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### Relationship between personal and socio-economic characteristics of dairy women and their role in dairy enterprise

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#### Abstract

The research was conducted in rural areas of Pune district, specifically in the tehsils of Baramati and Indapur, which have the highest cattle population in the region. The study aimed to analyse the correlation between the socio-personal profile of dairy women and their roles in dairy enterprises. The findings revealed that mass media exposure had a positive and highly significant correlation with women's roles, indicating that increased access to information enhances their participation in dairy activities. Similarly, education exhibited a positive and statistically significant relationship, suggesting that higher educational attainment is associated with more active involvement in dairy enterprises. Conversely, age showed a negative and significant correlation, implying that younger women are more actively engaged. However, variables such as experience in dairy farming, landholding size, annual income, family size, social participation, economic motivation, and herd size did not exhibit any statistically significant correlation with the women's roles in the dairy enterprise.

**Keywords:** Profile of dairy women, dairy enterprise, relationship

#### Introduction

Dairy farming stands as one of the most important income-generating activities for rural women in India, offering both economic benefits and opportunities for empowerment. With rising demand for milk and milk products, the sector has become increasingly profitable, contributing significantly to rural development. India remains the world's leading milk producer, with a record output of 239.3 million tonnes in 2023–24 and a per capita availability of 471 grams per day well above global and national standards. Women contribute over 70 per cent of the workforce in the dairy sector, performing key responsibilities such as feeding, milking, animal care, and processing dairy products. Despite their crucial role, rural women often lack access to necessary training and resources. The present study, titled "*Study on Role of Women in Dairy Enterprise*," aims to examine the diverse roles women play in dairy farming and the challenges they face in this vital sector.

#### Methodology

The present study was conducted in Baramati and Indapur tehsils of Pune district, Maharashtra, which are known for their high cattle population and active involvement of rural

women in dairy farming. These regions fall under a hot semi-arid agro-climatic zone, with black regur soils and agriculture supported by canal and river irrigation. Dairy farming, being one of the major income-generating activities for rural women, plays a crucial role in their socio-economic upliftment. A total of 150 dairy women from ten selected villages were randomly chosen for the study. Data were collected through structured interviews in Marathi, focusing on their personal and socio-economic background, roles in dairy activities, and challenges faced. The study aims to explore the multifaceted roles of women in the dairy sector and analyse the correlation between their profiles and participation in dairy enterprises.

#### Results and Discussion

##### Personal and socio-economic characteristics of the dairy women

The personal and socio-economic characteristics of dairy women encompass their age, education, experience in dairy enterprise, size of landholding, herd size, annual income, family size, social participation, mass media exposure and economic motivation.

**Table 1:** Personal and socio-economic characteristics of the dairy women

Sr. No.	Category	Respondents (n=150)	
		Frequency	Percentage
<b>1</b>	<b>Age</b>		
	Young (Up to 35)	40	26.67
	Middle (36 to 55)	95	63.33
	Old (56 and above)	15	10.00
<b>2</b>	<b>Education</b>		
	Illiterate (No formal education)	08	05.33
	Pre-primary (1 <sup>st</sup> to 4 <sup>th</sup> std.)	14	09.33
	Primary (5 <sup>th</sup> to 7 <sup>th</sup> std.)	20	13.33
	Secondary (8 <sup>th</sup> to 10 <sup>th</sup> std.)	61	40.67
	Higher secondary (11 <sup>th</sup> and 12 <sup>th</sup> )	31	20.67
	Graduation / Diploma	15	10.00
	Post graduation	01	0.67
<b>3</b>	<b>Experience in dairy enterprise</b>		
	Low (Up to 11 years)	106	70.67
	Medium (12 to 20 years)	35	23.33
	High (21 years and above)	09	06.00
<b>4</b>	<b>Size of land holding</b>		
	Marginal (Up to 1.00)	55	36.67
	Small (1.01 to 2.00)	53	35.33
	Medium (2.01 to 4.00)	36	24.00
	Large (4.01 and above)	06	04.00
<b>5</b>	<b>Herd size</b>		
	Small (Up to 9 animals)	81	54.00
	Medium (10 to 14 animals)	51	34.00
	High (15 and above)	18	12.00
<b>6</b>	<b>Annual income</b>		
	Low (Up to ₹ 2,00,000)	128	85.33
	Medium (₹ 2,00,001 to ₹ 2,50,000)	12	08.00
	High (₹ 2,50,001 and above)	10	06.67
<b>7</b>	<b>Family size</b>		
	Small (Up to 6 members)	62	41.33
	Medium (7 to 9 members)	57	38.00
	Large (10 and above)	31	20.67
<b>8</b>	<b>Social participation</b>		
	Low (Up to 5)	73	48.67
	Medium (6 to 7)	69	46.00
	High (8 and above)	08	05.33
<b>9</b>	<b>Mass media exposure</b>		
	Low (Up to 7)	68	45.33
	Medium (8 to 13)	60	40.00
	High (14 and above)	22	14.67
<b>10</b>	<b>Economic motivation</b>		
	Very low (Up to 10.80)	00	00.00
	Low (10.81 to 15.60)	00	00.00
	Medium (15.61 to 20.40)	14	09.33
	High (20.41 to 25.20)	110	73.33
	Very high (25.21 to 30)	26	17.33
<b>11</b>	<b>Role of women in dairy enterprise</b>		
	Low (Up to 72)	18	12.00
	Medium (73 to 79)	100	66.67
	High (80 and above)	32	21.33

### 1. Age

Most dairy women (63.33 per cent) belonged to the middle age group (36–55 years), actively engaged in dairy activities. Young women (26.67 per cent) also participated notably, while only 10 per cent were from the older age

group, likely due to the physical demands of the work. This showed that productive-age women played a key role in dairy farming.

### 2. Education

The educational profile of the dairy women revealed that most had basic to moderate levels of education. About 40.67 per cent had studied up to the secondary level, and 20.67 per cent had completed higher secondary education. Only 10 per cent held a graduation or diploma, and a very small number (0.67 per cent) had postgraduate qualifications, reflecting limited access to higher education. A few women (5.33 per cent) were illiterate, while the rest had received primary or pre-primary education.

### 3. Experience in dairy enterprise

Most of the dairy women had relatively low experience, with 70.67 per cent involved in dairy farming for up to 11 years, showing that many had taken it up in recent times. Around 23.33 per cent had a moderate level of experience (12 to 20 years), while only 6 per cent had been in the field for over two decades, indicating that dairy farming had become more popular among women in the past few years.

### 4. Size of land holding

Most dairy women were marginal (36.67 per cent) and small (35.33 per cent) landholders, owning up to 2 hectares of land. Only 24 per cent had medium holdings, and 4 per cent had large holdings, indicating the prevalence of small-scale dairy farming in the study area.

### 5. Herd size

The majority of dairy women (54 per cent) maintained a small herd size of up to 9 animals, showing the dominance of small-scale dairy farming. Around 34 per cent had medium-sized herds, while only 12 per cent managed larger herds, reflecting a preference for low-investment, manageable dairy units suited to household resources.

### 6. Annual income

A large majority of dairy women (85.33 per cent) had an annual income below ₹2,00,000, indicating limited earnings from dairy activities. Only 8 per cent earned a moderate income, and 6.67 per cent had higher earnings, highlighting economic challenges and the need for better support and market access.

### 7. Family size

Most dairy women belonged to small (41.33 per cent) or medium-sized families (38 per cent), while 20.67 per cent lived in large households. This suggested that dairy activities were mainly managed within small to medium family structures, affecting labour availability and decision-making at the household level.

### 8. Social participation

Most dairy women (48.67 per cent) had low social participation, while 46 per cent showed a moderate level of involvement. Only 5.33 per cent were highly active socially, indicating that active participation in community or cooperative activities was limited and needed to be encouraged.

### 9. Mass media exposure

The data showed that 45.33 per cent of dairy women had low mass media exposure, 40 per cent had moderate exposure, and only 14.67 per cent had high exposure, reflecting limited access to media and a need to strengthen information outreach efforts.

### 10. Economic motivation

The majority of dairy women (73.33 per cent) had high economic motivation, while 17.33 per cent showed very high motivation. Only 9.33 per cent fell into the medium category, and none were in the low or very low range. This reflected a strong economic drive among the women to engage in dairy farming for financial betterment.

### 11. Role of women in dairy enterprise

A majority (66.67 per cent) of dairy women had medium involvement in dairy activities, while 21.33 per cent showed high involvement and 12 per cent had low participation, indicating active contribution by most women, with many taking key roles.

### Relationship between profile of the dairy women and their role in dairy enterprise

This study explores how the personal and socio-economic profile of dairy women influences their role in dairy enterprises. It looks at factors such as age, education, dairy experience, landholding, herd size, income, family size, social participation, media exposure, and economic motivation. By examining these traits and drawing on past research, the study aims to understand how they shape women's role and contribution to dairy enterprise.

**Table 2:** Relationship between profile of the dairy women and their role in dairy enterprise

Sr. No.	Profile	Correlation Coefficient (r)
1.	Age	-0.202*
2.	Education	0.195*
3.	Experience	-0.126 <sup>NS</sup>
4.	Land holding	-0.049 <sup>NS</sup>
5.	Herd size	0.062 <sup>NS</sup>
6.	Annual income	-0.046 <sup>NS</sup>
7.	Family size	0.069 <sup>NS</sup>
8.	Social participation	0.102 <sup>NS</sup>
9.	Mass media exposure	0.218**
10.	Economic motivation	0.058 <sup>NS</sup>

\* Significant at 0.05 level of probability

\*\* significant at 0.01 level of probability

NS: Non-significant

### 1. Age and role of dairy women in dairy

The data in table 2, inferred that the age of dairy women had negatively significant relationship ( $r = -0.202^*$ ) with their role in the dairy enterprise, this indicates that the efficiency of dairy women to participate in animal husbandry activities declined with increasing age.

Therefore, it can be concluded that involvement of dairy women in dairy activities was significantly influenced by their age.

### 2. Education and role of women in dairy

The data observed in table 2 indicated that the education of dairy women had positive and significant relationship

( $r=0.195^*$ ) with their role in the dairy enterprise. This suggests that dairy women with higher education were likely more capable of implementing new techniques to enhance milk production and more actively participate in various dairy activities.

### 3. Experience and role of women in dairy

The findings shown in table 2 clearly imply that experience had a negative and non-significant relationship ( $r= -0.126$ ) with the role of dairy women in the dairy enterprise. This indicates that having more experience may not necessarily lead to increased involvement or opportunities for women in the dairy sector. This could be attributed to various factors such as social, cultural or economic barriers that limit women's participation in dairy farming.

### 4. Size of land holding and role of women in dairy

The findings presented in table 2 suggest that size of landholding had a negative and non-significant relationship ( $r= -0.049$ ) with the role of dairy women in dairy the enterprise. This indicates that dairy women's engagement in animal husbandry activities remained consistent regardless of farm size and that landholding had no notable impact on their participation in the dairy sector.

### 5. Herd size and role of women in dairy

The data shown in table 2 indicate that herd size had a positive and non-significant relationship ( $r= 0.062$ ) with the role of women in the dairy enterprise. This suggests that herd size had no meaningful impact on the participation of women in dairy activities.

### 6. Annual income and role of women in dairy

The results in table 2 clearly imply that the annual income of the dairy women had a negative and non-significant relationship ( $r= -0.046$ ) with their role in the dairy enterprise. This suggests that dairy women's participation in dairy activities was not determined by their annual income, in other words, a higher income did not necessarily lead to greater involvement in dairy enterprise.

### 7. Family size and role of women in dairy

The data given in table 2 indicate that the family size of dairy women had a positive and non-significant relationship ( $r= 0.069$ ) with their role in dairy enterprise. It can be concluded that family size had no significant impact on the role of dairy women, suggesting that their involvement in dairy activities was independent of family size.

### 8. Social participation and role of women in dairy

The data shown in table 2 imply that social participation had a positive and non-significant relationship ( $r= 0.102$ ) with the role of dairy women in the dairy enterprise. It can be concluded that social participation was not a determining factor in their level of involvement in dairy activities.

### 9. Mass media exposure and role of women in dairy

The data given in table 2 suggest that mass media exposure had a positive and highly significant relationship ( $r= 0.218^{**}$ ) with the role of dairy women in the dairy enterprise. It can be concluded that mass media exposure influenced and enhanced the role of women in dairy activities. Through

sources such as television, radio and newspapers, dairy women were able to gain new ideas and participated more actively and confidently in various aspects of dairy farming.

### 10. Economic motivation and role of women in dairy

Data observed in table 2 clearly imply that economic motivation had positive and non-significant relationship ( $r=0.058$ ) with the role of dairy in the dairy enterprise. This indicates that economic motivation had little to no effect on their involvement in dairy activities.

### Conclusion

The study revealed that two-thirds of the dairy women belonged to the middle age group and more than two-fifths were young, possessing educational qualifications ranging from primary to postgraduate levels. They had varying levels of experience in dairy enterprise, owned small to medium landholdings, and kept small to large herds. Most had low annual income, lived in small to large families, and exhibited low to medium levels of social participation and mass media exposure, though their economic motivation ranged from high to very high.

Among various characteristics, mass media exposure showed a positive and highly significant correlation with the role of dairy women, while age had a negative and significant relationship, and education showed a positive and statistically significant link. However, other factors like experience, landholding, family size, social participation and economic motivation did not have a significant correlation with their role.

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