

WOMEN EMPOWERMENT THROUGH MILK PRODUCERS COOPERATIVE SOCIETIES

N. M. Thaker¹, J. D. Bhatt² and S. M. Trivedi³

1 & 2 Assistant Professor, PG Institute of ABM, Junagadh Agricultural University, Junagadh - 360 001

3 Associate Professor, PG Institute of ABM, Junagadh Agricultural University, Junagadh - 362 001

Email : thaker_jagruti@jau.in

ABSTRACT

Women centric approach was promoter as a part of the stratagem under which enough number of dairy cooperative societies was formed at village level with the point of view that dairy cooperatives would provide a foundation of supplementary revenue and an organized platform to inquire about rectify the personal, social and other issues of women to empower them. To evaluate the women empowerment level through dairy cooperatives, the present study was conducted in Saurashtra region by selecting three districts by proportionate random sampling method. A total of 5 dairy cooperatives and 100 members of dairy cooperatives comprised the sample of study. The majority respondents had medium level of personal empowerment, social empowerment, economic empowerment, educational empowerment. On the other hand majority of the respondents had low level political empowerment. More emphasis needs to be given on economic empowerment by training them on other income generating activities like value addition for sustaining the dairy cooperatives. It could be observed that dairy cooperatives should encourage women to take part in political activities also. The role played by dairy cooperatives is greatly cherished which can also be simulated in other parts of the nation. It has significant benefits and scope for woman empowerment.

Keywords : women, empowerment, dairy co-operatives, economic empowerment, political empowerment.

INTRODUCTION

Gandhiji clearly pointed out that villages are the backbone of Indian economy. In India, female headed rural households are about 16.90 per cent only and female agriculture holders are about 14.90 per cent (FAO, 2015). The International Cooperative Alliance (ICA, 2015), defines cooperatives as “autonomous associations of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise.” Empowerment of women is a new ideology for carrying democratic values into the family and society. Empowerment of women means equal status to women, equal ownership of productive resources, increase participation in economic and commercial sections, awareness of their rights and responsibilities. Cooperatives are rendering fruitful services to the society concerned especially to women. Women get recognition in the society and also economic interdependence in the family. Hence, it is needless to say that cooperatives are playing a very important role in the empowerment of women through various schemes (Belurkar *et. al.*). Various NGOs and cooperative societies are involved in women empowerment in rural area of Saurashtra region. Women focused approach

was advocated as a part of the strategy under which sufficient number of dairy cooperative societies, with (women membership) was formed at village level with the point of view that dairy cooperatives would provide a source of additional income and an organized platform to seek redress of personal, social and other grievances of women to empower them.

OBJECTIVES

- (1) To study the socio economic profile of respondents
- (2) To assess the women empowerment through milk producers cooperative societies

METHODOLOGY

The present study was carried out in Saurashtra region of Gujarat state. Three districts, Junagadh, Rajkot and Porbandar, were selected randomly from the Saurashtra region. Five milk producers' cooperative societies were selected purposively from the three districts. Total 100 women members were selected randomly as respondents from five milk producer's cooperative societies.

Table 1 : The details of distribution of sample women in selected districts

Sr. No.	Districts	No. of woman members in milk cooperatives		Total
1	Junagadh	Majevadi	20	40
		Makhiyala	20	
2	Rajkot	Paneli	20	20
3	Porbandar	Khijdad	20	40
		Kutiyana	20	

Empowerment Index

To find out the level of the empowerment under different dimensions, an index value of the women empowerment was calculated for each dimension of Dairy Women Empowerment Index (DWEI) which consists of number of statements and hence, their range of total scores was different. Therefore, the total score of each dimension was converted into unit score by using simple range and variance as given below:

$$U_{ij} = \frac{Y_{ij} - \text{Min } Y_{ij}}{\text{Max } Y_j - \text{Min } Y_j}$$

Where,

Where,

U_{ij} = Unit score of the i^{th} respondents on j^{th} dimension

Y_{ij} = Value of the i^{th} respondent on the j^{th} dimension

$\text{Max } Y_j$ = Maximum score on the j^{th} dimension

$\text{Min } Y_j$ = Minimum score on the j^{th} dimension

Thus, the score of each dimension range from 0 to 1 *i.e.* when Y_{ij} is minimum, the score is 0 and when Y_{ij} is maximum the score is 1. Then the unit scores of each respondent was multiplied by respective scale value of each dimension and summed up. Thus, the obtained score was divided by the sum of scale values in order to get the DWEI for each respondent.

$$DWEI_i = \frac{\sum U_{ij} * S_j}{\text{Sum of scale values}}$$

Where,

$DWEI_i$ = Dairy Women Empowerment Index of i^{th} respondent

U_{ij} = Unit score of the i^{th} respondent on j^{th} component

$$U_{ij} = \frac{Y_{ij} - \text{Min } Y_{ij}}{\text{Max } Y_j - \text{Min } Y_j}$$

S_j = Scale value of the j^{th} component

The status of respondents' empowerment was calculated based on the total index score of all the indicators (Niketha *et.al.*).

Correlation analysis

The Correlation between profile variables and women empowerment is also examined as, Correlation coefficient is a measure of the relationship between two variables which are at the interval or ratio level of measurement and are linearly related. The range of correlation coefficient is between -1 to +1. This means that -1 is perfect negative correlation, +1 is perfect positive correlation. Correlations express the association between variables (Niketha *et.al.*).

$$r_{xy} = \frac{\sum(x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum(x_i - \bar{x})^2 \sum(y_i - \bar{y})^2}}$$

Where:

r_{xy} – the correlation coefficient of the linear relationship between the variables x and y

x_i – the values of the x-variable in a sample

\bar{x} – the mean of the values of the x-variable

y_i – the values of the y-variable in a sample

\bar{y} – the mean of the values of the y-variable

Regression Analysis

Regression Model of the following form was used to measure the impact of socio-economic factors on women empowerment:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + b_9X_9 + b_{10}X_{10} + u$$

Where:

Y = Women empowerment

- a = Constant / Intercept
- b_1, b_{10} = Regression Coefficients
- X_1 = Age (in years)
- X_2 = Education (in standards)
- X_3 = Family size (no. of family members)
- X_4 = Marital status (1 for Married, 2 for Unmarried and 3 for widow)
- X_5 = Occupation (1 for Animal husbandry and 2 Animal husbandry & Agriculture)
- X_6 = Social participation (1 for SHGs, 2 for Gram panchayat, 3 for Dairy coop. committee and 4 for SHGs & Gram panchayat)
- X_7 = Position hold (1 for Member and 2 for Leaders)
- X_8 = Animal holding (in numbers)

- X_9 = Years of membership
- X_{10} = Training received (1 for Yes and 0 for No)
- u = Error term

RESULTS AND DISCUSSION

Socio-economic profile of dairy women is presented in Table 2. It can be observed from the table that the age of women members in dairy cooperatives is ranging from 35 to above 50 years. The analysis of age groups indicates the human resources at different stages of dairy cooperatives. It is seen from the table that the overall maximum proportion (50%) comes under the middle age group, *i.e.* 36 to 50 years, followed by young age group, up to 35 years, (35%) and old age group, more than 50 years (14%). Literacy is considered as an indicator of development. Government is taking concerted efforts to increase the literacy level of people especially the marginalized.

Table 2 : The socio-economic profile of respondents

(n=100)

Sr. No.	Indicator	Junagadh	Rajkot	Porbandar	All
1	Age in Years				
i	Young Age - Up to 35	14 (35)	9(45)	13 (33)	36 (36)
ii	Middle Age - 36 to 50	23(58)	6(30)	21 (52)	50 (50)
iii	Old Age - Above 50	3 (7)	5(25)	6 (15)	14 (14)
2	Education of the women				
i	Illiterate	12(30)	6(30)	14(35)	32 (32)
ii	Up to Primary	18(45)	8(40)	16(40)	42(42)
iii	Up to Secondary	8(20)	4(20)	6(15)	18(18)
iv	Up to Higher Secondary	2(5)	1(5)	4(10)	7(7)
v	Graduates	0	1(5)	0	1(1)
3	Family Size				
i	1 to 4 members	22(55)	12(60)	26(65)	60(60)
ii	5 to 8 members	16(40)	6(30)	14(35)	36(36)
iii	more than 8 members	2(5)	2(10)	0	4(4)
4	Marital status of the respondent				
i	Married	38(95)	19(95)	34(85)	91(91)
ii	Unmarried	2(5)	1(5)	4(10)	7(7)
iii	Widow	0	0	2(5)	2(2)
5	Occupation of the respondent				
i	Animal Husbandry	8(20)	6(30)	6(15)	20 (20)
ii	Animal Husbandry & Agriculture	32(80)	14(70)	34(85)	80(80)
6	Social participation of the respondent				
i	SHGs	20(50)	7(35)	24(60)	51(51)
ii	Gram panchayat	8(20)	2(10)	4(10)	14(14)

Sr. No.	Indicator	Junagadh	Rajkot	Porbandar	All
iii	Dairy coop. committee	12(30)	10(50)	10(25)	32(32)
iv	SHGs & Gram panchayat	0	1(5)	2(5)	3(3)
7	Position hold				
i	Members	34(85)	18(90)	38(95)	90 (10)
ii	Leaders	6(15)	2(10)	2(5)	10 (10)
8	Animal holding of the respondent				
i	Cow	4(10)	4(20)	14(35)	22 (22)
ii	Buffalo	36(90)	16(80)	26(65)	78 (78)
9	Years of membership in dairy cooperatives				
i	Up to 5 years	18(45)	8(40)	16(40)	42 (42)
ii	6 to 9 years	20(50)	10(50)	18(45)	48(48)
iii	More than 10 years	2(5)	2(10)	6(15)	10(10)
10	Training received by dairy cooperatives				
i	Yes	40(100)	20(100)	40(100)	100(100)

Figures in the parentheses indicate percentages

The data revealed that the literacy level in the selected region of study was overall higher up to primary level of education i.e. 42 per cent, followed by secondary 18 per cent, higher secondary 7 per cent and graduate only 1 per cent. 32 per cent of women found illiterate which shows then higher ratio of low literacy level in education. The overall average family size is 5.42 members. Out of which 60 per cent belongs to the family of 1 to 4 members, followed by 36 per cent with the family of 5 to 8 members, and 4 per cent belongs to the family of more than 9 members. The results clearly show that higher the development level of the district lesser will be the tendency of living in joint family. It was found that overall 91 per cent women were married while 7 per cent were unmarried and 2 per cent were widow. It was also observed that 80 per cent of women were involved in the animal husbandry and agriculture as occupation together, while only 20 per cent of women were involved in animal husbandry solely as occupation which reveals that animal

Distribution of the respondents according to different dimensions of empowerment

husbandry is not taken as only income generation activity. It was revealed that 51 per cent of women were participating in SHGs only while 32 per cent were participating in dairy cooperatives, 14 per cent were participating in gram panchayat and only 3 per cent were participating in SHGs and Gram panchayat together. This shows that there is medium level of social participation found in women in study area. From the study 90 per cent women found to hold the position of members while only 10 per cent women found holding the leading position. It was observed that 78 per cent of women had buffalos, in comparison to 22 per cent had cows as milch animal. From the Table it was found that 48 per cent of women had membership from 6 to 9 years followed by 42 per cent up to 5 years and 10 per cent having more than 10 years of membership in dairy cooperatives. Overall 100 per cent of women respondents had received training provided by dairy cooperatives.

Table 3 : Distribution of the respondents according to different dimensions of empowerment

(n=100)

Sr. No.	Dimensions	Frequency	Percent
1	Personal Empowerment		
i	Low(up to 0.65)	47	47.00
ii	Medium (0.66 - 0.80)	53	53.00
iii	High (above 0.80)	0	00.00
2	Educational Empowerment		
i	Low (up to 0.49)	42	42.00

Sr. No.	Dimensions	Frequency	Percent
ii	Medium (0.50 - 0.79)	58	58.00
iii	High (above 0.79)	0	00.00
3	Social Empowerment		
i	Low (up to 0.68)	48	48.00
ii	Medium (0.69 - 0.79)	52	52.00
iii	High (above 0.79)	0	00.00
4	Economic Empowerment		
i	Low (up to 0.53)	37	37.00
ii	Medium (0.54 - 0.76)	63	63.00
iii	High (above 0.76)	0	00.00
5	Political Empowerment		
i	Low (up to 0.40)	72	72.00
ii	Medium (0.41 - 0.63)	28	28.00
iii	High (above 0.63)	0	00.00
6	Overall Empowerment		
i	Low (up to 0.58)	44	44.00
ii	Medium (0.59-0.68)	56	56.00
iii	High (above 0.68)	0	00.00

(1) Personal empowerment

The results presented in Table 3 enunciated the empowerment level of women under different dimension. With regard to personal empowerment 47 per cent of the respondents were found to have medium level of empowerment while, 53 per cent had low levels of personal empowerment. It can be inferred that majority of the members were having either medium or low levels of empowerment. Through participation in various activities women could break self-imposed, family and social barriers. Dairy cooperatives influenced the women in increasing their self-confidence, being expressive to believe in self-abilities which resulted in courage to deal with social aspects, dealing with different institutions, people and take part in community activities which resulted in increased empowerment of women personally.

(2) Educational empowerment

It is evident from Table 3 that 58 per cent of the respondents had medium level of educational empowerment, whereas, 42 per cent had low level of educational empowerment. It can be concluded that due to activities of dairy cooperatives, less number of respondents found to have low level of educational empowerment. It implies that dairy cooperatives are working in the right direction as more

members are feeling educationally empowered. Due to the dairy cooperatives, members were aware about clean milk production practices, machine milking, timely vaccination, de-worming, etc. This situation needs to be improved for better dairy development as well as for all round development of the rural masses especially, the women.

(3) Social empowerment

The results presented in Table 3 enunciated the empowerment level of women under social dimension. It revealed that 52 per cent of the respondents had medium level of social empowerment, followed by 48 per cent of the respondents with low level of social empowerment. It can be concluded that most of the respondents were either in the medium or low categories of social empowerment. Rural women had started involving themselves in business activities for which dairy cooperatives are providing the platform. Women are supplying milk to dairy cooperatives; at a common point, which in turn resulted in gathering, more interaction and participation. Respondents reported that due to this they came to know each other in village, unnecessary misunderstanding and conflicts were resolved. There was co-operation among the women and others villagers which led to the healthy environment of village as a whole. As a result of dairy cooperatives' activity, women had interaction with government officials which helped them in shedding off their

hesitations, it helped them in acquiring freedom of speech, mobility and involvement in decision making both in home and community as well.

(4) Economic empowerment

Economic empowerment of women is of dominant importance as from standard of living to status in the society are adjudged on the basis of money. Regarding economic empowerment, 63 per cent of the respondents were in medium category and rests of the respondent belonged to the low level of economic empowerment categories (37%). Dairy cooperatives were successful in empowering women economically as these have followed three pronged strategy; the members have been provided with soft loan to purchase the crossbred cow, the members have also been provided with assured marketing facilities in the vicinity of village and they have been provided with necessary technical know-how for proper management of the dairy animals. Dairy cooperatives have made positive impact particularly for increase in milk production, income, family assets, necessitated the opening of their personal account in bank, control on expenditure and savings of households giving women a suitable environment to experience their worth as a part of the society. Economic empowerment also boosted their confidence to express their power and rights.

(5) Political empowerment

It can be observed that majority of the respondents (72%) had low level of political empowerment, followed by medium level (28%) of political empowerment (Table 3). As far as political empowerment is concerned it was found to be at the lower side; it might be due to the non-preference of the members for the political arena. Further, women's traditional role prevents them from participating in political related activities. The members were aware about political institutions but contesting in election was found to be low priority area though they had participated in electoral process. The other reason might be that as majority of the members were under marginal, small and landless; it didn't encourage them to participate in political activities as the foremost important to them was to be economically empowered.

Overall empowerment

From the above detail of distribution of the respondents according to different dimensions of empowerment, it can be observed that overall majority of the respondents had (56%) medium level of overall empowerment, followed by (44%) low level of overall

empowerment. Empowerment under political component was found to be weak compare to all other dimensions.

Level of the empowerment under different dimensions

Index value of women empowerment and its dimensions achieved through activities carried out by dairy cooperatives for empowering women is enunciated in Table 4.

Table 4 : Level of the empowerment under different dimensions (n=100)

Sr. No.	Dimensions of Dairy Women Empowerment Index	Index Value	Rank
1	Social Empowerment	0.69	II
2	Educational Empowerment	0.61	IV
3	Personal Empowerment	0.72	I
4	Economic Empowerment	0.68	III
5	Political Empowerment	0.47	V
Overall empowerment Index		0.63	

Overall empowerment index of dairy women was found to be 0.63 which indicates that the empowerment level was found to be the 63 per cent, which was achieved through the activities of dairy cooperatives. In field studies cent per cent result can't be achieved at once compared to the laboratory experiments as real subjects are involved with many uncontrolled external variable factors influencing them and in the social field study it may take decades to achieve the desired result, even though 63 per cent is also an encouraging figure. There is the significant role of women in dairy cooperatives is observed in India. (Chayal *et. al.*).

From Table 4, it can be observed amongst the different dimensions of women's empowerment that personal empowerment was 0.72 (72 per cent) which is the highest compare to all other four dimensions It stands as a fundamental step for achieving empowerment under other dimensions. It is followed by social empowerment (0.69 index value), economic empowerment (0.68 index value), and political empowerment (0.47 index value). Through Dairy Women Empowerment Index (DWEI), it can be observed that personal empowerment plays a key role in empowering women. Once the women are personally empowered then in next stages it leads to empowerment in other different dimensions of empowerment. This should be taken care in other development programmes also.

More emphasis has to be given on social and economic empowerment by training them on other income generating activities like training to members on value

addition for sustaining the dairy cooperatives. They should also work to enhance educational and political empowerment through awareness campaign however; they should be motivated to maintain the cordial environment in the family. Further, the linkage with other concerned departments may also be improved to take benefits of their relevant programmes for capacity buildings of the members.

Correlation between profile variables and women empowerment

Table 5 :Correlation between profile variables and women empowerment (n=100)

Sr. No.	Variables	Co-efficient of correlation (r)
X ₁	Age	0.015
X ₂	Education	0.147*
X ₃	Family size	0.058
X ₄	Marital status	0.014
X ₅	Occupation	0.175**
X ₆	Social participation	0.132*
X ₇	Position hold	0.171**
X ₈	Animal holding	0.014
X ₉	Years of membership	0.164*
X ₁₀	Training received	0.431

* - Significant at 5 per cent level of significance

** - Significant at 1 per cent level of significance

It is concluded from Table 5 that, occupation and position hold are positively and highly significantly correlated while education, social participation as well as years of membership are positively and significantly correlated with dairy women empowerment. Age, family size, marital status, animal holding and training received were found to be not significant with the dairy women empowerment.

(1) Age and empowerment

Age has non-significant relationship with empowerment. It can be depicted that age of the women was not contributing towards empowerment which implies empowerment can occur irrespective of age. It may be due to that every human being whatever his/her age may be, has an urge to be respected in the society which is also true in case of women.

(2) Education and empowerment

Education is positively significant with empowerment at five per cent level of significance. Women are more likely to control their own destinies and effect change in their own communities when they have higher

levels of education. Education is often seen as one of the main pathways to achieve another key development goal for women’s empowerment. Education is one of the most important means of empowering women with the knowledge, skills and self-confidence necessary to participate fully in the development process.

(3) Family size and empowerment

Family size is having non- significant relationship with empowerment. It might be due to that attitude of the self, society and family members does matter more for empowerment of women rather than the family size.

(4) Marital status and empowerment

Marital status is having non- significant relationship with empowerment. This might be due to the fact that individuals with married or unmarried social status, does not make any exposure to empowerment leading to acquisition of knowledge and skill involved in different activities.

(5) Occupation and empowerment

Occupation is positively and highly significantly correlated with empowerment of dairy women which shows that it plays a core role in empowering women economically and socially.

(6) Social participation and empowerment

Social participation had positive significant correlation with empowerment of women. Being the members of dairy cooperatives it helped them to be active socially in different social organizations which increased mobility of the members constantly heading towards empowering ‘she’.

(7) Position held and empowerment

Position held is positively and highly significant at five per cent level of probability with empowerment. As higher position in social groups provide higher opportunities to meet more people, due to which they can get more knowledge and scope for empowerment.

(8) Animal holding and empowerment

Animal holding had no significant association with dairy women empowerment. As already stated, only by animal holding it increases their work not the empowerment. It will take even more time for caretaking the animals which would not contribute for women empowerment.

(9) Years of membership and empowerment

Years of membership had positive significant correlation with empowerment of women at five per cent. It

was found that older the member higher the empowerment. Older respondents further used the income from dairying for crop production, marriage functions, to pay back loan, meet out personal expenses, etc which empowered them economically.

(10) Training received and empowerment

Training received had no significant relationship with dairy women empowerment. Trainings on various aspects increased their skill, attitude, and experience but there is lack of proper opportunities for women to empower themselves.

Multiple regressions between profile variables and women empowerment

Most commonly, regression analysis estimates the conditional expectation of the dependent variable given the independent variables – that is, the average value of the dependent variable when the independent variables are constant. The multiple regression analysis was carried out to assess the extent of influence of independent variables towards the dairy women empowerment. Co-efficient of multiple determinations (R^2) was worked out and result is shown in Table 6.

Table 6 :Multiple regressions between profile variables and women empowerment (n=100)

Sr. No.	Variables	Co-efficient	Standard Error	t-value
X ₁	Age	0.05	0.01	5.00
X ₂	Education	0.09	0.04	2.25
X ₃	Family Size	0.04	0.02	2.00
X ₄	Marital status	0.01	0.06	0.17
X ₅	Occupation	0.40	0.04**	1.00
X ₆	Social Participation	0.23	0.07**	3.29
X ₇	Position hold	0.33	0.02**	16.50
X ₈	Animal holding	0.01	0.06	0.17
X ₉	Years of membership	0.04	0.07**	0.57
X ₁₀	Training Received	0.28	0.04	7.00
R ² = 0.52, F=20.84 **				

The value of co-efficient of multiple determinations indicates that 52 per cent of variation in dependent variable is explained by independent variables. The value of adjusted R^2 is 0.49 which implies that if the model is estimated from the population rather than the sample it would account for approximately 3 per cent (0.52 – 0.49) less variance in outcome. The F-value of 20.84 signifies that the fitted model is statistically significant at 0.01 level of probability

Unit increase in occupation, social participation, and position hold, would result in increasing the dairy

women empowerment to an extent of 0.004, 0.007 and 0.002, respectively. Occupation, social participation, and position hold had positive and significant contribution towards dairy women empowerment. This might be due to occupation, social participation, and position holds facilitated women to acquire knowledge, enhanced their mobility in the social system and made them capable to harness the benefits associated with dairying (Rathod et al.,2019).

CONCLUSION

In conclusion, dairy cooperatives not only play a core role in empowering rural women but also form a hub of platform to the weaker sections of them to put forth their genuine problems. More emphasis has to be given on economic empowerment by training them on other income generating activities like value addition for sustaining the dairy cooperatives. It is suggested that dairy cooperatives should encourage women to take part in political activities also. The role played by dairy cooperatives, is much appreciated which can also be replicated in other parts of the country. For greater acceleration rate of empowerment, future strategy must focus more and more on training and capacity building of members besides ensuring adequate linkage support.

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