

## Impact Analysis of DAY-NRLM On Poverty Reduction: An Explorative Study

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### Abstract

Poverty is a significant issue affecting humanity, characterized by suffering and inequity. A historical analysis shows that the wealthiest 1.1% of the global population controls about 45.8% of the total wealth, with similar disparities seen in India, where the top 1% owns approximately 40.1%, while the top 10% holds around 72.5% of the nation's wealth. In stark contrast, the bottom 50% of the global population possesses only about 6% of the wealth<sup>1</sup>. This deepening wealth gap is a primary driver of poverty, with the UNDP estimating that around 1.1 billion people are living in poverty worldwide, including approximately 234 million in India, making it home to a quarter of the world's impoverished population.

Such statistics underline the ongoing struggle for equitable wealth distribution and the urgent need to address these disparities both globally and within India. Present research was undertaken to analyse the impact the DAY- NRLM on the lives of rural poor woman of India, towards changing their destiny.

**Key Words:** Poverty, Government, Rural, Woman, Poor, SHG, DAY-NRLM

### Introduction

Poverty is the root cause of all the evils and is the greatest challenges before the governments, financial institutions and the world leadership. The poverty is the blot on the prestige of a nation, and has wide social manifestations. A recent study of UNDP reveals that India is a house to the approximately one fourth of the poor living in the acute poverty in the whole world and tops the rank in this aspect. The government of India has been making constant efforts to reduce and finally end poverty by 2030, in untiring efforts to achieve the goal of SDG -1 as envisaged by the UNDP.

This research is based on field survey of the SHG members under DAY-NRLM. The research explores, how the programme impacts the poor rural woman economically, to liberate them from the poverty trap.

#### 1.2 Review of Literature

Deaton, A. (2006)<sup>ii</sup>opines that the poverty can best be visualized by perception. *He feels that in place of the calorie based touchstone a general living standard should be taken into account. He advocates a self assessment method of declaring the minimum level of family income, one would think should one must have, to live a non-poor stranded in the society.*

Townsend P, (1962)<sup>iii</sup>While criticizing the prevailing basic needs concept of poverty measurement, states that poverty is an evolving concept. The author *emphasizes the need to shift from a monotonous, physical efficiency-based concept to a dynamic approach*, focusing on those who fall short of physical needs and income levels.

**Heshmat, Maasoumi, and Wan (2015)<sup>iv</sup>** primarily studied the specific poverty scenario of Asia region and a policy mix for sustainable development for region and the poverty alleviation programmes.

**Pradhan et al, (2022)<sup>v</sup>** have conducted an in-depth caste based study of multidimensional issue in poverty. While dealing with the issue they have mentioned the *journey of the poverty criteria from traditional version to the now prevailing multi dimensional approach* of poverty keeping pace with social development.

**Sundaram, J. K. (2012)<sup>vi</sup>** has in his work *criticized the world bank approach of putting a poverty line criteria* based on the analysis of the data of the countries world over three decades from 1981 to 2008. Similar view were expressed by **Lemanski, (2016)<sup>vii</sup>**.

**Pralia (2017)<sup>viii</sup>** while working on role of micro financing in eradicating the rural poverty and finds that the Gandhian philosophy of poverty removal still relevant for poverty reduction in India. **Sunil Kumar (2011)<sup>ix</sup>** also studied the role of micro financing in poverty reduction. Along with a number of studies [**Barman, Bhajan Chandra (2016)<sup>x</sup>, Dutta Abhishek (2021)<sup>xi</sup> Muggur et.al, (2012)<sup>xii</sup>, Sunimol VC, (2019)<sup>xiii</sup>, Barman & Bhattacharjya (2015)<sup>xiv</sup>]** have been done related to various poverty removal concepts including the SHG. The role of cooperative as a mechanism of poverty removal was studied by [**Fasoranti, Mary Modupe (2014)<sup>xv</sup>, Sumelius and Tenaw(2014)<sup>xvi</sup>, Prasad and Satsangi, (2013)<sup>xvii</sup>, Galab et al, (2003)<sup>xviii</sup>]**

### 1.3 Research Methodology

For the purpose of the present research, research methodology as specified below was formulated. The hypothesis were framed based on the objectives of the study. The research design was determined and scope of the study was limited to three districts of western Uttar Pradesh. Viz, Bulandshahar, Meerut and Hapur. Based on the objectives the questionnaire was framed for primary data collection, from field survey and the results were arrived at after statistical tools applications. In the upcoming paragraph the detailed description has been mentioned.

Research was based on the primary data, collected through direct personal interviews using a questionnaire to gather data. The research is quantitative and descriptive in nature as most of the variable studied related to financial parameters measured numerically. It uses statistical tools hence the research also qualifies for being descriptive analytics.

Sample was collected from 03 districts of western Uttar Pradesh. Adequacy of the Sample size was calculated by using **Yamane's Formula<sup>xix</sup>**.

$$\text{Sample size (n)} = N/1 + N*(e)^2$$

Here

**n**= Size of the corrected sample ,

**N** = Size of the population, and

**e** = is the desired Margin of error (MoE), which is often set to 0.05 for a 95 % confidence level.

**As the total population size for the study was calculated as 18,58,285 (see appendices for detailed calculation), therefore,** the minimum sample was determined as follows.

$$n = 1858285/1 + 1858285 (.05)^2$$

$$= 1858285/1 + 4645.7$$

=1858285/4646.7

= 399.9149 (Based on Approximation Rounded off to 400 )

#### 1.4 Variables and Statistical Tools Applied

The variables under study were the employment status of the participants, their income change, change in expenditure on children's education, medical preferences and life style related additions. For the purpose of data processing statistical tools such as Paired Samples Statistics, Paired Sample Correlations, and Paired Sample t-Test were conducted. Microsoft Excel and SPSS were used for data analysis.

#### 1.5 Objectives & Hypotheses of the Study

The study was carried out with the objective of examining the role of Self Help Groups (SHGs) under Deendayal Antayodaya Yojna – National Rural Livelihood Mission (DAY-NRLM) in the reduction of the poverty and uplifting the financial the rural poor woman, financially. The corresponding set of hypothesis framed to test the objective are as follows.

$H_o$  : There has been no reduction in rural poverty of the members of the SHGs under DAY-NRLM.

$H_1$  : There has been reduction in rural poverty of the members of the SHGs under DAYNRLM.

#### 1.6 Data Analysis and Interpretation

The outcome of analysis of financial impact was as follows.

##### ➤ Occupational Background of Respondents Before Joining SHG

In exploring the financial up-liftment, the following table revealed as follows:

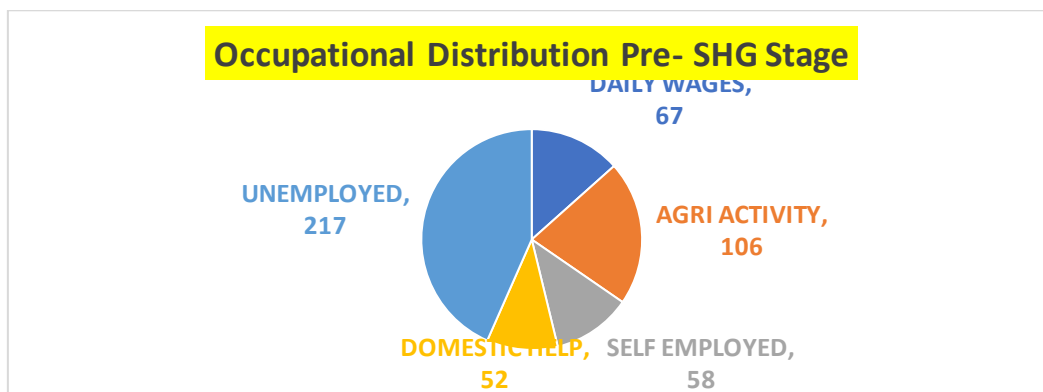
**Table - 1**

**Type of Previous Occupation before Joining SHG**

	Frequency	Percent	Cumulative Percent
Daily Wages	67	13.4	13.4
Agri Activity	106	21.2	34.6
Self Employed	58	11.6	46.2
Domestic Help	52	10.4	56.6
Unemployed	217	43.4	100.0
Total	500	100.0	

**Source:** Based on Primary Data Analysis

**Figure - 1**  
**Type of Previous Occupation before Joining SHG**



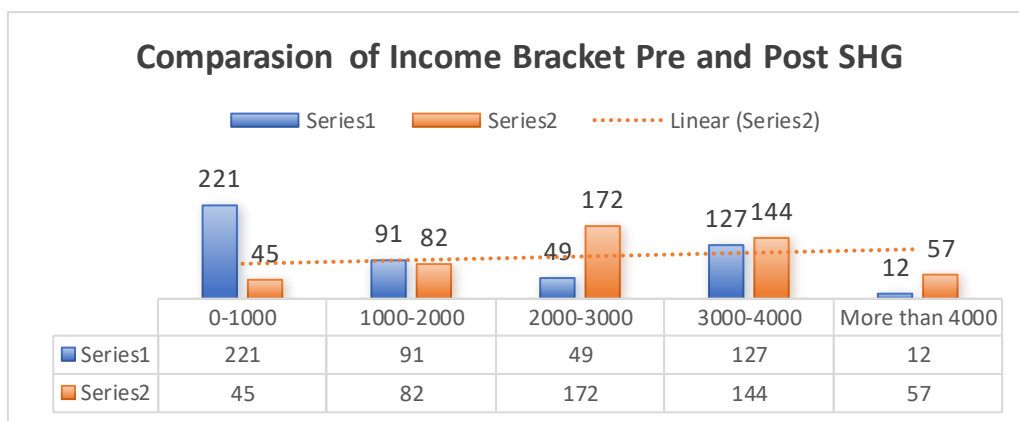
(Source: Based on Primary Data Analysis)

The data above illustrates that majority of the woman (43.4 %) who participated were unemployed revealing that the programme opened the new horizons of employment to a large section of members of SHGs.

➤ **Analysis of Income Bracket of the Participants**

Study was further conducted to analysis the income difference of the participants before and after joining the DAY-NRLM programme. The table below indicates the comparative position.

**Figure - 2**



(Source: Based on Primary Data Analysis)

The programme number of people who were earning less than ₹1000 per month reduced drastically form 221 to 45. The earning bracket of income of ₹. 1000 to ₹. 2000 was almost same, number of participants falling in income bracket of earning ₹. 2000 - ₹ 3000 changed from 49 to 172 which accounted for a **significant upward shift**, However the most remarkable change being that the number of people in last income bracket i.e. more then ₹ 4000 per month jumped significantly from 12 to 57. The same is evident by the upward rising trend line.

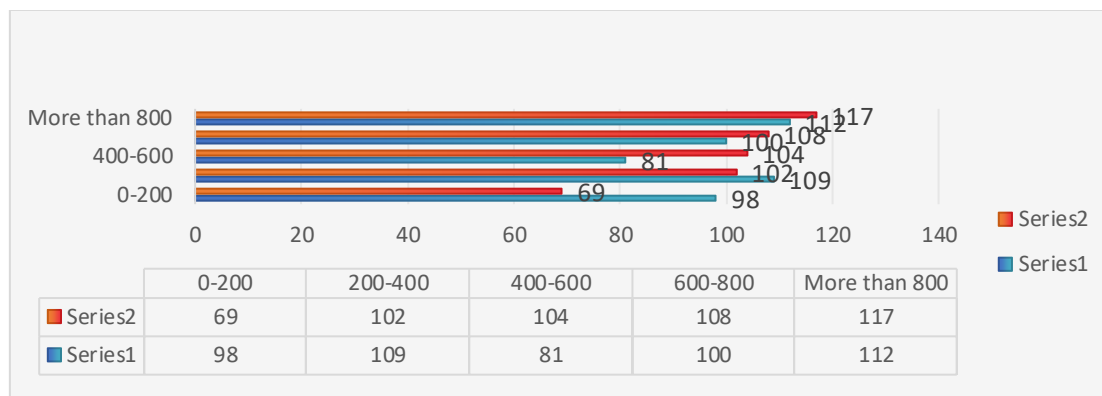
➤ **Analysis of Monthly Average Education Expenses**

Another variable studied to gauge the change in financial position was the comparison of average education expenses on the children’s education studying up to intermediate classes before and after joining SHG. The

details of the comparative results of the average expenditure per child before and after joining the programme were as follows.

**Figure - 3**

**Comparison of Expenditure on Education Before and After Joining SHG**



(Source: Based on Primary Data Analysis)

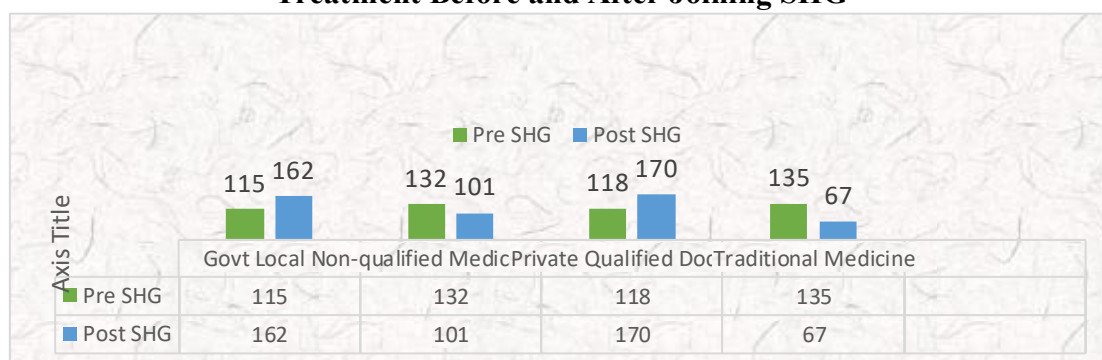
The post-SHG data indicates a notable increase in educational spending among respondents, with a decrease from 98 to 69 people in the lowest expenditure bracket of ₹ 0-200. In contrast, higher expenditure levels show an increase, notably from 293 to 329 respondents spending above ₹ 400, suggesting increased investment in education. This trend implies that SHG participation has positively affected families financial capacity and their willingness to allocate income towards children's education, particularly in average expenditure up to intermediate education due to the diversity of courses available beyond this level.

➤ **Analysis of Medical Consultation Preference**

Net variable which was studied was the preferences for medical treatment the following was the outcome of the data surveyed.

**Figure- 4**

**Comparison of type of Preferred Medical Treatment Before and After Joining SHG**



(Source: Based on Primary Data Analysis)

Participation in Self-Help Groups (SHGs) has significantly shifted healthcare preferences among respondents, with a rise from 233 to 332 in those favoring government hospitals or private qualified doctors. There is a

marked reduction in reliance on traditional non-medicinal practices, decreasing from 135 to 67 users. The decrease in local non-qualified practitioners suggests improved healthcare awareness, likely attributed to social linkages formed through SHGs and increased capacity for travel and spending for medical services.

### ➤ Analysis of Major Improvement / Addition to the Household Usables Among Respondents After Joining SHG

This question was directly exploring the change in living sundered of the participant. The following outcome were revealed.

**Table- 2**

#### Major Improvement / Addition to the Household Assets After Joining SHG

Item	Frequency	Percent	Cumulative Percent
Cooking Method/LPG Connection	87	17.4	17.4
Electricity Connection	89	17.8	35.2
Fan/Cooler	83	16.6	51.8
Fridge	91	18.2	70.0
House	81	16.2	86.2
TV/Recreational Device	69	13.8	100.0
Total	500	100.0	

(Source: Based on Primary Data Analysis)

The table indicates that following participation in SHGs, there has been at least some addition in the lifestyle enriching assets. These changes reflect enhanced living standards and asset accumulation among respondents post-SHG.

#### Testing of Hypothesis :

In order to test the null and related alternate hypothesis the analysis based on the Paired Samples Statistics, Correlations, and Paired Sample t-Test for Pre-SHG and Post-SHG Monthly Income Bracket were conducted to test the null and alternate hypothesis. The following tables indicates the outcome of the tests.

**Table - 3**

#### Paired Samples Statistics for Change in Monthly Income Before and After Joining SHG

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre-SHG Monthly Income Bracket	3.04	500	1.449	.065
	Post-SHG Monthly Income Bracket	3.00	500	1.437	.064

(Source: Based on Primary Data Analysis)

**Table - 4**

### Paired Samples Correlations for Change in Monthly Income Before and After Joining SHG

		PRE SHG INCOME OF PARTICIPANTS	POST SHG INCOME OF PARTICIPANTS
PRE SHG INCOME OF PARTICIPANTS	Pearson Correlation	1	.913**
	Sig. (2-tailed)		<.001
	N	500	500
POST SHG INCOME OF PARTICIPANTS	Pearson Correlation	.913**	1
	Sig. (2-tailed)	<.001	
	N	500	500

\*\* . Correlation is significant at the 0.01 level (2-tailed).

(Source: Based on Primary Data Analysis)

Table - 5

### Paired Sample t-Test for Change in Monthly Income Before and After joining SHG

Pair	Paired Differences					t	df	Sig. (2-tailed) (p - value)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pre-SHG Monthly Income Bracket - Post-SHG Monthly Income Bracket	.038	.601	.027	-.015	.091	1.414	499	.158

(Source: Based on Primary Data Analysis)

Although some members of Self-Help Groups (SHGs) reported increased incomes, statistical analysis revealed no significant overall change. The t-test indicated a mean difference of 0.038 with a p-value of .158, which does not support the hypothesis of a significant reduction in rural poverty. *This suggests that while income benefits exist for some, they are not widespread enough to validate substantial poverty reduction.* Additionally, poverty's multidimensional nature implies that non-income factors such as credit access and economic resilience may offer important insights that the income metric fails to capture.

Hypothesis (H<sub>0</sub>) proposed that there has been no reduction in rural poverty among member of SHGs under the DAY-NRLM. While the frequency distribution indicated a shift towards higher income categories following SHG participation, *the results of the paired samples t-test showed that the average change in income was not statistically significant,  $t(499) = 1.41, p = .158$  (where  $p > .05$ ).* This suggests that although some individuals may have experienced income gains, the improvement was not consistent or substantial enough across the sample to confirm a significant overall increase. *Therefore, Hypothesis H<sub>0</sub> is accepted and H<sub>1</sub> is rejected, by the data.*

## 1.7 Findings and Recommendations

- The DAY-NRLM programme opens an opportunity of employment for unemployed, while expanding the scope of financial enhancement for already occupied.
- The programme has positive impact on the financial upliftment of the participants, though the results of the paired samples *t*-test showed that the average change in income was not statistically significant.
- Present Programme should expand its focus to include urban women, as poverty transcends rural affiliations.
- Targeting additional BPL women is recommended, alongside establishing a separate scheme for men to enhance synergy.
- Permanent market spaces / selling points should be allocated for SHGs, fostering competition and innovation.
- To increase participation, publicity through various media is advised, integration with other government schemes and increasing the revolving fund amount per member are crucial for motivating SHG members.
- Transparency measures should be implemented to address performance issues among officials and banks, promoting accountability and support for the programme.

## 1.8 Conclusion

The study reveals that the DAY-NRLM has positive effect on the life of the members of the SHG. However the scheme further needs to be strengthened in terms of monetary incentives and sanction of funds especially at the revolving fund stage. The inclusion of woman of urban area and the additional programme on the line of SHG under present DAY-NRLM for the male population shall be a sure shot of driving India to achieve the SDG - 1 milestone by 2030.

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