



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

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ABSTRACT

Potohar plateau is 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 neither received adequate advice nor had adequate access to modern technology that could benefit them in their livestock management activities. It was revealed from 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.

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INTRODUCTION

Geographically located in the Salt Range, Potohar plateau is 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 Wilsmore, 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, paying school fee (Heffernan *et al.*, 2001). Among by-products of livestock, manure has its own importance, and collection and preparation of dung cakes is not only the source of income but 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 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; 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 more rural women in higher level livestock studies means more potential rural women extensionists, researchers, and policy makers, and a critical mass of rural women to help push open the doors of greater opportunity for rural women (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 to assess the level of rural women participation and need of their training in livestock management in the pertinent areas.

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 were 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 sample households (Table 1). It can be concluded that the data gathered from sample 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 sample house holds. 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 sample 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 family 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 Dev.
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	5.67¹	3.94

Note: the average number of animals per household in column4 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 Dev.
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 where as 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

Table 4: Gender-based participation ranking for livestock management

Activity types	Rural women respondents (n=200)			Rural men respondents (n=200)		
	Mean	Standard Deviation	Ranking order	Mean	Standard Deviation	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

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

Activity types	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 types	Rural women respondents (n=200)			Rural men respondents (n=200)		
	Mean ¹	Standard Deviation	Ranking order	Mean ¹	Standard Deviation	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

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; ¹The 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.

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 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).

Conclusion

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; where as rural women were interested to get training in livestock management, followed by animal production, protection, poultry husbandry and marketing of animals.

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