Socio-Economic and Demographic Determinants of Women Livestock Managers' Participation in Decision Making: A Study of Punjab, Pakistan

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Abstract: In Pakistan, women's role at the domestic level and the farm level is not recognized due to patriarchal norms and culture. The study was designed to find the socio-cultural determinants of women's engagement in livestock care/management and their participation in decision-making. In a multistage sampling technique, 600 women livestock managers were selected for data collection. A well-designed interview schedule was a tool for data collection. Results showed that 85.3% of females had no right to use the money earned from milk products and their male family members kept this money. Only 14% of females had the right to decide the children's marriage. 95% of females reported that they had no rights to sell and purchase the animals. The study revealed that the main reason for such type of issues was illiteracy as 78.2% of female respondents of the study were illiterate. The participation level in livestock management was found to be affected by family type, education age, and marital status of women. At the same time, decision-making participation is not guaranteed by participation in livestock management. Government and Non-Government Organizations can enhance the facility of education and conduct awareness sessions about their rights and women can be empowered by engaging and recognizing them in productive activities of livestock.

Keywords: Women, Decision-Making, Livestock Management, Undervalued, Education

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1. Introduction:

It is a universal truth that women participate in livestock management and agriculture. There is no exception in it. Women accomplish the responsibilities of agriculture and livestock independently and sometimes their men share these responsibilities too. Women are considered better livestock managers and caretakers than their counterparts. Women are more hard-working and efficient in agriculture activities such as livestock, farming, and rural household chores Arshad et al., (2013). Women are mostly in charge of small animals and men control large animals. Consequently, women play a greater role in livestock and management than men Nazli and Hamid, (2007).

Two-thirds of the village population and a small section of the peri-urban population derive their livelihood from livestock. Livestock is the only source of milk, red

meat yogurt, cheese, and butter. It was estimated that almost 35 million people are directly or indirectly involved in animal farming and its related activities Holman et al., (2005). The role of women in livestock management is unavoidable. Women spend most of their daily time in different dairy and poultry-related activities such as bathing and grazing animals, cutting and chopping fodder, cleaning sheds, collecting cow dung, making dung cakes, etc. animals Afzal and Naqvi, (2004). Besides routine work, in many cases, women are also responsible for difficult tasks such as marketing, curing sick animals, and breeding animals IFAD, (2007). Although women are said to be involved in all tasks related to livestock (Shivik, 2004) they receive the least recognition of their hard work (GOP, 2016-17).

Rural Pakistani women play an important role as animals and poultry managers. For important decision-making regarding family and livestock issues, though, they are always overlooked. Livestock and poultry farming are always considered as domestic responsibilities of women Neelum and Khan, (2017). Rural Women are supposed to do all the activities such as care and production related to livestock and poultry farming but the decision of sale and purchase of livestock solely lies with men. Moreover, the level of participation and management for women varies from person to person and family to family. The reported participation of women in livestock management is 90%. Niamir-Fuller (2000) narrated that the responsibilities of rural women in Punjab include the processing of livestock products, care of domestic animals, and rearing large animals.

Livestock management is a task where men take less responsibility as compared to women because it is considered domestic work. A rural woman works 12 to 18 hours per day for livestock management and livestock activities such as maintenance, care, supervision, and reproduction. Likewise, men work for 8 to 10 hours daily and women work 16 to 18 hours daily for managing and caring livestock. Females work 60.8 times more for animal husbandry than males Arshad *et al*., (2010). Women take part in animal and agricultural tasks such as animal production, poultry, and agricultural production. A large number of women in the province of Punjab (Pakistan) participate in animal welfare and crop production but have not, unfortunately, had enough information about their work Andleeb *et al*., (2017).

In South Asia, crop production activities, farming systems, and livestock care/management are not only male-oriented. Women work with men side by side. In addition to providing income, Livestock is also used for a range of purposes i.e., meeting the nutrition value, food supply, fertilizer, plowing, and satisfying fuel requirements. As for the commitment of women to animal care and administration, South Asia ranges from region to region. In Pakistan, for example, women perform activities related to livestock: milking, sweeping cow sheds, raising animals' offspring, picking and preparing dung cakes, and hay cuttings. The same is the case for poultry farming. In Bangladesh, women carry out animal activities such as the cleaning and protection of sheds, particularly during the night, tackling health problems, and fodder selection. Males, as well as females, perform livestock activities in Nepal, such as grazing, milking, feedstuff cutting, and collection of dung. Nonetheless, only women have their positions in certain tasks, particularly concerning health problems. Women undertake animal tasks in India and their behaviors differ regionally.

Again, their participation in the livestock industry is unfortunate and their role is always undervalued in the livestock sector World Bank, (2003). Significant gender roles, particularly in the livestock sector, are different between men and women. For instance, from a gender perspective, the marketing system varies. The gender differences are market accessibility (a) producers: income generation through animal husbandry (b) processing (c) market agents: different types of risk such as sexual harassment, transport, marketing, hosting, and abuse (d) economics scale: better positioning of women on the market. Nori, 2004; IFAD, 2007; GOP, 2005; Oladeji, 2004; Ovesola, 2004; Flintan, 2003; Pakistan Economic Survey, 2016-17; Gocsik et al., (2015).

The debate shows that women have always undervalued positions in managerial activities, including production and care. The patriarchal system is the cause of gender discrimination in Pakistan. In particular, our social values and cultural system underestimate women’s role in household and farming activities. Therefore, it is important but difficult, especially for research, to collect data on women livestock managers. In this endeavor, therefore, an effort is made to provide empirical evidence on this matter and to recommend some steps to address this issue.

1.1 Objectives:

This study focused on the objectives as what are the main demographic correlates of the participation of women livestock managers in decision-making.

The main objectives of the study are as follows:

1. To find the participation level of women livestock managers in decision-making.
2. To find the socio-cultural determinants of the decision-making of the respondents.
3. To elaborate on the issues of rural livestock managers.

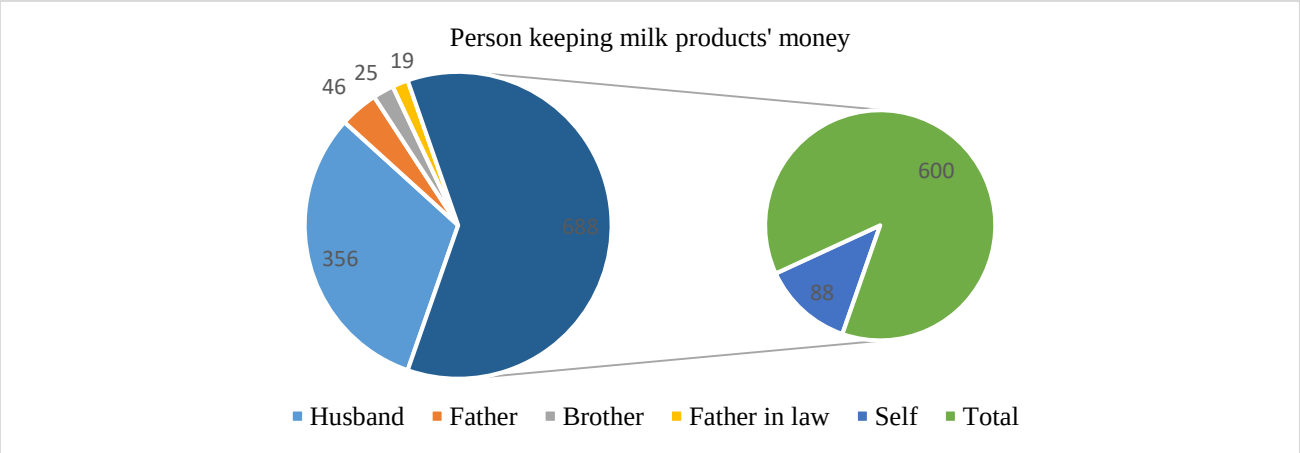
1.2 Material and Methods:

The nature of this study was quantitative. A sample survey was designed to be conducted in rural Punjab (Pakistan). A multi-stage sampling technique was employed to select the sample. At first, two districts, namely District Jhang and District Nankana Sahib were selected randomly. Two tehsils (one from each selected district: tehsil Jhang from Jhang district and Tehsil Nankana from district Nankana) and two union councils (one from each tehsil) were randomly selected. Resultantly, Union Council No. 58, namely Satiana, from tehsil Jhang, and Union Council No. 32, namely Machrala, from tehsil, Nankan Sahib was selected. Four villages (two from each union council) named Khanooana and Kharora Baqar, from Union Council Satiana, and Walgan Sohail and Bahawal Kot from Machrala union council were selected. Streets were also selected by using a simple random sampling technique Yamane, (1967). From each selected street, households were chosen by using systematic random sampling. In this way, every 3rd house was sampled household and the female head of the family was to be interviewed through an interview schedule as respondent. From each village proportionate sample according to the population of the village was selected. According to the Fitzgibbon table, a total sample of 600 female respondents, involved in livestock management and care, was selected; a sample of 300 women from each union council. Pre-testing of the interviewing schedule was carried out to determine the effectiveness of the questions designed to obtain relevant information from the respondents. Some amendments were made to the interview schedule based on problems faced during pretesting. After editing and coding, the data entry was made

for attaining frequency distribution to find out data discrepancies, if any, and for making corrections for further analysis of data. Data were analyzed at univariate, bivariate, and multivariate levels.

Results And Discussion

Figure 1: A person who keeps money from selling milk products.



The data shown in figure 1 reveals that a majority (59.3%) of the respondents' husbands kept the money earned by selling milk products, while, money was kept by more than one-tenth (14.7%) of the women themselves. In the rest of the (26 %) cases, the money was kept by other relatives such as fathers, brothers, in-laws, etc. Livestock management and poultry farming are considered part and parcel of the routine activities of women Niamir, (2000). So, they are not entitled to receive the reward whether it's recognition of their work or monetary returns/profit of their work. Because of this mindset, most of the money women earn through livestock management goes to the pockets of significant others. It has also been reported in different studies by Arshad, et al., 2013; Nazli and Hamid, 2007; Afzal and Naqvi, (2004) that women's role in livestock care and management is not appreciated.

The trends of money-keeping (almost 85.3% in this study) reflect the cultural patterns of Punjabi society where males are always dominant in all kinds of authoritative activities, even, in money-keeping. It has been reported that women earn more than their male family members through livestock. Women can be empowered by giving them opportunities to decide about the usage of the money they earn. However

the Punjabi culture is different from this proposal and women's role in income generation activities is undermined due to gender discrimination Tulachan and Karki, 2000; and Amuguni, (2001).

Figure 2: Participation in decision-making of children's marriage

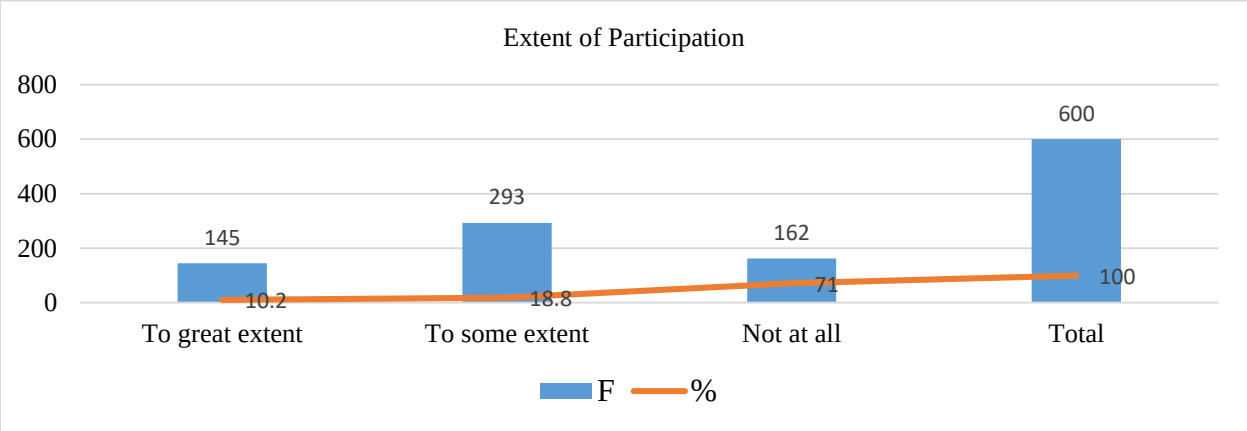
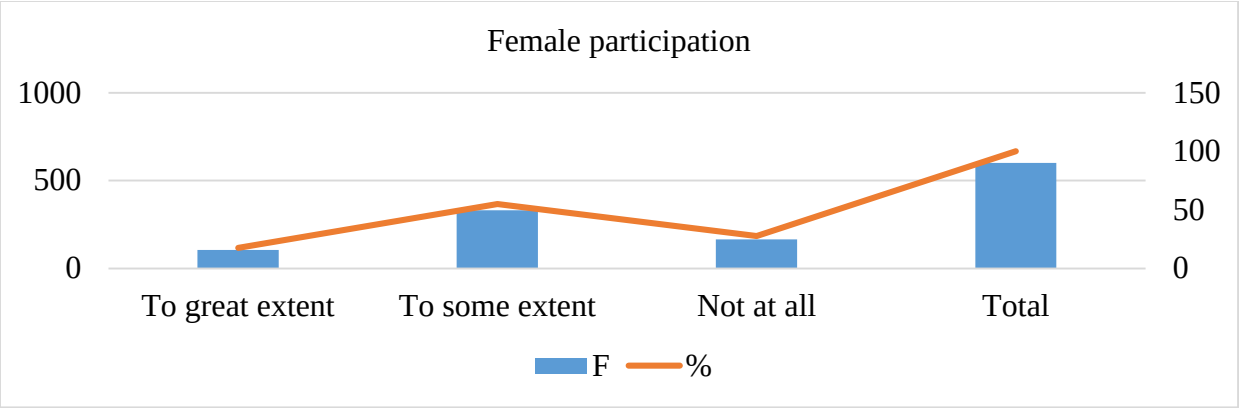


Figure 2 reveals that 18.8 percent of the respondents participated in the decision-making of their children's marriage to some extent. Only one-tenth (10.2%) of the respondent narrated that they were to a great extent involved in decisions of their children's marriage. In other words, a big majority (71.0%) of the women were "not at all" participating in the decision-making process of their children's marriage. It is stressed here that these are those women who spend a maximum of their daily time doing household activities and, most importantly, caring for and managing their livestock. But, they are not given importance at the time of decision-making about the most crucial part of their life i.e. marriages of their beloved children. This is also an important issue to be included in the policy to motivate the male heads of the families to consider the participation of their wives in these decisions, by telling them the social, psychological, and cultural outcomes/benefits of involving women in different aspects of family life.

Figure 3: Participation in decisions of purchasing the products for animals



The decision-making regarding the selection of animal breeds, sale and purchase of animals, sale of dairy and poultry products, and selection of fertilizer is solely done by the male members of the family. In present situations, women seek information for different tasks of livestock management from media and extension workers but final decisions are taken by the men (Mishra et al., 2008). Women are described as getting information about new technologies from different groups but the final decisions to implement the new technologies were taken by male family members. Surprisingly, women were not asked to decide about livestock for which they were spending most of their time to take care and manage. Such gender discrimination has been mentioned in several studies i.e. GOP, 2009; Ali et al., (2006). The information presented in Figure 3 exhibits that a majority (55%) of the respondents participated in decision-making regarding the purchase of animal products to some extent and more than twenty-seven percent were not involved in such decisions at all. It can be concluded that a huge majority (82.5%) of the women livestock managers were almost not involved in decisions on purchasing different products for their animals. However, less than one-fifth (17.5%) of the respondents reported that they were involved in the aforementioned decision to a great extent. Arshad et al. (2010) found different results about women's role in the decision-making process, especially regarding livestock issues, and reported that sometimes women alone and sometimes along with men were taking part in decisions on livestock management and care which is contradictory

to the findings of all other studies mentioned above.

Figure 4: Participation in the decision for the family budget

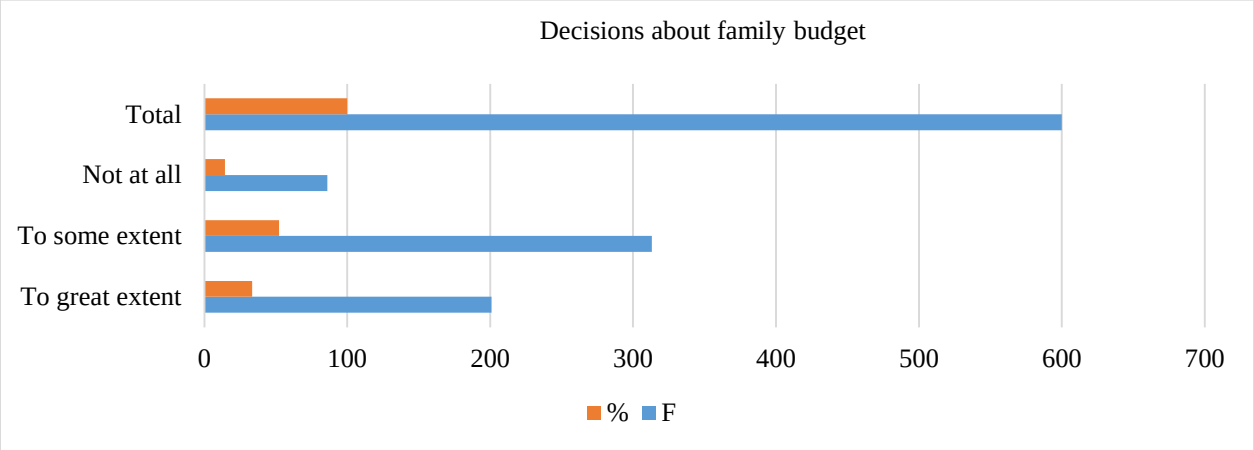


Figure 4 shows that the respondents who participated in decisions regarding household budget were fifty-two percent. Among the remaining respondents, more than one-third (33.5%) of the respondents were fully involved in the decision-making of the family budget. However, a small fraction of respondents never participated in such decision-making.

Bivariate Analysis

Table 1: Association between socio-economic characteristics and level of participation in the livestock care/management

Socio-economic characteristics	D. F.	Gamma	Chi-square	Level of significance
Age	4	.175	17.53	.007** (h.s)
Family type	2	.198	7.33	.023* (s)
Education level	2	-.114	17.21	.024*(s)
Marital status	4	.225	10.68	.037*(s)

Table 1 shows that the age of the respondents is highly significant among other socio-economic characteristics. The highly significant value of chi-square ($p <$ .01) and positive value of the Gemma test derived the conclusion that the age of rural women livestock managers is positively associated with the level of their participation in livestock management/ care activities. It means that elder respondents had more participation in livestock care/management. Therefore, the hypothesis "Age of the women is associated with the level of their participation in livestock care/management" is accepted. This seems quite logical as younger women in Punjabi

culture are not allowed to go outside the home to perform different livestock-related activities as it is considered against the respect and norms of the family/society. Similarly, younger women do not enjoy sufficient experience in performing many livestock-related activities. Neelum et al., (2017) found in their study that the age of the respondent is highly significant concerning livestock management.

The chi-square results in Table 1 are significant for the test of association between family type and level of participation in livestock management. Perhaps it is a culturally admitted fact that joint families' women have had a high level of participation in livestock care/management as compared to nuclear families' women. The cross-tabulation of family types of respondents and their level of participation in livestock management, in the present study, showed that a large majority (82.7%) of women living in a joint-family system had high levels of participation in livestock management. Therefore, the hypothesis "family type of the women is associated with the level of their participation in livestock care/management" is accepted.

The illiterate women devote more time to livestock management than literate women (Mishra et al., 2008). The association between the education level and the level of participation of respondents in livestock care/management is proved to be significant ($p< .05$) by the association test of chi-square. The negative gamma (-.114) value emphasizes a negative relationship between the variables. Hence, it can be concluded that literate women had less participation in livestock management. On the contrary, illiterate women managers reported greater participation in livestock care/management activities. The cross-tabulation confirmed these results as the majority (69.3%) of the illiterate respondents had participated at a high level in livestock care/ management. Therefore, the hypothesis "Education level of the women is associated with the level of their participation in livestock care/management" is accepted. The reasons for this high level of illiteracy can be found in the fact that the study has been conducted in rural areas on the one hand, and the sample is of women who are neglected due to the cultural and normative structure of Punjabi society, particularly in rural areas while making decisions. This is further supported by the national data which reported the female literacy rate as much lesser than the male literacy rate in Pakistan. (Saba, 2017) found that a major number of

people in Punjab faced the problem of illiteracy.

The results further cleared that marital status is also an important socioeconomic characteristic that determines the participation level of women in livestock management. It was found that married women are more likely to participate in livestock management than unmarried females. The reason for less participation of unmarried females in livestock management is that unmarried women are stigmatized as being liberal and out of control of family norms if they go out of the house for work. So they are restrained to live and do household chores within the four walls of the house. Therefore, the hypothesis "Marital status of the women is associated with the level of their participation in livestock care/management" is accepted.

Table 2: T-Statistics

	T	df	Sig. (2-tailed)
Problems in HHW	2.432	598	.015*
Participation in decision-making	-2.977	598	.003**

Grouping variable = family type

Most women reported that their routine life is extremely tough or very tough. They were working approximately 9-10 hours on average, and their work included domestic and productive activities Al-Rimawi, (2002). Women from joint families share responsibilities and their work regarding livestock is also shared and a large number of family members are available to work as compared to nuclear families. It was hypothesized that women from different family types would be facing different problems due to livestock management. The significant value (p = .015) of the t-test shows that women livestock managers from different family types face different levels of problems due to livestock management. Besides the fact that responsibilities are shared in joint families, decision-making is not a subject of democracy in joint families. In joint families (in Pakistan) most of the decision-making is entitled to the male head of family only. On the contrary, in nuclear families, domestic and productive work is managed by the married couple and so, they decide unanimously about almost everything. It was a hypothesis of the study that family type makes a difference in the participation level of decision-making. The results of the t-test are significant in Table 2 with p = .003. Hence, it is concluded that women livestock managers from different

family types have differences regarding the participation level of decision-making.

Table 3: Correlation Matrix

Variables	Pearson Correlation	Sig. (2-tailed)	N
Age * PRTP_HHW	-.109**	.007	600
Age * PRT_DECS	.138**	.001	600
PRTP_HHW * PROB_LIVEST	.130**	.001	600
PRTP_HHW * PRT_DECS	.135**	.001	600
PRTP_LIVESTM * PRT_DECS	.043	.290	600

****Correlation is significant at the.01 level (two-tailed).**

Elder the women and lesser would be her participation in household work. This correlation is approved as shown through highly significant ($p < .01$) results of Pearson correlation in Table 3. However, age is proven to be positively correlated with participation in decision-making. It's a known fact that with age, women get experience and become experts in their work. So, they are consulted for decisions regarding livestock and other household matters due to their knowledge and experience. It was found that participation in household work is positively correlated with problems faced due to livestock management. When women take on the responsibilities of livestock and domestic work, they become overloaded. The overload of work creates problems and they also encounter role conflict. This role conflict is between the roles of a homemaker and a livestock manager. Such role conflicts cause stress and health problems in women. Participation in household work is also positively correlated with the level of participation. Higher participation in household work higher would be participation in decision-making. Here household work and livestock management seem like two opposite poles. It is clear from the results in Table 3 that the level of engagement in livestock management had no significant correlation with decision-making, while, the level of participation in household work was positively correlated with decision-making. So, it is concluded that livestock managers had very little "say" in the decision-making of families. This trend needed to be addressed as recognition of women for their livestock management activities can make them work innovatively and efficiently which can result in the economic development of families through income generation Randolph et al., (2007).

1.3 Multivariate Analysis

The decision-making of women livestock managers is well predicted by the Respondent's education, no. of children, family type, type of Livestock, age of the respondents, and participation in household works.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.285[a]	.081	.072	4.07470
a. Predictors: (Constant), Respondent's education, no. of children, family type, type of Livestock, age of the respondents, PRTP_HHW				

Multiple-Correlation Coefficient (R), calculated for the data gathered for the present study shows that predictor variables i.e. Respondent's education, no. of children, family type, type of Livestock, age of the respondents, PRTP_HHW are fairly predicting the participation of women livestock managers in decision making of household affairs. The variance of decision-making is explained as 8 percent by the predictor variables as the coefficient of determination (R^2) shows in the model summary table.

ANOVA[a]						
Model		SS	df	MS	F	Sig.
1	Regression	867.134	6	144.522	8.705	.000[b]
	Residual	9845.664	593	16.603		
	Total	10712.798	599			
a. D V: PRT_DECS						
b. Predictors: (Constant), Respondent's education, no. of children, family type, type of Livestock, age of the respondents, PRTP_HHW						

A highly significant result of ANOVA shows that the data is a good fit for the model. So it is concluded that decision-making power is well explained by the predicting variables in a regression model with F (6, 593) = 8.705, $p < .05$

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.495	1.746		3.146	.002
	PRTP_HHW	.288	.057	.213	5.011	.000
	age of the respondents	.674	.212	.131	3.174	.002
	no. of children	.125	.137	.036	.917	.360
	family type	1.022	.351	.116	2.910	.004
	type of Livestock do you have	-.734	.502	-.059	-1.462	.144
	Respondent's education	1.552	.447	.152	3.474	.001
a. Dependent Variable: PRT_DECS						

The multiple regression coefficient analysis was done to know how predictor variables predict the decision-making of women livestock managers. Predictor/ independent variables were the participation level of women in household work, age of the respondent, number of children, family type, type of livestock, and respondent's education. The equation derived is as follows:

PRT_DECS = 5.495 + (.288 × participation level of women in household works) + (.674 × age of the respondent) + (.125 × number of children) + (1.022 × family type) – (.734 × type of livestock) + (1.552 × and respondent's education)

1.4 Interpretation

The significant results in the table of coefficients of multiple regressions show that the predictor variables can predict the decision-making level of the women livestock managers. The women's participation in household work, her age, family type, and education predicted the decision-making level as $p < .05$. Two variables namely, the number of children and type of livestock, however, were not individually contributing to the prediction of decision-making level.

2. Conclusion:

Rural women are the most suppressed part of the population as they work side by side with men but their work cannot get recognition. Besides working as unpaid laborers, they have had very little participation in decision-making. It was found from the study that women do all domestic tasks along with livestock management. They work almost 10 to 16 hours for various tasks (domestic and livestock management). However their participation is very low in decisions related to the household budget, children's marriage, purchase and sales of animals, purchase of products for animals, and selling of milk and other products. They were, even not allowed to keep the money they got after selling milk and milk products.

The level of participation in livestock management was found associated with age, education, family type, and marital status. Women of older ages were found less involved in household work while the level of their participation in decision-making was high. It was also found that women with a high level of participation in livestock management had high levels of problems in domestic work/ role conflict. Lastly, it was found that women who were more involved

in domestic work had high-level participation in decision-making. Data from the study was unable to support the proposition that women with high-level participation in livestock management had high-level participation in decision-making as well.

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