

Aggregating the Concepts and Attributes of Women Physical Involvement in Dairy Farming at Manipur

K. Pradhan¹, Yanglem Lakshimai Devi², Rema Das³ and Avishek Saha⁴ and Jitendra Chauhan⁵

²M.Sc (Ag) Student, Department of Agricultural Extension, Uttar Banga Krishi Viswavidyalaya, Pundibari, Coochbehar, West Bengal-736165

^{3,5}Department of Agricultural Extension, Uttar Banga Krishi Viswavidyalaya, Pundibari, Coochbehar, West Bengal-736165

⁴School of Social Studies, CPGS, CAU, Meghalaya
E-mail: ³remadas.cob2013@gmail.com

Abstract—Although women handle most of the productive aspects of animal care, feeding, watering, cleaning, milking, collecting dung etc, and despite their substantial role in the activities relating to the dairying, socio-cultural conventions have severely limited their access to organize public programmes and activities in the dairying sector. There is an urgent need to strengthen the involvement of women in dairy management activities. Hence, the present study seeks to explore the physical involvement status of farm women in dairy farming. The study was conducted in three districts of Manipur. Purposive, multi-stage and simple random sampling procedures were followed in the present study. Hundred women dairy farmers were selected as the respondents for final data collection. The physical involvement index is the concerned predicted variable in the present study. Other than these 19 predictor or independent variables were considered to characterize the predicted variables in a consulted way. The data were collected with the help of semi structured interview schedule through personal interview method. The results indicated that majority of the respondents possess medium level of physical involvement. The result shows that the variables mobility of women and attitude towards dairy farming are negatively and significantly associated with the physical involvement in dairy farming. The variable awareness and knowledge is positively and significantly associated with the physical involvement in dairy farming. Multiple regression analysis reveals that the variable family education status is positively and significantly contributing towards characterizing the physical involvement in dairy farming. The result also shows that the variables economic motivation and management orientation are negatively and significantly contributing towards characterizing the physical involvement of women in dairy farm activities.

Keywords: Women empowerment, dairy farming, physical involvement, multiple regression analysis, family education status.

1. INTRODUCTION

In India, animal husbandry is a vocation for small farmer and landless farmers. Milk and livestock sector provides regular employment to the rural mass. Nowadays, dairy farming has

grown from largely an organized complex activity into a vast enterprise that encompasses not only to increase production of milk and milk products but also the breeding of higher yielding cattle and the scientific rearing of cattle and production of cattle feeds. The importance of rearing livestock is increasing day by day due to its potentiality in ensuring sustainable livelihood that address the development issues of food security, equity and decentralized government through peoples' participation. In the present situation the buzz word of the social system is women empowerment in terms of social, political, psychological, economic and cultural. The strategies are very clear to make women much more empowered with the help of their own voices, resources, capacities and creativities. Among the several vocations through which the women can be empowered in the rural society the dairy is in the highest rank as from the primitive era women are the primary stakeholders and managers of this enterprise. It is estimated that women compose around two thirds of the 400 million poor livestock keepers who mainly rely on livestock for their income [1,2]. About 75 million women as against 15 million men are engaged in dairying in India [3]. Increasing demand for milk and milk products in recent years intensifies dairy farming as profitable enterprise for women [4]. Women accounted for 93% of total employment in dairy production depending upon the economic status. Women perform the task of collecting fodder, collecting and processing dung, preparing the cooking fuel, livestock management and production, milking and controlling over livestock and its products. Still men are living only 14% to women assumed the vast majority of the dairy cooperative membership. In some areas much of the work related to animal management has to be looked after by women due to migration of males for work. However, in many cases income from dairy farming does not remain in the women hands and neither thus the decision regarding sale or purchases. Women

are well aware about animal behavior and production characteristic. They understand the local feed resources and they have the skill to manage animal in a better way. The highlighted activities of women in dairy are preparing and providing feed and water of the animals, caring the health of the animals during sickness, pregnancy, processing activities like purchasing and disposing animal, selling of milk and better management through cleaning of animal shed, milking and making cow dung cake. Despite significant contributions of women in the crop production, animal husbandry, fisheries, forestry and post harvest operations, those engaged in the formulation of policies have often tended to neglect the productive role of women. Still the role of women is marginalized undervalued and unrecognized. Due to the biasness of the planners and policy makers the developmental, extension and training programmes are not gender sensitive to ensure greater involvement of women in dairy farming and extending benefits to them. Keeping all these in view, the present study aims to explore the extent of women's physical involvement in dairy farming.

2. METHODOLOGY

The study was conducted in Manipur, one of the north-eastern states of India. Purposive, multi-stage and simple random sampling procedures were followed in the present study. The districts Imphal East, Imphal West and Thoubal were selected purposively due to the active involvement of the farm women in the dairy farming for its management and marketing with the active cooperation of the Youth Voluntary Union and Friendship dairy cooperative. Three blocks namely Imphal east I, Imphal west I including Thoubal were selected randomly from the selected districts. From the three selected blocks the two villages in each block were randomly selected. The selected villages were Khaidem Leikai, Kontha Ahallup, Patsoi, Sangaiprou Maning Leikai, Thoubal Wangmataba and Thoubal Kshetri Leikai. An exhausted list of women dairy farmer of the selected villages was prepared with the help of the Block officials, Panchayat officials and dairy cooperative members. From this exhausted list 100 proactive dairy women farmers were selected as the respondents for final data collection. The physical involvement index is the concerned predicted variable in the present study. Other than these 19 predictor or independent variables were considered to characterize the predicted variables in a consulted way. The data were collected with the help semi structured interview schedule through personal interview method. The data were analyzed with the help of statistical tools such as Frequency, Percentage, Range, Mean, Standard deviation, Coefficient of variation, Coefficient of correlation, Multiple regression analysis etc.

3. RESULTS AND DISCUSSION

Table 1: Distribution of the respondents according to their physical involvement (Y)

Category	Score	Frequency	Percentage	Statistics
Low	55.21-66.66	25	25	Range = 55.21-89.58 Mean = 70.80 SD= 6.57 CV= 9.27 %
Medium	66.67-78.12	64	64	
High	78.13-89.58	11	11	

Table-1 presents the distribution of the women dairy farmers in Manipur according to their physical involvement in dairy activities. The results show that majority of the respondents are under the physical involvement group of 66.67-78.12 (64%), followed by physical involvement group of 55.21-66.66 (25%) and physical involvement group of 78.13-89.58 (11%) respectively. The mean score of total distribution is 70.80 and standard deviation of the distribution is 6.57. The coefficient of variation value within the distribution 9.27% signifies the very high consistency level of the distribution for the variable 'physical involvement in dairy activities'. It is revealing the fact that the maximum number of women dairy farmers in Manipur state is operating their dairy enterprise with a moderate level of physical involvement.

Table 2: Correlation Coefficient of Physical Involvement (Y) of women in Dairy Farming with 19 causal variables:

Variables	Correlation Coefficient (r)
Age (X ₁)	0.100
Caste (X ₂)	-0.094
Education (X ₃)	-0.166
Family Education Status (X ₄)	0.180
Family Annual Income (X ₅)	0.130
Land Holding (X ₆)	-0.100
Farm power (X ₇)	0.150
Asset Possession (X ₈)	-0.008
Livestock possession (X ₉)	0.035
House type (X ₁₀)	-0.039
Extension Worker Communication (X ₁₁)	-0.052
Mass media exposure (X ₁₂)	-0.183
Mobility of women (X ₁₃)	-0.231*
Risk preference (X ₁₄)	0.135
Economic motivation (X ₁₅)	-0.090
Attitude (X ₁₆)	-0.224*
Management orientation (X ₁₇)	-0.120
Awareness and knowledge (X ₁₈)	0.224*
Profit from dairy (X ₁₉)	0.024

*Significant at 5% level of significance

** Significant at 1% level of significance

Table-2 represents the Pearson's presents the coefficient of correlation among the physical involvement of women in dairy farming with 19 causal variables. The result shows that the variables mobility of women and attitude towards dairy farming are negatively and significantly associated with the physical involvement in dairy farming. The variable awareness and knowledge is positively and significantly associated with the physical involvement in dairy farming.

4. MOBILITY OF WOMEN AND PHYSICAL INVOLVEMENT IN DAIRY FARMING

The cosmopolite source of information and outside contact of women is always reflecting the mobility of women in outside periphery of their own residence. Though the mobility of the women for seeking cosmopolite source of information can keep them average with the new scientific information about dairy farming and it needs a physical energy to become mobile. consequently the women who have level of mobility outside their residence for seeking new information cannot involved themselves physically in case of scientific management practice of dairy farming in home. Though the mobility is positively influencing for gathering new information but still it restricts their physical involvement in livestock rearing. In such cases the other member of the family or the male counterpart of the family are shouldering the responsibility of the family to their dairy farming efficient. That is why the variable mobility of the women outside their residence is positively and significantly associated with the variable physical involvement of women in dairy farming.

5. ATTITUDE TOWARDS DAIRY FARMING AND PHYSICAL INVOLVEMENT OF WOMEN IN DAIRY FARMING

Attitude is the predisposition behavior the positive attitude towards any object or activity can make an environment to adopt and utilized any innovation in a specific situation. Attitude develops to the information enrichment, knowledge upliftment and skill development. But always attitude cannot ensure the physical involvement of people in any activity due to several reasons. In the present study explores the areas of women involvement in dairy farming. In dairy farming the maximum activities need hard work and physical energy as a result the male counterpart of the family shoulder the responsibility of the conducting the energy involved activities in dairy farming. Though the women of the family have a positive attitude towards adopting scientific practices in case of making their dairy farming more profit oriented but the women cannot physically involve within the land working of activity associated with dairy farming. Those activities are milking, washing the cattle, moving the cattle to other shed, etc. these activities also generate women in the study area due to the deficiency of physical energy. That is why the variable attitude towards dairy farming is negatively and significantly associated with physically involvement in dairy farming. In relation to it that it may opine that there is a need of women

friendly drudgery reducing dairy technology to make dairy farming more women vibrant.

6. AWARENESS AND KNOWLEDGE AND PHYSICAL INVOLVEMENT OF WOMEN IN DAIRY FARMING

Awareness and knowledge are the key cognitive elements of human psyche the several processes like educational exposure, information endowment and experience sharing can generate the awareness and enhance the knowledge throughout the life period. The awareness regarding any scientific practices enrich knowledge contribute positively in case of involving the women physically in any activity in spite of their physical constraints. In dairy farming the women are very much aware about the farming practices and management of the farmers which ultimately contribute to the profit maximization of dairy enterprise. That is why the awareness and knowledge is positively and significantly associated with the physically involvement of women in dairy farming. From the result without awareness and knowledge regarding the dairy practices the women cannot be motivated and involved physically in dairy farming.

Table 3: Multiple regression analysis of Physical involvement Index (Y) with predictor variables.

Variables	Standardized regression coefficient (β)	Unstandardised regression coefficient (B)	S.E of 'B'	t-value
Age (X ₁)	-0.019	-0.017	0.107	-0.160
Caste (X ₂)	-0.108	-4.145	4.057	-1.022
Education (X ₃)	-0.178	-1.059	0.804	-1.318
Family Education Status (X ₄)	0.240	2.398	1.199	2.000#
Family Annual Income (X ₅)	0.072	0.035	0.067	0.519
Land Holding (X ₆)	-0.135	-0.944	0.838	-1.126
Farm power (X ₇)	0.182	0.981	0.610	1.608
Asset Possession (X ₈)	-0.022	-0.014	0.086	-0.161
Livestock possession (X ₉)	-0.032	-0.077	0.271	-0.285
House type (X ₁₀)	-0.017	-0.194	1.343	-0.144
Extension Worker Communication (X ₁₁)	0.027	0.070	0.337	0.207
Mass media exposure (X ₁₂)	-0.108	-0.378	0.514	-0.734
Mobility of women (X ₁₃)	-0.016	-0.067	0.525	-0.127
Risk preference (X ₁₄)	0.105	0.397	0.440	0.903

Economic motivation (X ₁₅)	-0.217	-1.138	0.544	-2.091#
Attitude (X ₁₆)	-0.159	-0.653	0.450	-1.451
Management orientation (X ₁₇)	-0.221	-0.566	0.291	-1.944#
Awareness and knowledge (X ₁₈)	0.131	1.524	1.390	1.096
Profit from dairy (X ₁₉)	0.021	0.012	0.072	0.170

** Significant at 1% level of significance

Significant at 10% level of significance

R² = 0.278

Table-3 reflects the multiple regression analysis of physical involvement with the 19 predictor variables. From the table it is observable that the variable family education status is positively and significantly contributing towards characterizing the physical involvement in dairy farming. The table also showed that the variables economic motivation and management orientation are negatively and significantly contributing towards characterizing the physical involvement of women in dairy farm activities.

7. FAMILY EDUCATION STATUS AND PHYSICAL INVOLVEMENT OF WOMEN IN DAIRY FARMING

Family education status represents the literacy level of the members of the family. Higher is the family education status more will be the educational exposure of each and every members of the family. People with higher level of education also possess high information seeking behavior which makes them more aware about the scientific dairy farm practices. In reality it is evident that family support is one of the critical factors that hinder the women in developing any enterprise, mostly in rural areas. But the family having educated members always encourages and supports participation of the female members of their family in various income generating activities to empower them. In the present study area it seems that family members equipped with high level of education provides a favorable environment towards involvement of women in dairy farm practices. That is why the variable family education status is positively and significantly contributing towards characterized in the physical involvement of women in dairy farming. One unit change of the variable family education status is delineating the 0.240 unit change in the predicted variable, physical involvement of women in dairy farming.

8. ECONOMIC MOTIVATION AND PHYSICAL INVOLVEMENT OF WOMEN IN DAIRY FARMING

Economic motivation is directly related with the financial need of the farming community desired for economic affluence is used as one of the motive for bearing the risk, seeking the outside information, venturesomeness and network development. All this attributes are finally contributing for

managing an enterprise in a better way through increasing the profitability of the system. Economic motivation may be treated as the psychological component of the human being which helps the decision making process. In the present study it is observable that due to strong positive psychological belongingness of the women dairy farmer helps in making the decisions in favor of scientific management. But the women being the torch bearer of household activity the male member of the family restricts them to bear the responsibility of managing the dairy farm outside activities with their strong physical involvement. Consequently, the women family members are mostly confined themselves within the household activities rather to physically take part in case of cattle management though they have high level of economic motivation. That is why the variable economic motivation is negatively and significantly contributing towards characterizing the variable physical involvement of women in dairy farming. . One unit change of the variable economic motivation is delineating the 0.217 unit change in the predicted variable, physical involvement of women in dairy farming.

9. MANAGEMENT ORIENTATION AND PHYSICAL INVOLVEMENT OF WOMEN IN DAIRY FARMING

The orientation for managing an enterprise and taking the risk to adopt the scientific practices are the two major attributes for smooth and effective running of a profit making vocation. The management orientation includes planning, production and marketing orientation which ultimately reflects the activity to be conducted in case of production through practices and marketing of products on the basis of needs. It builds the capacity of the farming community to handle the activities associated with any enterprise in a better way by accepting the challenges embedded with the vocation. This variable is producing the drive to decide upon the aspect of planning, production and marketing as it is one of the psychological variable of the study. In the present study the women are considered as the respondents. In the patriarchal society like Indian society the women are not getting the opportunity to involve themselves in outside activities. They are mostly associated with the household activities. Most of the activities related to the dairy farming needs mobility of the individual managing the dairy farming in an efficient manner. In other words the women are considered as physically weak entity with less mobility and energy in comparison to the male members of the family. It decreases the degree of physical involvement of women in different outside activities associated with dairy farming though they have good degree of management orientation. That is why the variable management orientation is contributing negatively and significantly in case of characterizing in dependent variable or predicted variable, physical involvement of women in dairy farming. One unit change of the variable management orientation is delineating the 0.221 unit change in the

predicted variable, physical involvement of women in dairy farming.

The R^2 value being 0.278, it is to infer that the nineteen predictor variables put together have explained 27.8% variation embedded with the predicted variable physical involvement. Still 72.2% variations embedded with predicted one are unexplained.

10. CONCLUSION

The prosperity and growth of a nation depend on the status and development of its women as they are not only constitutes nearly half of the population but also positively influence the growth of remaining half of the population. The crucial role of women in dairy, agriculture, allied occupation and household activities has however been grossly under estimated and undervalued. Dairy farming is major occupation of rural women in Manipur. The women handled most of the critical job and considered to be the prime mover in small scale dairy farming. Though women play a significant role in dairy farming, still their control over livestock is minimized. The income from dairy animal is not remained in the hands of women and neither does the decisions regarding sale and purchases. The strategy is needed to develop the women dairy farmers' motivation in physical involvement through restricting their mobility outside the locality and promoting the physical involvement through developing women friendly scientific dairy technology by reducing the drudgery and sensitizing them to increasing their awareness and knowledge towards development of positive attitude in favor of women dairy farming.

REFERENCE

- [1] FAO 2011: ESA Working paper No. 11-02: The role of women in agriculture.
- [2] FAO 2012: Invisible Guardians; Women manage livestock diversity. FAO Animal Production and Health, 174.
- [3] Thakur Devesh and Mahesh Chandar (2006) Gender based differential access to inform among live stock owners and it's impact on house hold milk production in Kangra district of Himachal Pradesh. *Indian Journal of Dairy Science* 59(6):401-404.
- [4] Mohapatra, A. S., Behera, R., and Sahu, U. P. (2012). Constraints faced by tribal entrepreneurs in dairy farming enterprise. *International Journal of Physical and Social Sciences*, 2 (7), 171-184.