

# Dairy Dependent Self -Help Groups in Pondicherry: A tool for Economic Empowerment

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**Abstract** – This paper examines the economic empowerment of the Dairy Dependent Women Self-Help Group (SHG) members in Puducherry region in India. An ex-post facto design was employed to access the change in the economic empowerment of the women SHG members. Data were collected from 84 respondents using random sampling from all the three blocks of Puducherry region. To study the difference in the economic empowerment of the members within the group, the respondents were made into two groups by using wealth ranking: poor and better-off within the group. The study concludes that women are empowered when they take dairying as an Income Generating Activity (IGA). The relative advantage is observed more for the underprivileged women (widows, women whose husbands were sick) as it provides self employment. Contribution from dairying is 36 per cent of the total income for the poor category, whereas it is only 29 per cent for the better off category. The mean value of household assets, milk production and sale, and annual income of the women SHG members were increased in post SHG situations. The mean value of the assets and the mean annual income of the women SHG members had increased by 68 per cent and 77 per cent respectively. The contribution of dairying to the total annual income rose from 20 per cent to 30 per cent over a period. This reflected the significant improvement in the economic status of the women SHG members through dairying as IGA. While the consumption of milk, fruits and non-vegetarian items remains static without much change.

**Keywords** – Dairying, IGA, Family Income, Women Empowerment, Self Help Groups.

## I. INTRODUCTION

India, being a democratic and a welfare oriented country has recognized that social mobilization of the women with limited means to form Self-Help Groups (SHG) is one of the best ways to tackle poverty. Therefore the government has widely promoted self help approach in women's development and empowerment initiatives. The Project started in 1998 by the Department of Women and Child Development, Ministry of Human Resource Development, Government of India with the objective of establishing self-reliant women's self help groups having 15-20 member in each group and every member would improve the quality of their lives through greater access to, and control over resources; develop linkages between self-help groups and lending institutions to ensure continued access to credit facilities and increased control over income and spending through their involvement in income generation activities that will help in poverty alleviation.

SHGs had primarily been formed in India as a micro-credit groups that can empower women and the weaker sections of the society economically [1]. By means of empowering women economically, a 'conscious state' is created within women, which will help them to fight

against all the inequalities that are forced upon them by the patriarchal society [2]. The reason is that poor economic condition is one of the major causes for women's lower social status and economic strength is considered as the basis of social, political and psychological power in society [3]–[4].

Many studies have recognized the importance of economic empowerment in improving the status of impoverished women. The most straightforward vehicle to 'empower' poor women is to increase their productivity at home and in the market through the income they obtain from work [5]. The ILO has proposed various strategies to combat this problem, such as increasing women's access to land and other assets [6]. Opening the opportunity for tenure will encourage more women to use their domestic space for Income Generating Activities (IGA) [7]. Other recommendations include investing in human capital such as training for productive employment, providing financial resources with a focus on credit, expanding wage employment opportunities, improving social protection for female workers and empowering women through greater organization. Income-generating activities are seen as "entry points for channels of communication and vehicles by which women can meet their needs" [8]. They provide effective ways to address inequalities in the areas of health, education and poverty alleviation. Economic empowerment projects usually focus on income-generating activities, which allow women to independently acquire their income. Income-generating activities encompass a wide range of areas, such as small business promotion, cooperatives, job-creation schemes, sewing circles and credit and savings groups [9].

Dairying as IGA adds synergistic effect to the economic empowerment of women SHG members. Several studies had concluded that dairying itself - a tool for empowerment of women [10]–[11]. Thus the above discussion explains the positive effect of both SHGs and dairying on women economic empowerment. Based on the background, an empirical research is conducted in the Puducherry region to understand the contribution of dairying to the economic empowerment of poor women SHG members. The following objectives have been developed to study the economic empowerment of the dairy dependant women SHG members:

1. To study the employment status of Women SHG members resultant to Income Generating Activity.
2. To make out the changes in asset possession, consumption level, annual income of Women SHG members.
3. To scrutinize the variation in the level of economic empowerment between the rich and poor within the group.

## II. LITERATURE REVIEW

### A. Role of SHGs in women's development

The term 'Self-Help Group' or SHG can be used to describe a wide range of financial and non financial associations, in India. It has come to refer to a form of Accumulating Saving and Credit Association (ASCA) promoted by Government agencies, NGOs or Banks. These groups manage and lend their accumulated savings and externally leveraged funds to their members [12]. The government of India has widely promoted self help approach in the women's development and empowerment. The goal of poverty reduction and empowerment of women can be effectively achieved if poor women could organize into groups for community participation as well as for the assertion of their rights in various services related to economic and social well being [13].

In 2002, NABARD [14] evaluated the impact of SHGs by covering 560 members of 223 SHGs linked to banks in 11 states. The evaluation showed that SHG members gained significant increases in assets, income and employment. Women members were also found to have become more assertive in confronting social evils and problem situations. In addition, nearly half the poor member households were observed to have crossed the poverty line. Other reviews of SHG programmes divulged information that SHGs helped to promote savings yielding moderate economic benefits. It provided access to credit to their members which decreased the dependence on money lenders and thereby resulting in empowerment benefits to women. SHGs have demonstrated the potential to create a socioeconomic revolution among the poor women in India.

The microfinance that evolved through the SHGs for collective savings, group consumption credit, integrating social and economic goals among small groups had the potential not only for financial deepening in the rural areas but also for the empowerment of women in particular [15]. Empowering women is not just for meeting their economic needs, but also for more holistic social development [16] -[17]. Thus, SHGs not only provided credit, but also empower women socially and economically through the participation in decision making in the household, community and local democratic sector and by leadership positions [16]-[18]. SHGs enhance the equality of women's status as participants, decision makers and beneficiaries in the democratic, economic, social, and cultural spheres of life. The SHG empowers women and train them to take active part in the socioeconomic progress of the nation and make them sensitized, self-made and self disciplined. They help in removing the social limitations of women such as superstition and their dormant role in decision making. Further, it initiates confidence in the minds of rural women to succeed in their day to day life [19]. Therefore, the SHG movement relies on development through empowerment and not on subsidies.

The empowerment process brings forth behavioural changes in women, mainly, self-reliance. When this is ushered with the provision of financial services, it shapes the members as quality bank clients and a citizen, who is

amenable to maximize the absorption of other services [20]. SHGs enabled the women involved to take the very first step towards independence and self determination [21].

### B. Dairying - a tool for women empowerment in SHGs

The role of dairying in improving the socioeconomic status of the landless poor is significantly recognised globally and in India. The findings of some of the relevant researches conducted in various part of the world and in India are given below:

The small farmers of Colombia perceived that cattle had contributed much for the improvement of their life in terms of economic benefits from milk, security against crop failure, liquidity against financial crisis, as collateral for informal credit, and as a protection against inflation [22]. In Kenya, cattle were ranked as the most important livestock species that plays a major role in the household in changing the poverty status of people [23].

India has traditionally been known as 'the land of milk and honey'. Dairying was an important contributor to the village economy in ancient India. Much folklore has been woven around the people involved in this profession. Dairying as an occupation has shown to support the families of many women, especially among the rural poor in India [24]. In the southern states of India it is apparent that livestock, particularly cattle has a strong role in alleviating poverty, among the 'landless' rural poor [25]. Cattle acts as "moving banks" in crisis situations. The 'milk money' is one, which empowers the landless rural poor economically and is used mainly for; food at home, savings, education of children and the contribution from cattle make to their household financial security.

Women in dairy production were seen to get due recognition [26]. They reported that women handled most of the critical jobs in dairy farming such as feeding, milking, care of newborn and administration of medicine. In many cases the income from dairy animals did not remain in the hands of women and even the decision regarding sale and purchase. However, due to the establishment of women's dairy co-operatives in many states of India, women had better control over the sale of milk and the use of income from it. The involvement of women in dairying and animal husbandry activities was found to be very intensive and the intensity varied among different states. It varied from 32 per cent in Haryana, 45 per cent in West Bengal and 61 per cent in Rajasthan [27]. Dairying has become one of the most important and economically viable occupations of rural families. Widely, women were employed outside the home either in own or on others' farm in dairying related activities. After household work, care of animals took up a large part of women's time. On an average, 1.8 hours were devoted to animal care on a daily basis [28]. Whereas, Christy and Thirunavukkarasu reported that on an average, farm women spent about 4.9 hours per day and Natchimuthu observed 3.91 hours per day towards care of large ruminants [29]-[30]. Dairy enterprise contributes heavily towards increasing employment to the extent of 38.39 per cent, which was highest in landless (68.36%) and least in the small farmers' category (4.31%), which

indicated a positive impact of IRDP on dairy financing [31].

The contribution of dairying to the total income ranged between 50-80 percent of the families surveyed in four southern states [32]. The contribution of dairy animal to total income of the household was negatively correlated with size of land holdings in Haryana and in Puducherry [33]–[34]. Rangnekar in his study reported that dairy production accounts for 80 percent of the total livestock produce; farmers from higher strata derived more benefit from livestock than resource poor farmers in absolute terms, however, in relative terms, the contribution of livestock to family income of the resource poor was high [35]. A study by Nirmala revealed that a shift from farm to non – farm activities significantly reduced the earnings of the SHG members [36]. Whereas SHGs involved in farming activities viz., floriculture, poultry, dairy, banana cultivation earned more income compared to traditional non – farm activities.

### III. METHODOLOGY

The research design employed to assess the change in the economic empowerment of women SHG members is ex-post facto design. The multistage random sampling technique is used for the selection of women SHGs and the respondents. The study was conducted in all the three blocks (Ariyankuppam, Villianur and Oulgaret) of the Puducherry region. Four women SHGs were selected from each block, thus forming 12 women SHGs. Within the group the members are categorized into two classes viz., better-off (relatively rich within the group) and the poor using wealth ranking method. Three from better – off category and three from poor category within the group were selected randomly from each of the 12 selected women SHGs as sample respondents. Thus six members from each selected women SHGs were included as sample for this study. In addition, the presidents of all the selected women SHGs were included as sample respondents. Thus a total of 84 women SHG members from 12 women SHGs in 3 selected blocks of Puducherry region was selected as study respondents.

The data were collected by personally interviewing the selected respondents with the help of a pre tested structured interview schedule. Further, secondary data were also collected from the offices of the District Rural Development Agency (DRDA), Banks and Department of Animal Husbandry & Animal Welfare (DAH&AW). The collected data were analysed using parametric statistics such as percentages, frequencies, mean, mean differences and paired t - test.

### IV. RESULTS

The economic empowerment of the women SHG members was assessed with the selected economic indicators. All the selected indicators were measured at the pre and post SHG situation of the members. At the time of investigation only 57 respondents (68 percent) were continuing dairying as IGA. Hence, indicators which are specific to dairying were measured only for those

members who were involved in the IGA. The details of the respondents involved in IGA (dairying) as a result of SHG formation is given in Table I.

Table I: Number of women SHG members purchased cows with the bank loan

Categories	Frequency	%
Availed loan from bank for IGA	84	100.0
Actually purchased cows	75	89.0
Shown their own cow as purchased	05	6.0
Shown neighbours cow as purchased *	04	5.0
Possessed cows as on date of interview	57	68.0
Started rearing cows due to SHG loan	35	41.67
New members rearing cows as on date of interview	23	27.4

\* Four members never involved in dairying

#### Employment status and involvement in IGA

From the Table, it is clear that all the members had availed loan for doing IGA, but only 89 percent of the members had actually utilized it for IGA. Out of the 89 percent, only 68 percent continued dairying. But 92 percent of the women SHG members are in the view that dairying provides them additional employment. It is also observed that women members widely utilized their leisure time for dairy farming, in addition to the primary occupation (agricultural labour / coolie). This finding is in consonance with the results of [28]–[29], [31]. The analysis of data on time spent by the respondent families on dairy farming activities showed that on an average a typical household spent about 2.0 hours in a day before joining the group. This mean time spent on various activities of dairying increased to approximately 3 hours after joining the group (Table II). The positive mean difference (54 minutes / day) indicates that the average time spent on dairying by the family had increased in consequence with the SHG membership.

Table II: Mean time spent by women SHG member on dairying

Time spent	Before	After	Difference
Hours /day	2.0	2.9	0.9

#### Possession of assets

Asset possession of the member household directly reflects the economic status of the family. Assets are properties of every description belonging to the member household. Hence, it was measured in terms of change in land holdings, home appliances, type of house, cattle shed, vehicles, savings, ornaments, and other miscellaneous properties.

#### Land holdings

Table III shows that there was no change with respect to land holdings of the respondent households before and after joining the SHGs. Surprisingly, one member had discontinued crop farming on leased land.

**Table III: Landholding of women SHG member households**

Categories	Before	After	Difference
Landless	62 (73.8)	63 (75.0)	1
Leased Land	07 (08.0)	06 (07.0)	(-1)
Land owned	15 (18.0)	15 (18.0)	0

#### Home appliances

The differences in the number of home appliances between pre and post SHG period indicated that the respondent families purchased many household items after joining the group. There was a maximum increase in the number of households owning necessary items like grinder (25 to 53), colour television (3 to 23) and mixer (8 to 26) when compared to luxury items like telephone, refrigerator and CD player. The findings also revealed that more members acquired cable connection and grinders. However, the calculated percentage of change showed that the maximum change had taken place on costly and luxury items such as colour TV, CD player, refrigerator and telephone with 6, 8 and 10 fold increases respectively.

#### Type of housing

There was a substantial number of respondents converted their kutchra (thatched) houses to semi pucca (semi thatched) or pucca (brick) houses after joining the group. Thus the percentage of respondents owning pucca houses increased from five per cent to 32 per cent over a period of five years.

#### Cattle shed

Only two members had constructed pucca shed for their cattle after joining the group.

#### Vehicles

There was a significant increase in the total number of vehicles over a period. A shift from the small or less powered vehicles to more powered vehicles (from a bicycle to moped, from moped to motor bike) was also noticed among many respondent households. One member had bought a tractor after becoming a member of the SHG by borrowing money from the bank and SHG.

#### Miscellaneous assets

Some properties which were not covered under previous headings such as house plot, petty shop, carpentry shop, ornaments and coconut grove are taken under this indicator. There was a substantial increase in the number of members (27nos) owning miscellaneous assets after joining the SHGs. Among the members who had savings, majority preferred to save money in banks than in private chit funds.

Further, about 26 per cent of the members purchased gold ornaments with an average quantity of 11 grams per member during the last five years. The overall value of the assets was estimated in monetary terms for each category of assets possessed by the members. The data in Table IV indicated that the overall mean value of assets was Rs. 68,595 and Rs. 1, 15,351 in the pre and post SHG situations respectively. The calculated mean difference and the percentage of change revealed that the value of assets had increased by 68 per cent after joining the group

**Table IV: Mean value of assets possessed by women SHG member's household**

Value (in Rs.)	Before	After	Difference	Percent change
Mean value	68, 595	1,15,351	46,756 **	68.2

\*\* Significant at ( $P < 0.01$ )

#### Milk production, consumption and sale

The mean household milk production per day among the dairy farmers before and after joining the group was 5.79 and 7.86 liters respectively. There was an increase of about 2.0 liters per day in household milk production after joining the group (Table V).

**Table V: Mean household milk production, consumption and sale among respondent households**

Categories	Before (n = 40)	After (n = 57)	Difference
Milk production (liters/day)	5.79	7.86	2.07
Milk consumption (liters/day)	0.47	0.46	0.01
Milk sale (liters/day)	5.32	7.40	2.08

The mean household consumption of milk was 470 grams in the pre SHG situation and 460 grams in the post SHG situation. It was also evident that the mean household milk consumption was slightly reduced after joining the group among the dairy farmers. The average sale of milk per household in a day was 5.35 and 7.40 litres before and after joining SHG respectively. The mean difference showed that there was a significant increase in sales of milk after joining the group. The milk sale per household depends on the quantum of milk produced and consumed. The mean difference in household milk sales was 2.08 liters. Thus, it was concluded that an increase in milk production directly reflected on milk sale by 2 liters per household among the dairy farmers.

#### Consumption of staple food and other items

The data presented in the Table IV indicated that the mean score increase in the consumption of staple food was 0.18 after joining the group. This difference in the household level of food consumption was found statistically significant at the 1% level. This revealed that there was an improvement in the consumption level of staple food, i.e. they could able to consume sufficient / satisfactory amount of food now than before.

**Table VI: Mean scores on consumption of staple food and other items in respondent households**

Food items	Before	After	Difference
Staple food	1.57	1.75	0.18 **
Non Vegetarian	3.29	3.25	- 0.04
Fruits	1.61	1.63	0.02

\*\* Significant at ( $P < 0.01$ )

On the other hand the mean difference in the consumption level of the non – vegetarian items like egg, fish, chicken, beef and chevon was marginally reduced after joining the group. The mean score of consumption of fruits was 1.61 and 1.63 before and after joining SHG respectively. There was a minimum change in the consumption level of fruits which was not statistically significant. The number of respondents in insufficient food category reduced from 36 to 21 after joining in SHGs.

#### Annual household income

The total household income from dairying and other sources is given in the Table VII

Table VII: Mean annual household income of the WSHG members

Source	Before (Rs.)	After (Rs.)	Difference	Percent change
Dairying	7,507	20,051	12,544**	167
Other occupations	30,333	46,878	16,545**	54.5
Total	37,840	66,929	29,089**	76.87

\*\* Significant at ( $P < 0.01$ )

It is noted that the mean difference in the total annual household income was Rs. 29,089. The percentage increase in annual household income was 77 per cent over a period of five years and this increase was found to be statistically significant.

#### Comparison of mean values of selected indicators of Economic empowerment

In order to understand the differences between the better-off and poor category, the mean was calculated for selected economic indicators such as herd size, time spent on dairying, value of asset, household consumption, production and sale of milk, food consumption, income from dairying and other occupation and total income at two situations; before and after the formation of the SHG. The data analyzed for the better-off group is presented in Table VII. Similarly, the mean for the poor group is presented in Table IX.

From Table VIII and IX, it is noticed that the mean herd size, mean time spent on dairying and mean household consumption of milk are slightly reduced in the post SHG situations for the better off category, whereas on contradiction, these means were marginally increased for the poor category (see Table IX).

Table VIII: Mean values of selected indicators of economic empowerment of the Better-off group

Categories	Better-off		
	Before	After	Difference
Time spent on dairying (Hrs)	4.1	3.9	- 0.2
Herd size (Nos)	2.53	2.41	- 0.12
Value of asset (Rs)	93,528	1,58,667	65139 **
Milk production (lts)	5.94	7.9	1.96

Milk consumption (lts)	0.73	0.50	- 0.23
Milk sale (lts)	5.46	7.38	1.92
Food consumption (score)	1.69	1.97	0.28 *
Income from dairying (Rs)	8,335	23,371	15,036**
Income from other occupation (Rs)	36,256	58,452	22,196**
Total annual income (Rs)	44,591	81,823	37,232**

\*Significant at ( $P < 0.05$ ) \*\* Significant at ( $P < 0.01$ )

Table IX: Mean values of selected indicators of economic empowerment of the poor group

Categories	Poor		
	Before	After	Difference
Time spent on dairying (Hrs)	4.3	5.2	0.9*
Herd size (Nos)	2.4	2.8	0.4
Value of asset (Rs)	36,333	56,653	20,320**
Milk production (lts)	5.51	8.06	2.55**
Milk consumption (lts)	0.30	0.54	0.24
Milk sale (lts)	5.21	7.73	2.52**
Food consumption (score)	1.39	1.47	0.08
Income from dairying (Rs)	6,257	16,757	10,500**
Income from other occupation (Rs)	21,864	30,439	8,575**
Total annual income (Rs)	28,121	47,196	19075**

\*Significant at ( $P < 0.05$ ) \*\* Significant at ( $P < 0.01$ )

This implies that dairy farming was taken as a main occupation and a source of livelihood for the poor when compared to the better-off. Mean consumption of staple food for the better-off category was significantly improved, whereas it was marginally increased in case of poor, however, this difference was not statistically significant. The total annual income was increased after joining the group for both the categories. The increase in the livelihood option as dairying is also reflected in the increase in mean income for the poor category, as the income from dairying was 36 per cent of the total annual income, whereas the contribution was 29 percent of the total annual income for the better-off. These results are similar to the findings of Rangnekar and Nirmala, who reported that dairy farmers from higher strata derived more benefit from livestock than the poor farmers in absolute terms, however, in relative terms, the contribution of livestock to the family income of the poor was high [33], [35]. The value of assets possessed by the SHG members was increased after joining the group for both the categories..

## V. DISCUSSION

A Self-help group combined with dairying as an Income Generating Activity (IGA), provides an add-on effect to the economic empowerment of women who are living below the poverty line. Follow-on to the formation of SHG and taking up a dairy enterprise as IGA, it is found that a sequence of changes had been taking place in the lives of poor women perceptibly and imperceptibly. There was discernible positive changes in the employment status, asset possession (household appliances, movable and immovable assets), annual household income, milk production and sale. This result reflected that there was considerable improvement in the economic status of the women SHG members over a period. The obvious chances for acquiring assets could be attributed to the increased access to credit from banks and SHGs with low interest, savings and income through sale of animals.

On the other hand the progression of imperceptible positive changes was their increase in the communication network, interpersonal relationships, increase in awareness to government beneficiary schemes, upliftment in status, change in the way of savings which was directly proportional to the increase in the number of telephones, an increase in the number of semi-pucca and pucca houses, increase in miscellaneous assets and savings in a bank account instead of chit funds. In spite of an increase in income, consumption of milk, fruits and non-vegetarian (chicken/fish/chevon) item of the members remains static without any change over a period; and it was reduced among poor category within the group. Regardless of having their own cow, these members feel that milk is rare and special commodity to be consumed.

## VI. CONCLUSION

Dairying contributed more to the poor members when compared to the comparatively better-off both in relative as well as in absolute terms. More specifically, underprivileged women (widows, women whose husbands were sick) who is the bread winner, mainly depends on dairy income. The tendency of the women SHG members in cutting down their expenses on consumption and concentrate more on asset building shows their vehemence to achieve a living status as that of higher society. SHG with dairying as IGA helps the members to fulfill their anticipated needs. It gives remedy to their immediate needs and also fulfil their long term desire and needs. This study concludes that dairy farming is being adopted by the poor families as their main source of occupation and their choice of livelihood. As dairy farming had contributed to the economic empowerment of the poor, especially women, it can be said that dairying is one of the best empowerment tools for the resource poor women.

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