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## Key Factors Influencing the Empowerment of Rural Women Entrepreneurs through NGO Interventions: A Study in Virudhunagar District

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### Abstract

This study investigates the key factors influencing the empowerment of rural women entrepreneurs through Non-Governmental Organization (NGO) interventions in Virudhunagar District, Tamil Nadu, India. Women entrepreneurship in rural areas remains constrained by socio-economic, educational, financial, and institutional barriers. NGOs have emerged as vital catalysts in bridging these gaps by providing skill development, microfinance, market linkages, and awareness programs. Using a structured questionnaire, data were collected from 200 rural women entrepreneurs who have received NGO support. The study employs descriptive statistics, reliability analysis (Cronbach's Alpha), factor analysis, and multiple regression to identify and quantify the determinants of empowerment. The findings reveal that financial access, skill training, social awareness, family support, and NGO program quality are significant predictors of women's empowerment. The study concludes with actionable recommendations for NGOs, policymakers, and development agencies to strengthen rural women's entrepreneurial ecosystems.

**Keywords:** Women Empowerment, Rural Entrepreneurship, NGO Interventions, Virudhunagar District, Microfinance, Skill Development, Factor Analysis

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### 1. Introduction

Women entrepreneurship has gained considerable attention in the global development discourse as a powerful instrument for achieving sustainable economic growth, poverty alleviation, and gender equality. In India, rural women constitute a significant proportion of the workforce; however, their entrepreneurial potential remains largely untapped due to systemic socio-cultural barriers, limited financial access, inadequate skill sets, and restricted market exposure (Kabeer, 2005; Buvinic & Furst-Nichols, 2016).

Virudhunagar District in Tamil Nadu, known for its fireworks and match-making industries, presents a unique socio-economic landscape. While industrial activity is notable, a large segment of rural women remains engaged in subsistence livelihoods with limited participation in formal entrepreneurship. The marginalization of women in this context is not merely an economic issue but a complex intersection of patriarchal norms, low literacy, and institutional neglect (Nussbaum, 2000).

Non-Governmental Organizations (NGOs) have progressively stepped in to fill this void. Through targeted interventions such as Self-Help Group (SHG) formation, vocational training, microcredit facilitation, and market linkage programs, NGOs have played a transformative role in fostering rural women's entrepreneurship. Several studies have documented the positive impact of NGO activities on women's socio-



economic status in various Indian states (Datta & Gailey, 2012; Mayoux, 1999).

Despite this growing body of evidence, there is a relative paucity of empirical research specifically examining the factors that determine the effectiveness of NGO-driven empowerment initiatives among rural women entrepreneurs in Virudhunagar District. Identifying these factors is crucial for designing targeted, evidence-based interventions. This study, therefore, aims to empirically investigate the key determinants influencing the empowerment of rural women entrepreneurs through NGO interventions in this district.

The remainder of this paper is organized as follows: Section 2 presents the review of literature, Section 3 identifies the research gap, Section 4 outlines the study objectives, Section 5 describes the research methodology, Section 6 presents the analysis and findings, and Section 7 concludes the study with recommendations.

## 2. Review of Literature

The relationship between NGO interventions and women's empowerment has been extensively studied across developing nations. Scholars have approached this relationship from multiple theoretical and empirical dimensions.

### 2.1 Women Empowerment and Entrepreneurship

Kabeer (1999) conceptualized empowerment as the expansion of people's ability to make strategic life choices in a context where this ability was previously denied. This definition has become foundational to gender empowerment research. Mayoux (2001) extended this framework to argue that microfinance programs targeting women, when well-designed, can enhance agency, income, and social standing.

Brush et al. (2009) contended that women entrepreneurs occupy a unique position in the entrepreneurial ecosystem, facing 'gender-based market failures' that require targeted policy and institutional support. In rural India, this takes on added significance given the intersectionality of gender, caste, and class (Datta & Gailey, 2012).

### 2.2 Role of NGOs in Women's Empowerment

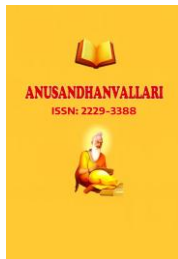
Hashemi et al. (1996) provided early empirical evidence that credit programs delivered through NGOs significantly increased women's mobility, political participation, and economic decision-making in Bangladesh. Nussbaum (2000) emphasized the 'capabilities approach,' arguing that development organizations must move beyond income metrics to address multidimensional well-being.

In the Indian context, Buvinic and Furst-Nichols (2016) found that NGO-led self-help groups effectively bridged the financial inclusion gap for rural women. Singh and Bhargava (2015) studied the Rajasthan context and found that NGO training programs significantly improved women's business skills and self-efficacy.

### 2.3 Factors Affecting Empowerment Through NGO Interventions

Research has identified several factors that moderate the effectiveness of NGO-driven empowerment. Financial accessibility is consistently reported as a primary driver (Yunus, 2007; Pitt & Khandker, 1998). Literacy and education level act as enabling factors that amplify the impact of training interventions (Coleman, 1999).

Family and community support structures have also been found to significantly influence participation and outcomes in NGO programs (Alkire, 2005). Institutional quality, including NGO governance, transparency,



and program design, moderates effectiveness (Fowler, 2000). Social capital, particularly peer networks formed within SHGs, enhances entrepreneurial resilience and market access (Putnam, 2000).

In Tamil Nadu specifically, Rajendran and Ramasamy (2017) found that NGO-facilitated SHGs significantly contributed to livelihood improvement among rural women in southern districts. Muthulakshmi and Selvi (2020) documented that women who received both skill training and microfinance through NGOs in Madurai division showed higher entrepreneurial success rates compared to those who received only one form of support.

### 3. Research Gap

While the existing literature extensively covers NGO-women empowerment linkages at the macro-level in India and specifically in Tamil Nadu, there is a notable absence of empirical, district-level studies focusing on Virudhunagar. Most available studies are either qualitative case studies or confined to SHG financial performance metrics, thus failing to capture the multidimensional nature of empowerment.

Furthermore, prior research has not systematically examined the relative importance of various factors financial, social, educational, and institutional in a single integrated framework for this geographic context. The present study addresses this gap by employing multivariate statistical techniques to empirically test the determinants of rural women's empowerment through NGO interventions in Virudhunagar District.

### 4. Objectives of the Study

The study pursues the following specific objectives:

1. To examine the socio-demographic profile of rural women entrepreneurs supported by NGOs in Virudhunagar District.
2. To identify the key factors influencing the empowerment of rural women entrepreneurs through NGO interventions.
3. To assess the relationship between NGO program characteristics and the level of women's empowerment.
4. To provide policy recommendations for enhancing the effectiveness of NGO-driven empowerment programs.

### 5. Research Methodology

#### 5.1 Research Design

This study adopts a descriptive and analytical research design. A cross-sectional survey method was employed to collect primary data. The study uses a positivist epistemological approach, relying on quantitative methods to test hypothesized relationships between independent variables (factors) and the dependent variable (women's empowerment level).

#### 5.2 Sampling Method

A stratified random sampling technique was employed. The district was divided into five taluks—Virudhunagar, Aruppukottai, Rajapalayam, Sivakasi, and Srivilliputhur treated as strata. From

each taluk, NGO-enrolled rural women entrepreneurs were identified in consultation with local NGO coordinators. A proportionate sample was drawn from each stratum.

### 5.3 Sample Size

Using Cochran's (1977) formula for sample size determination with a 95% confidence level and 5% margin of error, a minimum sample of 196 was computed. The final sample comprised 200 respondents to account for non-response. All respondents were rural women aged 18–55 years who had participated in at least one NGO program for a minimum of six months.

### 5.4 Data Collection Instrument

A structured questionnaire with three sections was administered: (i) socio-demographic profile, (ii) NGO program participation and characteristics (15 items), and (iii) empowerment indicators across five dimensions economic, social, psychological, political, and educational measured on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). The instrument was pre-tested with 30 respondents. Cronbach's Alpha for the overall scale was 0.876, confirming high reliability.

## 6. Statistical Analysis and Interpretation

### 6.1 Socio-Demographic Profile of Respondents

Table 1 presents the demographic characteristics of the 200 respondents surveyed.

**Table 1: Socio-Demographic Profile of Respondents (N = 200)**

Variable	Category	Frequency	Percentage (%)
Age Group	18–25 years	38	19.0
	26–35 years	72	36.0
	36–45 years	60	30.0
	46–55 years	30	15.0
Education	Illiterate	22	11.0
	Primary Level	48	24.0
	Secondary Level	76	38.0
	Graduate & Above	54	27.0
Marital Status	Married	158	79.0
	Unmarried	28	14.0
	Widowed/Separated	14	7.0
Annual Income (₹)	Below 50,000	62	31.0
	50,001–1,00,000	84	42.0

	1,00,001–2,00,000	38	19.0
	Above 2,00,000	16	8.0
NGO Programme	Skill Training	58	29.0
Participation	Microfinance/SHG	68	34.0
	Awareness & Advocacy	44	22.0
	Market Linkage	30	15.0

Note. Data collected through structured questionnaire, 2024.

The majority of respondents (36%) fell in the 26–35 age group, and 38% had secondary-level education. A significant 79% were married. The largest income group (42%) earned between ₹50,001 and ₹1,00,000 annually. Microfinance and SHG participation was the most common form of NGO engagement (34%).

## 6.2 Reliability Analysis

Cronbach's Alpha was computed for each empowerment dimension. As shown in Table 2, all values exceeded the acceptable threshold of 0.70, confirming internal consistency.

**Table 2: Reliability Statistics for Empowerment Dimensions**

Empowerment Dimension	No. of Items	Cronbach's Alpha	Interpretation
Economic Empowerment	6	0.871	Excellent
Social Empowerment	5	0.843	Good
Psychological Empowerment	5	0.856	Good
Political Empowerment	4	0.812	Good
Educational Empowerment	4	0.829	Good
Overall Scale	24	0.876	Excellent

## 6.3 Factor Analysis of Influencing Factors

Principal Component Analysis (PCA) with Varimax rotation was conducted on 20 items measuring influencing factors. The Kaiser-Meyer-Olkin (KMO) value of 0.843 and Bartlett's Test of Sphericity ( $\chi^2 = 2314.6$ ,  $df = 190$ ,  $p < .001$ ) confirmed the suitability of the data for factor analysis. Five factors were extracted, explaining 68.4% of the total variance (Table 3).

**Table 3:** Factor Analysis: Key Factors Influencing Empowerment

Factor	Factor Label	No. of Items	Eigenvalue	% Variance	Cumulative %
F1	Financial Access & Microfinance	5	4.62	23.10	23.10
F2	Skill Development & Training	4	2.84	14.20	37.30
F3	Social Awareness & Networking	4	2.31	11.55	48.85
F4	Family & Community Support	4	1.93	9.65	58.50
F5	NGO Program Quality	3	1.98	9.90	68.40

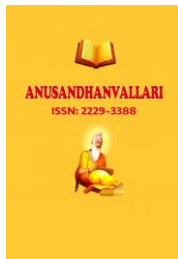
Factor 1 (Financial Access & Microfinance) emerged as the dominant factor, accounting for 23.10% of variance. Factor 5 (NGO Program Quality) was also noteworthy, underscoring the importance of program design in determining outcomes.

#### 6.4 Multiple Regression Analysis

Multiple regression analysis was performed to examine the influence of the five extracted factors on the overall empowerment index (Table 4). The model was statistically significant ( $F = 42.31$ ,  $p < .001$ ) with an  $R^2$  of 0.684, indicating that the five factors collectively explain 68.4% of variance in empowerment.

**Table 4:** Multiple Regression Analysis: Predictors of Women's Empowerment

Predictor Factor	B	Std. Error	Beta ( $\beta$ )	t-value	p-value	Significance
(Constant)	1.243	0.214	—	5.81	< .001	—
Financial Access (F1)	0.412	0.063	0.381	6.54	< .001	***
Skill Development (F2)	0.287	0.071	0.249	4.04	< .001	***
Social Awareness (F3)	0.231	0.068	0.203	3.40	.001	**
Family Support (F4)	0.198	0.072	0.172	2.75	.006	**
NGO Program Quality (F5)	0.173	0.069	0.152	2.51	.013	*



Note. Dependent Variable: Overall Empowerment Index.  $R^2 = .684$ ,  $Adj. R^2 = .676$ ,  $F(5,194) = 42.31$ ,  $p < .001$ .  
\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Financial access emerged as the strongest predictor ( $\beta = 0.381$ ,  $p < .001$ ), followed by skill development ( $\beta = 0.249$ ,  $p < .001$ ) and social awareness ( $\beta = 0.203$ ,  $p < .001$ ). Family support ( $\beta = 0.172$ ) and NGO program quality ( $\beta = 0.152$ ) also significantly influenced empowerment, albeit with smaller effect sizes. These results validate all five factors as significant drivers of empowerment, with financial access and training playing the most pivotal roles.

## Conclusion

This study empirically examined the key factors influencing the empowerment of rural women entrepreneurs through NGO interventions in Virudhunagar District, Tamil Nadu. Based on data from 200 respondents, the study identified five critical determinants: financial access and microfinance, skill development and training, social awareness and networking, family and community support, and NGO program quality.

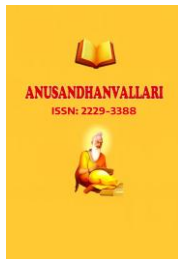
The findings underscore that financial inclusion remains the most potent lever for women's empowerment in rural areas. Microfinance delivered through SHGs not only provides capital but also cultivates financial discipline and group cohesion. Skill development programs amplify this effect by equipping women with marketable competencies. Social awareness initiatives challenge entrenched gender norms, while supportive family environments create enabling conditions for women's entrepreneurial activities.

Importantly, NGO program quality emerged as a significant predictor, suggesting that the design, governance, and delivery mechanisms of NGO programs must be continuously improved. Policymakers and development practitioners should prioritize strengthening NGO capacities in monitoring and evaluation, ensuring that interventions are contextually relevant and responsive to beneficiary needs.

The study has certain limitations: it is confined to a single district and relies on self-reported data, which may be subject to response bias. Future research should adopt longitudinal designs and comparative frameworks across multiple districts to build a more robust evidence base for policy formulation.

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