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### Assessment of women empowerment through women dairy co-operatives in western Maharashtra

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#### Abstract

The present study was conducted in two districts of Western Maharashtra to assess the socio-economic profile and empowerment level of WDCs. Almost all the variables studied under socioeconomic profile grouped under medium level. A total of 240 women members of WDCs were selected through random sampling and data was collected through a structured interview schedule from WDCs of Pune and Kolhapur districts of Maharashtra. Collected data were analyzed through different statistical tools, the DWEI index value was, and outcomes were interpreted. Overall empowerment of members of WDCs recorded in the category of middle level. It was revealed that most of the respondents were grouped in the medium categories of social, cultural, psychological, economic, political, legal, and technological dimensions of empowerment. However, WDCs played an energetic role in facilitating women to become economically independent and self-reliant to accept diverse tasks. The seven dimensions of the dairy women empowerment index were ranked accordingly psychological empowerment was the uppermost level, followed by social, economic, technological, cultural, legal, and political empowerment. It was observed that training is an important aspect of raising the level of empowerment; therefore, the future strategy must focus on capacity building through training. It can be concluded that women members get empowered through WDCs up to a medium range, however, further efforts are required to magnify the empowerment as well as sustain the same for a longer period of time.

**Keywords:** Women empowerment, women dairy co-operatives

#### Introduction

Indian milk production has grown at a compound annual growth rate of about 6.2% to reach 209.96 million tonnes in 2020-21 (DAHD, 2022). India is an agrarian country and livestock is integral to agriculture farming. Women play a significant role in agriculture, dairying, animal husbandry, and dairy farming is a major occupation of women (Rathod *et al.*, 2011) <sup>[31]</sup>. Dairying in India is a female-dominated enterprise. However, the roles played by men and women in the dairy value chain are influenced by the gender division of labour. Under the traditional production system, women contribute most of the labour in dairy production and contribute even more under intensified small-scale operations (Katothya, 2017) <sup>[17]</sup>. Women's empowerment has gained momentum in India in various sectors, including the dairy sector. The cooperative is the only organization that educates women, helps them increase their participation in

economic activities, and develops leadership qualities and confidence levels. Sapovadia and Achuthan, (2006) <sup>[34]</sup> highlighted the role of women leaders in the Cooperative Dairy Movement and women's empowerment with the association and alliance with NDDDB.

India's government has initiated women's empowerment through dairy farming by establishing exclusive women's dairy cooperatives; however, to what extent these have succeeded in achieving the goal is a question. Thus, studies on women's empowerment through dairy cooperatives shall be undertaken (Niketha *et al.*, 2017) <sup>[26]</sup>. A quiet rural shift is being brought about by women's dairy cooperative associations. The WDCs place a strong focus on the fact that the project will assist rural women in many ways, including capacity building and the ability to learn by inference thanks to their ownership and management of milch animals. Yet, to alter and enhance the women's dairy cooperatives for

more empowerment, it is important to investigate the extent to which these cooperatives successfully fulfilled the goal of women's empowerment. In order to assess the level of women's empowerment through WDCs, the current study, "Assessment of Women Empowerment through Women Dairy Co-operatives," was undertaken in western Maharashtra.

### Materials and Methods

The proposed study was conducted in two districts of Western Maharashtra. An ex-post facto research design was used for this study. Two districts from western Maharashtra and two tehsils from these two districts will be selected to determine the women's dairy cooperatives. A total of 30 women members from each women's dairy co-operatives were randomly selected. Thus, the total sample size was 240. Data was collected through a structured interview schedule by personal interview method. Selection of independent and dependent objective-oriented variables were selected and scored through scales and a structured schedule. Empowerment determinants viz. Social, economic, cultural, psychological, technological, legal, and political were selected. Statements were selected by available literature and the judge's score and scored on the basis of the Likert scale. To know the level of empowerment, an index value of women empowerment was calculated for each dimension by the Dairy Women Empowerment Index (DWEI) developed by Niketha *et al.* (2021) with slight modifications. Collected data was analyzed by using appropriate statistical tools.

### Results and Discussion

Observations were made after the collection, tabulation and analysis of the data. The results of the present study were presented and discussed under the following subheads,

#### Socio-economic profile of members of women dairy co-operatives

##### 1. Age

The age of the respondents was categorized into young, middle and old age groups. Present findings revealed that (Table 1), the majority of the respondents (69.16%) were from the middle age group, followed by the young age group (14.58%) and old age group (16.25%), respectively. It was observed that, the middle age group is commonly engaged in women's dairy co-operative activities as they shouldered the family responsibilities very efficiently. Similar findings were also recorded by Gadad and Kunnal (2018) <sup>[10]</sup>, wherein they reported that the majority of the farmers were in the middle age group (49.17%), followed by the old age group (40%) and young age group (10.83%) respectively. These observations were also in harmony with the findings of Nikita *et al.* (2018) <sup>[40]</sup>, Ravinder and Umadevi, (2020) <sup>[33]</sup>, Kochar and Kaur (2015) <sup>[20]</sup>.

##### 2. Education

The educational status of women members is expressed in Table 1, which revealed that most of the women members in dairy co-operatives attended schooling secondary (40.83%) followed by higher secondary (25.41%), primary (17.08%), graduation (9.16%) and illiterate (7.5%) respectively. This literacy level could be due to the good educational

environment in the study areas, positive attitude toward education and easy approachability to educational institutes. These observations are in agreement with the findings of Dash *et al.* (2020) <sup>[6]</sup>, wherein they noted that the maximum number of women have a middle-class education level (29.4%) followed by an SSC level (20%) and a higher secondary level of education (4%). Similar results were noted by Kochar and Kaur (2015) <sup>[20]</sup>, who reported that most of the respondents had a certificate of competence (43.5%), completed a professional degree (29.9%) and completed higher agricultural education (26.6%), respectively.

##### 3. Family size

The results revealed that (Table 1), most of the women members of WDC (60.83%) had a medium family size followed by a small family size (28.75%) and a large family size (10.41%). Most women members of WDC belong to medium family size in the study area, which might be due to most of the respondents living with their close relatives. Medium family size was supportive for them in dairy enterprises. Kaur *et al.* (2017) reported similar findings that the majority (74.29%) of respondents belong to medium family size comprising 4 to 6 members, followed by low family size category (28%). Parallel results were noted by Gadad and Kunnal, (2018) <sup>[10]</sup> wherein, they observed that a maximum number of respondents belonged to medium family sizes up to 5-8 members (45.83%) followed by small family sizes up to 4 members (27.17%) and large family size more than 8 members (25%) respectively.

##### 4. Landholding

The distribution of the respondents according to land size is presented in Table 1. Results showed that most of the respondents had marginal land size (46.25%) followed by small land size (39.58%), semi-medium land size (12.91%), landless (0.83%), medium land size (0.41%), respectively, and nobody was in the large category of land holdings. The size of landholding might be decreasing due to the division of land over the generations, changes in family patterns, and land used for the industrial and private sectors to set up big projects. Similar results were noted by Halakatti *et al.* (2007) <sup>[14]</sup> wherein they noted that land holding of trained women members of dairy co-operatives had small and medium land holdings (39.90%), trained dairy farm women had big land holdings (13%), whereas the majority of untrained dairy farm women had landless or medium land holding category (39.90%) respectively and nobody has big-sized land holdings.

##### 5. Herd size

Results of the study showed that (Table 1), most of the respondents (59.58%) had medium herd size followed by small herd size (30%) and large herd size (10.41%). It was noted that most of the respondents possessed mostly 4-9 dairy animals as they were undertaking dairy farming along with agriculture. Halakatti *et al.* (2007) <sup>[14]</sup> made similar observations and reported that the majority of skilled dairy women members had crossbred cows (83.79%).

##### 6. Milk production

The data on milk production of the dairy farmers presented

in Table 1 indicates that the maximum respondents belonged to the medium category of milk production (66.66%), followed by the low category (22.08%) and the high category (11.25%) of milk production. The above findings were coherent with the observations made by Niketha *et al.* (2017)<sup>[26]</sup>, wherein they revealed that most of the respondents were in the medium level of milk production.

### 7. Annual income

Results revealed that the majority of women members of women dairy co-operatives belonged to the medium-level annual income group 83,241 to 2,09,113 (70.83%), followed by a high-level annual income group (16.25%) and low-level annual income group (12.91%) respectively. Due to fertile soil, excellent irrigation systems and a financially sound subsidiary business, the study region is regarded as a well-developed location. Similar findings were reported by Makarabbi *et al.* (2021)<sup>[23]</sup>, wherein most respondents come from the middle-income category.

### 8. Social participation

The findings of the study revealed that the majority of respondents (54.16%) had a medium level of social participation, followed by a low level (34.16%) and a high level (11.66%) of social participation. Similar results were supported by studies conducted by Thaker *et al.* (2020)<sup>[37]</sup> and Upretil and Bhardwaj, (2018)<sup>[10]</sup>. It was observed that most of them were members of milk co-operative societies to fulfil the essentials of dairy farming, including timely economic support.

### 9. Training Received

Results revealed that the majority of the women members of WDC respondents had received training (72.50%) provided by dairy co-operatives. The importance of training is progressively realized, and thus, to upgrade the knowledge and skill of women members, dairy co-operatives organized various training programs. Similar findings were reported by Nikita *et al.* (2017)<sup>[26]</sup>.

### 10. Information-seeking behaviour

The information-seeking behaviour of WDC members is presented in Table 1. It revealed that the majority of respondents (72.50%) had a medium level of information-seeking behaviour followed by a low level (17.08%) and a high level (10.41%) of information-seeking behaviour. It was observed that, most of the women members of WDCs received information from veterinary officers, village-level workers LSS, and neighbours/friends/relatives. Also, they obtained information from social media.

### Level of empowerment of women members through WDCs

#### Distribution of the respondents according to different dimensions of empowerment

The results presented in Table 2 indicated that most of the women members of WDCs had a medium level of social empowerment (57.91%) followed by high (22.50%) and low (19.58%) levels of empowerment. It was revealed that most

of the respondents were in the medium categories of social empowerment. The concept of WDCs is not deeply rooted and is at a premature early development stage. WDCs are a promising platform for making women self-sustainable. Rural women have been participating in economic ventures for which WDCs are acting as a platform. Women provide milk to WDCs at a similar location, leading to gatherings, increased interaction, and increased participation. Respondents stated that as a result, they got to know one another in the community, and unneeded disputes were settled. The women and other people worked together, creating a positive atmosphere that contributed to the health of the village as a whole. Women interacted with government representatives due to the WDCs' activities, which helped them overcome their hesitations. In addition to giving them more freedom of expression, movement, and participation, women's successful management of dairy cooperatives raised their status among villagers and villages. Singh and Kaur (2012)<sup>[2]</sup> found similar results, stating that women who participated in SHGs were empowered to make decisions about the general welfare of the family, education and marriage of their children. They were also given confidence in their technical and communicative abilities, which increased their participation in social activities.

Results indicated that most of the women members of WDCs had a medium level of cultural empowerment (62.50%) followed by low (23.75%) and high levels of cultural empowerment (13.75%), respectively. It can be inferred that very few respondents were able to experience low levels of cultural empowerment due to WDC activities, indicating that WDCs are on the correct path because most members experience cultural empowerment. Due to WDC activities, they overcame social obstacles, participated in local and national celebrations, and contacted people outside of their immediate family for charitable purposes.

Results revealed that the responses for psychological empowerment were at a medium level (49.58%) followed by low (34.16%) and high (16.25%) levels of psychological empowerment. Women can overcome social, familial, and self-imposed limitations by participating in various activities. WDCs influenced women's self-esteem, expressiveness and belief in their abilities, giving them the courage to confront social issues, interact with various institutions, and participate in community activities, all of which improved women's psychological empowerment.

In terms of economic empowerment, the majority of respondents (46.25%) had a medium level, followed by a high level (32.50%) and then a low level (21.25%) of economic empowerment. Economic empowerment of women is essential because it affects everything, including social and lifestyle standards. Economic resources are critical for the long-term and dignified well-being of all people, particularly women WDCs were successful in empowering women economically because they adopted a three-pronged strategy: members received a soft loan to buy a milking cow, members also received assurances of marketing opportunities close to the village and members received the technical training required for proper management of the dairy animals. In their attempts to redistribute rural income in their favour, WDCs have had a

favourable impact on rural communities in general and the well-being of the weaker segments in particular. They created a conducive climate for women to recognize their value as members of society through their activities, which increased milk production, income and family assets. They also made it necessary for them to register personal bank accounts and monitor household spending. Their confidence to assert their power and rights was also increased by economic empowerment.

Dash *et al.* (2020) <sup>[6]</sup> reported similar findings, stating that women's economic condition was significantly changed after joining WDCs. After joining the Milk Union, the cooperative members felt greater economic independence. Gangwar *et al.* (2004) <sup>[12]</sup> discovered similar results, revealing that membership in dairy cooperatives helped women become economically independent and self-confident with improved community prestige. Similar findings were observed by Meera and Gowda, (2013) <sup>[24]</sup>. They stated that dairy co-operatives played an important role in creating employment opportunities for women, access to income and credit, and supporting women's economic empowerment.

Regarding political empowerment, it can be observed that the majority of respondents (57.50%) have a medium level of empowerment. The rest have a low (37.08%) and then a high level (05.41%). Political empowerment was discovered to be on the low end, possibly due to the members' revulsion of politics. Women are also prohibited from participating in political activities because of their traditional roles. Connecting poor people with the government is critical to the political empowerment component of the white revolution. In India, women's freedom of movement is frequently restricted. In India, two-thirds of women are forbidden from entering public spaces such as markets, health care facilities, or other communities by their own culture. Members were aware of political institutions, but contesting elections was found to be a low-priority area, even though they had participated in the electoral process. Another reason could be that the majority of the members were marginal, small, and landless, which discouraged them from participating in political activities because the most important thing to them was to be economically empowered. Regarding legal empowerment, most of the respondents were having medium level (60.00%) of empowerment followed by low (21.66%) and high level (18.33%) of legal empowerment. It can be concluded that the majority of respondents lacked legal empowerment. It can be attributed to restrictive social norms, the complexity of the legal process and women's strong attachment to their families, all of which limit their ability to use the legal system to settle family disputes. One of the main causes of this can be a lack of understanding of legal matters. Yet, WDCs are crucial in raising women members' awareness of legal facts.

In terms of technological empowerment, the results revealed that the majority of respondents (64.16%) had a medium level of empowerment, followed by a low level (24.58%) and then a high level (11.25%). Despite the challenges, dairy women were found to make rigorous efforts to maximize their available resources. Because of the role co-operatives played in organizing training, demonstrations and

other activities that tended to promote technology acquisition behaviour among women, the results indicated that women had a medium level of technical knowledge related to dairying. Members were marginally aware of digital technologies due to WDCs and the rise of campaigns and digital media. This will support the empowerment of rural women through digital technology.

In terms of overall empowerment (table 3), the majority of respondents (60.00%) had a medium level, followed by a low level (30.83%) and a high level (9.16%) of empowerment. Kochar and Kaur (2015) <sup>[20]</sup> reported similar findings, stating that women who joined a dairy cooperative society and started their businesses improved their financial situation, communication skills, and decision-making roles and gained the confidence to express their thoughts and feelings. Nikitha *et al.* (2017) <sup>[26]</sup> observed comparable findings, inferring that psychological empowerment was the first and foremost basic need for women to be empowered. WDCs play an important role in empowering rural women and serve as a platform for the weaker sections of them to express their genuine concerns. Economic empowerment must be prioritized by training them in other income-generating activities such as value addition to sustaining WDCs. To increase the rate of empowerment, the future strategy must focus more on member training and capacity building, in addition to ensuring adequate linkage support.

#### **Level of empowerment under different dimensions of women members of WDC**

Table 3 showed that the strongest component of psychological empowerment (Ranked I) was obtained by women members of WDCs, followed by social empowerment (Ranked II), economic empowerment (Ranked III), technological empowerment (Ranked IV), cultural empowerment (Ranked V), legal empowerment (Ranked VI), and political empowerment (Ranked VII). The empowerment indices were used to rank the seven dairy women empowerment index dimensions. These findings were similar to Nikitha *et al.* (2017) <sup>[26]</sup>, who found that women members of WDCs had the highest index values for psychological and social empowerment.

The results showed that empowering women psychologically is crucial (DWEI). Psychologically empowered women are also more likely to have other types of empowerment. Other development initiatives should take this into account as well. By educating members on additional sources of revenue like value addition, more focus should be put on economic empowerment to sustain the WDCs. WDCs should be urged to maintain a sociable family environment, but they should also work to become more politically and legally powerful through education efforts. Even though technical empowerment is placed fourth, we must emphasize technology usage because it has an impact on output, productivity and revenue. Through visits, educational tours, exhibitions, demonstrations, community radio and the use of social media, members can become more motivated about it. Also, it may be possible to create links with other relevant departments so that members can access their relevant capacity-building activities.



**Table 1:** Distribution of women members of WDC according to their socioeconomic profile

N=240

Sr. No	Category	Frequency	Percentage
<b>Age</b>			
1	Young age (<34 years)	35	14.58
2	Middle age (34-51 years)	166	69.16
3	Old age (>51 years).	39	16.25
<b>Education</b>			
1	Illiterate	18	07.50
2	Primary	41	17.08
3	Secondary	98	40.83
4	Higher Secondary	61	25.41
5	Graduation	22	09.16
<b>Family Size</b>			
1	Small family size (1-4 members)	69	28.75
2	Medium family size (4-7 members)	146	60.83
3	Large family size (>7 members)	25	10.41
<b>Land Size</b>			
1	Landless	02	00.83
2	Marginal	111	46.25
3	Small	95	39.58
4	Semi-medium	31	12.91
5	Medium	01	00.41
6	Large	00	00.00
<b>Herd Size</b>			
1	Small (up to 4 animals)	72	30.00
2	Medium (4-9 animals)	143	59.58
3	Large (above 9 animals)	25	10.41
<b>Milk Production</b>			
1	Low (Up to 20 liters)	53	22.08
2	Medium (20-50 liters)	160	66.66
3	High (Above 50 liters)	27	11.25
<b>Annual Income</b>			
1	Low (Up to Rs.83,241)	31	12.91
2	Medium (Rs.83,241 to 2,09,113)	170	70.83
3	High (Above Rs.2,09,113)	39	16.25
<b>Social Participation</b>			
1	Low (Up to 2)	82	34.16
2	Medium (2 to 3)	130	54.16
3	High (Above 3)	28	11.66
<b>Training Received</b>			
1	Yes	174	72.50
2	No	66	27.50
<b>Information Seeking Behaviour</b>			
1	Low (Up to 13)	41	17.08
2	Medium (13 to 18)	174	72.50
3	High (More than 18)	25	10.41

**Table 2:** Distribution of the respondents according to different dimensions of empowerment

N = 240

Sr. No.	Sources of information	Frequency	Percentage
1	<b>Social Empowerment</b>		
	Low (up to 22)	47	19.58
	Medium (22 to 29)	139	57.91
	High (above 29)	54	22.50
2	<b>Cultural Empowerment</b>		
	Low (up to 35)	57	23.75
	Medium (35 to 40)	150	62.50
	High (above 40)	33	13.75
3	<b>Psychological Empowerment</b>		
	Low (up to 37)	82	34.16
	Medium (37 to 39)	119	49.58
	High (above 39)	39	16.25
4	<b>Economic Empowerment</b>		
	Low (up to 37)	51	21.25
	Medium (37 to 44)	111	46.25
	High (above 44)	78	32.50
5	<b>Political Empowerment</b>		
	Low (up to 19)	89	37.08
	Medium (19 to 24)	138	57.50
	High (above 24)	13	05.41
6	<b>Legal Empowerment</b>		
	Low (up to 30)	52	21.66
	Medium (30 to 40)	144	60.00
	High (above 40)	44	18.33
7	<b>Technological Empowerment</b>		
	Low (up to 30)	59	24.58
	Medium (30 to 40)	154	64.16
	High (above 40)	27	11.25
8	<b>Overall Empowerment</b>		
	Low (up to 0.21)	74	30.83
	Medium (0.21 to 0.25)	144	60.00
	High (above 0.25)	22	09.16

**Table 3:** Level of empowerment under different dimensions of women members of WDC

N = 240

Sr. No.	Seven Dimensions of Dairy Women Empowerment Index	Index Value	Rank
1	Social Empowerment	0.89	II
2	Cultural Empowerment	0.77	V
3	Psychological Empowerment	0.94	I
4	Economic Empowerment	0.87	III
5	Political Empowerment	0.55	VII
6	Technological Empowerment	0.80	IV
7	Legal Empowerment	0.70	VI

## Conclusion

The involvement of women members in WDCs improved shared cooperation, social participation, and group

cohesiveness. The majority of the respondents had a moderate level of social, cultural, psychological, economic, political, legal, and technological empowerment; however,

WDCs played a vital role in helping women become economically independent and self-sufficient to shoulder responsibilities. Among the seven dimensions of the dairy women empowerment index, the level of psychological empowerment was comparatively more than the social, economic, technological, cultural, legal, and political levels. To raise the level of empowerment, the future strategy must focus on capacity building through training. Women's dairy cooperatives are instrumental in augmenting the income and employment of women dairy farmers. On the overall basis, it can be concluded that women members get empowered up to a certain extent, however, further efforts are required to improve the empowerment as well as sustain the same for a longer period.

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