable change in the rural societies through agricultural development. The success of these planned programmes principally depends on the rational decision making by women (Vandana, 2004). However, the role of women in decision-making regarding agriculture has not generally been investigated (Amali, 1989). Even today male dominance in decision making regarding family and economy is continued even in the regions where women are the principal providers of labour because the influence of women is not recognized. The women are downgraded and bound to play a secondary role both at home and the economy levels. Okafor et al 2002 also confirmed that women of developing countries are disadvantaged as compared to men. Women are denied equal access to land structure and availing extension services under male dominated socio-political system. The lack of women consultation and ignoring their specific capabilities and responsibilities prevent new agricultural projects and technologies from adoption at

farm (Awake, 1998). Rahman et al. 2003 stated that numerous reasons are responsible for the deprived position of women in the developing countries. They are low skilled, less literate and lack organizational structures, through which resources can be mobilize for their benefit. Similarly their access to formal education is limited by having separate gender school system, because boys' schools are given priority (Penh, 2006). At the same time poor health conditions and high fertility rate restrict their development and lack of mobility further worsens the situation (Parveen, 2001; Rani, 1992). Rural women in Pakistan, are working in the crop and livestock production, cottage industry and household maintenance but their work is not recognized. (Naqvi et al., 2003). Therefore it is necessary to analyze the gender participation in agriculture decision making and rural development Tackling all the gender issues in agriculture and rural development, it is widely accepted that full participation of all citizens, both men and women is the best way to build and sustain society that will reduce conflict and achieve human development (Damisa et al. 2007). Keeping the importance of rural women in agricultural production in view, this study was conducted in the six union councils of district Swabi of Khyber Pakhtunkhwa province to investigate the level of women participation in decision-making in various areas of crop management with the following specific objectives:

Objectives of the study

1. To compare gender participation in decision making regarding crop management in district Swabi of Khyber Pakhtunkhwa province, Pakistan.
2. To present appropriate recommendations based on the findings of the study.

MATERIALS AND METHODS

The population for the study consisted of the men and women farmers in the 6 union councils of districts Swabi of Khyber Pakhtunkhwa province i.e Ganduf, Kabgani, Ganichatra, Gabasni, Nara Amazi and Menai. District Swabi has two sub-divisions also called tehsils. These are tehsil Lahor and tehsil Swabi. District Swabi has a total cultivated area of 87,046 hectare (Crop statistics, 2010-11) and had a total population of 1,026,804 persons (Census, 1998; Govt. of Pakistan, 2007). Whereas, the present estimated population of this district is 1.41 millions. It has 56 union councils i.e 15 urban and 41 rural. There are 157 villages in the district. Researchers used multistage random sampling technique for the purpose of study. Thus, one tehsil was selected by using simple random sampling technique. Thereafter, six villages were selected at random including one from each union council. Furthermore, 40 men and 40 women respondents were selected by means of systematic random sampling technique. Thereby making a total of 480 respondents i.e 240 men and 240 women. An interview schedule was constructed, checked for its validity and reliability and was pre-tested. The respondents were interviewed through the pre-tested interview schedule by "survey". The data collected were analyzed by applying Statistical Package for Social Sciences (SPSS). Means and standard deviation were computed for different variables. However, researchers also applied t-test to determine the difference between men and women participation in decision making process regarding crop management and results drawn are given as follow.

RESULTS AND DISCUSSIONS

Table 1 indicates that the difference between responses of men and women respondents was highly significant in almost all areas of decision making regarding crop management. This situation reflects a male dominated society because level of women participation in decision making was lower as compare to men. However, the highest difference in decision making process by men and women was recorded in the area of land preparation which ranked 1st with mean difference 0.71 followed by purchase of inputs and marketing of produce which were ranked 2nd and 3rd with difference in mean values as 0.60 and 0.56, respectively.

The results of the present study are strongly supported by those of (Damisa et al, 2007) who concluded that woman farmer is heavily involved in agriculture in Nigeria but the level of her participation in farm management decision making is quite low, especially in case

of land preparation it was found to be nil with regard to considering final decision.

The highest difference in decision making between the two categories in all aspects may be due to the fact that men are still dominating segment of the society. This may also be due to the unawareness about Islamic education which lay emphasis on seeking mutual discussion and thereafter proceeding in all matters of life. The mean values indicate that participation level in decision making of both the respondents ranged from medium to high but those of men tended towards high and those of women respondents tended towards medium categories.

Table 1. Mean ±SD with t-values for comparison of gender participation in decision making regarding various crop production activities

Areas of decision making regarding crop production	Men participation in decision making	Women participation in decision making	Mean difference	t-value	P-value
	Mean ± SD	Mean ± SD			
Preparation of land	3.98 ± 0.64	3.27 ± 0.61	0.71	-6.92	<0.001**
Purchase of inputs	3.90 ± 0.62	3.30 ± 0.54	0.60	-7.91	<0.001**
Marketing of produce	3.96 ± 0.74	3.40 ± 0.61	0.56	-5.60	<0.001**
Which fertilizer to apply	3.86 ± 0.79	3.32 ± 0.55	0.54	-5.61	<0.001**
How much seed rate to use	3.73 ± 0.63	3.22 ± 0.57	0.51	-6.96	<0.001**
Which sowing method to follow	3.92 ± 0.63	3.42 ± 0.65	0.50	-6.26	<0.001**
Applying FYM to fields	3.89 ± 0.70	3.42 ± 0.66	0.47	-4.82	<0.001**
Irrigation methods	3.65 ± 0.67	3.31 ± 0.58	0.34	-5.03	<0.001**
Controlling pre & post harvest losses	3.56 ± 0.75	3.23 ± 0.53	0.33	-4.25	<0.001**
How to control weeds	3.71 ± 0.79	3.39 ± 0.65	0.32	-3.65	<0.001**
Grain store management	3.51 ± 0.67	3.28 ± 0.70	0.23	-2.33	<0.05*

Source: Survey data; * = Significant (P< 0.05); ** = Highly significant (P< 0.01)

Table 2 shows that there was a highly significant difference between the extent of men and women participation in the decision making process regarding crop management. However, the highest difference was found in the aspects of insect/ pests' identification followed by insect/ pest control with local recipes as well as manually and ranked 1st, 2nd and 3rd with mean difference 0.55, 0.50 and 0.49, respectively.

The highest difference between gender participation in decision making regarding pest control measures was due to the low education rate of women, and so lack of knowledge regarding latest agricultural technologies.

The mean values indicate that participation level in decision making of both the respondents ranged from medium to high but those of men tended towards high whereas those of women respondents tended towards medium classes.

Table 2. Mean ±SD with t-values for comparison of gender participation in decision making regarding various pest control activities

Areas of decision making regarding pest control	Men participation in decision making	Women participation in decision making	Mean difference	t-value	P-value
	Mean ± SD	Mean ± SD			
Insect/ pests' identification	3.92 ± 0.66	3.37 ± 0.62	0.55	-10.21	<0.001**
Insect/ pests control by local recipes	3.93 ± 0.68	3.43 ± 0.60	0.50	-9.40	<0.001**
Manual pest control	3.90 ± 0.70	3.41 ± 0.64	0.49	-9.94	<0.001**
Seed treatment	3.86 ± 0.64	3.38 ± 0.50	0.48	-10.54	<0.001**
Mass killing of insects pests	3.88 ± 0.68	3.41 ±0.64	0.47	-9.39	<0.001**
Biological control of Insect/ pests	3.85 ± 0.62	3.39 ± 0.57	0.46	-10.46	<0.001**

Source: Survey data; * = Significant (P< 0.05); ** = Highly significant (P< 0.01)

Table 3 shows that there was a highly significant difference between the level of men and women participation in the decision making process regarding all weed control measures. However, the highest difference was found in the aspect of chemical weed control closely followed by manual and cultural weed control measures which were ranked 1st, 2nd and 3rd with mean difference 0.51, 0.50 and 0.47, respectively.

The highest difference in the decision making in regarding chemical weed control measure may be due to the reason that women farmers not involved at all in the spray of chemicals i.e pesticides rather this task is exclusively considered as the responsibility of male farmers in the study area.

The mean values indicate that responses of male and farmer respondents regarding cultural weed control measure in the pre FFS scenario ranged from medium to high but tended towards medium. However, it ranged between high and very high categories in the post-FFS scenario, but tended towards high category.

Table 3. Mean ±SD with t-values for comparison of gender participation in decision making regarding various weed control measures

Areas of decision making regarding weed control measures	Men participation in decision making	Women participation in decision making	Mean difference	t-value	P-value
	Mean ± SD	Mean ± SD			
Chemical	3.83 ± 0.61	3.32 ± 0.56	0.51	-10.77	<0.001**
Manual	3.84 ± 0.1	3.34 ± 0.55	0.50	-11.13	<0.001**
Cultural	3.86 ± 0.69	3.39 ± 0.64	0.47	-10.41	<0.001**
Mechanical	3.74 ± 0.64	3.30 ± 0.54	0.40	-11.40	<0.001**
Legal	3.73 ± 0.62	3.34 ± 0.51	0.39	-10.48	<0.001**

Source: Survey data; * = Significant (P< 0.05); ** = Highly significant (P< 0.01)

Table 4 reflects that the difference between gender participation in the decision making process regarding all farm activities was a non-significant. This means that women were empowered as they enjoyed sufficient authority in decision making process regarding harvesting of crop, bringing produce to one point, threshing and these areas of farming.

storing grain at home godowns.

The results of the present study are strongly supported by those of the mean values indicate that responses of farmers regarding collecting insect/ pests specimens was good while rest of the aspects regarding zoo maintenance ranged from satisfactory to good but tended towards good.

Table 4. Mean ±SD with t-values for comparison of gender participation in decision making regarding various farm activities

Areas of decision making regarding farm activities	Men participation in decision making		Women participation in decision making		Mean difference	t-value	P-value
	Mean	SD	Mean	SD			
Harvesting of crops	3.83	0.73	4.00	0.74	-0.17	-1.58	0.1154 NS
Bringing produce to one point	3.81	0.69	3.90	0.77	-0.09	-0.85	0.3935NS
Threshing	3.79	0.68	3.82	0.75	-0.03	-0.25	0.8038NS
Storing grain	3.77	0.70	3.92	0.70	-0.15	-1.44	0.1513NS

Source: Survey data; * = Significant (P< 0.05); ** = Highly significant (P< 0.01)

CONCLUSIONS

It can be concluded from the study that the difference in the level of men and women participation in decision making was highly significant in almost all areas of crop management. This differential situation reflects that level of women participation in decision making was quite lower as compare to men in

the study area. Although men and woman has lot of participation in farming but the level of women participation in decision making regarding crop management is low. This can be attributed to the widely existence of male dominance across third world countries which may be reduced by acknowledging as well as appreciating the work of women. This situation reflects a male dominated society. However, women enjoyed sufficient authority in decision making process regarding harvesting of crop, bringing produce to one point, its threshing and storing grain at home godowns. Hence it is recommended that overall women participation in decision making regarding crop management may be enhanced by launching development projects possessing women in development (WID) section to increase agricultural productivity through exploiting available resources by utilizing services of both genders of the country.

REFERENCES

Amali E., 1989. The role of Women in Agricultural development Process. Development studies Review Centre Publication. University of Jos., 1& 2, p. 52-60.

Damanisa M.A., Yohanna M., 2007. Role of Rural Women in Farm Management Decision Making Process: Ordered Probit Analysis. Trends in Applied Sciences Research 2 (3), p. 241-245.

Kishor R., Gupta B., Yadav S.R., Singh T.R., 1999. Role of Rural Women in Decision-Making Process in Agriculture in district Sitapur (UttarPradesh). Ind. J. Agric. Econom., 54, p. 282-286.

Govt. of Pakistan, 2007. Economic Survey, 2007. Federal Bureau of Statistics, Islamabad.

Naqvi Z.F., Shahnaz L., 2003. How Do Women Decide to Work in Pakistan. Paper presented in the Annual General Meeting of Pakistan Society of Development Economists 2003.

Okafor C.N., Chukwu G.O., 2002. The Role of Women in Food Production in Orumba North Local Government Area of Anambra State. In Food and Fibre Production in Nigeria in the 21st Century. Proceedings of the First Annual Conference of the College of Agricultural and Veterinary Medicine, Abia State University, Umuahia, p. 89-93.

Parveen S., 2001. The sociology study of female participation in decision making process in various family matters in selected urban areas in Faisalabad Distt. M.Sc. Thesis, Rural Sociology, Univ. of Agric., Faisalabad (Unpublished).

Penh P., 2006. Gender Mainstreaming Policy and Strategy in Agriculture, Development Policy in Asia and the Pacific Ministry of Agriculture, Forestry and Fisheries. Kingdom of Cambodia.

Rahman S.A., Alamu J.F., 2003. Estimating the Level of Women Interest in Agric: the application of Logit Regression Model. Nig. J. Sci. Res., 4, p. 45-49.

Rani S., 1992. A study of rural women's participation in decision-making with regard to farm and family matters. M.Sc. Thesis, Rural Sociology. University of Agriculture, Faisalabad (Unpublished).

Vandana S., 2004. Empowering Women. BBC World Service Trust.com. Rahman, S.A. and J.F. Alamu. 2003. Estimating the Level of Women Interest in Agriculture: The Application of Logit Regression Model. Nigerian Journal of Scientific Research 4, p. 45-49.