



RESEARCH ARTICLE

An Assessment of Participation of Rural Women in Livestock Management and Their Training Needs in Potohar Region

Farhana Nosheen*, Tanvir Ali¹, Haq Nawaz Anwar² and Muhammad Ahmad³

Department of Home Economics, G. C. University, Faisalabad; ¹Department of Agricultural Extension, University of Agriculture, Faisalabad; ²Department of Sociology, G. C. University Faisalabad; ³Adaptive Research Complex, Govt. of the Punjab, Dera Ghazi Khan, Pakistan

*Corresponding author: farhananosheen@ymail.com

ARTICLE HISTORY

Received: July 02, 2009
Revised: March 11, 2010
Accepted: May 5, 2010

Key words:

Livestock management
Potohar
Rural women
Training need

ABSTRACT

Potohar plateau is a mountainous and rocky region, covered with scrub forest, interspaced with flat lying plains; the north and north-east consist of softly undulating plain areas along with some rocky patches. Realizing the need for the quantification of women participation in livestock management, a study was conducted to assess the level of participation and need of training in areas of interest. Chakwal, the third most populated district of barani Potohar, was selected as the universe of this research. Like other districts of Pakistan, all livestock species were reared in Potohar region including Chakwal district. Among total livestock population in the district, the decreasing order of species began with goats, followed by cattle, sheep, buffaloes, asses, camels, horses and mules. Although rural women had productive role in livestock management, yet they neither received adequate advice nor had adequate access to modern technology that could benefit them in their livestock management activities. It was revealed from the study that more frequently carried out activities by rural women were livestock management, animal production, protection and poultry husbandry. Rural women were interested to get their training in livestock management, animal production, protection, poultry husbandry and marketing of animals to boost up the livestock productivity.

©2011 PVJ. All rights reserved

To cite this article: Nosheen F, T Ali, HN Anwar and M Ahmad, 2011. Participation of rural women in livestock management and their training needs in Potohar region. *Pak Vet J*, 31(1): 40-44.

INTRODUCTION

Geographically located in the Salt Range, Potohar Plateau is a mountainous and rocky region, covered with scrub forest and interspaced with flat lying plains. The north and north-east part consist of softly undulating plain areas with scattered rocky patches, ravines and gorges and some desert areas. The plains are being cultivated, even those which lie in the hilly regions, and a considerable area is covered by forests (Govt. Punjab, 2000).

Livestock are treated as a form of financial, social and natural capital (McLeod and Wilmore, 2001). The purposes of maintaining the livestock are different in different societies in gender perspective like for income generation, food security, draught purpose, fuel and manure, traditional life style and paying school fee (Heffernan *et al.*, 2001). Among by-products of livestock, manure has its own importance. Collection and preparation of dung cakes is not only the source of income but it is also used as fuel for cooking and saves the rural

women labour required for collection of fuel wood (McCorckle, 1987).

Livestock farming in Pakistan is carried out under many systems like transhumant, pastoralist, agropastoralist, subsistence and commercial stall-feeding, and peri-urban intensive system (Rashida, 1999). These systems differ widely among ecological and socio-political zones but in the villages of Punjab mainly stall-feeding and grazing are in vogue.

Both men and rural women are involved in the livestock management, but rural women play an important role in sustainability of livestock through caring and grazing of animals, fodder collection, cleaning of animal sheds and processing of milk, whereas fodder production is usually the responsibility of men (Ishaq, 2005).

Iqbal (2003) reported that in Cholistan desert, cattle are the major animals of the area, followed by sheep, goats and camels. Milk production and sale of dairy products are the first and second most important objectives of the farmers in the area. The grazing and

watering of animals are mainly performed by males and/or male children. However, calves are often tethered at the encampment and are stall fed and cared by rural women members of the family. Milking of camels is performed by rural men, however, milk handling and processing is primarily performed by rural women folk (Rashida, 1999).

In Pakistan, dairy development and livestock management extension services are responsible to enhance the process of livestock development to meet the milk, meat, and hide needs of farmers (of both sexes) through information that enables them to take good decision in farming, to transfer appropriate technologies from research and other sources and ultimately to improve their livelihood (Subedi and Garforth, 1996; Rashida, 1999). But the extension services in Pakistan have benefited men more than rural women. Village -AID system was the only one in which there was some involvement of rural women (World Bank, 2003; Iqbal, 2003).

Although rural women have productive role in livestock management, mostly they do not get a chance to receive adequate advice and have little access to modern technology that could benefit them in their activities. In recent years, there has been an increasing reorganization of the need to integrate rural women into main stream development efforts (Nosheen *et al.*, 2008; Hassan, 2008).

Educated rural women need to be encouraged to get training as extension workers. Some efforts in this direction are the provision of special training courses for rural women farmers, and the reorientation of dairy development and livestock management curricula to emphasize the needs of rural women in milk and meat production (Lahai *et al.*, 2000; Feder *et al.*, 2001). Participation of rural women in livestock activities requires women extensionists, researchers, and policy makers in the system (FAO, 1989; Hassan, 2008).

Realizing the importance of livestock as a source of income of farmers and the need for the quantification of women participation in livestock management as well as the need for their training in animal management, a study was conducted in district Chakwal.

MATERIALS AND METHODS

A cross sectional survey research design was used for this study, following a multistage random sampling process. Two out of four tehsils of district Chakwal were selected by employing simple random sampling technique. Afterwards, five villages were selected randomly from each tehsil and 20 households (farming and non-farming families) of each village were further selected by using systematic random sampling technique. Thus, a total of 200 households were included in the study. One married couple from these households was selected as respondents and a total of 400 respondents (200 rural women and 200 rural men) were interviewed. The data were collected through pre-tested semi structured interview schedule. The obtained data related to livestock species, average number of animals per household, livestock types, herd sizes, level of human participation in

livestock management activities, gender-based participation and training needs in various livestock activities. The collections of data were started during the year 2007 and it was continued till February, 2008. The quantitative data acquired from the field were transferred in the Microsoft Excel and SPSS in order to summarize the gathered data. The information was presented in the form of simple-tables containing mean values, frequencies and percentages for comparison across various groups. Chi-square test was applied in hypothesis testing for examining whether the differences in the variable under consideration across groups were statistically significant for inferential analysis.

RESULTS AND DISCUSSION

Livestock production in the study area

Like most other districts of Pakistan, animals of all livestock species were recorded in Chakwal district. Turning to sample farms, cattle were the most frequently kept animal (70% house holds) with a mean number of 2.91 animals/household, followed by goats (46% house holds) with a mean number of 3.28 animals/household, buffaloes (40% house holds) with a mean number of 2.36 animals/household and bullocks (27% house holds) with a mean number of 2.13 animals per household. Sheep were the least kept animal (14.5% house holds with a mean number as 3.24 animals per household) on sampled households (Table 1). It can be concluded that the data gathered from sampled households also represents the spread of various livestock species in the district.

Table 2 shows the types of livestock species reared on sampled house holds. It was found that either mixed or large ruminants were kept by the majority of households. With mixed types, the average number of animals kept was much higher than with other types, making the inter-category differences significant ($P < 0.05$). By herd size, 45% of the households had small herds, i.e. up to 5 animal units. The inter-herd size differences were statistically highly significant. Similar trends were observed by Nosheen *et al.* (2008) and Hassan (2008).

Gender based participation of respondents in livestock management

In livestock farming, more frequently carried out activities by rural women included livestock management, animal production, protection and poultry husbandry. On rural men's part, the most frequent livestock farming related jobs were animal production, protection and marketing (Table 3). Statistically highly significant differences were observed for all the aspects of gender involvement in livestock management activities. The difference in percentages for reporting the extent of participation in different activities for livestock by rural women versus rural men consistency in reporting the degree of participation in livestock management activities clearly indicates the non-recognition of rural women contribution in agricultural activities.

Our findings are in line with those of Ishaq (2005) and Rashida (1999) that women were more active in livestock and poultry management where as men were leading in marketing of animals. The roles of women are

Table 1: Frequency distribution of house holds according to the livestock species and average number of animals per house hold

Animal type	House holds (200)		Average number of animals	
	Number	%	Number	Standard Deviation
Buffaloes	80	40.0	2.36	1.02
Bullocks	54	27.0	2.13	1.60
Cows	140	70.0	2.91	2.17
Goats	92	46.0	3.28	2.92
Sheep	29	14.5	3.24	3.10
Other animals	3	1.5	2.00	0.00
Livestock keepers	170	85.0	5.67 ¹	3.94

Note: the average number of animals per household in column 4 pertains to those households keeping those animal species; ¹The last figure in column 4 pertains to adult animal equivalents rather than the number of heads described earlier. For estimating this figure buffalo number was multiplied by its weight as 1.5, bullock as 1.5, cattle as 1, sheep/goats as 0.25, and other animals as 0.3.

Table 2: Frequency distribution of livestock types and herd sizes kept on sample respondents farms

Items	Households (200)		Mean number of animals or units	
	Number	%	Number	Standard Deviation
Animal types				
Large ruminants	71	35.5	6.19	4.64
Small ruminants	10	5.0	0.85	0.67
Both	89	44.5	5.79	3.12
Total	170	85.0	5.67	3.94
				Sig.level=0.000
Herd size				
Up to 5 animal units	90	45.0	2.82	1.34
>5 to 10 animal units	61	30.5	7.29	1.65
>10 animal units	19	9.5	13.91	2.66
Total	170	85.0	5.67	3.94
				Sig.level=0.000

Table 3: Frequency distribution of the respondents by level of participation in livestock management activities

Activity types	Rural women (n=200)						Rural men (n=200)						χ^2 -value
	Never		Sometimes		Often		Never		Sometimes		Often		
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	
Animal production	103	51.5	20	10.0	77	38.5	78	39.0	57	28.5	65	32.5	22.246*
Animal protection	117	58.5	27	13.5	56	28.0	75	37.5	55	27.5	70	35.0	20.304*
Marketing of animals	135	67.5	23	11.5	42	21.0	116	58.0	63	31.5	21	10.5	27.043*
Livestock management	54	27.0	14	7.0	132	66.0	144	72.0	39	19.5	17	8.5	141.460*
Poultry husbandry	117	58.5	30	15.0	53	26.5	179	89.5	14	7.0	7	3.5	54.071*

The scale used for estimating mean for the role and participation level is: 1=Never/none; 2=sometimes; 3=often. *=Significant ($p < 0.01$).

visible in the livestock management, but they are discriminated against by stereotypes which restricted them to reproductive role and denied access to resources which could enhance their social and economic contribution to the society.

The findings in Table 4 indicate the ranking of the level of participation of rural men and women in various activities. The three top ranking activities of rural women were livestock management, animal production and protection. Their lowest ranking activities were related to poultry husbandry and marketing of animals. For men, crop protection, production and marketing of animals were the top three ranking activities. Correspondingly, the lowest ranking activities for the men were livestock and poultry management. Similar observations were reported by Bekure *et al.* (1991) and Amuguni (2001) that women were actively participating in livestock management and

animal production whereas men were actively participating in animal protection and production.

Gender based trainings requirements in livestock management

Both the rural men and women respondents were asked about their training needs in various activities related to livestock management. Majority of the rural men desired for training in animal protection, followed by animal production, marketing, management and poultry husbandry (Table 5). Majority of their women counterparts were interested to get training in livestock management, followed by animal production, protection, poultry husbandry and marketing of animals (Table 5).

The trainings mentioned by the respondents were also gauged in terms of degree of importance attached to them by using Likert scale. A number of good indications could

Table 4: Gender-based participation ranking for livestock management

Activity type	Rural women respondents (n=200)			Rural men respondents (n=200)		
	Mean	SD	Ranking order	Mean	SD	Ranking order
Livestock management	2.390	0.884	1	1.365	0.635	4
Animal production	1.870	0.942	2	1.935	0.845	2
Animal protection	1.695	0.881	3	1.975	0.853	1
Poultry husbandry	1.680	0.867	4	1.140	0.437	5
Marketing of animals	1.535	0.820	5	1.525	0.679	3

SD=Standard Deviation

Table 5: Distribution of respondents according to their training needs for various activities/roles

Activity type	Rural women respondents (n=200)		Rural men respondents (n=200)		χ^2 -value
	Yes (#)	Yes (%)	Yes (#)	Yes (%)	
Livestock management	146	73.0	56	28.0	81.008**
Animal production	97	48.5	122	61.0	6.307*
Animal protection	83	41.5	125	62.5	17.668**
Poultry husbandry	83	41.5	21	10.5	49.948
Marketing of animals	65	32.5	84	42.0	3.861*

* = Significant (P<0.05) ** = Significant (P<0.01)

Table 6: Ranking by mean scores about the importance of training in various activities

Activity type	Rural women respondents (n=200)			Rural men respondents (n=200)		
	Mean*	SD	Ranking order	Mean*	SD	Ranking order
Animal production	4.206	0.877	3	3.656	1.051	2
Animal protection	4.265	0.842	2	3.704	1.000	1
Marketing of animals	4.123	0.960	4	3.333	1.010	4
Livestock management	4.384	0.745	1	3.375	1.001	3
Poultry husbandry	4.096	0.878	5	3.095	1.091	5

SD=Standard Deviation; The scale used for estimating mean for the importance of training is: 1=to some extent; 2=below average extent; 3= average extent; 4= above average extent; and 5=maximum extent; *The mean level pertains to those respondents who participate in livestock activities and expressed some degree of importance to different types of livestock related training areas.

be drawn from Table 6. The findings were used for ranking the order of participation in various activities. The three top rankings showed the need for training of rural women in livestock management, animal production and protection. Their lowest ranking activities were related to marketing of animals and poultry husbandry.

At the same time, it also negates the general perceptions about rural men that they wanted to come out of home for nothing. Our findings clearly show that rural women folk want to contribute to household income in the household domain where they can assist in livestock management (Subedi and Garforth, 1996; Sadaf *et al.*, 2005). It appears that strong inclination of rural women for participation in farming activities would also positively contribute to make them a majority voice at the discussion table while planning for livestock farming (Ajayi *et al.*, 2003).

Conclusions

It is concluded that in livestock farming, more frequently carried out activities by rural women were livestock management, animal production, protection and poultry husbandry. With rural men, the most frequent livestock farming related jobs were animal production and animal protection. Rural men desired their training in animal protection, followed by animal production, marketing, management and poultry husbandry; whereas rural women were interested to get training in livestock management, followed by animal production, protection, poultry husbandry and marketing of animals.

REFERENCES

- Ajayi AO, AJ Farinde and EA Laogun, 2003. Women farmers training needs and their correlates for effective extension programme and poverty reduction in Dyo State, Nigeria. *J Ext*, 19: 91-102.
- Amuguni HM, 2001. A gender study focusing on the Turkana and Pokot of North West Kenya. Animal Health and Participatory Epidemiology Unit (APE), Pan-African Control of Epizootics (PACE), African unity/Inter-African Bureau for Animal Resources, Africa.
- Bekure S, PN de Leeuw, B Grandin and JH Neate, 1991. Maasai herding: An analysis of the livestock production system of Maasai pastoralists in Eastern Kajiado District, Kenya. ILCA System Study, No. 4. International Livestock Centre for Africa, Addis Ababa, Ethiopia.
- FAO, 1989. Access to extension and training: Improving Extension Work with Rural Women: An Instructional Package. Research, Extension and Training Division, Extension, Education and Communication Service, FAO, Rome, Italy.
- Feder G, A Willett and W Zijp, 2001. Agricultural extension: generic challenges and the ingredients for solutions. In: Wolf S. and D. Zilberman (eds), Knowledge Generation and Technical Change: institutional innovation in agriculture, Kluwer, Boston, USA, pp: 313-356.
- Govt Punjab, 2000. Punjab Development Statistics, 2000, Bureau of Statistics, Govt. of the Punjab, Lahore, Pakistan.

- Hassan, MZY, 2008. Analysis of the obstacles to gender mainstreaming in agricultural extension in Punjab: A case study of District Muzaffargarh, PhD Thesis, Dept. Agri. Ext., Univ. Agri., Faisalabad, Pakistan.
- Heffernan C, L Nielsen and F Misturelli, 2001. Restocking pastoralists: a manual. Livestock Production Programme, Department for International Development, London, UK.
- Ishaq M, 2005. Snags in buffalo farming, Economic & Business Rev., The Daily Dawn, Lahore, Pakistan, April 4.
- Iqbal J, 2003. Female participation in livestock production, care and management in rural areas of district Okara (A focus on poverty alleviation). MSc Thesis, Dept., Rural Sociology, Univ Agri, Faisalabad, Pakistan.
- Lahai BAN, P Goldey and GE Jones, 2000. The gender of the extension agent and farmers' access to and participation in agricultural extension in Nigeria. J Agri Edu Ext, 6(4): 223-233.
- McCorckle CH, 1987. Highlights from sociological research on small ruminants. Pastoral Development Network Paper 24d, Overseas Dev. Instt., London, UK.
- McLeod A and T Wilsmore, 2001. The delivery of livestock services to the poor: a review. In: Perry, BD, JJ McDermott, TF Randolph, KD Sones and PK Thornton (eds). Investing in Animal Health Research to Alleviate Poverty. International Livestock Research Institute, Nairobi, Kenya, pp: 304-339.
- Nosheen F, T Ali, M Ahmad and H Nawaz, 2008. Exploring the gender involvement in agricultural decision making: A case study of District Chakwal. Pak J Agri Sci, 45(3):101-106.
- Rashida A, 1999. Environmental Rehabilitation Project, Mount Elum, Distt. Swat, Islamic Republic of Pakistan.
- Sadaf S, S Muhammad and TE Lodhi, 2005. Need for the agricultural extension services for rural women in tehsil Faisalabad. Pak J Agri Social Sci, 1(3): 248-251.
- Subedi A and C Garforth, 1996. Gender information and communication network: Implication for Extension. Eur J Agri Edu Ext; 3(2): 63-74.
- World Bank, 2003. Regional Workshop on Operationalizing agricultural extension reforms in South Asia- A case study of Pakistan. Country paper, Delhi, India.